

WASHOE COUNTY
**Regional Open Space &
Natural Resource
Management Plan**

JUNE 24, 2008

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WASHOE COUNTY

Regional Open Space & Natural Resource Management Plan

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A printed copy of the Washoe County Regional Open Space and Natural Resource Management Plan document can be purchased for \$20.00 at the Washoe County Department of Community Development and the Department of Regional Parks and Open Space or found on-line at the departments' websites:

Department of Community Development
www.washoecounty.us/openspace
Department of Regional Parks and Open Space:
www.washoecountyparks.com

In accordance with NRS 376A.020 of the Nevada Revised Statutes, the Washoe County Regional Open Space and Natural Resource Management Plan was adopted by Resolution of the Washoe County Commission on June 24, 2008, and found in conformance with the Truckee Meadows Regional Plan by the Regional Planning Governing Board on September 11, 2008. Copies of the adopting resolutions are kept in the Washoe County Commission archival files.

FIRST PRINTING, June 24, 2008

Executive Summary

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The Washoe County Regional Open Space and Natural Resource Plan provides the framework, goals and policies for the management of natural resources and open spaces in southern Washoe County. The planning area includes the entire southern portion of the county stretching from the northern shores of Pyramid Lake and Honey Lake south to the boundary with Carson City. This area is over 2,000 square miles and includes the cities of Reno and Sparks. The Plan is designed to be compatible with both cities of Reno and Sparks own Open Space and Greenways Plans and coordination among the three entities plans will be sought by the County, as appropriate and beneficial. The area also contains a wealth of natural, cultural and recreational resources and includes alpine lakes and tundra around Lake Tahoe, the sagebrush country of the valleys and the desert lakes and playas in the valley bottoms. This great variety of environments represents 23 of the 27 vegetation communities that exist in the entire state, making this planning area one of the most diverse in Nevada. This diversity of vegetation is accompanied by a broad array of unique animals, from large animals like Mule Deer, Black Bear and Big Horn Sheep to more rare species like Steamboat Buckwheat and the Carson Wandering Skipper.

In addition to the natural wealth of the region our cultural and recreational resources also contribute to the uniqueness of our region. The long history of human societies in the region has left a rich legacy that includes rock art, evidence of occupation sites as well as more recent historic resources that include remnants of mining communities, and other historic structures. This legacy continues on today with cultural activities continuing to be practiced by the tribes of Washoe County. The recreational resources of our region are world renowned, including the famous areas around Lake Tahoe along the Truckee River, the special beauty of Pyramid Lake and the desert features in the county. These areas provide a wide variety of recreational opportunities for those that call the county home, and for the tourists who are excited to visit. The same mountains and ridge tops that provide these recreational opportunities also

define our region's character. These visual resources give us the defining skyline of our communities and also help to maintain their uniqueness.

However, our natural, cultural and recreational resources face challenges as our communities grow. This Plan identifies five key threats to our natural resources and open spaces: wildfire, invasive species, managing multiple uses, development, and acquisition and management. The increase in large wildfires damages both habitats and watersheds and threatens our homes and the biodiversity of the region. The spread of weeds and invasive plants threatens natural species and often increases the chance and intensity of wildfire. The region also faces challenges in managing how people use the land, including illegal dumping and recreational activities that have a higher impact on the landscape. Converting natural lands to new uses for development or infrastructure impact the region's habitats, water and cultural resources. Adding to these challenges is how we balance the complexity of many land owners, federal, tribal, state, local and private, all with different priorities, laws, and budgets.

By recognizing these resources and these threats, this plan strives to protect the region's natural resources and open space through a series of goals and policies that address the following concerns.

Biodiversity: The protection and management of the region's many wildlife and plants and the lands they rely on. Policies include the protection of species and the habitats they depend on as well as the migration routes they need.

Cultural Resources: The protection and management of the history and prehistory of the region as well as the continuing legacy of current cultural uses. Policies include increasing the surveys undertaken to expand our data on the location of these resources and using cooperative agreements to manage these resources.

Natural Hazards: The protection of our communities

from the threats of wildfire, floods and landslides. Policies include a series of methods for reducing wildfire risk on public and private lands and integrating this plan with flood management activities.

Recreational Resources: The provision and protection of recreational opportunities across the region and for many types of users. This plan identifies a base network for a regional trail system and provides guidance on achieving the recreational goals.

Visual and Scenic Character: The protection and management of the region's defining views, and the ridges and landscapes that define our communities. The plan identifies visual and scenic areas and directs the County to protect these through ridgeline protection and coordination with other jurisdictions.

Water Resources: The protection of the water resources on which our communities, wildlife and plants depend. Plan policies include increasing protection for seeps and springs, and assuring that new land acquisitions have adequate water rights to sustain their natural functions.

In addition to these six resource categories, there is a final set of goals that apply universally. These are the goals and policies that facilitate an ecosystem service approach and strive for no net loss of these services. Ecosystem services are the series of benefits and services we depend on from the natural environment, and if they are lost we must replace them. They include natural protection from flooding, the natural filtration and storage of drinking water, and the healthy regulation of disease and fire in our wildlands. When we impact these functions, we often must engineer a solution to replace them, with levees or treatment facilities, for example. This plan strives to assure that these functions are protected and are included in the County's management of the region. Obtaining this goal will allow the region's natural resources and open spaces to provide us many values for now and into the future, while assuring safe and healthy communities.

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CHAPTER 1 Introduction to the Plan

*“Everybody needs beauty
as well as bread,
places to play in and pray in,
where nature may heal and
give strength to body and soul.”*

JOHN MUIR

The Regional Open Space and Natural Resource Management Plan is Washoe County’s vision, direction and commitment to action for the future of the region’s open spaces and natural resources over the next 20 years. This action-oriented plan focuses upon the projects and activities that need to be undertaken to carry out this vision, a set of principles to guide this and future planning efforts, and desired outcomes expressed as achievable goals. The Regional Open Space and Natural Resource Management Plan is comprised of three components:

- 1. Inventory and Assessment:** The Inventory and Assessment component is a compilation and evaluation of data and identification of issues that serve as the factual foundation for this Plan.
- 2. The Plan:** The Plan presents the summary of issues, the long-term vision for open spaces and natural resources, the principles that are guiding planning for these resources, the long-term goals, and the public policies that Washoe County will champion and follow as it seeks to achieve the Plan’s vision and goals.
- 3. Implementation Plan:** The Implementation Plan is the compilation and prioritization of actions to carry out the Plan’s policies, achieve its goals and realize its vision for the future. As financial resources and the political lay of the land are subject to change, the Implementation Strategy must also be flexible in order to take changing circumstances into account and to take advantage of opportunities that may arise. Accordingly, this component is intended to be a stand-alone tool, one that is continually monitored and regularly updated.

This document is the Plan, the overarching document providing the public policy guidance for the protection, conservation and management of the region’s open spaces and natural resources. It will serve the county by coordinating its actions and provide a framework for partnership with other agencies, the community and the public.



PAUL MANSON

View of Mt. Rose showing some of the region’s natural diversity with wet meadows, Sierran conifer forests, and alpine habitat.

This Plan is a vision-based, outcomes-oriented tool for protecting and managing the region’s open spaces and natural resources, one that aims to protect what’s good, provide a balance of access and choices, and protect the region’s biodiversity for the benefit of future generations. Founded upon science and collaboration among a wide range of planning partners and public, this Plan seeks to achieve a balance between often competing interests. The following sections of this document present the future vision for the state of the region’s open spaces and natural resources, and the planning principles that guided the Plan’s preparation.

Following the statement of the desired future and the principles that shaped this Plan is a discussion of its underlying foundation, the concept of ecosystems services, and a green infrastructure for connecting, effectively managing, and maximizing the value

of the various components of the region’s natural systems and environment.

Next comes a discussion of the goals that Washoe County and its planning partners seek to fulfill, and the policies that will guide their actions and inform their priorities as they work together over time to achieve the vision for the future. These goals and policies for achieving the vision are presented within seven categories: six resource categories, and one which addresses issues that are overarching, transcending this categorization.

Finally, a plan is only as good as its execution. The final section, the Implementation Plan, presents the framework and strategy for carrying out the plan incrementally, over time. This Plan is intended to be regularly monitored for progress in completing



TERMS: OPEN SPACE

OPEN SPACE consists of undeveloped lands with significant natural, cultural and visual resources that are integral to the county’s quality of life.

the actions and achieving its goals. Thus, the Implementation Plan itself is a stand-alone document in order to facilitate this monitoring and updating as public priorities change and as financial resources and other opportunities become available.

What is Open Space for Washoe County?

Open space is a critical component of the quality of life in our region. This includes access to world class recreation near our homes, defining views of the ridges and peaks of the region, and a unique landscape of natural and human history. Open space also serves to define the many communities of the region. Ridges, hills and open space areas all allow for each community's unique character. The geology of the region provides special places, including springs, unique geological structures, playas and canyons. The county is also home to numerous wildlife and plant species that are found only in Washoe County, and these species depend on the natural functions of open space.

It is these many functions of recreation, biodiversity, cultural resources, water ways and views that define open space for this Plan. Throughout this Plan there is a constant theme of how the land functions and how we depend on it for many things. While open space can be on federal, state, local or private land, it is the functions of the land that the Plan focuses on. By using functions to understand our open spaces, the Plan broadens the discussion about how we evaluate, protect and enjoy our open spaces.

What is the Vision and Planning Principles for this Plan?

The Vision

The vision is a statement picturing a preferred future, an end state featuring desired outcomes and what Washoe County, its planning partners, and its residents want to leave as a legacy for future generations. This desired future vision for the region's open spaces and natural resources is best expressed as follows:



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Looking east from the Tahoe Rim Trail across Washoe Lake, the region's biodiversity is evident in the rapid shift from alpine forests through agricultural lands to the sagebrush and montane environments beyond.

In 2030, the region's open spaces and natural resources will be:

- valued for their recreation, scenic, wildlife and cultural attributes regardless of jurisdictional boundaries;
- recognized for their contribution to the quality of life enjoyed by those who live, work and visit this area; and
- preserved, enhanced and managed by the region's planning partners through effective, trusting and mutually beneficial relationships.

Through the process of developing this vision statement, it became clear that agencies, jurisdictions, special interest groups and the community-at-large hold a deep sense of value for these regional resources. They want to see them protected and well managed for future generations, and recognize that regional stewardship of such valuable resources requires the building of relationships and stewardship by a network of partners.

Planning Principles

To ensure the planning effort would be focused toward achieving the vision, the Stakeholder Advisory Committee, the Science Review Team and the broader community developed a set of planning principles and statements reflecting desired outcomes. The planning principles, which also served as criteria against which the success of the Plan would be gauged, are as follows:

- Assure that natural and cultural resources are protected, restored and sustained.
- Ensure sustainable wildlife populations and regional biodiversity on both public and private lands.
- Protect foothills, mountains, canyons, river corridors and other natural features.
- Provide a balance of access and choices for active and passive recreation users while respecting the impacts on nearby residents and natural resources.
- Recognize and manage multiple-use impacts upon the environment.

- Address the impacts of increasing development and recreation on our area's natural, scenic and cultural resources.
- Manage open space and natural resources for the ecological, social and economic functions and benefits they provide.
- Share the responsibility for stewardship of resources through:
 - Plan implementation
 - Maintenance and management
 - Funding

The vision and planning principles provided the foundation for developing the future scenario for open spaces and natural resources within the region, and for the collaboratively developed goals, policies and actions for achieving them.

Why Plan for Open Space and Natural Resources?

In 1991, new state legislation was passed that provided the foundation for the coordinated development of a regional open space plan for Washoe County, with the intended focus primarily being the creation of a regional system of major open space areas linked by trails or open space corridors. In 1994, the Washoe County Regional Open Space Plan was adopted, intended for use by Reno, Sparks and Washoe County in their efforts to preserve open space for current and future generations. This 1994 Open Space Plan provided a wealth of information, including an open space inventory, open space acquisition criteria, and an implementation program featuring an array of tools for potential use by Reno, Sparks and Washoe County for preservation of open space. However, it did not provide the same inventory, assessment, and implementation program for the protection/conservation of natural resources.

The Truckee Meadows Regional Plan (TMRP) was updated and approved by the Regional Planning Governing Board in 2007. It has, among its major



PAUL MANSON

Sierran rivers and streams bring water from the snow in the mountains and feed streams and springs to the east.

objectives, the intent to preserve designated natural resources and open spaces to help support a sustainable and economically healthy region. The TMRP calls for all local governments within the region to prepare integrated plans to address natural resources and to preserve and restore the values of sensitive land areas, wildlife habitat, open spaces and greenways, cultural and archeological resources, scenic resources, air quality, and water quality and quantity. It further encourages Washoe County, in coordination with its planning partners throughout the region, to secure funding to carry out the regional open space plan and encourages all jurisdictions to establish a coordinated network of open space and greenways. The Cities of Reno and Sparks actively contributed to this plan throughout its development. As this plan was being developed, the City of Reno completed its Open Space and Greenways Plan.

Plans are dynamic documents, subject to change as key

characteristics of the region (demographics, finances, development, changes to the regulatory environment, public preference, public policy, etc.) change over time. It is within the context of this larger area and the changes that have occurred since 1991 that Washoe County has taken the leadership role in collaboratively preparing a plan for managing open spaces and natural resources within the region.

Why Plan on a Regional Level?

With the loss of rural land, there is less undeveloped land, commonly referred to as open space. The southern portion of Washoe County is presently at a stage in its evolution where preserving certain undeveloped lands as open space is critical for both the environment and the economy. The county's attractive landscape, along with numerous outdoor recreational opportunities, is closely linked to our region's quality of life. One of the key quality-of-life factors in the region is the existence

of open space, which can directly and indirectly influence numerous other quality-of-life factors, such as water quality and supply, economic growth, health, educational and cultural opportunities, and leisure opportunities. The region's quality of life attracts both people and economic growth to Washoe County. It is listed time and time again as one of the contributing factors, if not the major factor, for new businesses considering relocating to this area.

The health of the region's tourism industry is also linked to the area's quality of life. Many of the region's businesses emphasize the scenic resources and the recreational opportunities available to visitors and employees in Washoe County. The preservation and management of open space helps provide and enhance these recreational opportunities and quality-of-life benefits. Many communities around the country are capitalizing on this eco-tourism potential by preserving and managing the lands that can provide both passive and active recreational opportunities while contributing to the economic vitality of a community. This Regional Open Space and Natural Resource Management Plan is intended as a cooperative effort to benefit the entire region, designed to be used as a tool by Reno, Sparks, Washoe County, governmental agencies, non-profit and advocacy groups and the public to assist in the preservation of open spaces and natural resources in the region.

How to Use This Plan

The three components of the Regional Open Space and Natural Resource Management Plan are intended to serve a number of functions, the three most important of which are reference, vision and policy, and direction.

As a reference tool, the **Inventory and Assessment** component is intended to present the summary of information and issues and the assessment of the state of open spaces and natural resources within the county that informed the development of the Plan's goals and policies. Accordingly, the Inventory and Assessment

The health of the region's tourism industry is also linked to the area's quality of life. Many of the region's businesses emphasize the scenic resources and the recreational opportunities available to visitors and employees in Washoe County.

component can be referred to for the technical information regarding why courses of action are being proposed. A substantial amount of information has been assembled and evaluated, and a diverse array of planning partners worked together to update and assess this information in the preparation of this Plan. New information will be coming to light over the near- and longer-term; accordingly, the maps and graphics associated with this Plan will be updated as new information becomes available. Individuals turning to this plan for information regarding specific areas of the county should contact Washoe County to ensure they are accessing the most current information.

As a vision and policy tool, the **Plan** component provides the county's long-term vision for open spaces and natural resources and the principles that are guiding planning for these resources. This component also presents the long-term goals and public policies that Washoe County and its planning partners will champion and follow as they seek to realize the Plan's vision. Accordingly, the Plan will be used to make informed decisions on the use of property as it relates to the protection, conservation and management of open space and natural resources. Plan policies can be used as evaluation criteria in the review of development proposals, and to guide the making of informed decisions regarding the programming of limited fiscal and personnel resources.

Finally, as a directional tool, the **Implementation Plan** component identifies the tools that can be used, the actions that should be taken, the partnerships



PAUL MANSON

that should be formed, and the changes that should be made to the county's land use regulations to carry out the Plan's policies, achieve its goals, and realize its vision for the future. It also presents potential opportunities for acquisition and retention, and criteria for assisting in making decisions on how to spend limited resources (or to take advantage of opportunities) for acquisition and/or retention. As indicated earlier, financial resources, the regulatory environment, property ownership, and the political lay of the land are subject to change. Accordingly, the Implementation Plan must also be flexible in order to take changing circumstances into account and to take advantage of opportunities that may arise. This is why this component is intended to be a stand-alone tool, one that is continually monitored and regularly updated. This is the document that should be consulted to ascertain the short-term and longer-term actions being proposed and programmed.

Following Pyramid Lake, the Virginia Mountains provide rich recreational experiences and frame the amazing views of Pyramid Lake.

CHAPTER 2 Physical and Planning Context

“Thousands of tired, nerve-shaken, over-civilized people are beginning to find out that going to the mountain is going home; that wilderness is necessity; that mountain parks and reservations are useful not only as fountains of timber and irrigating rivers, but as fountains of life.”

JOHN MUIR

From the early prehistory and history of the region and the promise of a new life in the West, to the captivating beauty of the canyons and mountains, Washoe County has been defined by what the natural world has provided here. For this reason, the Washoe County Open Space and Natural Resource planning effort was initiated in early 2007 to assess and plan for how to manage these resources. It is at once an effort to update the 1994 Open Space Plan and to create a new Natural Resource Management Plan for the southern portion of Washoe County.

What is the Planning Area?

The planning area covers the southern portion of the county ranging from the eastern boundary with Pershing and Churchill counties to the California border in the west. It stretches north from the boundary with Carson City, to the northern shores of Pyramid Lake. It includes Lake Tahoe, Marlette Lake and Mount Rose in the south. As the study area runs north it includes Peavine Mountain, Peterson Mountain, Hungry Valley and the Pah Rah Range. The northern edge of the study area includes Honey Lake, the Virginia Mountains, and the Needles at Pyramid Lake. Map 1 illustrates the planning area boundaries. The area includes the communities of Reno and Sparks as well as tribal lands managed by the Washoe Tribe, Reno-Sparks Indian Colony and the Pyramid Lake Paiute Tribe.

The study area includes the county's urban areas and the interface between private lands and public ownership. The region includes extensive tribal lands as well. This assortment of land ownership and uses has created an increase in competition for resource and open space use. From expanding urban centers and communities, to increased water consumption and conflicting outdoor activities, the region's open space and natural resources are experiencing more pressure and use than before. This plan strives to both create a way to best share the experiences and values from the landscape and preserve them for future use.

The region's natural setting today attracts new employers, residents and tourists looking for a quality of life only our region can provide. The easy and quick access to open spaces, to special places, and for recreation are all contributors to quality of life.

For everyone in the county, the wide open spaces, striking natural skylines, rich natural and cultural history, and unique ecosystems all make Washoe County a special place for those who call it home.

EXISTING ENVIRONMENT: An Overview

Natural Environment Context

This Plan includes all of Washoe County south of the northern shores of Pyramid Lake to the County boundary with Carson City. Two ecoregions are present within the planning area: the Great Basin, and the Sierra Nevada. The Great Basin ecoregion comprises a majority of the study area, and the Sierra Nevada ecoregion covers the southwestern portion. The area has a wealth of biodiversity, from the alpine areas around Lake Tahoe and Mount Rose, down through the canyons and montane woodland, to the sagebrush valleys and playas of the northern portion of the study area.

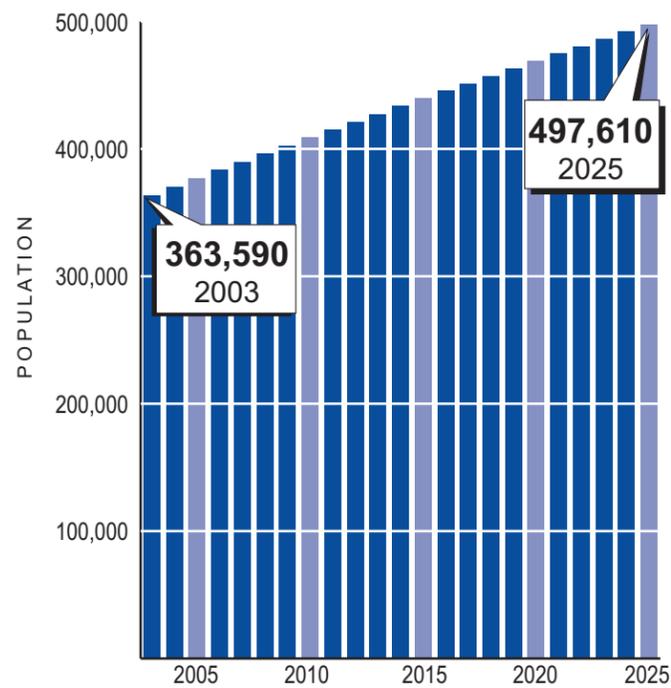
The natural environment of the region is unique in its diversity. This diversity can be found in the course the Truckee River takes. As it flows from the high alpine country of the Lake Tahoe area, through the Truckee River meadows, and on through to the deserts and playas of the Great Basin, an amazing diversity of landscapes can be found in a very short

distance. This transition from ecoregion to ecoregion happens rapidly along the Truckee River as it transects these environments. The history of the region's geology and environment also set it apart. Pyramid Lake, the remnant of the ancient Lake Lahontan, is a rare terminal lake. The waters that flow in from Lake Tahoe, from the flanks of the Virginia Mountains and Lake Range, all end in Pyramid Lake with some diversions upstream. The ancient Lake Lahontan was an enormous inland sea that covered much of southern Washoe and Pershing counties. Today, the remnants of this ancient sea are the playas and deserts of the valley floors.

In addition to the iconic water bodies of Lake Tahoe, the Truckee River and Pyramid Lake are the numerous seeps and springs that are sprinkled across the landscape. Some of these springs are geothermal and bring warmed water to the surface, while others bring cool clear water to the surface. These springs and seeps are critical in the desert environment and allowed for nature and people to survive, adapt and flourish in the region. For this reason, the areas around seeps and springs offer some of the richest occurrences of biodiversity as plants take advantage of the water and host numerous animal species that feed and water in these locations. The water and wildlife that come to the springs also attracted people who have occupied the region, making seeps and springs as rich in cultural and historical resources as they are in natural resources.

Over the course of history, this unique setting of natural and physical resources has been utilized by Native Americans and continues to attract growing communities and new residents. The region's natural setting today attracts new employers, residents and tourists looking for a quality of life only our region can provide. The easy and quick access to open spaces, to special places, and for recreation are all contributors to quality of life. Today, tourism driven by our natural setting is growing rapidly, and employers looking to bring jobs to the region identify the environment as one of their criteria for doing so.

Washoe County Consensus Forecast, 2003-2025



However challenges exist in maintaining this biodiversity. Many of the region's waterways are heavily impacted by pollution and development. Fish habitat has become degraded due to water diversion and sediments carried by urban runoff. In the past, the Truckee River has provided habitat for at least eight native species of fish, which had unimpeded access from Lake Tahoe all the way along the river to Pyramid Lake. The first project of the U.S. Bureau of Reclamation can be found along the Truckee River, and this changed the river's habitat and ability to support fish. The original strain of threatened Lahontan cutthroat trout has now been extirpated, and the prehistoric cui-ui, a non-game fish, is listed as endangered.

At the same time the loss of sagebrush habitat threatens the sage grouse populations. Connectivity for mule deer and other large mammals is being lost to development and transportation infrastructure. These developments threaten the continued health of these populations. Many rare and unique plant species, found only in this region, are also at risk. Despite these challenges the region has an impressive wealth of natural areas, but these areas will require continued efforts to protect, conserve and, as needed, restore.

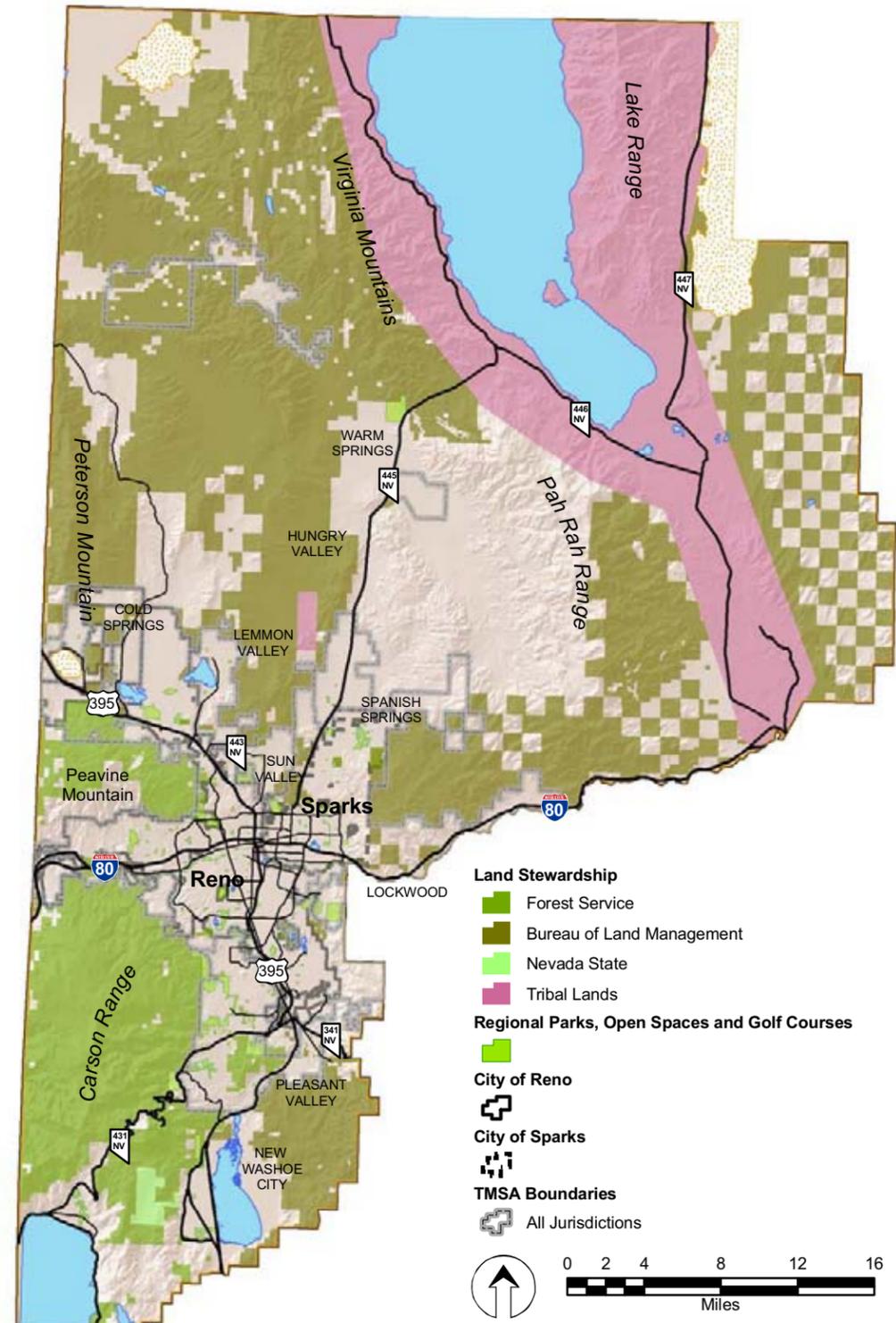
By 2025, over 13 percent of the county's population is expected to be over age 65, compared to 10 percent in 2003.

Built Environment and Demographic Context

Current development is centered around the Truckee River in the City of Reno and City of Sparks and radiates north and south through the valleys. Development densities are low in the region and tend toward lower units or fewer residents per acre. This form of development places a higher pressure on land because development uses more land to accommodate new residents in the region. At the same time, this development is increasing within an area referred to as the urban wildland interface, an area where natural lands and homes mix without a clean break. This interface provides unique challenges in managing natural hazards like wildfire, invasive species and conflicting recreation uses.

According to projections from the *Washoe County Consensus Forecast, 2003-2025* (at left), between 2003 and 2025 the county is projected to grow at an average annual rate of 1.4 percent, increasing in population from 383,000 persons in 2004 to close to 500,000 persons in 2025.

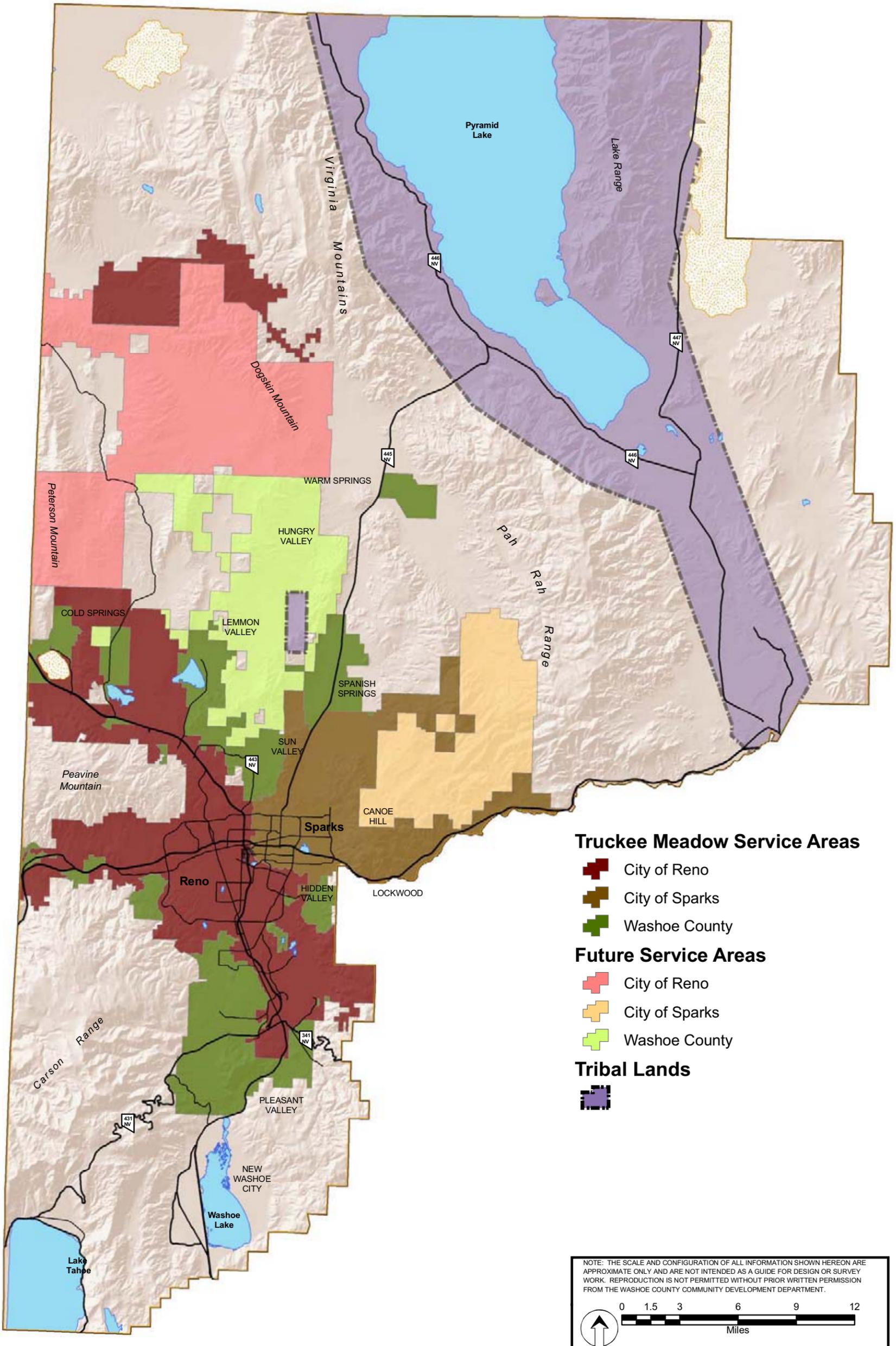
MAP 1
The Planning Area Boundaries



MAP 2

Approved Current and Future Service Areas

This map shows the current and future service areas of the City of Reno and City of Sparks and unincorporated Washoe County. The darker color shows the current areas served, while the lighter shade shows future service areas. These areas are where future development and growth are expected. This development will impact existing open space and generate new demands for parks and recreation opportunities.



Map 2 displays the current and future service areas for Washoe County and the City of Reno and City of Sparks. These areas are where future growth and development will occur. Much of this growth is anticipated in the Spanish Springs area to the north and in the Southeast Truckee Meadows.

This growth in population is continuing to change the once rural landscape of the southern portion of the county. New residents have required more housing, schools, shopping centers, office buildings, roads, water and sewer facilities, and recreational facilities and services. As a result, the once abundant rural landscape is becoming urbanized.

The evolving pattern of growth will influence the number and location of parks and recreation facilities that may be needed in the future as well as the potential for future open space acquisitions to accommodate park-type uses.

A second trend of note is the continued aging of the “baby boom” population and its effect on demand for more passive recreation facilities, such as trails. By 2025, over 13 percent of the county’s population is expected to be over age 65 compared to 10 percent in 2003. The percentage of residents who are young children (under age 4) or school age (age 5-19) is expected to remain roughly constant.

Regional Planning Context

The previous section addressed the larger regional planning framework within which this Regional Open Space and Natural Resource Management Plan has been prepared. Within the Truckee Meadows region, there are a number of jurisdictions, agencies and advocacy organizations engaged in planning for the conservation and management of open spaces and natural resources. The responsibilities, efforts and priorities of these agencies, jurisdictions, and interests provide the background and help shape the process and outcomes of this Plan. These partners also participated directly in the preparation of this Plan.

This growth in population is continuing to change the once rural landscape of the southern portion of the county. New residents have required more housing, schools, shopping centers, office buildings, roads, water and sewer facilities, and recreational facilities and services.

While this effort was led jointly by the Department of Regional Parks and Open Space and the Department of Community Development, many more county agencies and offices worked collaboratively to contribute data, resources and energy. This includes the County Manager, Department of Water Resources, Air Quality Division, Geographic Information Systems, and the Truckee River Flood Control Project. The County’s wildfire, water resource and flood planning documents were all consulted, as well as the County’s comprehensive plans, code and policies.

The City of Reno and City of Sparks actively contributed to this plan throughout its development. As this plan was developed, the City of Reno completed its Open Space and Greenway Plan, and the City of Sparks was preparing to start its open space planning process. Additionally the Truckee Meadows Regional Plan was incorporated in the planning effort.

Federal and State agency partners also joined the table with the U.S. Forest Service (USFS) and Bureau of Land Management (BLM). Each of these agencies has developed plans and protocols for the management of their extensive land holdings in the study area. Their cooperation both now and during the implementation of the Plan will be critical as the



PAUL MANSON

Pyramid Lake is a remnant of the ancient Lake Lahontan.

two largest land managers in the region. The Nevada Department of Wildlife also played an invaluable role, both through the State’s Wildlife Action Plan and through participation in the planning process.

Additionally, the Reno Sparks Indian Colony, the Pyramid Lake Paiute Tribe and the Washoe Tribe plus numerous non-profit organizations joined the effort and contributed greatly to the planning effort by participating in the committee reviews and providing information for the Plan.

CHAPTER 3 How Was This Plan Developed?

*“We do not see nature with our eyes,
but with our understandings
and our hearts.”*

WILLIAM HAZLITT

The Regional Open Space and Natural Resource Management Plan is a regional and collaborative effort, founded upon a partnership between Washoe County, a broad range of planning partners and the public. In developing the Plan, a phased, iterative process was used to move from current conditions to recommendations for the future. Initial research and stakeholder interviews were followed by discussions and brainstorming with project technical and stakeholder committees, leading to agreement on an overall future vision for open spaces and natural resources within the region. This visioning led to agreement upon principles to guide future planning and to development of a set of goals and policies for achieving this vision. The following sections summarize how the county’s practice of forward-thinking set the stage for a collaboratively developed, vision-based, outcomes-driven Plan.

FORMING THE FOUNDATION: Research, Inventory and Assessment

Prior to engaging in looking forward and envisioning a future set of desired outcomes and planning principles, it was necessary to have a firm foundation of information. This provides a starting point for all planning. A number of agencies and jurisdictions have the responsibility for developing and carrying out plans for the development and/or management of resources, facilities and services. These documents were reviewed to determine the existing public policy context within which this Plan was to be developed. In addition, as noted in the following section, a number of stakeholder interviews, project committee meetings and public and special workshops were conducted and summarized throughout the planning process. This information provided a critically important foundation for ensuring that the right issues were being addressed and that community and stakeholder values were being adequately captured.

Finally, three inventory and assessment reports were prepared for this Plan, addressing three major subject



LYNDA NELSON



PAUL MANSON

The planning process considered the different uses of the land and the many different landscapes within the planning area.

areas: natural resources, open space, and parks and recreation. These reports are based on the best available science and studies at this time. No new field data were collected; however, local resource managers, academic researchers and local stakeholders and user groups were consulted to ensure that the best available information was brought into the planning process. These reports helped the project team test local values on open space and natural resources, supported the development of a future scenario, and were intended to serve as stand-alone documents that support planning and decision making on the topics they covered. Among the fundamental assumptions of this Plan is the notion that plans are dynamic, subject to change as information and conditions

warrant. These Inventory and Assessment Reports serve as a platform for revisiting the Regional Open Space and Natural Resource Management Plan as it is reevaluated and updated periodically in the future.

Stakeholder and Community Outreach

The Plan was developed in conjunction with an active outreach program designed to educate, inform and involve the various publics having an interest or a stake in the region’s open space and natural resource legacy for the future. To help facilitate an initial understanding of the range of issues needing to be addressed by the Plan, a series of stakeholder interviews were conducted and follow-up contacts were made.

The goal of these interviews was to identify overall resource opportunities and challenges in southern Washoe County, while also collecting information that aided in the study of key issues and the development and refinement of the project's vision and planning principles. These stakeholders continued to play an important role in the development of the Plan during individual committee meetings and through public and special purpose workshops.

The County wanted to ensure the Plan had a firm foundation in science, and that it provided an avenue for soliciting input from representatives of a wide range of interest groups and the general public. Accordingly, an outreach program was developed that featured three major components: a Science Review Team, a Stakeholder Advisory Committee, and public workshops. The Science Review Team was comprised of representatives from federal, state, regional and local agencies who would focus on open space and natural resource data and management strategies. The Stakeholder Advisory Committee was comprised of representatives from advocacy and interest groups, and helped to ensure focused discussions on issues and strategies. Workshops were held at various locations throughout the county to provide information, facilitate discussion, and obtain the viewpoints of the general public. Throughout the project, county staff ensured ongoing communication with the public through the county's website, newspaper interviews, and special presentations to smaller groups.

More detailed information summarizing the results of initial stakeholder interviews, materials reviewed with the Science Review Team and Stakeholder Advisory Committee, and materials and summary notes from the four public workshops can be found in the Inventory and Assessment component of this plan.

Outcomes-Based Vision and Planning Principles

A vision is a statement picturing a preferred future, an end state featuring desired outcomes. Too often

future plans are prepared simply to keep up with a projected trend or scenario. By taking the time to look at current circumstances and resources, and entering into a public discussion of desired outcomes for the future, communities and regions can take control of their future. With a clear vision, actions can be taken that fulfill clearly stated community objectives. Washoe County and its planning partners have the culture, the capacity and a history of planning; that provide a natural platform for developing a clear statement about a desired future. The Stakeholder Advisory Committee, the Science Review Team and the community as a whole examined the foundation of information, and developed a vision, a 20-year look into the future of the region's open space and natural resources. In addition, to ensure the planning effort would be focused toward achieving the vision, these same committees and participants helped develop a set of planning principles, statements reflecting desired outcomes. The principles also serve as criteria against which the success of the Plan can be gauged.

Decision-Making Process

The Regional Open Space and Natural Resource Management Plan is the product of a true collaboration between Washoe County, its family of planning partners (agencies, federal agencies, tribal governments, local jurisdictions, interest and advocacy groups), and the general public. A truly collaborative process requires asking a lot of questions and sharing information. The decision-making process used in this planning process was carefully intertwined with the public, agency and stakeholder involvement process discussed earlier; both involved three key steps: educate, inform and involve.

The public, agency and stakeholder outreach process has been described in a previous section of this document. A series of meetings with the Stakeholder Advisory Committee and Science Review Team and several workshops with the public were instrumental in establishing the vision and associated principles



PAUL MANSON

for the Plan. In these meetings and workshops, the project team worked closely with the stakeholders and the public to determine their values – what they felt to be important with regard to individual resources. Using these principles and values, the project team, stakeholders and the public were able to use an evolutionary process for developing a preferred future scenario for open spaces and natural resources within the region.

Following completion of the draft Plan, Washoe County staff took the Plan on the road, providing briefings to County Citizen Advisory Boards; Reno Neighborhood Advisory Boards; Sparks Citizen Advisory Committee; the City of Reno; the City of Sparks; and the elected and appointed officials of the the Washoe County Planning Commission, Open Space and Regional Parks Commission, Truckee Meadows Regional Governing Board, and Washoe County Board of Commissioners. After receiving and responding to comments from the reviewing parties and adopting and endorsing agencies, a final Plan was prepared.

Streams, seeps and springs provide important refuge for wildlife and include forested or dense vegetation habitat for migrating species.

CHAPTER 4 Setting the Stage: Summary Findings

*“Forests, lakes, and rivers,
clouds and winds, stars and flowers,
stupendous glaciers and crystal snowflakes
– every form of animate or inanimate
existence, leaves its impress
upon the soul of man.”*

ORISON SWETT MARDEN

This initial planning effort was built on a foundation of public outreach along with inventory and assessment reports. The public outreach included stakeholder interviews with key groups and interests in the county as well as public open houses held throughout the process. The public open houses included exercises and surveys to solicit feedback from the public. The inventory and assessment reports studied the current status and trends of natural resources, open space and recreational resources in the study area. These reports all serve as the scientific and technical foundation for the recommendations in this Plan. This section briefly reviews the findings of these efforts.

Findings from Stakeholder Interviews

The stakeholder interviews included over 24 group interviews with two to five participants each. The groups were invited based on resource or policy issues and included state and federal agency representatives, tribal representatives, private developers and realtors, recreation advocates, environmental conservation groups, fire and public safety agencies, and transportation agencies. These groups were all asked to reflect on a series of questions about the role of open space and the region's natural resources. These informal sessions provided the initial direction for identifying key issues for the Plan to address.

Everyone agreed that the region's open spaces provided a critical component in the county's quality of life. Many noted that open space in Washoe County was a way for everyone to have some elbowroom and that it provided a shared backyard for every resident. Others noted how important the region's open space is in attracting visitors and tourists. Many also noted concern over preserving access and connections to these open spaces. Noting the many planning partners in the region, it was clear that coordination and partnership were important tools for the successful management of open space.



PAUL MANSON

Open house events during the planning process included exercises and interactive events to include public feedback.

The status of the region's fish and wildlife was a concern for many as well. It was a concern that the number of species that are protected because of the threat of extinction would continue to grow. This included rare and unique plants and animals as well as larger, more visible species such as mule deer. These concerns also include fears of losing wildlife viewing and hunting opportunities as well as the loss of native plants for gathering, especially by tribal users.

Another concern is that the loss of open space to development is creating challenges for managing floods and water quality. With development farther out from the center of the urban areas, more surface water runoff is being generated, creating more water in flood events and generating more water pollution.

The interviews also suggested several areas that could help improve the management and maintenance of open space areas. Many participants in the interviews recognized that there were many agencies and groups involved in managing open space and

natural resources, and that increased coordination and partnerships were important for the region. Additionally, funding was identified as a challenge. Concerns were expressed that more funding should be available for acquisition, but of more importance to many was the need for funding of operations and maintenance. Operations and maintenance were identified as one of the biggest challenges for open space and included issues of fuels management, illegal dumping, law enforcement, and invasive weed management, among others.

Additionally, education and outreach have also been identified as a key opportunity. As the region's demographics have changed with new residents moving into the area, new expectations and understandings of what open space is and how it is managed are developing. Many suggested increasing interpretive programs, partnerships with non-profit organizations, and educational programs to help teach the public about the natural wealth of the region and the ways to enjoy it without impacting it.

Findings from Public Process

Five public open houses were held throughout the planning process. The first one introduced the planning process to the public and allowed for a general discussion of issues and locations that are of importance to the community. The next two open houses were an opportunity to test the values and issues that were identified in the inventory and assessment process as well as in the stakeholder interviews. The fourth open house provided the public an opportunity to review and comment on the draft goals and policies for the Plan and to work with mapping to view and vote on areas of importance. The final public workshop was held on January 24, 2008, at the May Museum and provided an opportunity for the public to view the entire plan in one document and share their thoughts, concerns and questions.

The key issues identified in the public open houses focused on what resources and areas required protection or action. The resources that were identified included unique hydrological features, wildlife and native plant habitats and migration corridors, and trails and connections. Unique hydrologic features include the Truckee River, Lake Tahoe, Pyramid Lake, the region's playas, and the mountain streams. Concerns were expressed about both the loss of habitat in the region and the loss of connections between habitats, for example, preserving migration corridors for species that spend the winter and summer at different elevations. Recreation and trail connection issues stemmed from public concerns that access and trail connections are being lost through the development of open space, which restricts public recreation.

Areas of concern that were identified in these public events included popular recreation areas and areas that provide scenic backdrops in the region. The Pah Rah Range, Carson Range, Virginia Mountains, Peterson Mountain, Peavine Mountain, Mt. Rose, and the Dogskin Mountains were all identified repeatedly as scenic and recreational resources. As expected, the

Truckee River, Lake Tahoe and Pyramid Lake were consistently identified as important. Additionally, the wide open spaces in the north and the rural character of Washoe Valley were also identified in the exercises. These results aided planning staff as the Plan goals and policies were developed. More information on the public involvement process and the results can be found in the Public Involvement Plan document. This document is available on request from the County.

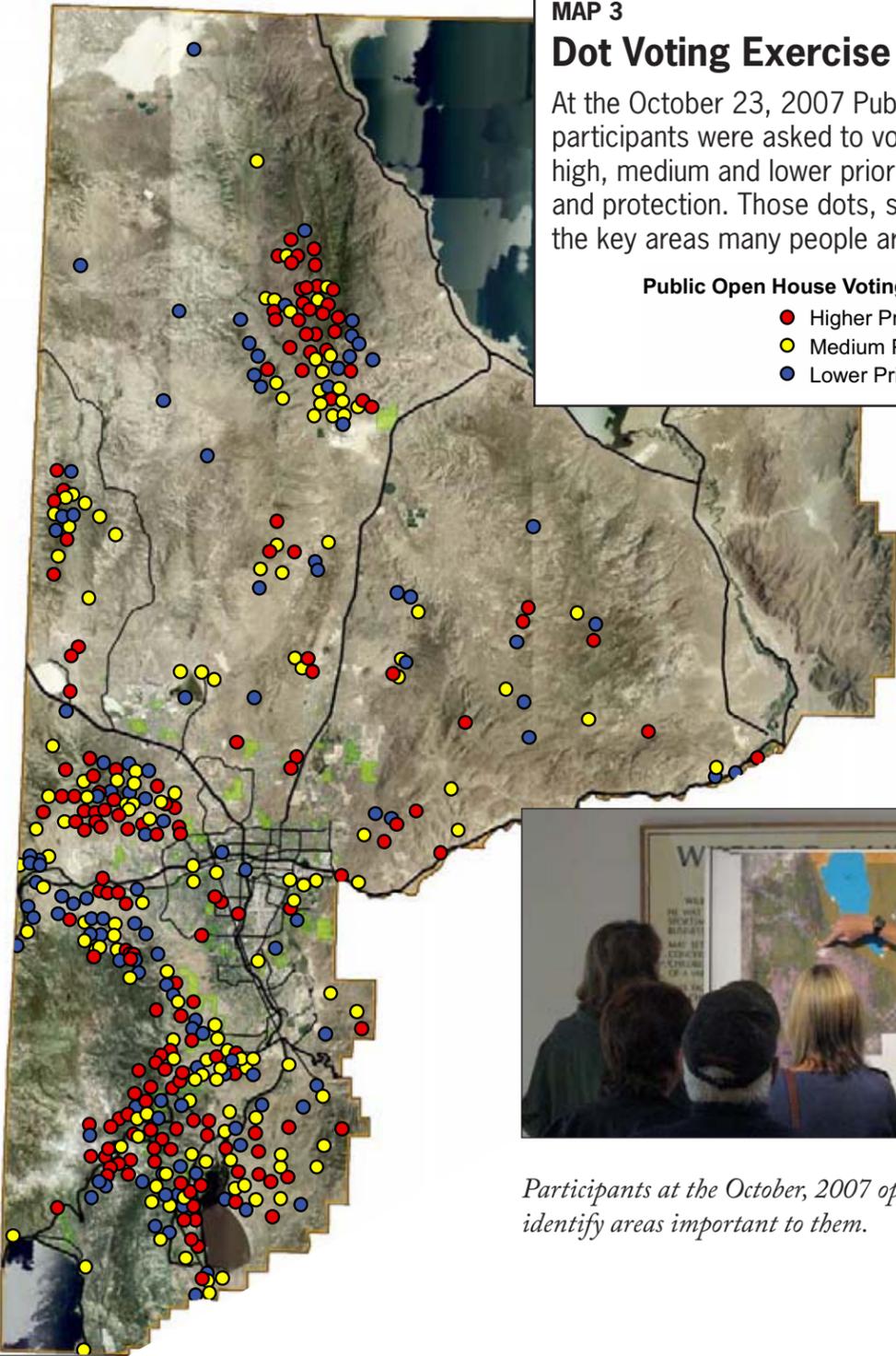
Inventory and Assessment Reports

One of the first steps in the development of the plan, while the public outreach was underway, was a technical review of the region's natural resources, open space and recreational resources. These reports provided the County, the advisory and review committees and the public with the information and foundation to develop this plan. The summary findings of these are given below.

Recreational Resources

The recreational resources inventory and assessment report looked at both the demand for recreation and the supply of facilities to meet it. Population trends in the region include a projected population of 500,000 by 2025 as well as an aging population with different demands and expectations. The shift in the age of the population is expected to increase demand for passive recreation, such as hiking and cycling. These trends were also noted in recent public surveys conducted by the County and included demands for more trails and trail connections, including developed nature viewing areas.

Additionally, population centers are moving north into the Spanish Springs area and south into the Southeast Truckee Meadows area. These changes also bring new challenges in assuring proper levels of service in these new centers. These levels of service are defined by County standards and are currently not being met. However, the region's park availability is comparable



MAP 3
Dot Voting Exercise
At the October 23, 2007 Public Open House participants were asked to vote with dots to identify high, medium and lower priority areas for preservation and protection. Those dots, shown here, help show the key areas many people are concerned about.
Public Open House Voting for Priority Areas
● Higher Priority
● Medium Priority
● Lower Priority



Participants at the October, 2007 open house place dots to identify areas important to them.

to other lower-density cities such as Houston, Tampa and Atlanta. Additionally, open spaces such as federal lands are not included in this calculation.

The unique natural setting and recreational preferences of the region may require a new set of standards to ensure the public's recreational needs are met. Traditional park infrastructure plays a different role in each community, and public desires for trails, hiking, cycling and solitude in outdoor experiences change the way these resources are evaluated. For successful recreational planning, these different values and demands are critical and are discussed further in the Recreational Resources section.

The planning process identified that the region's stated goals of providing formal or traditional parks have not kept up with population growth. Because of the region's open space and natural areas in proximity to where people live, this number may need to be adjusted to meet the values of the residents. Traditional parks provide different recreational activities which are more active, such as organized sports, and may include pools or turf. However, with the noted change in recreational preferences, these may not serve the same interests in the region in the future. As open and green spaces for passive recreation like wildlife viewing, hiking or walking grow in demand, traditional parks will not necessarily serve the same purpose. However, this change will need to also require evaluation of the distance residents are expected to travel from home or work to recreate. If the only passive opportunities are well outside the cities it may require too much travel for users to feel served. Therefore, natural area recreation will need to be protected, restored or developed within urban or suburban areas.

Open Spaces

Open space consists of undeveloped lands with significant natural, cultural and visual resources that are integral to the county's quality of life. These resources include unique geological or water features, areas of

The unique natural setting and recreational preferences of the region may require a new set of standards to ensure the public's recreational needs are met.

critical environmental concern, cultural resources, community-shaping open space, and urban open spaces. Additionally, a defining characteristic of open space in the county is the large amount of land under federal or tribal ownership. The open space inventory and assessment report examined these resources and their relationship to other values such as recreation and natural resources.

Unique geological or water resources were identified in the report. Water resources include the Truckee River, Steamboat Creek, Lake Tahoe, Washoe Lake, and Pyramid Lake. Major playas, perennial streams and ditches make up additional significant features. Geological features include the Incandescent Rocks area as well as the region's geothermal resources, including hot springs.

Areas of critical concern are based on a program the BLM administers to protect special features or species on BLM land. These include protected areas for Steamboat Buckwheat, Carson Wandering Skipper, and Virginia Range Williams Combleaf and for the Pah Rah petroglyphs area.

Cultural resources have been identified throughout the region and are particularly rich near water sources, including seeps and springs. These resources can be traced from the more recent development history of the county back in time to the first inhabitants of the region. There are presently over 5,000 known cultural sites in southern Washoe County. However,

most of these sites have not been formally surveyed or studied.

Scenic and community-shaping areas include visually significant mountain ranges, ridgelines, hills, or individual mountain peaks, as well as the valley floor. These form a significant backdrop and contrast to the more urbanized portions of the county and are a part of the day-to-day "visual experience" for both residents and visitors. If these areas were to fully develop, the quality of this experience would change dramatically. These areas also help to maintain community identity by creating breaks between community developments.

The planning process identified a number of threats and opportunities for open space in the study area. The unique water resources of the region have been impacted by development, diversion and pollution. However, a number of new efforts are underway to improve the quality of these resources, most notably the Truckee River Flood Control project and its restoration goals. But these efforts also include the development of a new open space plan by the City of Reno and the future development of a plan by the City of Sparks. Restoration efforts are underway along Steamboat Creek through the Washoe-Storey Conservation District. Yet other water and geological resources still remain unprotected or at risk of being impaired. This includes the region's wetlands, playas and floodplains. Areas of Critical Environmental Concern (ACEC) are resources that are considered better protected due to their location on BLM lands and regulatory requirements for protection. These designations may also be an opportunity for protecting other resources that are not currently under any protective designation.

Risks for cultural resources include loss or destruction through other land uses or recreation. Often this may be unintentional but, nonetheless, is irreversible. Vandalism and theft also remain a challenge in protecting these resources. Protection of these resources requires identification of resources, and then using various measures to steer impacts away from

them. Cultural resources can also include present day activities such as gathering of traditional materials. For these resources, access is the critical issue. Agreements and measures to maintain or improve access have been developed but still can go further. Scenic and visual areas in the region are highly valued both for providing a defining backdrop and to create distinct community identities within the region. The main threat to this resource is development that builds in highly visible areas and recreation that scars the landscape. A challenge to managing visual and scenic resources is first defining them, and then managing development when the resource may serve many communities and be in any number of responsible jurisdictions. Opportunities for this include developing a regional definition of visual and scenic areas that can allow for a coordinated management effort.

Natural Resources

The Natural Resource Inventory and Assessment Report focused on three areas: biodiversity, water resources, and natural hazards. These categories provided a framework for the development of goals and policies in this Plan. These three categories also focused on the natural functions of the environment and the landscape's ability to support species, to naturally provide water for human and wildlife health, and to manage floods, fire and storms.

The region's biodiversity resources are uniquely diverse; of the 27 habitat types that occur in Nevada, 23 can be found within the study area. This diversity is reflected in the journey the Truckee River takes from alpine lakes and forests through montane woodlands, to the urban areas of Reno and Sparks and on through the canyons and sagebrush lands to Pyramid Lake. These habitats were studied for the species of wildlife and fish and plants they support and provided valuable information on which habitats are critical for the health of the region's ecosystem. Most of the threats to the region's biodiversity come from loss of habitat because of development or loss of water, the spread

The Natural Resource Inventory and Assessment Report focused on three areas: biodiversity, water resources, and natural hazards.

These categories provided a framework for the development of goals and policies in this Plan.

of invasive species, impacts of catastrophic fire, and inappropriate recreational uses.

Water resource issues concern both surface water and groundwater, including streams, rivers, and aquifers beneath the surface. These resources are needed to support fish and wildlife and to provide safe drinking water in the region. Threats include the overuse of water due to development, the loss of recharge areas from conversion of natural areas, and pollution from runoff, agriculture and industry. Open space plays a critical role in collecting, filtering and storing water resources.

Natural hazards include floods, fire and landslides. All of these are of critical importance in the region, but conflicts occur where natural occurrences of these hazards meet new development, causing potential threats to homes. Healthy open spaces are a way to buffer and protect our communities from the impacts of these threats.



MARK SHELDON

Streams, creeks and ditches provide opportunities for recreation routes but must include other natural resource goals.

CHAPTER 5 The Plan

*“When one tugs
at a single thing in nature,
he finds it attached
to the rest of the world.”*

JOHN MUIR

This section of the Plan introduces the goals and policies. The section is organized by the key resource categories for open space and natural resource management for our region:

- Biodiversity Support
- Cultural Resources and Sensitive Lands
- Natural Hazards
- Recreation Resources
- Visual and Scenic Character
- Water Resources

The Plan discusses the challenges to and opportunities for each of these resource categories in detail and provides resources for interested stakeholders and members of the public to learn more and become involved in the issues.

In addition to these categories, the Plan recognizes five important and common challenges for open space and natural resources in the region. These common challenges span resource issues across the region – and represent the areas that require the most effort to protect our region’s resources.

- **Wildfire:** Severity and frequency of wildfires have grown above natural levels. These fires threaten property and lives as well as rare and critical biodiversity. The reasons for growth in wildfire are complex and varied, but generally are due to increases in wildfire fuels due to invasive species and to past management practices. However, increased development in the growing wildland/urban interface also contributes greatly to this challenge.
- **Invasive Species:** By pushing native vegetation out, invasive species convert valuable habitat, threaten fish and wildlife species, and provide a dangerous fuel source for wildfires. These species expand rapidly after a wildfire and can

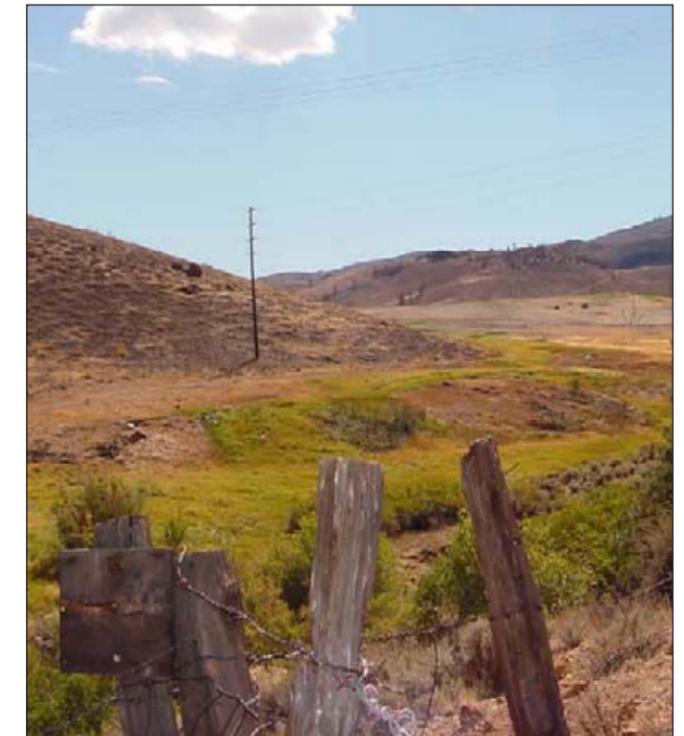


BILL GARDNER

Challenges for open space and natural resources include managing many different impacts, such as utility corridor impacts to views, and managing working landscapes such as agriculture.

also be spread by agriculture, recreation and land disturbance from development.

- **Multiple Use:** The challenge of multiple use is that as the region grows with new residents and more visitors, organizing compatible and incompatible uses will be necessary. Those users also have different impacts on the landscape, and some landscapes are less capable of supporting increased use as demands grow.
- **Development:** The popularity of our region has attracted many new residents, and with them, development has expanded to provide homes, jobs and other opportunities. The location of development will be critical in determining which species and habitats are impacted. Additionally, as development expands it can also create new threats from flooding, wildfire and invasive species if not planned properly.



MIKE BOSTER

- **Acquisition and Management:** The region’s open space and natural resources have increasing management requirements, the same requirements that face private and other landowners. Increasing use leads to managing trails, illegal dumping, and other law enforcement issues. Fuels management as well as invasive species are a continuing challenge. Identifying dedicated funding is necessary to meet these challenges.

Biodiversity Support

What is biodiversity support?

Southern Washoe County has a very diverse landscape which contains 23 of the 27 vegetation communities found in Nevada (as identified in the Nevada Department of Wildlife [NDOW] Wildlife Action Plan), Nevada Natural Heritage Program and the The U.S. Geological Survey Southwest Regional Gap Analysis Project (SWReGAP) data, ranging from desert scrub to alpine tundra, from woodlands to desert playas and ephemeral pools. These vegetation communities are defined by the species that are present or supported by the area. This Plan relies on vegetation communities because they are easier to measure, and they provide support for levels of biodiversity that are otherwise difficult to evaluate. Each of the 23 vegetation communities provides unique functions important to the natural health and environmental sustainability of the region.

Biodiversity support is the ability of these 23 vegetation communities to support species, as well as to provide important functions associated with each vegetation community (e.g., the physical, chemical, and biological processes or attributes of each vegetation community). A particular focus is on those communities that support listed species and species of identified concern such as sage grouse, mule deer, black bear, antelope and bighorn sheep. Biodiversity support also includes the ability of each vegetation community to perform critical ecosystem services for the region and the continued possibility of meeting the needs of future generations.

What are the challenges facing biodiversity support in our region?

Biodiversity support faces a number of challenges caused by the diminishing quantity and quality of vegetation communities and the key functions they perform. All the vegetation communities within the region are being



MORE INFORMATION

To learn more about these resources and to view technical information, please see the Natural Resource Inventory and Assessment Report, available online at: www.washoecounty.us/openspace.

altered from historic conditions to some degree by actions which include, but are not limited to:

- **Urban and suburban development:** As development occurs, areas are converted from their natural state to one that may no longer support the species that used the area. This may also result in the introduction of new non-native species with landscaping or construction.
- **Recreational activities:** Human use in certain areas or at certain times of the year may discourage wildlife from using the area. Recreation can also impact plants through damage from hiking, biking or motorized activities as well as through the transport of invasive species.
- **Alterations to fire regimes:** Severe fires can replace the vegetation communities within the area burned. This conversion can result in the loss of rare and valuable ones. Fires also create an opening for invasive species to enter and establish, which keeps native vegetation from returning.
- **Construction of dams:** Dams alter the flow of water by changing the times and locations of flows, raising temperatures and preventing passage of fish.
- **Regulation, or diversion, of stream flows:** Levees or other modifications within the

floodplain change the speed and types of flows. This in turn can change the aquatic habitat and remove entire stretches of a river from use by species. Diversions and use of water can also reduce flows, so that the temperature rises dangerously high or does not leave in-stream flow behind for species to use.

- **Industrial discharge:** Pollutants and heated waters can come from industrial users, and this may result in loss of aquatic habitat and poor water quality. These impacts can remove certain species from areas downstream of the discharge.
- **Mining:** Surface mining and subsurface mining both produce and expose humans and wildlife to toxic compounds that may be released due to the mining process. Surface mining, which includes aggregate operations, can also drastically change the landscape through the removal of unique vegetation communities and increased human activity.
- **Livestock grazing:** Intense grazing can result in the loss of land cover and compaction of the ground adjacent to water. Compaction speeds erosion of soil and damages riparian areas. Grazing often includes both the intentional and unintentional introduction of non-native invasive species.

These actions alter key vegetation communities and limit or impair the ability for habitat to support species through:

- Loss of native vegetation
- Introduction of invasive (non-native) species
- Soil erosion and pollution
- Decreased water quality and quantity
- Habitat fragmentation

What is biodiversity?

Biodiversity is a term that often leads to many definitions or understandings. For the Regional Open Space and Natural Resource Management Plan, biodiversity is a measure of the number of vegetation communities and species that are present in the region. It is a way of understanding the great variety of plants, animals and insects that are present. Biodiversity support is how the landscape in the region supports this diversity of plants and animals and maintains their healthy populations.

What are vegetation communities?

The vegetation communities that are included in this planning effort are defined by groups of plant communities that occur within areas that share common environmental traits, such as soils, climate, or other natural processes. These communities include both native vegetation communities and altered communities where development, fire or invasive species may have changed the landscape. The vegetation communities classification was developed by a coalition of federal agencies, universities and conservation organizations and is recognized as a high quality tool for conservation planning.

How does biodiversity relate to ecosystem services?

Biodiversity provides the foundation for many ecosystem services. Because biodiversity is a measure of health for the natural world, it is also a measure of how natural processes are able to support our society. A healthy natural system will moderate the size of pest or disease outbreaks that may damage a forest and in turn present a fire hazard to our communities. A healthy riparian or floodplain area provides us with filtering and storage capacity to safeguard our drinking water. By protecting biodiversity we directly support many of the ecosystem services we rely upon for our own health and safety.

How are species protected?

Various plants, animals and insects in the region receive unique protection because they are threatened with extinction or continued loss. These protections include the U.S. Endangered Species Act and the State of Nevada statutes that provide protections for sensitive, threatened and endangered species. These laws prohibit the killing or harming of certain species and may also include the protection of the habitat these species rely upon. Often the species protected by these laws are called **listed species**. This phrase refers to the species included on protection lists by various agencies that administer the laws.

The protection of these species is often best accomplished through protecting the habitats they rely on for healthy populations. That is why this Plan relies on the use of vegetation communities to measure the threats and opportunities for these species.

Listed species are not the only species this plan focuses on. It also includes Mule Deer, Greater Sage Grouse, Black Bear, Big Horn Sheep, Pygmy Rabbit, and Pronghorn Antelope. These species were included in all of the same level of analyses as the listed species mentioned above. It is recognized locally that Mule Deer critical winter habitat is being lost under pressure from development and wildland fires.

These all lead to a loss or conversion of key vegetation communities, loss of natural wildlife habitat areas, the displacement or direct mortality of wildlife, the loss of unique endemic and rare vegetation communities and species, and diminished aesthetic aspects of the region.

Also, on a larger scale, global climate change represents a threat to all vegetation communities within the region. Potential effects of global climate change include a shift in vegetation community locations, conversions of vegetation communities, a loss of these communities, increased occurrences of disease in plant and wildlife species, changes in wildlife distribution, and extirpation of plants and wildlife.

What are our opportunities for biodiversity support?

Evaluation or valuation of opportunities for biodiversity support can be a difficult task and requires decisions that often involve tradeoffs in allocating resources. Thus, this Plan aids the County in the decision making related to the preservation, restoration, enhancement, management, and in some cases, reintroduction of key vegetation communities.

As an example, the Plan identifies next steps to assure seeps and springs are protected and the associated habitats that depend on them. This may involve the County applying for water rights or protesting other applications that may harm a seep or spring. With the County becoming an active owner and participant in the protection and management of these, and other, key vegetation communities within the region, it will benefit fish and wildlife, listed species, such as the Carson Wandering Skipper, and water resources that surrounding communities depend on.

The plan also takes into account not only the preservation and restoration of key vegetation communities for fish and wildlife, but also the value of these areas for recreational, aesthetic, and economic benefits. This may include land trades or acquisition of lands where an area of a key vegetation community may be preserved for

a listed species, such as Steamboat Buckwheat, while another area that is more suitable for recreation can be designated as an area for off-road vehicle use.

What are our policies and goals for biodiversity support?

The Plan provides guidance on ways to protect and manage resources that will justify and set priorities for programs, policies, or actions to protect or restore key habitats and services. Cooperative planning and coordinated implementation will be necessary by multiple entities within the region that are willing to help the County achieve these goals. Federal, state, city and county resources and interests all overlap in the region. Management of the region's biodiversity will not succeed without integration and cooperation of efforts.

The Plan provides the following goals and policies:

GOAL 1: Protect and re-establish migration corridors.

- 1.1 Work with local communities, the public and special interest groups to educate them on the value and need for migration corridors and ways to help reduce impacts on them (such as an "adopt a corridor" type program).
- 1.2 Limit development activities that impede natural migration patterns between habitats on which migratory species depend.
- 1.3 Restore and/or acquire critical migration corridors to assure they are left in their natural state.

GOAL 2: Acquire and restore critical vegetation communities.

- 2.1 Acquire and restore critical areas with particular attention to:
 - 2.1.1 Lake Tahoe restoration projects (including wet meadows within the Tahoe Basin).
 - 2.1.2 Acquisition or cooperative management agreements regarding private in-holdings

in the Warm Springs, Winnemucca Ranch, and Bedell Flat areas for sage grouse breeding and nesting, and for protecting wetlands, springs and seeps in the area.

- 2.1.3 Acquisition of additional private lands to help buffer the Pah Rah High Lakes Basin Area of Critical Environmental Concern (ACEC) and Wandering Skipper ACEC.
- 2.1.4 Steamboat Creek starting at the headwaters in Little Washoe Lake.
- 2.1.5 Habitat for Altered Andesite Buckwheat.
- 2.2 Accept dedications and donations of open space only after evaluating their suitability in meeting the goals and policies of this Plan. Donations that create undue management costs because of invasive species, wildfire risk, or misuse should only be accepted with a pre-identified funding source to mitigate for these issues or if the land serves multiple values as identified in the goals and policies of this Plan.

GOAL 3: Achieve species restoration goals through cooperative efforts.

- 3.1 Work with other agencies and jurisdictions to achieve species restoration goals.
- 3.2 Work with state and federal agencies to identify any potential land exchanges, leases or acquisitions that will add unique habitats to the Washoe County Open Space Plan.
- 3.3 Support partnerships for the use of Southern Nevada Public Land Management (SNPLMA) Funds for the acquisition of environmentally sensitive lands.
- 3.4 Any efforts to dispose of properties through Public Land Bills or other legislation should rely on values based upon scientific assessments.
- 3.5 Support and encourage the passage of local and state bond measures to support future acquisition and management of open spaces and environmentally sensitive lands.

- 3.6 Support the establishment of regionally consistent or complementary conditions of approval for dedication of sensitive lands as open space.
- 3.7 Coordinate with the Nevada Department of Wildlife (NDOW) on acquisitions that will benefit species diversity identified in the Nevada Wildlife Action Plan.
- 3.8 Work with all planning partners to develop funding sources and incentives for the acquisition, dedication and maintenance of open space and sensitive lands.
- 3.9 Coordinate with the Regional Transportation Commission and the Nevada Department of Transportation to minimize the location of new transportation corridors through dedicated open space and parks.

GOAL 4: Control invasive non-native species in the region.

- 4.1 The County will support government and private efforts to control the spread of invasive, non-native species throughout the region through eradication, prevention and education activities.

GOAL 5: Protect important habitats from impacts or loss due to development.

- 5.1 Ensure that riparian and environmentally sensitive areas within the County’s jurisdiction have adequate buffers from development to protect critical functions.

VEGETATION COMMUNITY
Lower Montane Woodlands

What defines this vegetation community?

It is found in drier landscapes and is normally dominated by piñon-juniper stands. These woodlands provide important cover for wildlife, including areas for nesting and forage. Because of the evergreen cover provided, these woodlands provide protection from summer heat and winter cold. It also provides nut and berry crops important to wildlife species. Piñon nut gathering is a traditional cultural resource for Native American groups in the region and a defining resource for the Great Basin cultures.

The spread of this vegetation community has been encouraged in some areas because of the aesthetic desirability of trees. It has replaced sagebrush in some areas, usually adjacent to development where residents prefer the trees instead of sagebrush. This vegetation community also presents a higher risk for wildfire and when



CAROLYN POISSANT

A view of the foothills in Canepa Ranch.

mixed with development brings homes and the habitat into possible conflict.

Vegetation that can be found in this habitat includes curl leaf mountain mahogany, bitterbrush, serviceberry, snowbrush and manzanita.

What species are dependent on this vegetation community?

- Ferruginous Hawk
- Fringed Myotis
- Spotted Bat
- Townsend Big-eared Bat
- Western Small-footed Myotis

Where is this vegetation community found?

It is primarily located on the sides of the region’s mountains and ridges between 5,000 and 8,000 feet elevation. The Pah Rah Range, Dogskin Mountain and the Virginia Mountains contain large and dense areas of this habitat. It is also on the slopes of Peterson Mountain, Peavine Mountain and in the foothills of the Carson Range.

VEGETATION COMMUNITY
Intermountain (Cold Desert) Scrub

What defines this vegetation community?

This vegetation community is found in areas with extreme temperature variation and little precipitation. Plants that grow in this area are limited by the salinity and drainage of soils. The soils also tend to be loose materials such as sand or gravel and provide opportunities for burrowing animals. This soil type also tends to be higher in moisture than adjacent upland areas. This makes it important for migrating species as they move across the landscape.

This loose soil type also means the Intermountain Scrub is susceptible to damage from motorized activities and recreation. This soil type also works to store or slow the movement of runoff after storms. Changes in runoff or surface water flows due to development can reduce the ability of these areas to store water and in turn speed flood waters downstream.

Vegetation that can be found in this habitat includes sagebrush, bitterbrush, sandberg bluegrass, needle and thread grass, hawksbeard, phlox and Indian paintbrush.

What species are dependent on this vegetation community?

- | | |
|-------------------------------|-----------------------------|
| • Bald Eagle | • Loggerhead Shrike |
| • Brewer’s Sparrow | • Long-Nosed Leopard Lizard |
| • Burrowing Owl | • Pale Kangaroo Mouse |
| • Dark Kangaroo Mouse | • Pallid Bat |
| • Desert Horned Lizard | • Sage Sparrow |
| • Ferruginous Hawk | • Mule Deer |
| • Great Basin Collared Lizard | • Pronghorn Antelope |
| • Kit Fox | • Sage Grouse |



JENNIFER BUDGE

Natural areas within Sun Valley Regional Park.

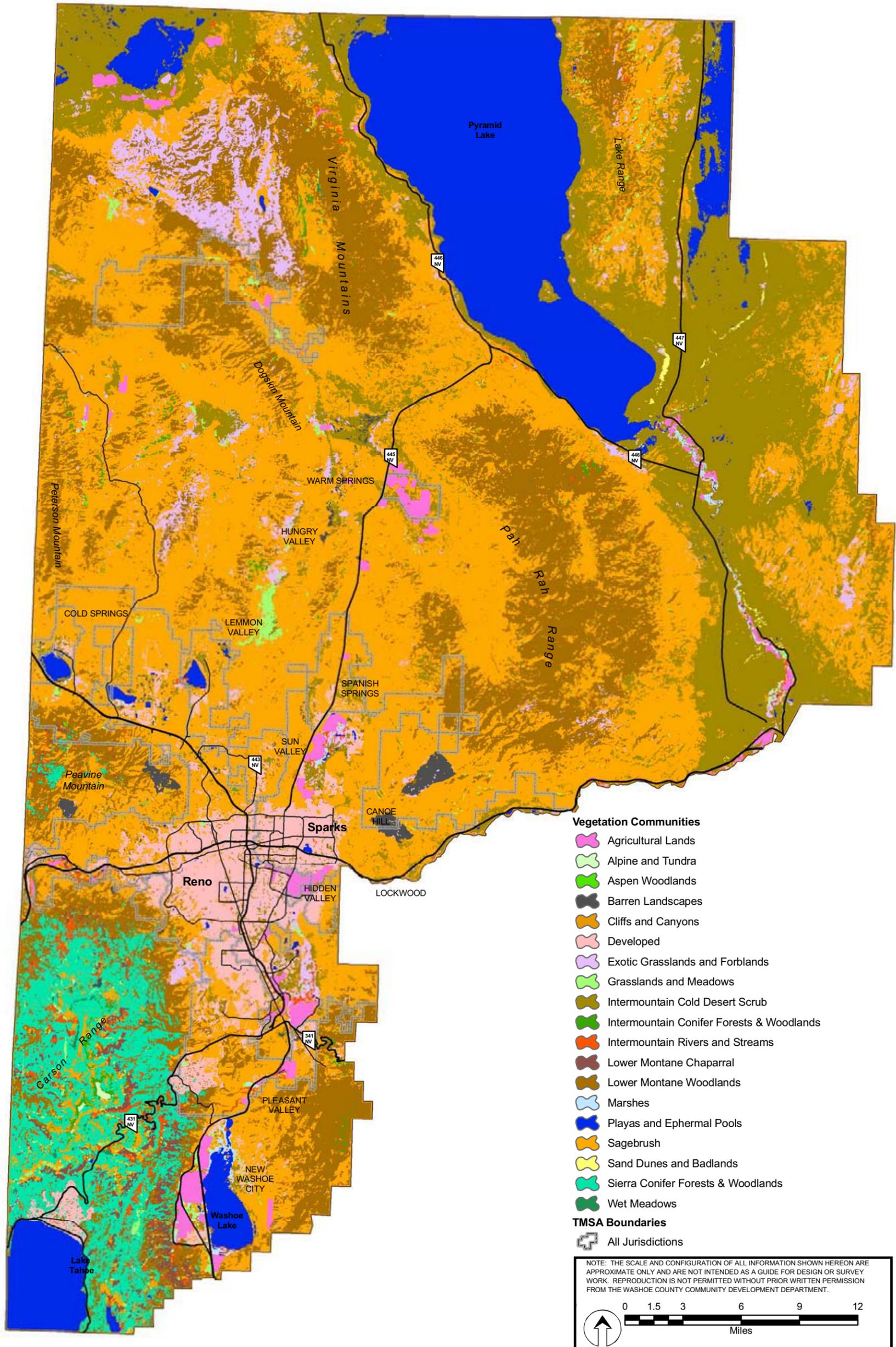
Where is this vegetation community found?

Intermountain Scrub is primarily in the northern and eastern portions of the study area in the valley bottoms. Areas of this habitat surround Pyramid Lake and Honey Lake and are found along the Truckee River just beyond the riparian corridor.

MAP 4

Biodiversity Resources

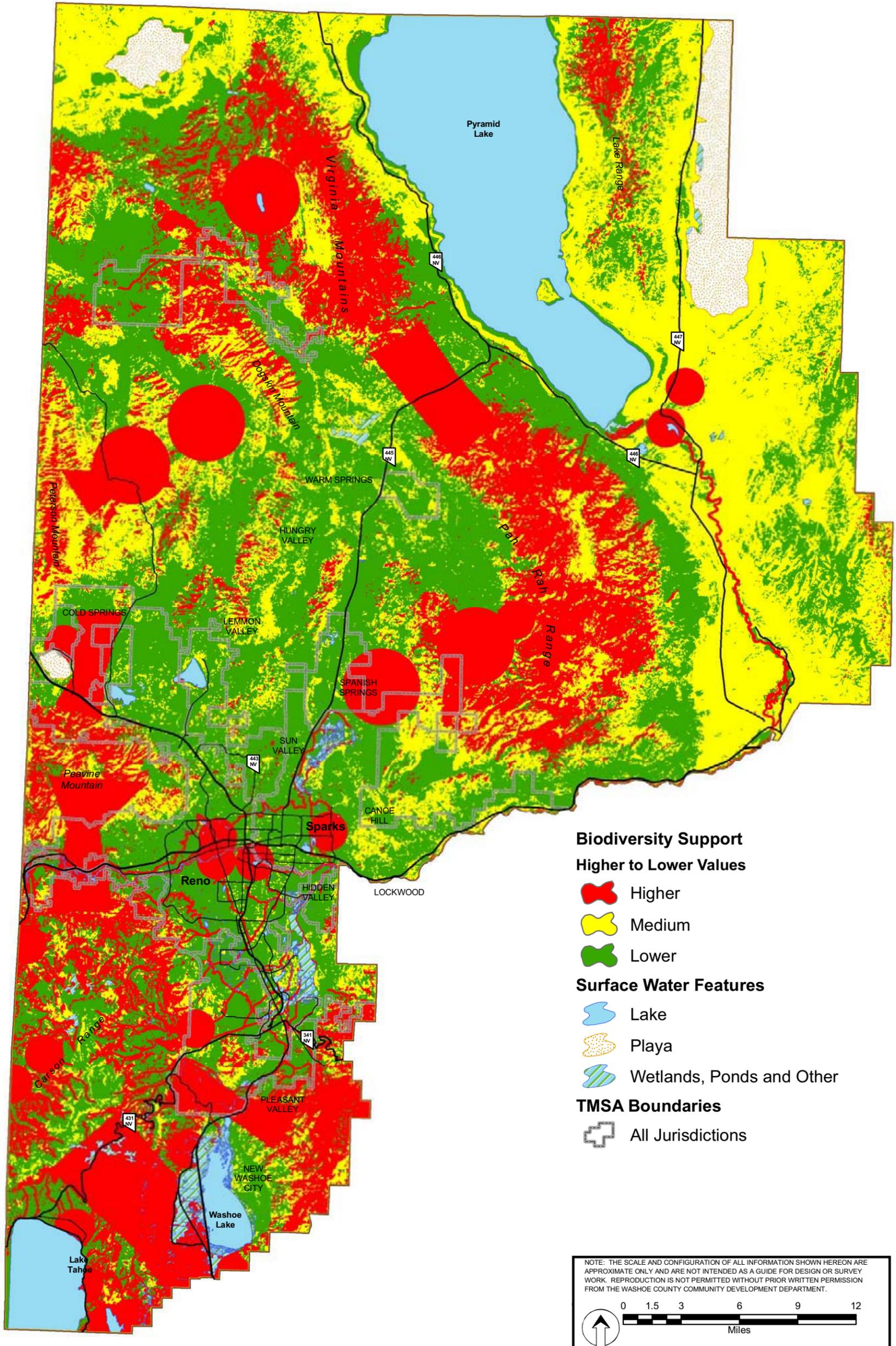
The measure of biodiversity support used in this plan is based on the Southwest Regional Gap Analysis Project (SWReGAP). This project performed a large area analysis to develop mapping of vegetation communities across the Southwestern U.S. This map shows what vegetation communities are present and where. These data provide a basis for connecting plant and animal species to a habitat or area they need to maintain healthy populations.



MAP 5

Biodiversity Values

Through the planning process, the County worked with regional partners including state agencies, local conservation groups and other professionals to identify important features for supporting biodiversity in the region. These features include vegetation communities, migration corridors, important bird areas, and the known location of species protected by law or of particular interest to the County. Areas of high value on this map include vegetation communities that support the most species, provide migration routes, or are a location of a protected species. The lower value areas tend to reflect a loss of habitat quality, either through the spread of invasive plants or weeds, development or recent wildfire.



Cultural Resources and Sensitive Lands

What are Cultural Resources and Sensitive Lands?

Cultural and sensitive landscapes are two of the region's most fragile – and irreplaceable – assets. Once these are destroyed or damaged, as a result of development, vandalism or recreational overuse, they are unable to be replaced, and a part of our history is lost forever.

Cultural resources or cultural landscapes refer to areas that were previously inhabited – from prehistoric times to the immediate past and many of these areas are still utilized and highly valued by Native Americans for their cultural practices. They include remnants of the built environment, settlement, or occupation. They may encompass archaeological sites, where tools, rock rings, or petroglyphs might be found; fishing, hunting, gathering or mining camps, or wintering villages; historic buildings and structures; constructed landscapes, such as irrigation canals, gardens or windbreaks; or any modification to the landscape or manufactured or humanly altered object.

The term *archaeological resource* means any material remains of past human life or activities which are of archaeological interest and cultural significance. These include but are not limited to: pottery, basketry, bottles, weapons, weapon projectiles, tools, structures or portions of structures, pit houses, rock paintings, rock carvings, intaglios, graves, human skeletal materials, or any portion or piece of any of the foregoing items.

Historic resources recorded in Nevada include buildings, structures, objects, districts, and landscapes in addition to archaeological sites. Most often these resources are associated with mining districts, agriculture, transportation corridors, and military bases. Euroamerican settlement in Nevada began in the 1850s when gold and silver were discovered on the Comstock, and as Mormons constructed missions in the southern part of the state. The development of Reno and Sparks,



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Rock art from the Court of Antiquities is an example of the wealth of cultural resources in the region.

like other Nevada cities, was largely the result of the construction of transcontinental rail lines.

Traditional and cultural uses of some of these landscapes may persist through time, for example, the gathering of medicinal plants, harvesting of materials for basketry, or conducting religious ceremonies at selected locations. Because many of these uses have been practiced over multiple generations, loss of the ability to perform these functions – by restricting access to the areas in which they are performed or from vandalism or desecration, for example – can affect the continuity of a people's tradition and heritage by modifying the setting and the loss of context.

Sensitive landscapes, for purposes of this plan, include five Areas of Critical Environmental Concern (ACECs) that have been identified by the Bureau of Land Management. These are landscapes that include very sensitive or rare geologic features, such as areas of rare volcanic rocks or geothermal features; landscapes that support endangered plant species

(e.g., Steamboat Buckwheat, Williams Combleaf) or animals (e.g., Carson Wandering Skipper); or landscapes that include significant concentrations of archaeological resources. Culturally sensitive landscapes are very common in the Washoe County planning area. There is one ACEC identified within the planning area for cultural sensitivity.

The primary benefits to preserving and protecting cultural resources and sensitive landscapes are the opportunity to preserve local and regional heritage, and the opportunity to provide suitable educational and interpretive opportunities that do not compromise the integrity of the resource and allows existing traditional practices to continue.

What are the Challenges for Cultural and Sensitive Resources in our Region?

There are several challenges facing the region's cultural and sensitive resources.



MORE INFORMATION

To learn more about these resources and to view technical information, please see the Open Space Inventory and Assessment Report available, online at: www.washoecounty.us/openspace.

A major challenge is the sheer *magnitude and number of sites*, coupled with the fact that large areas have not yet been mapped or surveyed. There are presently over 5,000 known cultural sites in southern Washoe County; however, this is only a fraction of those that exist. Surveys and studies have not been able to fully capture the wealth of sites in the region. The Cultural Resources and Sensitive Landscapes Map on page 28 shows where there are significant, known concentrations of resources – though actual locations are not shown, to protect the integrity of the resource. Where the map shows a survey grid, it means that something has been discovered within that section, although the entire section may not have been surveyed and the quality of the resource may not yet be documented. Where the map does not show a survey square, it means that no survey has been undertaken, so the resource value is unknown.

It is unrealistic for the County or any entity to survey and evaluate all of these sites; the human and financial resource implications would be significant. It is also unrealistic to expect that public entities would attempt to acquire and maintain all of the affected lands, or that private development or recreational use would be completely prohibited. The challenge posed is thus to find a suitable approach to ensure that as many of these sites are protected as possible while representing a reasonable investment of resources. However, we do know that cultural resources are often clustered around sites such as seeps, springs, or other surface water resources. These resources have always attracted people, and with them, cultural resources were left for present generations to appreciate and learn from. Unique viewpoints or geological formations served a similar function, and can hold many cultural resources not yet known.

A second challenge concerns *continued private development in locations with significant concentrations of cultural resources* – such as the Spanish Springs and Warm Springs Valley – or in proximity to sensitive landscapes such as the Steamboat Creek area. As the map illustrates,

many areas of known or suspected cultural or sensitive resources are privately held. The current development code does not include requirements for protection of these resources; this contrasts with physiographic conditions, such as steep slopes or floodplains, where development is regulated.

The County expects developers to perform surveys of potential cultural resource zones when studying development options. While this responsibility will not be taken lightly, the County also wants to provide opportunities to collaborate with developers, tribes and other agencies charged with protecting cultural resources. It may be possible, through identification of critical buffer zones and through educational programs, to encourage increased voluntary compliance and therefore not require enforcement actions.

A third challenge *concerns unregulated recreational use, including what has been termed “consumptive” recreational use*. Unregulated off-highway vehicle use can affect not only cultural resources but water quality. The Incandescent Rocks area is a popular spot for hiking and exploring, and may warrant additional management actions to ensure that public use does not reach a level where the resource is overwhelmed or degraded. This may become particularly necessary as the North Valleys continue to develop. The Pah Rah High Basin petroglyph area, particularly because of its proximity to a highly developed area east of Sparks, may warrant the same type of management attention.

Underlying this challenge are two somewhat related considerations: first, the multiple jurisdictions that are involved, and second, the lack of adequate staff resources to effectively patrol such large areas. Both will need to be addressed to provide effective protections.

A fourth challenge, suggested above, concerns the *many jurisdictions who are either responsible for these landscapes or have a vested interest in their protection*. These include units of the federal government (BLM and USFS), the State Historic Preservation Office (SHPO), the County,

and area tribes, including the Pyramid Lake Paiute Tribe, Washoe Tribe, and Reno Sparks Indian Colony. Federal and state entities have specific missions and enforcement powers against prohibited acts. The County has no defined mission with respect to cultural resource protection and has limited enforcement capability through the Sheriff’s office. Tribal representatives have a strong interest in resource protection and have formed their own patrols, sometimes involving tribal police. Focusing all of these entities around shared problems and management actions might allow limited resources of any one party to go farther.

Recreational use of BLM public lands is growing at a faster rate than for any other lands. For much of the time that BLM has existed as an agency, the BLM lands have been thought to be too inaccessible and undeveloped to support substantial recreation use. Today, BLM lands are fully accessible due to the pervasive use of off-highway motorized vehicles and mountain bikes. This presents new challenges for enforcing laws on these public lands. One senior BLM official noted that *“BLM has complete regulatory ability to control the impacts on cultural resources of its permit applicants; however the greatest threat to cultural resources today is coming from the rapid increase in recreational access, with essentially no regulatory control, or enforcement capacity in place to deal with growing impacts.”* (National Trust for Historic Preservation, May 2006)

What are the Opportunities for Cultural and Sensitive Resources?

Providing effective yet implementable protections for cultural resources and sensitive lands – in developed areas, urbanizing zones, and in traditional open space areas within the county – will be a complex effort that will need to evolve over time. It is also a process that needs to recognize the relationship between cultural resources, cultural practices and other resources such as water and biodiversity. This Plan can help by providing guidance for the various jurisdictions that are a party to this effort, in the following areas:

How does this relate to other resources?

Water resources: Water is essential for life; therefore, it is no surprise that many cultural resource sites are located adjacent to water. The region’s climate has changed over the geologic and human history of the region. Sites that are dry today may have been wet in the past; thus, present day locations of water are not always indicative of where sites could be found. Members of area tribes still gather plants and use some areas ceremonially. Protecting waterway resources provides an opportunity for protection and interpretation of important cultural sites as well as preservation of traditional uses.

Parks, trails, recreation and connections: Many areas that contain important cultural resources or sensitive landscapes are also popular for recreation – not because of their significance, but because they offer challenging rocky terrain and remote locations that appeal to certain recreationists. Careful management of the type and intensity of recreational uses in these areas can help to ensure that resources are not permanently lost or significantly impaired.

- Developing workable mechanisms for identifying and prioritizing the most sensitive resource areas for acquisition, management and protection. Forming an interjurisdictional task force to provide oversight and guidance would be a good first step, as well as ongoing consultation with tribes.
- Developing workable mechanisms for encouraging partnerships, voluntary support and participation in cultural resource preservation endeavors on the part of the private development community and to assure tribal users have access to these resources.
- A comprehensive, broad-based education program to raise awareness about resource significance and actions with especially harmful or illegal impacts. Education may include the naming of historic areas with their Native American place names and outreach to school programs to learn about the tribal history of the region.
- Suggesting strategies for monitoring and controlling “consumptive” recreational uses while still providing for appropriate public access.
- Suggesting approaches for creating working partnerships between affected agencies, organizations, and jurisdictions involved, so that resource protection is elevated in importance in each agency’s mission, responsibilities are clear, and cooperative efforts are made to leverage each agency’s capabilities and staff/financial resources.
- Managing County-owned lands to protect and provide appropriate access to cultural resources and for usual and accustomed practices such as gathering.

What are our Goals and Policies for Cultural Resources and Sensitive Landscapes?

GOAL 1: Ensure that culturally and environmentally sensitive lands are adequately buffered from development.

- 1.1 Designated Areas of Critical Environmental Concern (ACECs) and known cultural resources



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Prominent rock art or cultural resources require our protection from damage by vandalism.

within urbanized areas will be protected through the use of buffers and other appropriate mechanisms.

- 1.2 Develop and update access management strategies to protect cultural resource areas that are open to public recreation, those that are in proximity to developed areas, and those that are in especially remote locations.
- 1.3 Protect cultural resources through the development review process.

GOAL 2: Protect and manage cultural resources within the region’s urban, rural and urban interface areas.

- 2.1 Work in conjunction with federal, state and local partners to identify critical cultural resource sites and protect them through acquisition, conservation easements, Recreation & Public Purpose (R&PP) leases or other appropriate means.

- 2.2 Participate in the ongoing development of policy and tools for the management of cultural resources within the region's urban, rural and urban interface areas.
- 2.3 Regulate recreational damage on culturally sensitive lands and enforce such regulations with appropriate measures and penalties for violation.
- 2.4 Provide incentives for private developers to voluntarily protect cultural resources in sensitive zones.
- 2.5 Encourage ongoing interjurisdictional coordination in cultural resource management.
- 2.6 Identify and support any potential land exchanges, acquisitions or dedications that will add unique cultural resource sites to public ownership.

GOAL 3: Teach citizens about the history, legacy and uniqueness of the region's cultural and sensitive resources.

- 3.1 The County will work with its planning partners to develop and maintain a comprehensive public education program to teach citizens about the history, legacy and uniqueness of the region's cultural and sensitive resources.
- 3.2 Incorporate the tribal legacy and history of Washoe County in the naming of trails and facilities and through interpretive signs to connect users with the context of the land.
- 3.3 Partner with the Nevada Rock Art Foundation and other local partners to plan and develop the Court of Antiquity petroglyph site on the Truckee River as an educational interpretive park.

GOAL 4: Native American tribes will have access to areas used for cultural purposes.

- 4.1 Ensure continued tribal access to areas used for cultural purposes, including gathering and hunting and traditional cultural practices.



JENNIFER BUDGE

Protecting rare cultural resources requires balancing access to enjoy the resource and protections to preserve them for the future.

GOAL 5: Secure public funding for acquisition and protection of culturally sensitive lands.

- 5.1 Work with all planning partners to develop funding sources and incentives for the acquisition, dedication and maintenance of open space and sensitive lands.
- 5.2 Identify important traditional cultural gathering areas and associated plant species; recommend appropriate protection measures for maintaining a sustainable ecosystem.

Who oversees cultural and sensitive resources in the region – at federal, state or local levels?

The Bureau of Land Management

The organic statute governing BLM, the Federal Lands Policy and Management Act of 1976 (FLPMA), established a clear policy of long-term retention and professional management of the lands and resources, including cultural resources, under the BLM. While the general policy of "multiple-use" is BLM's core mission under FLPMA, it was made clear in the statute that rare, special, sensitive, beautiful, or other specific places within the BLM lands could be protected from competing uses, or from destruction by development or overuse, through various special management actions such as designation of "areas of critical environmental concern."

The Areas of Critical Environmental Concern (ACEC) program is managed by the Bureau of Land Management. The program was created by the 1976 Federal Lands Policy and Management Act, which established the first conservation mandate for the BLM. The ACEC mandate directs the BLM to protect important riparian corridors, threatened and endangered species habitat, cultural and archeological resources, and unique scenic landscapes throughout the Southwest that the agency believes need special management attention.

More recently, BLM has administratively organized all of its special management areas (those designated by Congress or the President) into a "National Landscape Conservation System" (NLCS) as a way to give more management attention and direction to these special places and to the significant cultural resources in them. However, there is no statutory basis for the NLCS to be given special status within the agency, and it could be changed by a simple action of the Secretary of the Interior.

The U.S. Forest Service

The U.S. Forest Service is responsible for compliance with Sections 106 and 110 of the National Historic Preservation Act (NHPA) (16 USC 470) on Forest Service-owned lands. Each Forest supports a full time Heritage Program committed to the fulfillment of historic

preservation mandates and objectives defined in NHPA Sections 106 and 110 and related authorities, as well as Forest Service Heritage Resource Program goals defined in Forest Service Manual Title 2300, Chapter 2361 (1990) or its successor.

The mission of the Forest Service Heritage Resource Program includes protecting significant heritage resources and contributing relevant information and perspectives to natural resource management. As manager of almost 200 million acres of public land nationwide, the National Forest System is entrusted with the stewardship of a large share of the nation's historical and cultural heritage. Most of the stewardship efforts remain focused on protecting heritage sites from project impacts.

Nevada Department of Cultural Affairs– State Historic Preservation Office

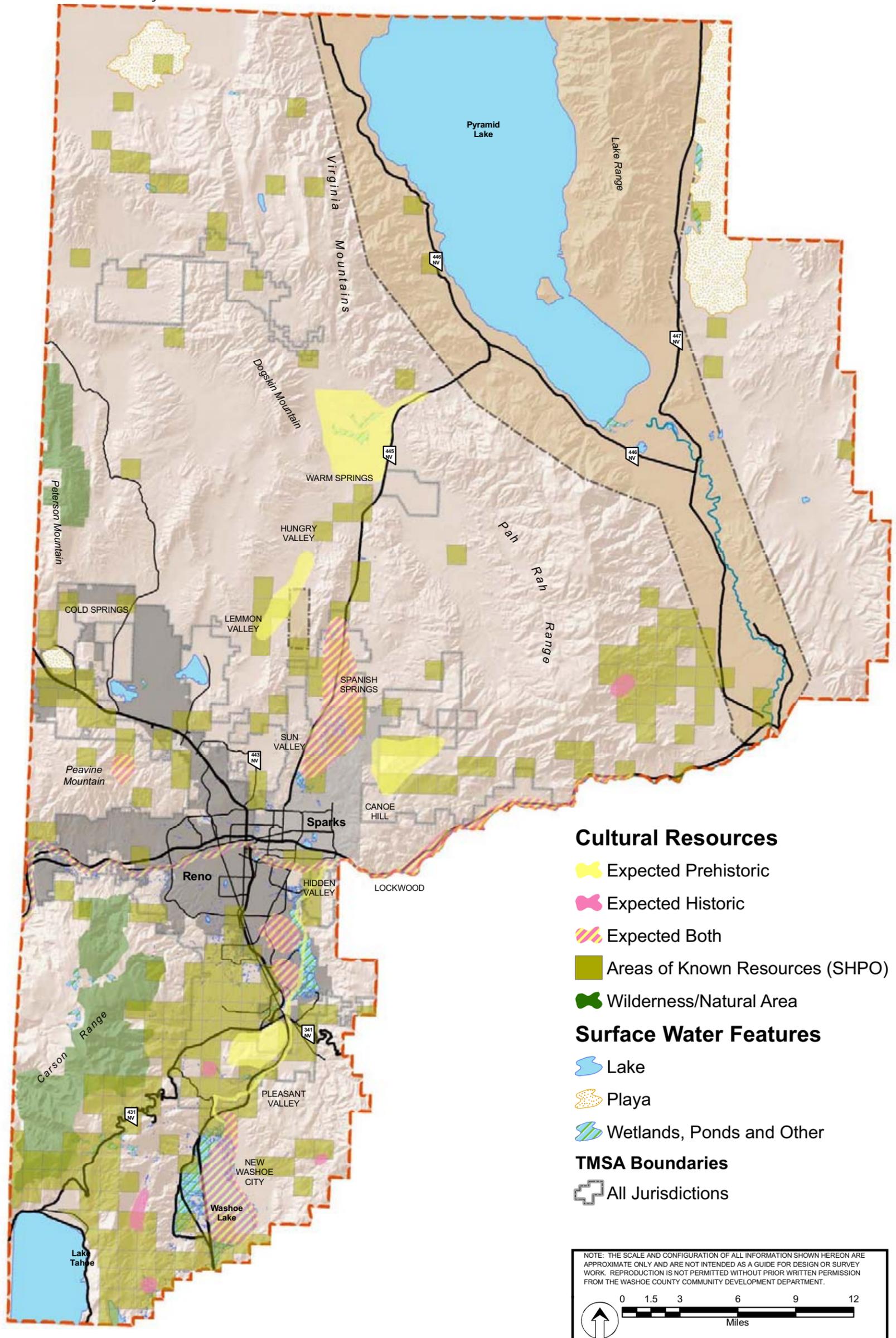
The State Historic Preservation Office (SHPO) encourages the preservation, documentation, and use of cultural resources through state and federal programs. The agency works to educate the public about the importance of our cultural heritage so that Nevada's historic and archaeological properties are preserved, interpreted, and reused for their economic, educational, and intrinsic values and for future generations to appreciate.

The SHPO's mission is authorized through Nevada Revised Statute 383. Major functions include administering the state's stewardship program, preparation of a statewide historic preservation plan, and consultation on applications for National Historic Register status under the U.S. Department of the Interior's Section 106 guidance. SHPO's authority also extends to duties and actions relative to discovery of Indian burial sites on private lands as well as enforcement against prohibited acts, and protection of historic and prehistoric sites, including penalties for destruction or trafficking in artifacts.

MAP 6

Cultural Resources and Sensitive Landscapes

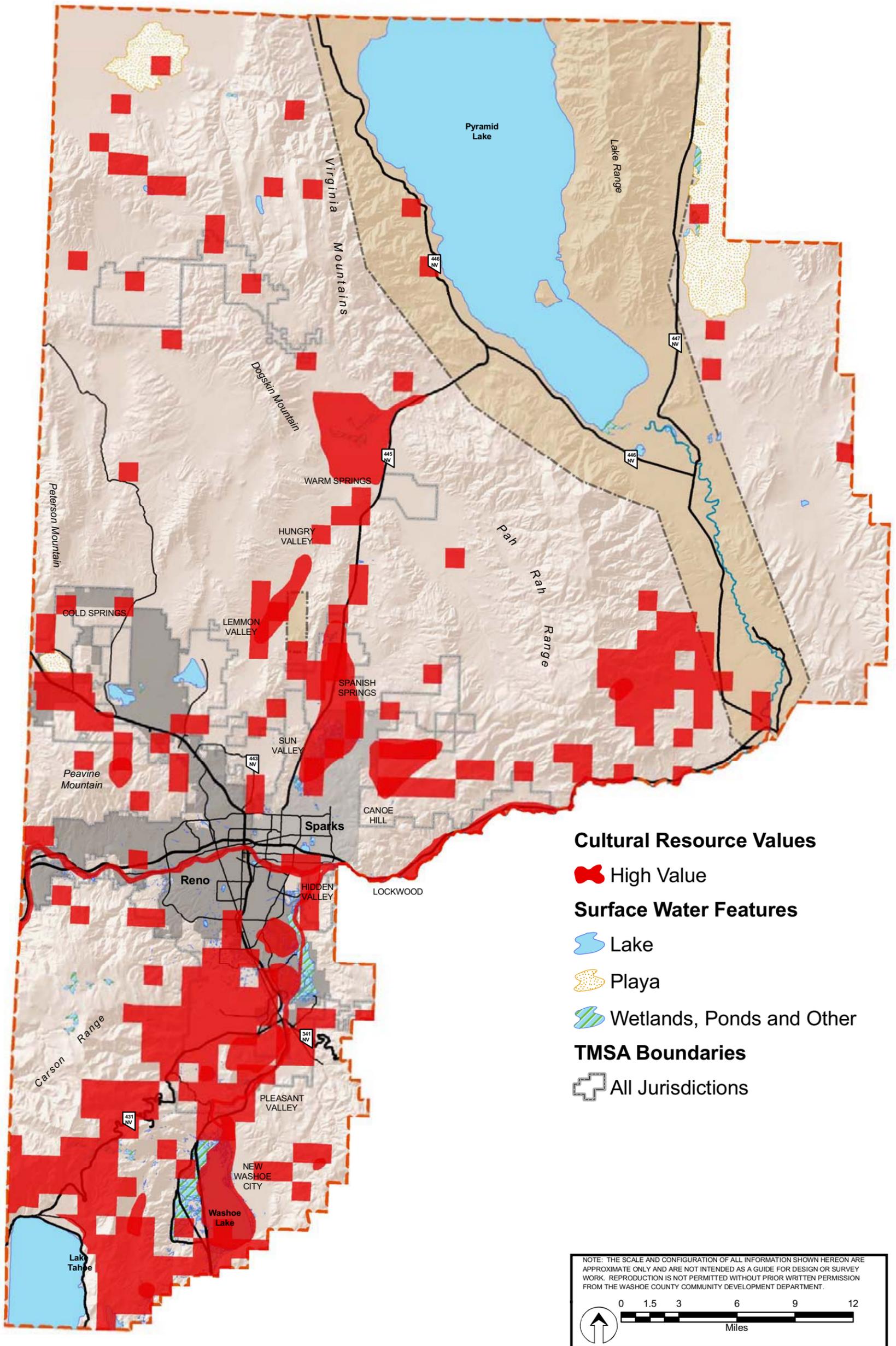
Cultural and historic resources are represented on this map through data provided by the State Historic Preservation Office, the Bureau of Land Management and County data sources. The expected resource areas are based on consultation with professionals and experts on cultural resources and help us understand where resources are likely to be found. Because of the sensitivity of cultural resources, exact locations are not included. The Cultural Grid data shown on this map indicates that a known resource has been documented within that one-mile square. The polygons showing prehistoric, historic and both resources are based on consultation with regional experts and also indicate a general area of cultural resource presence. These locations show only known areas. There are very likely many more sites and resources that have yet to be documented.



MAP 7

Cultural Resources and Sensitive Landscapes Values

All of the areas of expected or known resources were given a high value on this map. This is meant to increase the importance of these lands in decisions about the management, acquisition and retention of open space in the region. As new information or resources are identified, they will also be added to this evaluation.



Natural Hazards

What are Natural Hazards?

Natural hazards are events that can threaten lives and property in our region. Often these events are part of a natural cycle, but some natural hazards have developed into more catastrophic events. This change from a natural system to a more catastrophic one can be due to a number of reasons. Increased development in the floodplain can raise flood levels for development outside the floodplain; in addition, this development can speed the delivery of runoff and cause higher floods with more devastating force. In the case of wildfire, the spread of invasive plants and the removal of natural fire can cause the wildlands to become choked with fuels ready to burn.

As homes move in closer to these areas and as recreation brings more users, the chances increase for fires that threaten life and property and that damage the very ecosystem they were once a natural part of. Critical natural hazards in the region include flooding, wildfire, and seismic events and damage. In addition, other natural hazards include wildlife collisions with vehicles, varying air quality challenges, and to a lesser degree, landslides and avalanches. These examples show how the natural hazards combine with development and management to create challenges for the county.

Wildfire

Fire plays an important role in maintaining healthy ecosystems. Lower-intensity fires remove pests or diseased portions of the forest, leaving naturally fire-resistant stands that can mature and live with these lower-intensity fires. However, as fires have grown more severe, both here in Washoe County and across the Western U.S., fires can be so devastating as to prevent the return of the original forest and cause the loss of rare and valuable habitat. These catastrophic fires bring with them an additional danger. Once the fire is out, recently burned areas may immediately sprout

with non-native invasive species that are more prone to fires and, in some cases, may even move into an annual burning cycle. Additionally, burn areas have a greater potential for increased flash flooding and soil erosion.

The region's fire history shows how over the past century most, if not all, of southern Washoe County has burned at some point. Researchers have found that the Sierra Nevada forests in the western portion of the county have very wide ranges of both burn severity and frequency. While natural, low-intensity burns were always part of the ecosystem, the Sierra Nevada region also naturally experienced large catastrophic fires occasionally, though rarely. Fires throughout the region are predominantly ignited by lightning strikes, though a third or more of the fires are started by human activity, including construction activity, campfires, sparks from vehicles, and arson. Fires occur increasingly in areas that include residential development. This adds to the potential for ignition, contributes more fuels, and creates a scenario where fire crews may risk their lives in unsafe conditions to protect homes. The increased development in the wildland interface means that homeowners play an increasingly important role in the fire safety and ecology of our region.

Flooding

Flooding is a part of life in many communities in the arid West. Our region is no different, with sudden mountain storms and a landscape that does not absorb much water, floods can quickly build and flow through our communities (e.g., the Truckee River flood of 1997). Flooding can threaten residents and cause severe economic loss for our communities, because homes or buildings are allowed in areas known to flood or because the areas that flood grow in size due to changes in how much and how fast runoff reaches the rivers.

The region's fire history shows how over the past century most, if not all, of southern Washoe County has burned at some point. Researchers have found that the Sierra Nevada forests in the western portion of the county have very wide ranges of both burn severity and frequency.

As development of homes, streets and commercial areas convert natural lands to paved or built surfaces, water can more quickly move to streams and rivers, changing the type and levels of flooding for those downstream. Additionally, many of the smaller streams in the region are not fully mapped, so that we do not understand where floodwaters may collect to create threats for life and property. As our communities build out farther into rural or undeveloped areas, these unmapped streams, which seem dry or too small to be a threat, may roar to life during a storm and result in extensive damage or loss of life. In particular, development of the upper portions of watersheds will be a critical flood management concern in the coming years.

Water quality may also be impacted by flooding. As development expands, more runoff is generated by paved or developed surfaces. These surfaces not only speed runoff, but are also a source of pollution as runoff picks up contaminants from parking lots or buildings. Floods can bring nutrients or chemicals that change the health of the streams, or can move large amounts of sediment and change the way rivers flow after a flooding event.



MORE INFORMATION

To learn more about these resources and to view technical information, please see the Natural Resource Inventory and Assessment Report, available online at: www.washoecounty.us/openspace.

Air Quality

Air quality in the region is regulated by the U.S. Environmental Protection Agency and managed locally by the County Air Quality Management Program. Good air quality assures that our community's public health is not impacted by pollutants or particulates in the air we breathe. Clean air also maintains the panoramic views that attract tourists and contribute to our quality of life. Most of our region's air quality challenges come from four pollutants: carbon monoxide, nitrogen oxide, ozone, and particulate matter. All four are generally products of combustion, although ozone is also generated when certain compounds such as chemicals in solvents react with exposure to sunlight. The last pollutant, particulate matter (PM), consists of very small particles such as dust, soot, and unburned fuels. Of all air quality concerns, PM is the one this Plan can most directly address.

PM is created by smoke from forest fires and from dust released from land use or development. PM is a uniquely dangerous pollutant because the small particles physically injure lungs, and at the same time the surface of these particles is often coated in other dangerous chemicals, such as the by-products of combustion. The smaller the particle, the more deeply it can make its way into the lungs. In addition, the smaller the particle size, the more surface area is provided by a given quantity of PM, resulting in more pollution attached to this surface area. Children and those with breathing problems are especially vulnerable to the effects of PM, as their respiratory systems are more sensitive.

Wildlife Conflicts

Wildlife and vehicle collisions represent a smaller, but very serious threat to both people and wildlife in the region. These collisions are mainly from automobile traffic, but can also include aircraft which can be more catastrophic. In Southern Washoe County, from 2004 to 2006 the average number of wildlife/vehicle collisions was 79 per year, 85% of which were with deer. Over this same timeframe 12 of the

collisions resulted in injury to the vehicle occupants. Additionally, if it is assumed that each collision with a deer or bear resulted in \$2,000 damage to the vehicle involved, this three-year period witnessed almost half a million dollars in property damage.

Wildlife collisions can be increased or decreased by how roads, habitat and water are located in relationship to each other. Understanding migratory routes and how these interact with transportation corridors and infrastructure is critical. With mule deer populations threatened by other factors, having over 60 deer involved in vehicle collisions each year may place the population past a point from which it can recover.

Conflicts between wildlife and aircraft are also a concern. Some regional projects such as restoration along the Truckee River and Steamboat Creek may attract birds closer to the Reno/Tahoe International Airport. These conflicts can be managed through existing federal guidelines, but they must be considered as restoration proceeds.

Conflicts with bears are also an increasing concern in the region. These conflicts involve bears coming into urban areas and the growth and expansion of development and houses into bear habitat. Conflicts are often worsened by poorly stored household garbage or other food items that attract bears and make them less fearful of humans. As development and bear habitat mix, other conflicts such as vehicle collisions increase. In order to address these concerns and conflicts, the County participates in the regional Sierra Front Bear Working Group. The Working Group is developing a Community Bear Management Plan to reduce conflicts between bears and humans along the Sierra Front.

What are the challenges in managing Natural Hazards?

Wildfire

The primary challenges in managing wildfire are controlling the spread of invasive non-native species



CYRUS BULLOCK

Well-maintained forests greatly reduce the risk of catastrophic fire and minimize losses to homes and property.

and implementing appropriate fire management in the wildland/urban interface by landowners. In addition to invasive non-native species, some native habitat types, namely Piñon-Juniper forests, have encroached into sagebrush areas beyond their historic range and bring heightened fire risk.

Invasive species play a role both in initiating a cycle of frequent and destructive burns and in sustaining this cycle after a burn. Non-native weeds such as Cheatgrass add very flammable fuel to an existing landscape and may introduce an annual burn cycle

during dry years. Once an area burns – with or without invasive species – it is very likely that weeds will take advantage of the cleared area and establish themselves before native species are able to. Managing non-native invasive species requires that landowners who currently have these species work to eradicate them through mechanical or chemical treatments, as appropriate. Lands that become infested with these weeds serve to broadcast the weeds each year, making the task of managing these species very difficult. Additionally, agricultural and recreational activities can spread these weeds as livestock, horses, vehicles and hikers pick up seeds and spread them as they travel across the region.

In the case of recent fires, if plans are not developed to restore a burned landscape with native plants within the first season following wildfire, it will most likely become infested with weeds that will speed the return of another fire to the landscape. Owners and managers of burned lands must act swiftly to create a replanting and management plan and to implement it immediately to prevent the spread of invasive species. This can be difficult where there are multiple landowners or managers, or where dedicated funding does not exist to support the planning and implementation programs.

The expansion of land development into natural areas complicates all of these challenges as small individual landowners come to dominate the landscape. Not all owners properly build or manage their land to provide defensible space and prevent a deadly mix of structures and vegetation; they may even create more dangerous conditions by introducing flammable landscaping or building materials. Increasingly recent residential development has preferred the ideal of a home built in the forest or with vegetation close, versus the classical method of clearing a field and building in the middle. This intermix of construction and fuels creates a dangerous situation for firefighters and creates a higher likelihood that homeowner activities may cause fires that can expand into the surrounding wildlands.

Flooding

The main threat for increased flooding in the region comes from the conversion of natural areas into developed areas dominated by impervious surfaces. This conversion results in a change in how the landscape interacts with surface water after storms. Of particular concern are the drainages and areas farther away from the Truckee River. The Truckee and its floodplain and floodways are mapped and well understood, but the areas farther out that generate the water that flows to the Truckee are less studied. As development occurs, streams or washes that historically played only a small role in moving floodwaters can become raging torrents during storms as adjacent paved surfaces speed more water into the streambeds.

This situation can create new local flooding problems in the drainages that are developed, and it can change the shape and size of flooding in already developed areas like Reno, Sparks and downstream all the way to Pyramid Lake. This occurs because current flood mapping is based on no or little development outside the developed areas. While new development is supposed to demonstrate no effect on downstream flooding, the true effects of such development are not always clear. As flood mapping improves, these threats will be reduced, but the impacts of current development may not be known until the next flood event.

Air Quality

In the context of this Plan, the main challenge to air quality comes from increasing particulate matter from forest fires and construction during development. The soot from forest fires contributes more particulate matter over shorter periods of time, and impacts on regional air quality depend on atmospheric conditions like wind, temperature and time of year. Agencies that regulate air quality in the region already take fires into consideration when they set goals for management. Therefore, any increase in fires will create potential violations of federal air quality laws. The impact from development comes

In the case of recent fires, if plans are not developed to restore a burned landscape with native plants within the first season following wildfire, it will most likely become infested with weeds that will speed the return of another fire to the landscape.

from grading sites and creating sources for dust to be released. This dust can cause very poor air quality close to the site, but dust dissipates with distance.

Wildlife Conflicts

As development grows and new highway development occurs to serve it, animals will be confined to smaller migration corridors, and this will create higher chances for collisions as more vehicles are added. This is of particular concern along Interstate 80 West, U.S. Highway 395 North, the Pyramid Highway, and Mt. Rose Highway. As these stretches see increased traffic volumes, collisions will grow rapidly. For species that are already threatened, such as mule deer, this additional pressure may not allow species recovery. Bears are increasingly attracted by unmaintained garbage stored near homes with no measures to prevent access by bears.

Opportunities for Natural Hazards

Wildfire

The reduction of the severity of wildfires requires a two-part strategy: proper management of public lands and open space, and the proper management of private lands to provide defensible space and to remove invasive weeds or dangerous fuel sources. Based on these two issues, the key opportunities to properly manage wildfires in the region will require:

Educating homeowners about defensible space landscaping and encouraging fire-safe construction methods can go a long way to preventing wildfire risk. Properly managed fuels and homes, in combination with fuels reduction on public lands, will greatly reduce fire in our communities.

- Reduction and removal of invasive non-native species.
- Individual landowner management and responsibility to establish and maintain defensible space.
- Emergency replanting after fires.

Removing invasive species and preventing their return is critical to minimize fire risk in the region, especially in the wildland/urban interface. Invasive weeds have not been managed well in the past, in part because of the labor or cost associated with doing so, but also because many private landowners are not aware of the threats. While it is the responsibility of all landowners, public and private, to manage and remove weeds, the County and this Plan will provide assistance. Assistance may include education and outreach to help landowners in identifying risks. It may also include more direct efforts such as providing chippers or volunteer crews for removing trees, brush and weeds. At the same time, enforcement of existing regulations will remain part of the strategy.

For properties in the wildland/urban interface, homeowners must also make proper decisions about defensible space, landscaping and building materials to prevent wildfires. Educating homeowners about defensible space landscaping and encouraging fire-safe construction methods can go a long way to

preventing wildfire risk. Properly managed fuels and homes, in combination with fuels reduction on public lands, will greatly reduce fire in our communities. Defensible space is also critical for protecting the lives of firefighters if a fire starts.

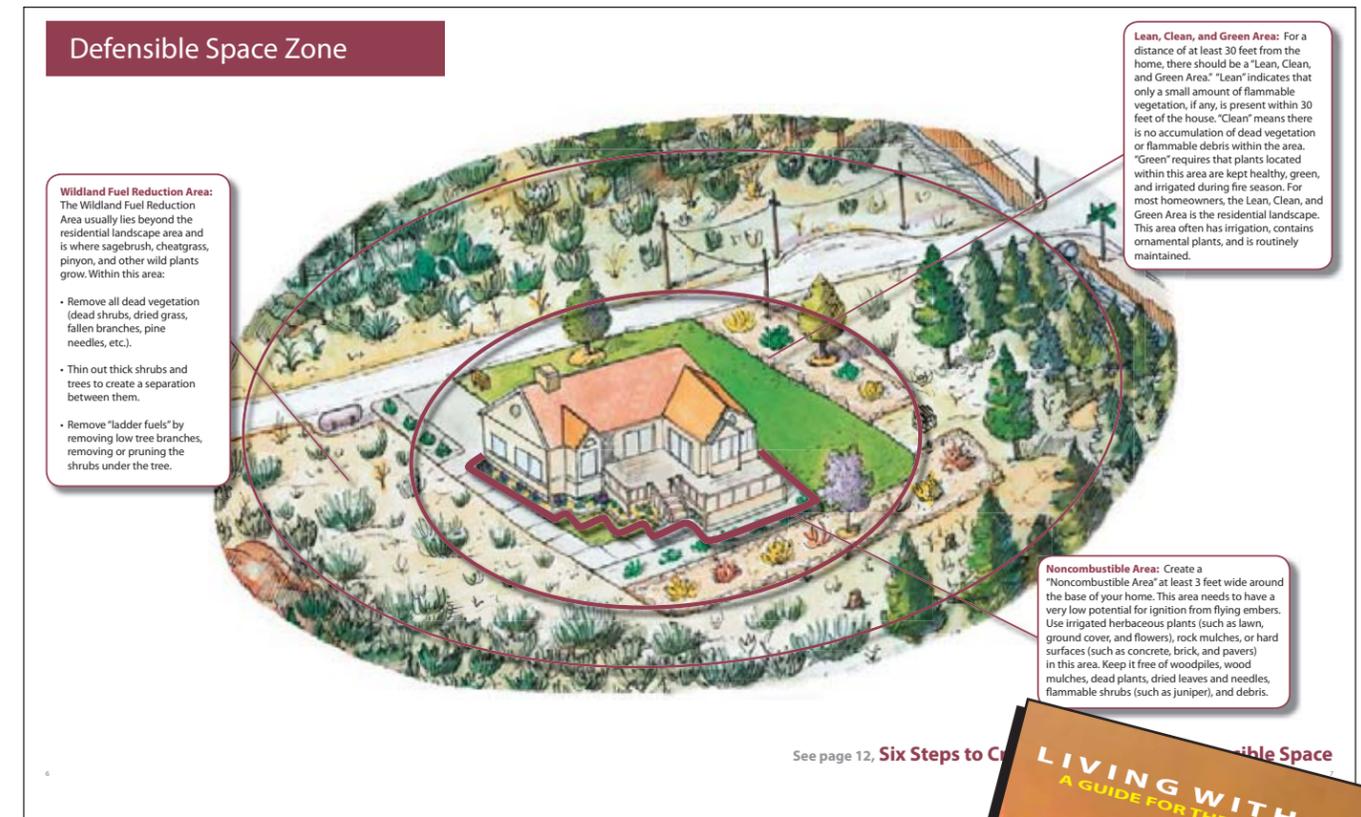
The period of time just after a fire is critical to stopping the cycle of frequent fires and protecting the native habitat. Having restoration planning in place and ensuring that replanting is ready when a fire is burning will allow crews to evaluate and develop a strategy for recovery immediately after the fire is out. Responding quickly after a fire prevents the encroachment of invasive weeds, reduces erosion and its effects on water quality, and gives native species the opportunity to reestablish and thrive.

Flooding

Opportunities to address flooding center on expanding flood mapping and using this information to inform development decisions in the region. Flood mitigation opportunities also exist as some land uses are converted into new uses that can tolerate occasional flooding. An example of this is the conversion of residential or industrial lands into pastures that can tolerate flood waters at certain times in the year. These conversions may allow other residential or industrial areas to stay dry and not require new flood control structures. These types of activities are being pursued along the Truckee River through the Truckee River Flood Management Project, including a series of 11 proposed river restoration projects.

Additionally, some lands may allow for on-site water retention that provides multiple benefits. Siting open space or even parks in the proper location can help reduce flood damage by storing or slowing flood waters. Open space can save adjacent lands from floods and provide all of the amenities of open space. Currently, some flood retention devices act as recreational areas, such as for skateboarders. Parks and natural areas can also serve this role if the users of the area, both

Defensive Space Zone for Eastern Sierra Front

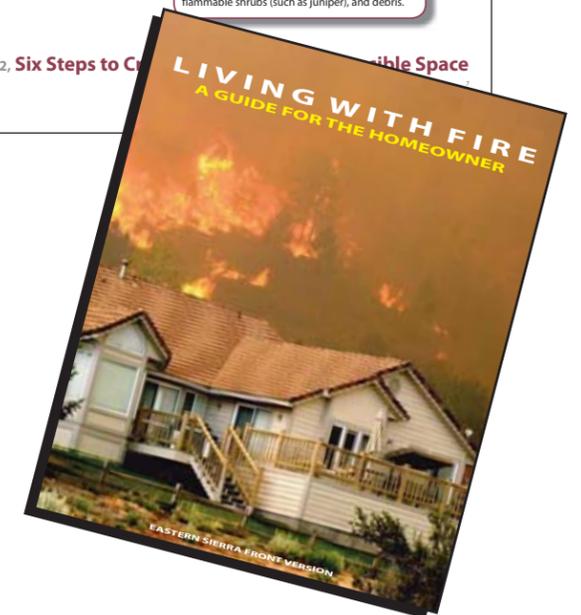


For more information about *Living With Fire*, visit www.livingwithfire.info.

human and natural, are able to accept the occasional flooding. Playas play this role naturally, and may be a habitat type that can be emulated in artificial retention areas that rely on natural functions to store and filter stormwater and floodwater.

Air Quality

The primary opportunity for air quality in this Plan is the possibility of improved management of wildfire fuels to reduce their severity and, therefore, emissions. This is a way to allow for emissions by other sources in the region on a tradable basis. Trading emissions involves guaranteeing that an allowed emission does not occur and shifting this opportunity to



LIVING WITH FIRE
BY THE UNIVERSITY OF NEVADA
COOPERATIVE EXTENSION



LYNDA NELSON

This Plan strives to manage for multiple goals on the landscape. To assure this occurs, the Plan focuses on lands that provide multiple functions at once.

another emitter who will pay for emission. However, the amount of trading that may occur may be small depending on the risks the region is willing to accept if fires grow out of control and create more pollution than allowed. Another trading opportunity also comes from preserving views. The tourism industry is dependent on clear vistas from around the city, and it may be willing to support converting polluting technologies to clean ones to assure that views stay clear.

Wildlife Conflicts

Vehicle collision reduction through this Plan can be achieved through coordination with transportation development and open space management to assure wildlife have accessible and safe migration corridors. This may include overpasses or underpasses at critical crossings. It also may involve working with private landowners to assure migrations are not blocked and not directed towards developed areas where conflicts can arise.

This Plan supports development and implementation of a plan to limit the number of human and bear conflicts through better garbage storage and disposal practices. The Sierra Front Bear Working Group is developing a work plan to address these issues and implement actions to limit conflicts. The initial activities will include outreach and education, and these are excellent opportunities to further the goal of this Plan to limit wildlife conflicts.

Goals and Policies

GOAL 1: Emphasize fire suppression through the use of defensible space and native habitat restoration.

- 1.1 To allow for fire suppression in developed areas, the provision of defensible space must be required and enforced by appropriate laws, provisions within development codes, and property covenants and restrictions. Defensible space will be defined by International Wildland Urban Interface Code, or other County-approved standards.

GOAL 2: Achieve an awareness of the private responsibility for fuels management.

- 2.1 Encourage an awareness of the private responsibility for fuels management through homeowner education and the development review process.
- 2.2 The County will coordinate with other local agencies and partners in helping individuals learn to live with fire and manage their properties in a “fire-safe” manner by providing educational materials, workshops, technical assistance and other resources.
- 2.3 Fuels management plans should be developed and implemented for County-owned lands.
- 2.4 The County will update the Wildfire Hazard Risk Assessment study to guide management of wildfire hazards in urban interface areas.
- 2.5 County open space lands in the wildland/urban interface will be managed for defensible space and will rely on natural fire regimes once fuels are under control.
- 2.6 The County will aggressively manage the spread of invasive weeds.
- 2.7 Decisions regarding fuels reduction in open space areas must weigh the decision’s potential harm to habitats as well as its benefits for fire management. Those areas more distant from development should not be treated as aggressively as those closer to development.
- 2.8 The County and its planning partners should develop and carry out an emergency wildfire response plan and replanting program for all non-federal public lands in the region, modeled after the federal emergency response replanting programs.

GOAL 3: Develop, fund and carry out a region-wide fuels management program.

- 3.1 Coordinate and partner with other agencies and jurisdictions to develop, fund and implement a region-wide fuels management program.

GOAL 4: Integrate regional open space and natural resource management with flood management where appropriate.

- 4.1 Coordinate the activities of the Regional Open Space Program with proposed restoration projects on the lower Truckee River. Riparian habitat and river channel restoration will be supported as an important component of overall flood management planning.
- 4.2 Playas and their floodplains will not be developed and will be considered for acquisition in order to protect their capacity for storing floodwaters and for their role as critical habitat.

GOAL 5: Maintain excellent air quality in the region.

- 5.1 Future air quality planning efforts shall address the impact of wildfires and land cover disturbances such as grading and tilling.
- 5.2 The County recognizes the value of clean air and visibility for the region and will work to preserve visibility.

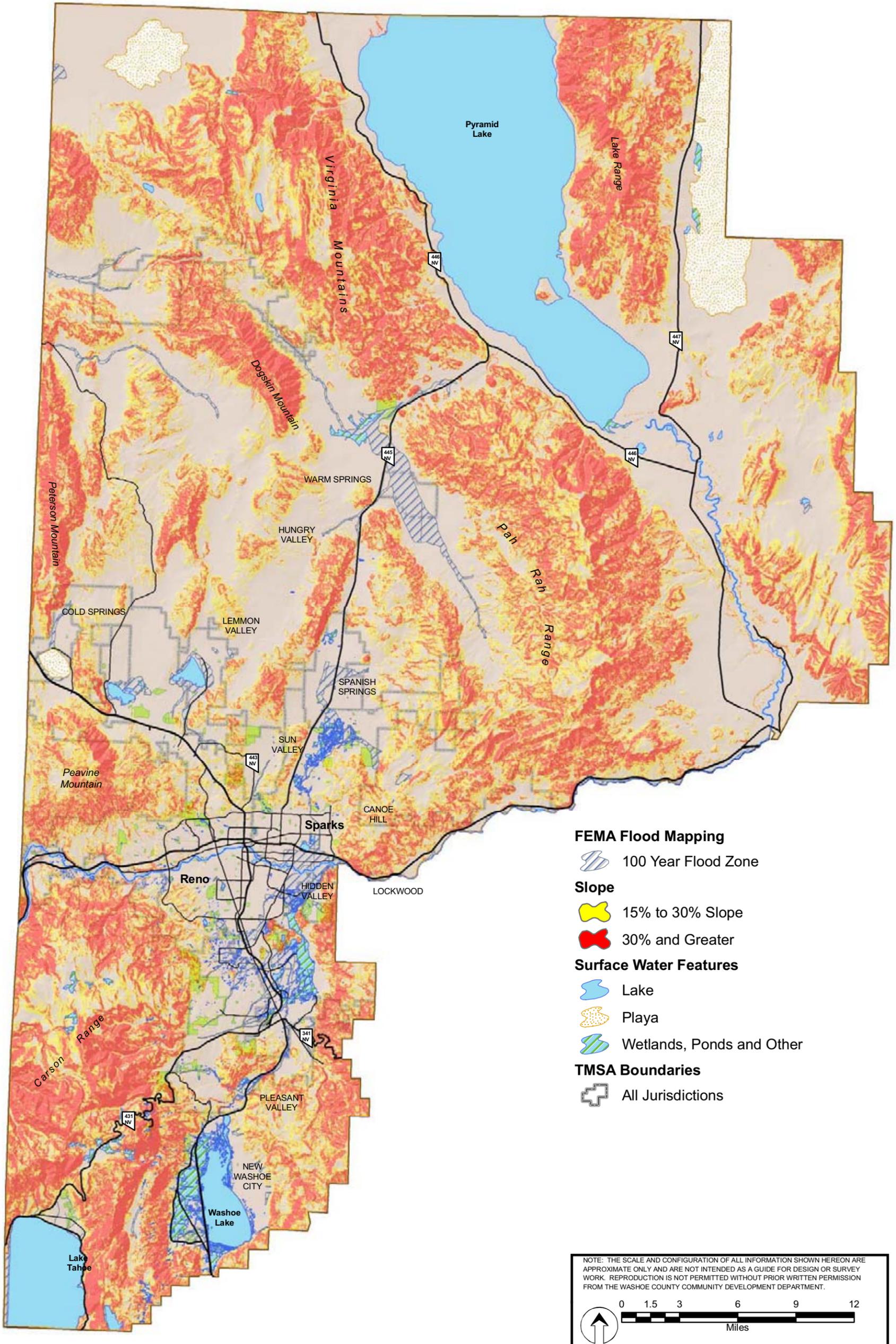
GOAL 6: Wildlife conflicts will be minimized within transportation corridors and in the urban interface.

- 6.1 The County will cooperate with the Regional Transportation Commission and the Nevada Department of Transportation to minimize wildlife conflicts within transportation corridors.
- 6.2 Support and participate in the Sierra Front Bear Working Group’s effort to prepare and implement a Community Bear Management Plan. Provide outreach and education to the community on living with bears in the urban interface.

MAP 8

Natural Hazard Resources

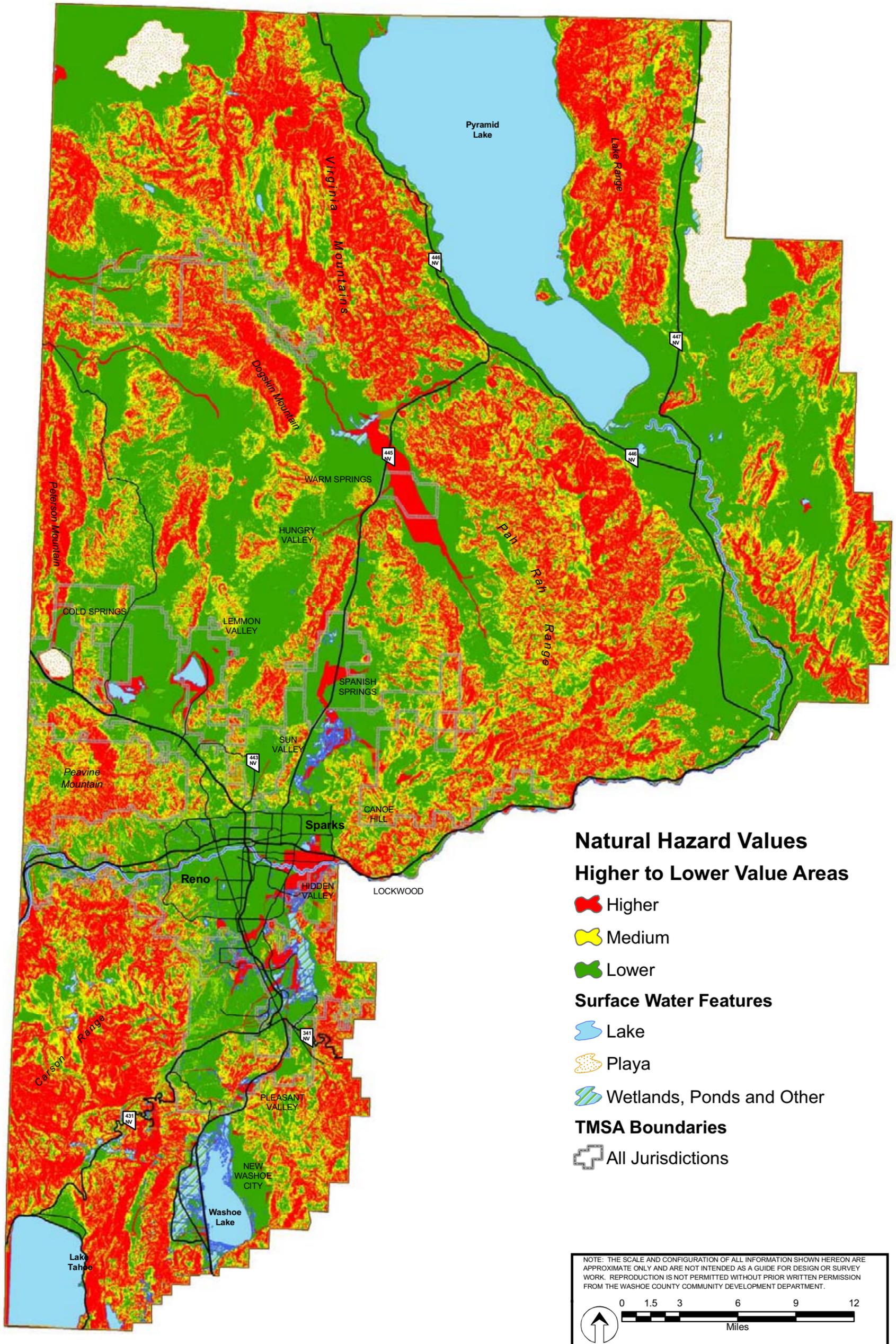
This map shows the region's natural hazards that open space can be used to help manage. The natural hazards mapped include the 100-year flood boundaries and areas with steep slopes that are not suitable for development.



MAP 9

Natural Hazard Values

The features shown on the Natural Hazard Resources map were given values to help weight decisions on land management. Areas within the 100-year flood zone and areas steeper than 30% are valued as the highest, with slopes between 15% and 30% medium.



Recreational Resources

What are Recreational Resources?

Recreational resources within southern Washoe County encompass a variety of facilities and support a very broad range of activities. For planning purposes, recreational resources have been organized into the following four categories:

- Regional, community, and neighborhood parks; depending on the size and scale of the park, these may include open turf lawns, practice and playing fields and associated facilities, playgrounds, and natural open space. Regional parks are ones that are larger than 100 acres, with community and neighborhood parks being typically 5 to 50 acres in size. Facilities are owned and managed by Washoe County, the City of Reno, or the City of Sparks.
- Urban open space and natural areas; these include native areas within the most urbanized portions of the county, areas which may or may not incorporate passive recreational opportunities. These spaces may also serve as buffers between developed areas of the county. Facilities are owned and managed by BLM, USFS, Washoe County, State of Nevada, the City of Reno, or the City of Sparks.
- Remote open space and natural areas; these include County-owned open space as well as Federal (U.S. Forest Service or Bureau of Land Management) or State Parks lands located outside the developed portions of the county. These lands may support passive recreation and some, such as Peavine Mountain, also have designated areas for motorized uses.
- Local, regional and remote pathways and trails; these include multipurpose pathways and bike lanes within the developed areas as well as multipurpose and soft surface pathways in

the more remote open space and public lands. Facilities are owned and managed by the cities or the county (within urbanized areas), or by county, state or federal agencies (within more remote parts of the county).

What are the Challenges for Recreational Resources in our Region?

Recreational resources in the region are facing a number of challenges that are driven in part by population growth and competition for the use of public lands. In other cases these challenges stem from the sheer number of agencies involved in managing the region's public spaces. Challenges come from increasing urbanization, conflicting uses on the landscape, the challenges of mixed federal, tribal, state, local and private landowners, and creating a clear network of trails for users. Along with these challenges is the common problem of identifying and maintaining funding to meet recreation goals.

As areas begin to develop beyond the urban core, more people are now living and visiting the region. This increasing urbanization is creating additional pressures, from more visitors in our parks and open space to homes being built closer to valued natural and recreation areas. In some cases, parks, open spaces and trails are receiving so much additional use that they are being "loved to death."

Conflicts and resource degradation associated with inappropriate off-highway vehicle (OHV) use continue to threaten our open spaces. In many areas in and around the Truckee Meadows, inappropriate OHV use has resulted in damage and degradation to the landscape as well as conflicts with area residents and other recreational users. Such inappropriate use also affects those OHV users who ride responsibly on designated trails or public roads, and who invest their own time in maintaining and policing facilities,

How does this relate to other resources?

Water resources: Many of the region's parks and open spaces are located along major waterways, including the Truckee River and Steamboat Creek. Both have associated greenway plans which are in the process of being implemented. The existing irrigation ditch system also could be better integrated into the region's trails system. Protecting water resources and providing for compatible recreational uses are activities that should continue to be carefully integrated with each other.

as their ability to use facilities is often challenged by the actions of a small group of individuals.

The cities of Reno and Sparks, the County, Nevada State Parks, the region's tribes, and the Federal government (BLM and USFS) are involved in administering recreational uses, parks, open space and trails in various ways. These multiple and overlapping jurisdictions require more planning and coordination to accomplish goals, and sometime there are conflicting policies or laws involved. Each agency has its own mission, design standards, maintenance and enforcement resources. Coordination between the affected agencies often occurs on a project- or location-specific basis, as opposed to an issue basis (like the unregulated use of OHVs throughout all public lands within the county). This can result in some operating inefficiencies or in failures to leverage the collective resources of each agency as effectively as might otherwise happen. In some cases, stronger partnerships might allow certain issues to be elevated in importance and actions to address them identified.

In addition to the many public agencies that manage our land, private development and landowners play an important role. Private development adjacent to



BILL GARDNER

Public outreach and developed interpretive sites are critical to helping understand the value of our open spaces.



MORE INFORMATION

To learn more about these resources and to view technical information, please see the Recreational Resources Inventory and Assessment Report, available online at: www.washoecounty.us/openspace.



PAUL MANSON

Recreational activities vary widely in the region, and working to coordinate these different activities is a key goal of this Plan.

public lands has sometimes resulted in blocked access to these public lands or conflicts between homeowners and recreational users. This issue has been most visible and prevalent on the south side of Peavine Mountain, though it has been experienced in other locations as well. In some cases, access has been blocked with fencing or wire, posing an injury or liability risk.

The existing and extensive trails system can be a challenge for users to navigate. The trails system includes a variety of facilities, including recreational trails on public lands, existing county roads, existing presumed public roads, and in the more urbanized areas, a network of sidewalks and bike lanes. While each jurisdiction has its own mapping, the region could benefit from assembling comprehensive mapping that illustrates how these facilities connect with each other and that identifies the level of difficulty and experience associated with major or most popular routes. This would help to organize the trails system around a hierarchy of user experiences, making it more transparent for residents as well as visitors.

Finally, financial resources necessary for maintenance and enforcement of regulations are in short supply, including resources for construction of certain facilities. Each of the agencies involved with the County's public lands system has indicated that resources for maintenance and enforcement need to be enhanced so that they may better fulfill responsibilities. While the County's Residential Construction Tax (RCT) does provide funding for construction of local, neighborhood parks, these funds cannot be used for trail construction, nor can they be used for maintenance of park facilities. This challenge is one that underlies or makes more difficult all of the other challenges noted here.

What are the Opportunities for Recreational Resources?

This Plan is intended to offer the County and its related agency partners practical recommendations for improving the management of recreational resources, including assuring that the recreational opportunities on public lands are protected and that resources are managed for public enjoyment so as to minimize conflicts between different user groups and so that the underlying landscape resources do not become degraded through over-use. Where feasible and appropriate, the plan also suggests new funding mechanisms that could provide resources needed for improved patrolling and enforcement in zones where inappropriate uses are frequently observed.

As an example, the plan suggests identifying or developing multi-purpose trails and pathways that could also function as fire breaks, making them eligible for additional financial resources or even suggesting that a fire management taxing district be created that would perform these functions. Considering trails as "multi-benefit" facilities in this regard could help to address salient wildland/urban interface issues while also providing recreational benefits.

The plan also recommends the need for an ongoing interagency working group, composed of local, county,

state, tribal and federal partners, to oversee the public lands system and make sure that critical resources, including trail connections, are adequately protected and managed to a reasonably consistent set of standards. One of the first issues that such a group might help to address, for example, is inappropriate OHV use in particularly sensitive areas, and the designation of a "close-in" OHV park for those recreationists who are looking for this type of experience rather than a scenic touring experience, which would be accomplished by riding on existing roads within remote locations.

What are our Goals and Policies for Recreational Resources?

The Plan will provide guidance on ways to protect and manage recreational resources in a way that sets priorities for programs, policies or actions that provide beneficial recreational use while protecting the underlying resources. As suggested above, a concerted, ongoing interagency working group is viewed as being instrumental to effective resource management.

The Plan provides for the following goals and policies.

GOAL 1: Sustain effective and ongoing interagency and interjurisdictional working relationships to address the planning, development, operations and maintenance of regional recreational resources, and foster an integrated approach to resource management.

- 1.1 Partner with other public lands management agencies to encourage interjurisdictional compatibility of policies governing public access and use.
- 1.2 Ensure ongoing interagency and interjurisdictional coordination in the planning, development, operations and maintenance of park and recreational facilities, trails, and trailheads and other means of enhancing

regional recreational resource connectivity where appropriate.

- 1.3 Foster and maintain a strategic alliance with other agencies to address lakes, rivers and water-based recreation in particular.
- 1.4 Investigate long-term funding opportunities for acquisition, development and maintenance of parks, trails and other recreational facilities.
- 1.5 Evaluate appropriate levels of recreation and implement a monitoring plan to ensure the sustainability of the natural environment.

GOAL 2: Leverage existing infrastructure opportunities for regional trail corridors and connections.

- 2.1 Maximize the potential for building upon existing and historical infrastructure in the development and connection of trail corridors and facilities.
- 2.2 Support completion of the outstanding segments of the Tahoe-Pyramid Bikeway.
- 2.3 Encourage the use of US 395 mitigation activities to help improve trail corridor connectivity.

GOAL 3: Preserve valuable properties and make strategic acquisitions.

- 3.1 Acquire, develop and maintain a system of regional parks that provide for both active and passive recreational opportunities.

GOAL 4: Create a major regional trail corridor system.

- 4.1 Identify a major regional trail or corridor system that connects the major peaks and ranges in southern Washoe County.
- 4.2 Provide for a water-based trail system through the Truckee River corridor that provides access for fishers, rafters and other recreational users, and for cultural uses of waterways and wetlands.
- 4.3 Integrate interpretation and environmental education into the “base trail” system in order

to interpret and communicate the region’s cultural and mining heritage, natural features, and wildlife. Support the creation of visitor and recreational resource centers and opportunities for disseminating information throughout the region.

- 4.4 Coordinate with the Regional Transportation Commission and the Nevada Department of Transportation to develop bicycle corridors and trails.

GOAL 5: Provide appropriate opportunities and facilities for motorized recreation.

- 5.1 When identifying trails that are suitable for motorized use, the County will consider such factors as width, surfacing, extent of use by nonmotorized users, and the potential for conflicts and unauthorized motorized vehicle use outside of designated areas.
- 5.2 The inappropriate use of off-highway vehicles (OHV) is a high-priority item warranting serious attention. The County will work closely with agencies and jurisdictions to develop positive solutions for encouraging OHV use in appropriate areas and preventing inappropriate use.
- 5.3 The County will support the establishment of a statewide off-highway vehicle registration program, suggesting that it include an educational component.

GOAL 6: Minimize resource pressures posed by development near open space areas.

- 6.1 Strongly discourage high-density development near open space areas and consider the downward transitioning of densities next to or near open space areas in order to minimize resource pressure, fire danger, and other negative impacts.
- 6.2 Require public access easements from subdivisions that are adjacent to public lands.
- 6.3 Fire breaks between developed areas and open space should be provided to minimize wildland

Who oversees recreational resources and public lands within the Region?

Publicly owned lands presently encompass approximately 58 percent of the land area in southern Washoe County.

Federal agencies administer approximately 3,320,483 acres of land in all of Washoe County. The BLM manages the majority of public lands in southern Washoe County, most of them in the North Valleys, along the Dogskin and Virginia Mountains and extending into Hungry Valley. Recreational uses on BLM land include camping, hiking, all-terrain vehicle riding, rock crawling, horseback riding, and shooting. BLM estimates daily usage at roughly 300 visits per day or close to 100,000 visits per year.

BLM also manages land within the Peterson Mountains. Other large areas of BLM land are located in the Pah Rah Range, and on the north side of the Truckee River, east of Sparks. A final expanse of BLM land is located east of Pleasant Valley. BLM’s holdings are generally well-connected to other public lands managed by the state or the U.S. Forest Service (USFS), or to tribal lands.

The U.S. Forest Service Carson Ranger District administers almost 400,000 acres of land with about half of the acreage in Washoe County, primarily in the Carson Range, including the Mt. Rose Wilderness. This 28,000-acre wilderness was designated in 1989 and provides opportunities for non-motorized recreation, including camping and hiking. Bicycles and off-road

fire danger and minimize other potential urban interface conflicts.

GOAL 7: Promote the use and support of the region’s park and recreation facilities and services.

- 7.1 Market the economic and tourism potential of the region’s system of open spaces and natural resources as an economic driver and asset for the county.

vehicles are prohibited. The USFS also manages approximately 18,000 acres on Peavine Mountain. The many old mining roads provide opportunities for hiking as well as OHV recreation. The south side of Peavine Mountain remains in private ownership, and this has raised concerns regarding access to public lands.

The State of Nevada, through its Division of State Parks, and Division of Wildlife, owns just over 35,000 acres of land on the south and east sides of Washoe Lake (Washoe Lake State Park) and on the east side of Lake Tahoe (Lake Tahoe - Nevada State Park).

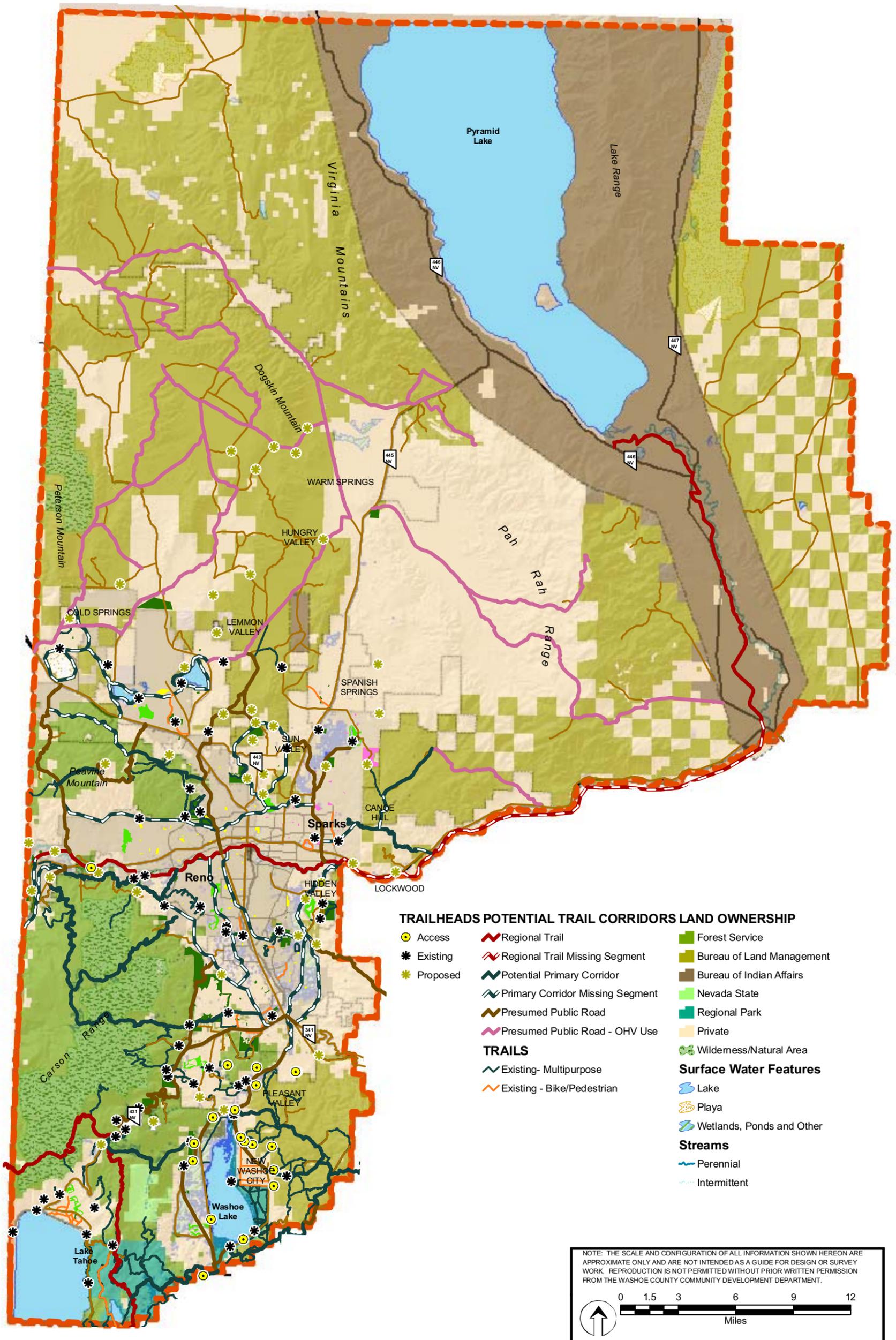
Washoe County owns and administers 8,277 acres of parks, open space, greenways, special use facilities and golf courses. As of May 2007, the Washoe County Regional Parks and Open Space Department was operating and maintaining approximately 2,861 acres of regional parks; 395 acres of community parks; 3,748 acres of open space, greenbelt and trail areas; 677 acres of specialized facilities such as shooting ranges; and 495 acres of golf courses. (Source: Washoe County Geographic Information System, 2007; Regional Parks and Open Space Department Inventory, May 2007).

The City of Reno maintains approximately 622 acres of parks and the City of Sparks maintains approximately 704 acres of parks.

MAP 10

Recreational Resources

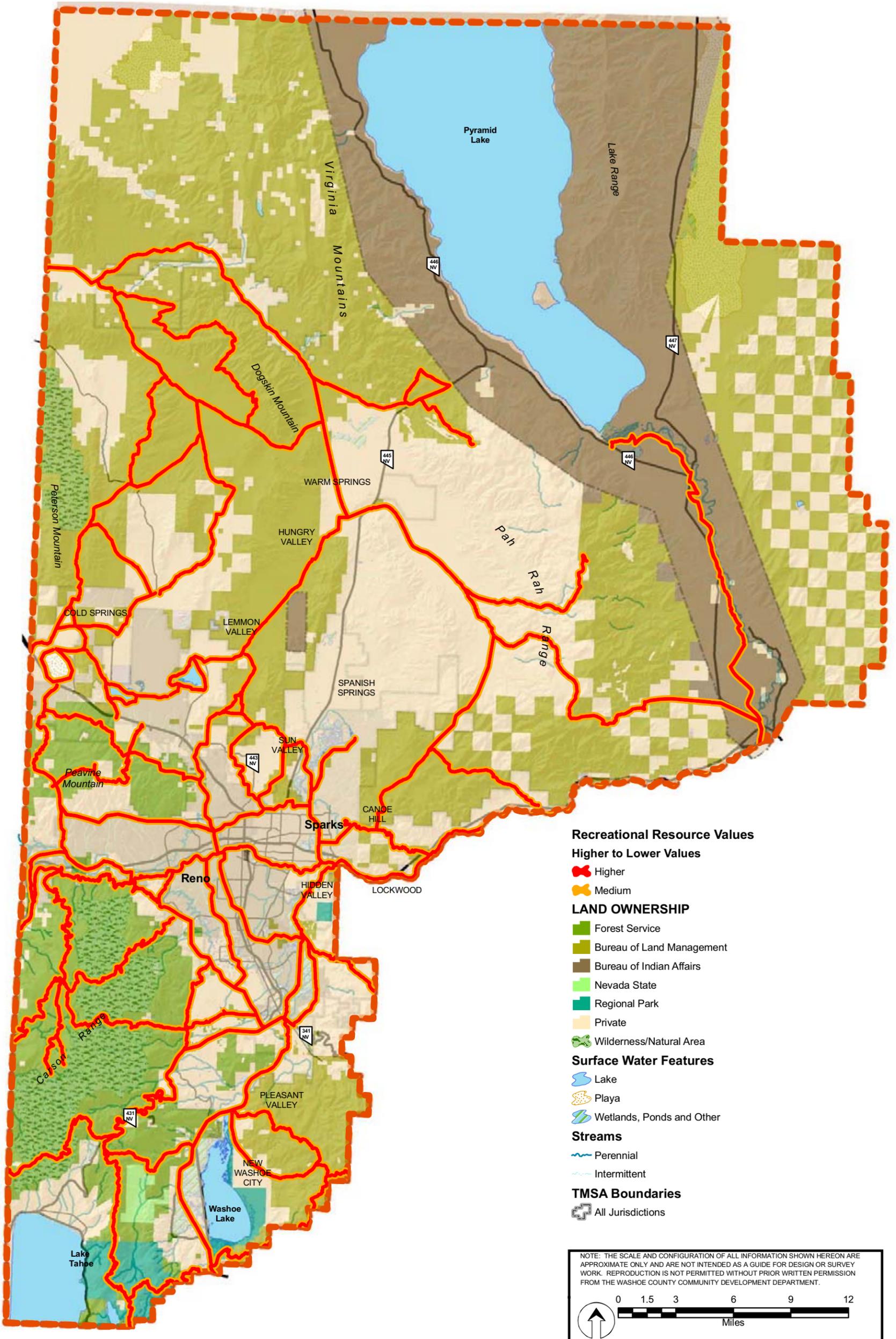
This map depicts the proposed trail corridors and the existing regional trail networks as well as the Presumed Public Roads. The proposed trail corridors serve as a backbone to create connections throughout the regions and between different areas and recreational opportunities. The missing segments are opportunities to develop this base trail network.



MAP 11

Recreational Resource Values

Existing and potential trail corridors are included on this map, plus 500 feet on each side for a high value, and 500 more feet for a medium value. This creates corridors of high value to help identify lands that can either provide connections to complete trail networks or to protect the visual and natural character of existing trails. Smaller corridor buffer widths may be appropriate in the more populated areas and in areas with taller and denser vegetation.



Visual and Scenic Character

What is Visual and Scenic Character?

Visual and scenic character commonly refers to landscapes that provide significant views, or that embody or typify the visual and landscape character of Washoe County, or that provide a buffer between developed areas, or that allow for an experience of nature in the city. A viewshed is an area of land, water, and other elements that is visible from a fixed vantage point or viewpoint. In community planning, for example, viewsheds tend to be areas of particular scenic or historic value that are deemed worthy of preservation against development or other change. The preservation of viewsheds is a goal in the designation of open space areas, greenbelts, and community separators.

Washoe County possesses a unique visual and scenic character that is shaped by the many mountain ranges that encircle the cities of Reno and Sparks and the Truckee Meadows, by the rugged foothills landscapes, and by the dominant plant communities, specifically, sagebrush. The region's character is also influenced by significant riparian corridors along the Truckee River and numerous perennial creeks such as Steamboat Creek, and by the contrast between the Valley landscapes and the foothills and mountain peaks that surround them.

What are the Challenges for Visual and Scenic Character in our Region?

The region's visual environment and landscape character are changing significantly as a consequence of development. Some of the major issues that the region will continue to face include development that impact views in the region, building and development along streams and waterbodies, and the conversion of landscapes from a natural character to a developed one.

Development along ridgelines affects views and the "night sky" landscape by adding lighting along ridges.



JENNIFER BUDGE

Mountain and ridgeline views are one of the most important features cited by citizens as important during planning.

While the County's and both cities' development codes afford some protection for affected ridgelines, development has continued to take place along major ridgelines in the Truckee Meadows. While efforts have been made to ensure that development is visually compatible with the natural landscape, it is still visible, especially in the evening when lights are on. Utility corridors, including aboveground power lines and cell phone towers, can also affect the visual quality of the community in a negative manner. To enhance reception, collections of cell phone towers are often located on ridgelines, to the detriment of the region's scenic character. Uncontrolled off-highway vehicle (OHV) use has resulted in a patchwork collection of trails on mountain flanks, and not only impairs visual quality but contributes to erosion.



CAROLYN POISSANT

Scenic views can be impacted by illegal trail creation; however, well planned trails can provide recreation opportunities and limit impacts on visual character, such as the Mogul Ditch Trail shown here.

Private ownership of foothill flanks and ridgelines presents the potential for continued development of these hilly areas. Some of the most significant areas within private ownership are portions of the Virginia Foothills that form the eastern boundary of the Truckee Meadows, including Rattlesnake Mountain and the Huffaker Hills. Much of the Pah Rah Range is also privately owned and is located at the edge of the City of Sparks' annexation boundary, so pressures from potential development may ensue. Another significant and well-known feature is Peavine Mountain, whose south side is in private ownership. Development on the south side of Peavine (if not planned in a low-impact manner) will have a visual impact on the Truckee Meadows. Peavine Mountain is one of the prominent backdrops in the region.



MORE INFORMATION

To learn more about these resources and to view technical information, please see the Open Space Inventory and Assessment Report, available online at: www.washoecounty.us/openspace.

Development adjacent to the Truckee River and Steamboat Creek affects the visual quality and character of these significant waterways. In such an arid climate, perennial rivers and streams and their associated riparian areas are very significant defining elements, and development in and near these waterways should be carefully oriented to respect views of the water and to limit visual clutter.

Conversion of dominant landscape types (such as the sagebrush ecosystem) to residential development or the introduction of invasive species change the defining landscape many associate with the region. As communities develop, their signature landscapes are often replaced wholesale with landscapes that are not indigenous to the area or that require extensive irrigation to sustain. This has been observed in many subdivisions in southern Washoe County; incomplete landscape restoration projects have also resulted in colonization of large areas with invasive species, including perennial Pepperweed.

A final, and persistent challenge for our region's visual character is illegal dumping. This can include abandoned vehicles, household waste, and cuttings or yard debris. Illegal dumping not only spoils the views of the region, but it also tends to encourage others to illegally dump items. Illegal dumping on county, private, and federal lands also can be a challenge for enforcement and clean-up. Many of these land managers also must divert valuable resources from other important uses to clean up these dump sites, making an impact on other beneficial uses on these lands.

What are the Opportunities for Visual and Scenic Character?

Through this Plan, opportunities exist to install additional protections for some of the region's most sensitive and distinctive visual resources, and to better coordinate efforts among the variety of local, county, state and federal jurisdictions involved in

administration of these resources. For example, the Plan recommends that any ridgeline or "night sky" protection codes and ordinances be coordinated so that the cities and County are working toward a common set of objectives with comparable tools. The Plan also recommends that a comprehensive "visual education" program be developed that describes the importance and significance of visual resources to the community's quality of life and to its tourism potential.

Underlying both of these opportunities, however, is a need to reach consensus on the most significant visual resources within the community; visual and scenic character can be somewhat subjective, and so attempting to better define the principal features that are important to the community's quality of life can help to foster consensus on the measures and tools that may be needed to help preserve them. Understanding the areas that would be affected by any future, strengthened ridgeline protection ordinance, for example, may help reassure municipal and development partners that such an ordinance would not be unduly restrictive.

A regional Illegal Dumping Task Force has been convened to address dumping and abandonment of vehicles. Using cooperative opportunities to expand education, outreach and new waste collection and disposal options, it is hoped that dumping can be eliminated. This task force is composed of representatives from the county, the cities of Reno and Sparks and other partners in the region. Continued support of this task force is important to controlling the problem of illegal dumping.

What are our Goals and Policies for Visual and Scenic Character?

The Plan advocates a variety of goals and policies that are intended to better define the visual resources and character that warrants preserving, and the types of policy and management actions that could be implemented to achieve these goals.



WASHOE COUNTY REGIONAL PARKS AND OPEN SPACE

Views from the Mt. Rose Trail show the world famous recreational opportunities of the region.

They include the following:

GOAL 1: Protect the region's visual and scenic resources.

- 1.1 Washoe County's visual and scenic resources (viewsheds and community separators) are important to the region's quality of life and must be protected for future generations.
- 1.2 The County will work collaboratively with all planning partners to gain regional consensus on managing and protecting the region's visual and scenic resources.

Where Are Some of the Region's Scenic Areas Located?

Scenic areas are, to some degree, in the eyes of the beholder. Different people may appreciate certain types of landscapes more than others. Within the framework established by this plan, however, the following represent some of the most unique and distinctive resources within the region:

The Mt. Rose Wilderness, and surrounding high elevation national forest lands. The wilderness area encompasses over 28,000 acres and includes 14 distinctive mountain peaks within the Carson Range. This area is a distinctive landscape southwest of Reno and its scenic quality was cited by the general public.

Peavine Mountain, north and west of Reno, which includes both Peavine Peak as well as nearby South Mountain. The southern face of Peavine Peak is in private ownership, and the public has raised concerns about impacts to this resource if this area is allowed to develop further.

The Peterson Mountains, which span the border between Nevada and California, north and west of Reno, and which include the Peterson Mountains Natural Area.

Pyramid Lake, which encompasses 188 square miles and includes SR 446, a National Scenic Byway. The lake is one of the largest lakes in the United States and also the largest remnant of ancient Lake Lahontan that covered much of northwestern Nevada at the end of the last ice age.

The Dogskin Mountains, which are visible to the west from the Pyramid Highway and which also have cultural significance.

The Virginia Mountains and Tule Peak, which are visible along the western edge of Pyramid Lake.

Hungry Valley and Ridge, which parallels a section of the Pyramid Highway and which also has cultural significance.

The Pah Rah Range, to the south of Pyramid Lake which includes Virginia, Pond and Spanish Springs Peaks.

The Truckee River, which flows from west to east and provides a visual experience of nature in the City.

The Virginia Range, which lies on the southeast side of Truckee Meadows and which forms the southeast boundary of our planning area. These foothills, sparsely vegetated in sagebrush and pinon pine/juniper communities, form a very significant backdrop and edge to the county. Also on the east side are the Huffaker Hills, including privately-owned Rattlesnake Mountain, a very significant and recognizable feature within the foothills.

Steamboat Creek and associated wetlands, an area that provides a unique interface between the valley floor and the foothills. The original marsh or bog is the low point in the Truckee Meadows, and was one of the first sights to greet wagon trains as they wound their way up the Truckee River. The Overland Emigrant Trail, which followed the base of the Virginia Range, then along the Huffaker Hills to southwest Truckee Meadows, is still visible in this area in selected locations.

Washoe Lake and Washoe Valley, on the southern edge of the project area and which include Washoe Lake State Park, Bowers Mansion, Davis Creek Park and large agricultural properties such as Winter Ranch.

Lake Tahoe, at the far southwestern edge of the project area.

Bedell Flats in the North Valleys, a large predominantly sage-covered valley surrounded by hills with no human-made structures visible except for a few dirt roads.

Painted Hills and Needle Rock, unique geologic formations located just north of the Incandescent Rocks ACEC.

Swan, Silver and White Lakes, three playas in the North Valleys.

Jumbo Grade, the large undeveloped area of hills east of Washoe Valley that includes Bailey Canyon, Wakefield Peak and McClelland Peak.

The **Mount Rose Highway** (SR 431).

Geiger Grade (SR 341).

U.S. 395 through Pleasant Valley, Washoe Valley and Cold Springs Valley.

1.3 The County will work collaboratively with all planning partners to gain regional consensus on identifying and protecting the region's significant visual gateways as experienced from major interstate travel routes.

1.4 County and local jurisdictional development review processes should be expanded and coordinated to include consistent criteria for the evaluation of visual impacts of proposed projects.

1.5 Any regional parks, facilities or County-owned open space that are impacted by non-park uses, or uses not consistent with this plan, must comply with the Regional Parks & Open Space Granting of Easement Policy and the review process.

GOAL 2: Preserve and protect the visual integrity of our region's hillsides, ridges and hilltops.

2.1 The County will work collaboratively with Reno and Sparks to gain regional consensus on a coordinated approach for managing and protecting hillsides, ridges and hilltops through policies and implementing ordinances.

GOAL 3: Preserve the remaining integrity of our region's dark night sky.

3.1 Develop and implement consistent and comparable ordinances and consistent lighting codes for Reno, Sparks and the county that will help preserve the "dark night sky."

3.2 Development codes should require lighting plans for proposed projects to include ways for reducing any adverse effect of artificial light, including glare, unwanted lighting, decreased visibility at night, and energy waste.

GOAL 4: Protect the region's visual resources from impacts of illegal activities (such as

dumping, abandoned vehicles and illegal trail creation).

4.1 Support and continuously improve coordination among law enforcement agencies to reduce impacts on visual resources from illegal trail creation, OHV use, dumping, and other impacts to public lands from illegal activities.

4.2 Support and participate in the Illegal Dumping Task Force and collaborate to inform the public on dumping, provide information, and improve current efforts to eliminate illegal dumping.

4.3 Coordinate with appropriate agencies to reduce illegal activities through increased fines, public service restoration requirements, and other enforcement measures.

GOAL 5: Educate the public on the values of the region's scenic resources.

5.1 Increase general awareness of the Regional Open Space and Natural Resource Management Plan, with a focus on building appreciation of the scenic character of our area (coincidental with building appreciation for recreational opportunities and ecosystem services).

5.2 Educate and enlist local and regional organizations and special interest groups in the support and promotion of the Regional Open Space and Natural Resource Management Plan's direct ties to economic development, the tourism industry, the region's quality of life and our local citizen's sense of pride/ownership.

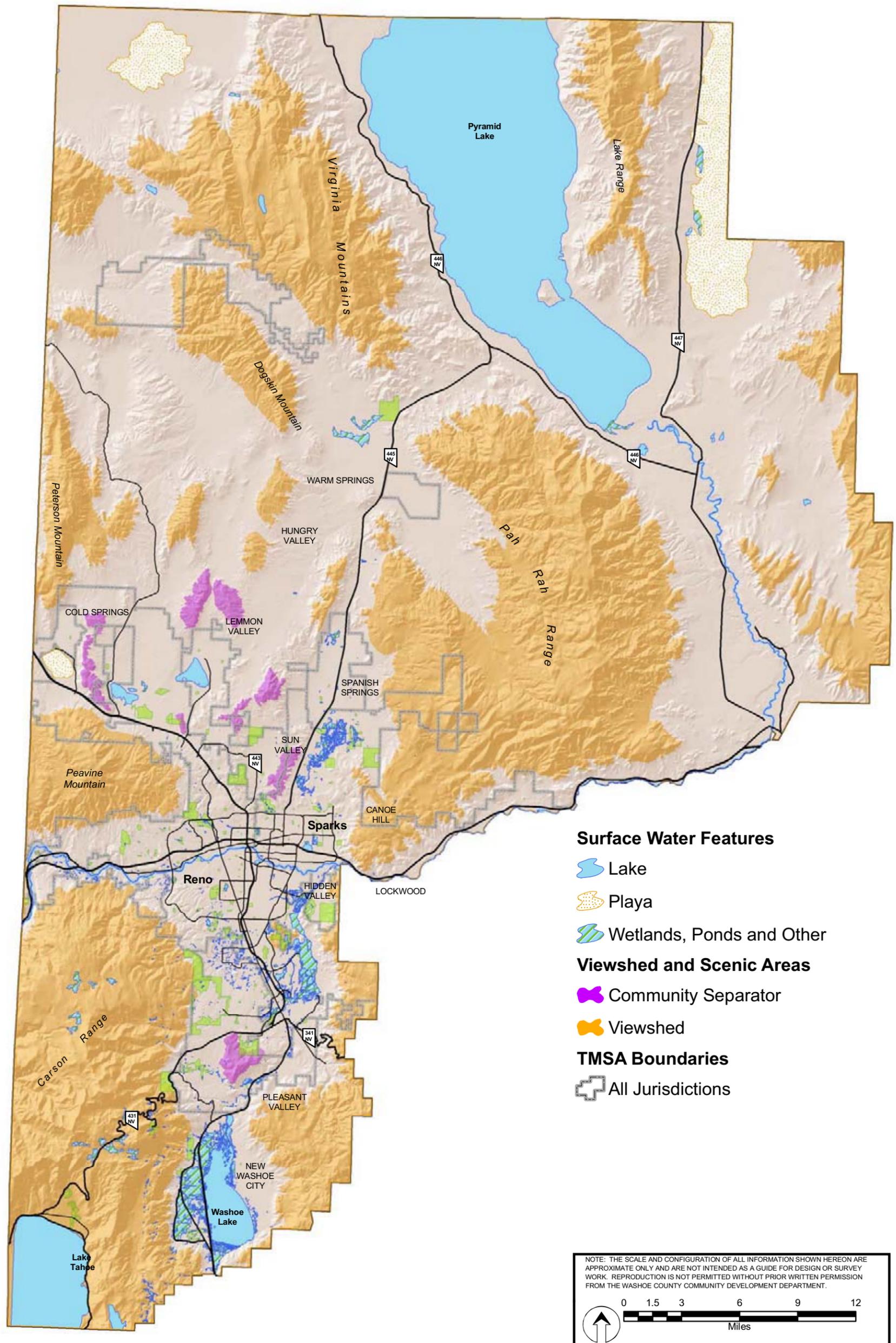
5.3 Work with NDOT and RTC regarding the incorporation of scenic viewpoints into the region's planning for transportation enhancements and funding activities.

5.4 Work with NDOT and RTC regarding the preservation of our area's scenic viewsheds in future transportation planning.

MAP 12

Visual and Scenic Resources

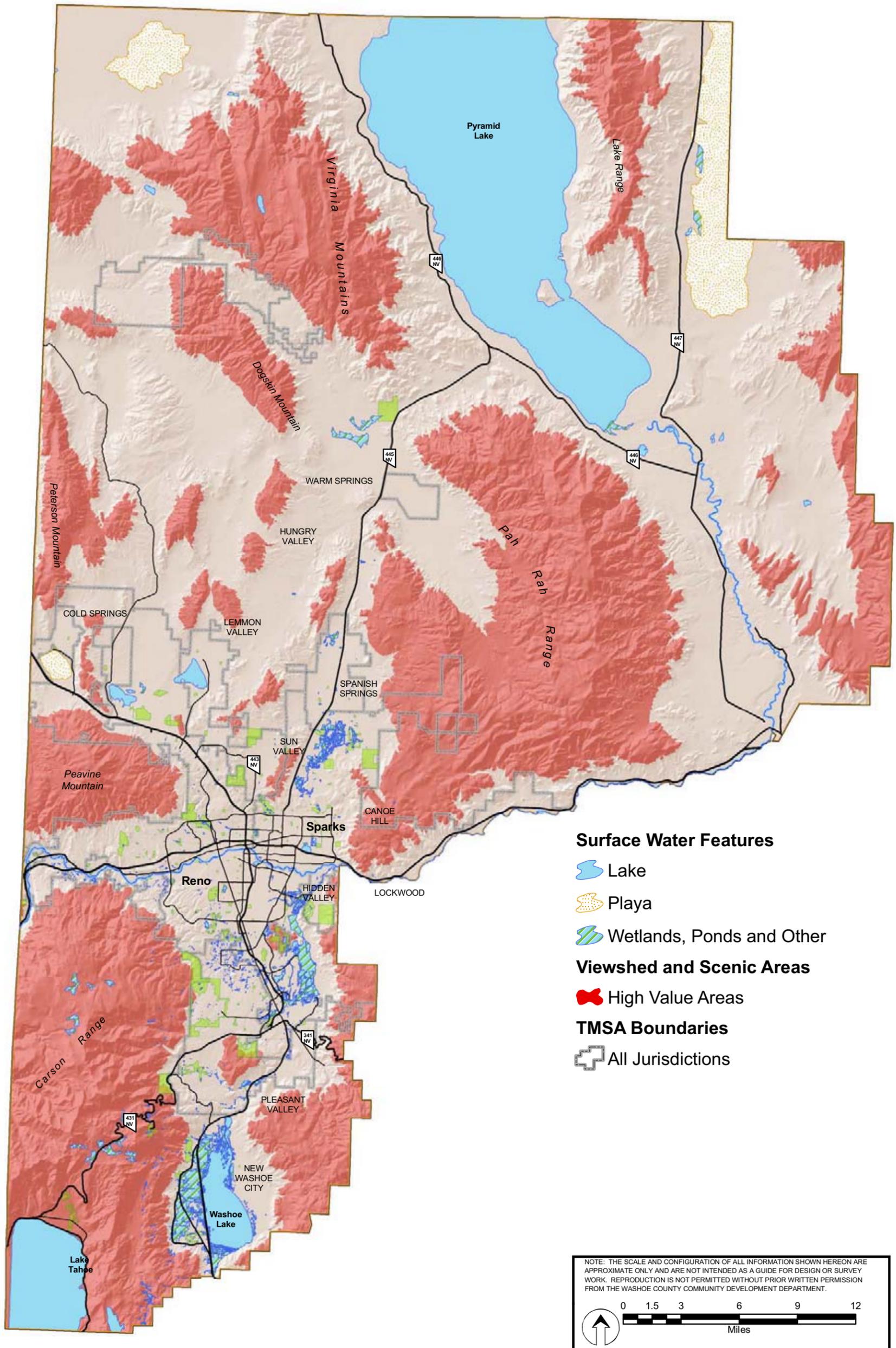
This map shows the visual resources of the region. This includes areas that provide the views that define our region and the ridgelines that help create the individual identity of each community within our region. These areas were developed through a combination of interviews and working sessions along with analysis of the elevations and viewpoints in the region.



MAP 13

Visual and Scenic Values

The visual resources depicted on the previous map are given high values on this map. These areas contribute the highest visual value for the region.



Water Resources

What are water resources?

Water resources include all of the surface water and groundwater in the region: lakes, playas, rivers, streams, seeps, springs, and the network of groundwater aquifers and the subsurface flows that connect aquifers to surface features.

Our landscape is characterized by how precious water is in this environment. Plants and animals have developed unique strategies to take advantage of the water that is available, and our communities have historically been located where these resources are readily available.

The greater Truckee Meadows, the Sierra, and the Washoe Valley area all benefit from the water that finds its way over the divide from the Lake Tahoe region. Key to this is the Truckee River and its Lake Tahoe headwaters, which bring both water for our communities and for fish and wildlife. These conditions have shaped how urban and agricultural development have grown up in the southern half of Washoe County.

What are the challenges for water in our region?

Surface Water

Our water resources face a number of challenges to both quantity and quality. Water quantity is an issue because demand for potable water increases as development expands. As more people move to our region and more homes are built, more water must either come from the Truckee River, its tributaries, or groundwater that is pumped to homes. Our water quality is threatened by increased development that brings polluted stormwater runoff and introduces pollutants into the groundwater in areas with no community sewer systems. Agricultural uses and industry also contribute to these threats through discharges of pollutants or

What is a water resource?

Water resources include surface and groundwater resources. Surface water resources include:

- Lakes and ponds
- Playas and pools
- Rivers and streams
- Seeps and springs
- Washes and intermittent streams
- Wetlands and marshes

Groundwater includes various aquifers and subsurface flows that connect recharge areas with springs, streams and wetlands. Groundwater provides an important source of water for many of our surface water resources. These groundwater flows provide a slower year-round release that keeps seeps, springs, and rivers flowing during dry periods, and supports the adjacent habitats.

contaminated water. This pollution can threaten both human and wildlife health.

Water quantity challenges stem from the laws and history of water development in the region. How much water is available for everyone has been a constant struggle, both here and across the West. In dry periods the use of allocated water may leave little or no water in rivers and streams for fish and wildlife. As demand increases for the residents of the county, long-distance importation of water is being developed from Fish Springs Ranch and is being considered from other areas.

The challenges to how much water we have are also accompanied by issues of how clean the water is. Surface water pollution in our region led to the Truckee River being one of the first rivers in the U.S. to have a Total Maximum Daily Load (TMDL) created under the Clean Water Act. A TMDL manages the allowable

How does this relate to other resources?

Biodiversity: Water resources are key to the success of many of the habitats and their species in the region. Enough water, at the right time of the year, is critical for fish and wildlife alike.

Natural Hazards: Water pollution threatens human health and over-pumping of groundwater can cause land subsidence. Impacts from flooding can change how rivers flow or carry pollutants that may enter aquifers or surface sources for drinking water.

Parks and Trails: Water is a key feature for recreation. Adequate river flows and lake levels permit water recreation and provide a visual amenity.

discharges to waterbodies and is created in response to high levels of pollution. As an example, Steamboat Creek is the largest source of non-point pollution for the Truckee River. Additionally, polluted groundwater not only makes it unsuitable for human use; but as it moves into streams and creeks, it carries the pollution with it. Some of this pollution is naturally occurring, while in other cases it results from industrial chemicals leaking into groundwater supplies.

Our region also has a number of ditches and drains that were built to convey water from one area to another for irrigation or to generate power. These watercourses move both water and pollutants across the region, adding complexity to managing both water quality and quantity. The maintenance of these ditches also presents challenges, because poorly maintained ditches can increase the amount of sediment due to bank erosion and the potential for disastrous flooding.

Our landscape is characterized by how precious water is in this environment. Plants and animals have developed unique strategies to take advantage of the water that is available, and our communities have historically been located where these resources are readily available.



TERMS: SEEPS

SEEPS OR SPRINGS are locations where water oozes from the earth, often forming the source of a small stream. Seeps and springs are hydrologically supported by groundwater and have relatively constant water temperature and chemistry. Springs differ from seeps in that they tend to have a more persistent water source and have fewer dry periods than seeps. Changing groundwater conditions can change seeps to springs and springs to seeps, so they are managed similarly.



MORE INFORMATION

To learn more about these resources and to view technical information, please see the Natural Resource Inventory and Assessment Report, available online at: www.washoecounty.us/openspace.

Water resources are a highly regulated and studied issue in our region. Most of the focus on managing water is to ensure that homes, agriculture and industry have the water they need.

Groundwater

In addition to the valuable surface water, there is the groundwater that lies beneath our region. Groundwater provides a water supply to seeps and springs, and helps the rivers flow during dry times of the year. Recharge – rain and runoff that filters back into the ground – is critical. If groundwater is pumped out for use and there is not adequate recharge, the aquifer will eventually run dry. In some cases this can cause the ground above to deform and sink. Groundwater is also faced with the same legal challenges as surface water, except that the demand and impacts of use are less well known because of the challenges of measuring groundwater. Groundwater is also vulnerable to pollution. As development occurs, groundwater aquifer recharge is limited, reducing supply, and pollutants can be carried into the ground, making it unfit for human or natural uses.

Well development throughout the region has also increased as private residents drill individual wells to meet their needs. These wells draw from groundwater

sources that may or may not be able to support the demand. If this water is not replaced by adequate recharge, adjacent springs and streams can go dry during parts of the year. Many of these concerns are also discussed in the biodiversity section, because of the impact of losing springs and seeps for species support.

Groundwater also faces threats to quality from both natural and human causes. Natural geothermal activity and highly mineralized aquifers require expensive and difficult treatment to be made potable. Human causes include septic tanks and industrial pollution. Home septic tanks create plumes of nitrates that threaten health standards, while industrial pollutants can include oils and solvents. Of critical concern is the industrial solvent perchloroethylene (PCE), which is present beneath the urban areas of the Truckee Meadows.

What are our opportunities for water resources?

Addressing the water resource challenges of the region is a complex task that will continue to require many parties in the region to agree on the path forward. The Plan can help by directing open space and natural resource management decisions made by the County in such a way as to build on or complement other efforts to maintain our water resources. At the same time, this Plan will help the County to manage land it owns to best maintain the water needed for the land's natural functions and to allow those functions to benefit the region's environmental health.

In order to maintain the integrity of vegetation communities and the natural functions of our region, the County must acquire and preserve water rights to serve fish, wildlife and recreation, both for open space holdings and for the water bodies that flow through our communities. Other opportunities include further development of effluent reuse, which involves treating wastewater to make it suitable for irrigating public amenities such as parks and golf courses or for release to streams in the region. This innovative water option

What do water resources mean for the Plan?

Water resources are a highly regulated and studied issue in our region. Most of the focus on managing water is to ensure that homes, agriculture and industry have the water they need. This plan seeks to expand the scope of water resource management to ensure adequate water for natural uses, including fish, wildlife, plant communities and recreation.

Challenges to these uses come from the overuse or over-appropriation of water, or when water pollution becomes so serious as to harm or kill fish and wildlife that depend on the water.

This Plan seeks to:

- Preserve water in streams and lakes to meet the needs of fish, wildlife and recreation.
- Restore natural processes that help keep water clean.
- Restore or maintain groundwater so it continues to supply water to springs, seeps, wetlands and rivers.
- Where possible, align open space acquisitions with regional goals to protect municipal water resources through land or water rights acquisitions.

is currently in use at North Valleys Regional Park, Sierra Sage Golf Course, South Valleys Regional Park, Swan Lake and Lazy 5 Regional Park, just to name a few, with a planned pipeline extension to the Montreaux Golf course.

The Plan offers guidance to partners in the region on how to manage their land and water resources. This includes the federal land management agencies, USFS and BLM, who manage the largest portions of public lands in the county.

The Plan also identifies next steps to ensure that seeps and springs and their associated habitats are protected. This may require the County or other

Rivers in the region provide important corridors for species migration, transportation and recreation.



CAROLYN POISSANT

entities to apply for water rights or protest other applications that may harm a seep or spring. The Plan directs the County to become an active owner and participant in the water management process in our region, and to do so with the benefit of fish and wildlife as well as recreation in mind.

An additional resource is to work with local agencies such as sewer utilities to develop enterprise funds to finance restoration activities. Currently the City of Reno sewer utility operates an enterprise fund for watershed improvement and restoration. Partnering or creating other similar programs could greatly add to the success of protecting the region's water resources.

What are our goals and policies for water resources?

GOAL 1: Preserve and acquire water rights to support healthy fish and wildlife populations.

- 1.1 Apply for water rights where possible or establish standings in water rights applications to assure sufficient water is available for wildlife and recreation.
- 1.2 Encourage the Bureau of Land Management, U.S. Forest Service and Nevada Department of Wildlife to apply for water rights, or protest applications, in order to assure sufficient water is available for wildlife and recreation.
- 1.3 Support efforts (such as the creation of a water conservancy trust) to purchase and hold water rights for fish, wildlife and recreational uses.

GOAL 2: Provide sufficient water resources to support natural functions of open space.

- 2.1 As open space is acquired, the County or partners should acquire the associated water rights where cost-effective and available. Open space that will not have sufficient water rights to remain in its present condition should not be acquired without a plan to acquire other water rights to maintain its function.

POLLUTION TYPES

Surface,
Ground
and
Point Versus
Non-point

Water pollution in the region can be divided between *surface water pollution* and *groundwater pollution*. Surface water pollution typically results from discharges from agricultural, wastewater or energy facilities or industry. These discharges are regulated and have permits associated with the discharge. Groundwater pollution typically results from the movement of a pollutant through the soil into groundwater aquifers; it comes from a number of sources, including septic tanks and accidental or improper management of chemicals or compounds in industry or natural contamination. Groundwater pollution can also travel underground and flow into surface water, contaminating it as well.

Both forms of pollution can come from *point or non-point sources*. Point sources are discharges from pipes or specific locations that can be more easily measured and monitored. Non-point pollution is typically pollution from many small discharges that are hard to find or track, such as agricultural runoff. It is also harder to assign responsibility for non-point pollution.

- 2.2 As new water sources are made available to replace Truckee River water (such as treated effluent), where appropriate, a portion of the water returned to the natural source should be dedicated to fish, wildlife and recreational use.
- 2.3 As treated effluent is produced and made available for new uses, where appropriate, a portion of treated effluent will be dedicated to natural uses to benefit wildlife and the habitats they depend on.
- 2.4 Water importation proposals should ensure sufficient water remains in the basin of origin to protect biodiversity and the natural functions of the area's seeps and springs.
- 2.5 Seeps and springs will be protected from development and other uses that may damage the surrounding vegetation communities and habitat. A buffer of no less than 100' from the source of any single seep or spring will be established. In areas of seep and spring complexes, an approved seep/spring management plan should be submitted as part of the development proposal to assure water quality, wildlife access and some flexibility of buffering standards.

- 2.6 Where water is currently dedicated for maintenance of wetlands or other natural systems, it should not be rededicated to other uses unless impacts can be mitigated through other efforts.

GOAL 3: Integrate open space acquisition with water resource management where feasible.

- 3.1 Collaborate with the Northern Nevada Water Planning Commission on acquiring open space for watershed protection and to assure buffering for wellhead protection.
- 3.2 When prioritizing open space acquisitions, protect aquifer recharge areas to assure groundwater discharge at seeps and springs, especially in hydrobasins that are expected to be overappropriated in the future or that are presently.
- 3.3 Continue to acquire/retain areas of moderate to high groundwater recharge zones where appropriate. Protect moderate to high groundwater recharge areas where possible through the development review process.
- 3.4 Coordinate open space acquisition and retention decisions with current and future wellhead protection areas.

How is water managed in our region?

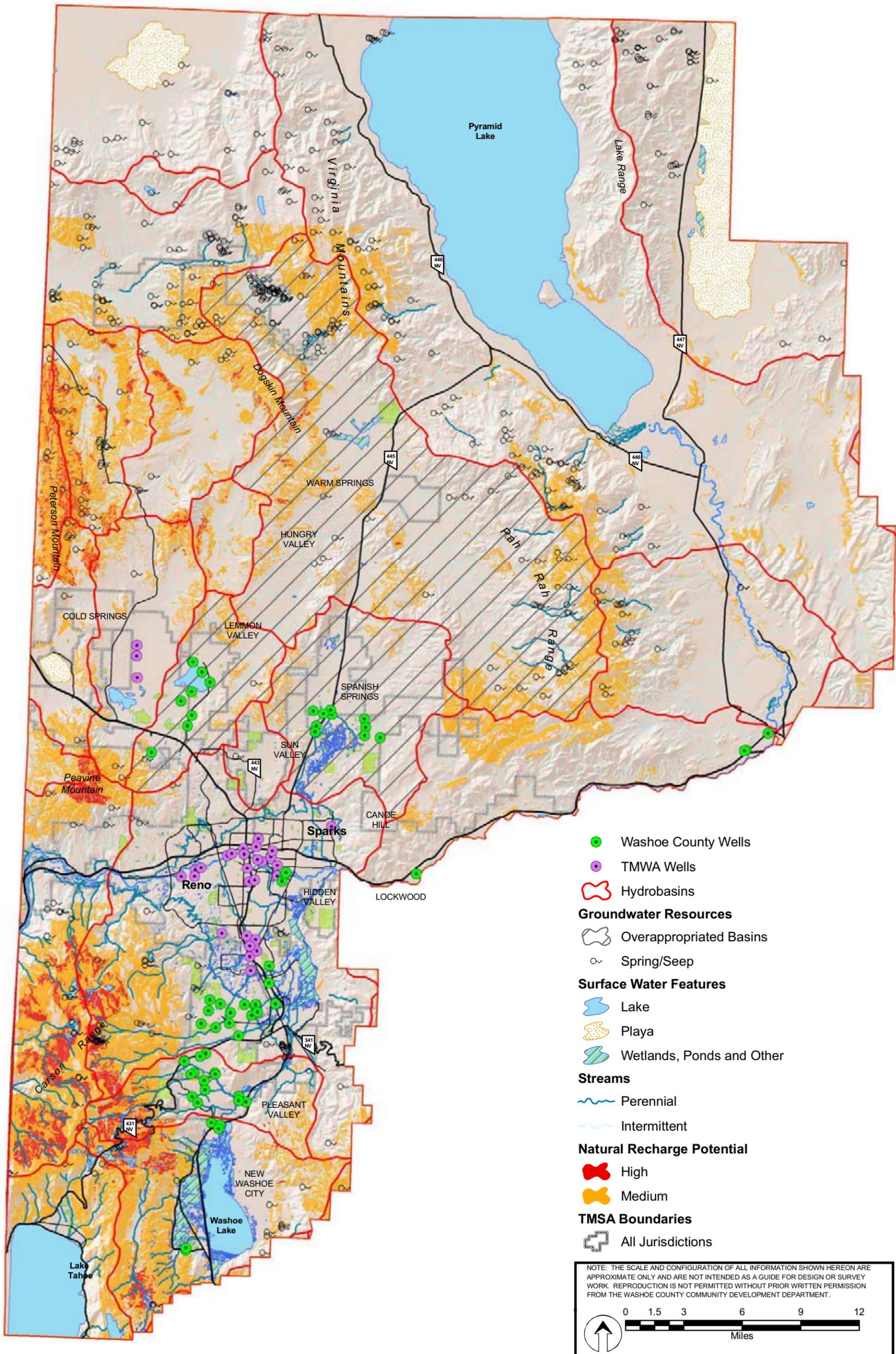
As the West was being settled in the 19th century, a unique set of laws and principles were developed to share the water among users. The key principle of these laws is that a right to water is based on it being used first, before other users. In our region many of the first users were the federal government, Indian tribes, and agriculture. As cities developed they too had to develop a water right. As each right is established they stack on top of each other – each taking out a set amount of water, until the source is completely allocated. This is like putting several straws in a glass at different heights. Each one has access to certain amounts of water; however, in wet years there is more water around, and others may put a straw in. When a dry year comes, the junior rights, the last ones to make a claim for a right, may not get any water.

Our region has many straws, and more and more are near the top. The surface water from the Truckee River is fully appropriated, and now we are drilling more wells and even looking to other parts of the region for water. In all of these cases, it is important to remember that if all of the water is allocated, rivers can run out of water and dry up. The Water Master keeps an eye on these conditions – but it is difficult. What is a dry year and what is a wet one is hard to judge. Some users take water in consistent amounts. Others may use their right fully one year, but only partially the next. At the same time our cities and subdivisions need more water for new homes. All of this demand means our rivers have less water for recreation, fish and wildlife and we are now pumping more water out of the ground. Groundwater that is pumped too heavily causes springs to go dry, and in some cases causes the ground to sink beneath us.

MAP 14

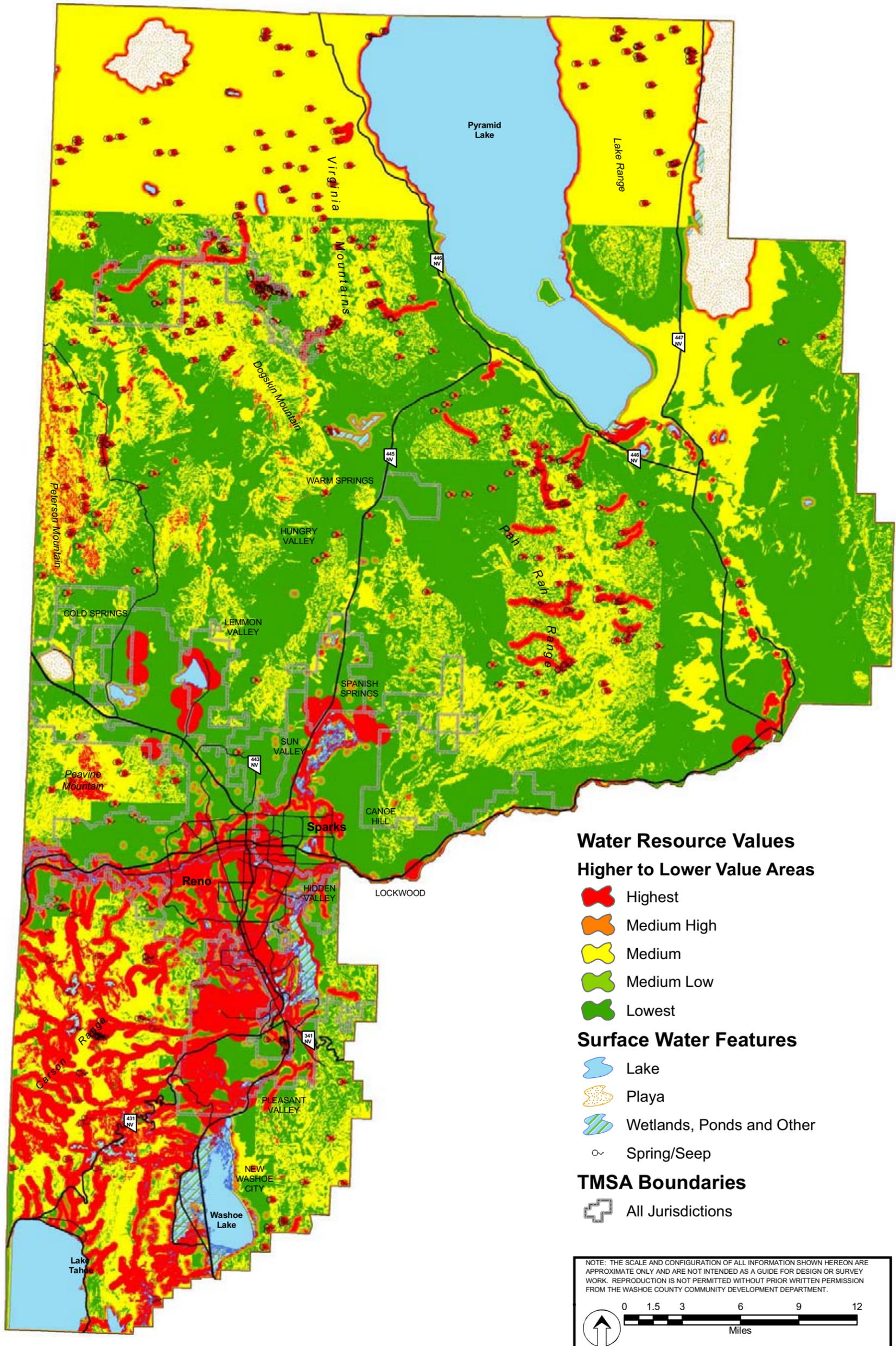
Water Resources

The features on this map show important water resources in the region. Surface water features include rivers, streams, springs, seeps, lakes and wetlands. Groundwater resources include drinking water wells in the region as well as areas with high groundwater recharge potential. In addition to these features, areas with expected groundwater challenges are shown in cross-hatched areas in the north valleys.



Water Resource Values

This map shows the location and types of water resources for planning and resource management purposes. All of the surface water resources were assigned high values, including a buffer that protects and supports the resources. Additionally, groundwater resources were valued based on groundwater recharge potential and by providing a protective ring around groundwater wells. These ranges of values are used to help the County focus efforts in areas that are most critical to protecting water resources.



Sustainability and Ecosystem Services

What is No Net Loss?

The resource categories in this plan capture the key resources that support our communities. These include how the natural landscape provides us with clean water, protection from floods, healthy ecosystems, recreational opportunities, and the visual character of the region. When evaluated across the planning area, this plan calls for no net loss of ecosystem services. The plan recognizes that in some cases ecosystem services may be lost due to infrastructure construction, development or other human activities, but that in these cases the loss must be replaced with restored or enhanced ecosystem services somewhere else in the region. For example, one important service is groundwater recharge. If a development caused an area to no longer be able to let water seep into the ground, then this plan calls for that loss to be replaced by the restoration or enhancement of another piece of land that can provide that recharge. In this way development and environmental protection can be linked and work together to make the best decisions.

While many of the Plan's goals and policies apply to one of the six resource categories, certain goals and policies for the region's open space and natural resources need to stand alone in the Plan. These policies reflect the basic values and goals for the program, which is to preserve and restore as needed the natural functions our communities rely on. These functions are known as ecosystem services. They provide society essential services like clean water, flood protection, fire resistant wildlands, biodiversity, and scenic and recreational values. When lands that provide these services are impacted or modified, society must replace them if they were relied upon. When a floodplain is modified, the natural ability to store water must be replaced by engineered solutions such as levees or dams. Similarly, as groundwater recharge areas are modified and prevent water from recharging aquifers, either new water must be imported or other technologies used to meet demands for water. These examples show how our entire region relies on a green infrastructure to maintain our quality of life. The following sections introduce how this green infrastructure works, and then lists goals and policies to provide for it.

What are Ecosystem Services?

Our open spaces and natural areas have always provided important values for our region: open spaces to recreate, clean water to drink and fish, amazing and sweeping views, and unique wildlife and plants, just to name a few. At the same time we have historically viewed some natural areas as threats or limits on the development of our cities. Flood-prone rivers, wetlands or steep areas were managed as risks or challenges to our communities. We have developed engineered solutions to protect us from these, but sometimes with consequences for the environment – loss of fish habitat, or loss of wetlands, for example.

However, with more studies and science we have come to realize that the natural areas around us support

Flood-prone rivers, wetlands or steep areas were managed as risks or challenges to our communities.

We have developed engineered solutions to protect us from these, but sometimes with consequences for the environment – loss of fish habitat, or loss of wetlands, for example.

our healthy communities better than our engineered solutions can. Today there is a growing awareness that these natural systems form an infrastructure that supports our communities, a green infrastructure.

This green infrastructure performs the same functions as pipes, levees, dams, and other management tools. It includes the natural capacity for the land to hold and store floodwaters and runoff, to maintain healthy pest and fire cycles, and to filter and store drinking water on the surface or in aquifers. This infrastructure also includes such critical functions such as oxygen production and pollination of plants. These functions are known collectively as ecosystem services – in recognition of the fact that the environment provides services that society relies upon for its continued health.

Not all land provides all ecosystem services in the same way. A valley bottom of sagebrush may store flood waters, allow these waters to seep into the ground and recharge wells, and support healthy vegetation that is more fire resistant and supports various wildlife species. To some degree, this land could be converted to other uses such as roads, housing or commercial areas without an impact on flooding, drinking water, fires or wildlife. However, at some point each amount of land lost will start to change the way the natural system works. These changes will require someone to

build flood control devices, water treatment plants, provide fuels treatment for fire prevention, and so on.

This simple example illustrates how the protection of our natural areas in fact provides the best protections for our communities from these common challenges – and often at a lower cost. Additionally, when we modify the landscape, the impacts and costs are not always shared fairly. One piece of land may play a large role in protecting downstream landowners from flooding, and if the protection is lost it sends the cost of flooding downstream.

This Plan seeks to build on this understanding to encourage the protection and enhancement of lands that provide these services. This Plan charters an effort to develop a formal program for protecting, enhancing and restoring these ecosystem services. It is a process that is unique to Washoe County – and one that will require subsequent efforts to develop measures and practices for meeting the Plan's goal of stopping further loss of ecosystem services. By looking at ecosystem services, the Plan can not only meet the recreational, cultural, scenic, and biodiversity goals of the open space program, but can provide additional value for the entire community by being a partner in providing healthy communities, clean water and protection from natural hazards.

How do Ecosystem Services support the goals of this Plan?

Using this green infrastructure framework has informed many of the issues examined in this plan. The resource categories that this Plan addresses are:

- Biodiversity
- Cultural Resources
- Natural Hazards
- Recreation Resources

- Visual and Scenic Resources
- Water Resources

These categories capture the key resources that the Plan has identified as ones of special concern and ones that require attention. These resource categories contain in them ecosystem services that the Plan strives to protect. These services are in turn tied to the landscape and have both policies and tools here to protect them. One of the ways this Plan aims to protect open space is through market-based tools including the purchase and selling of ecosystem services.

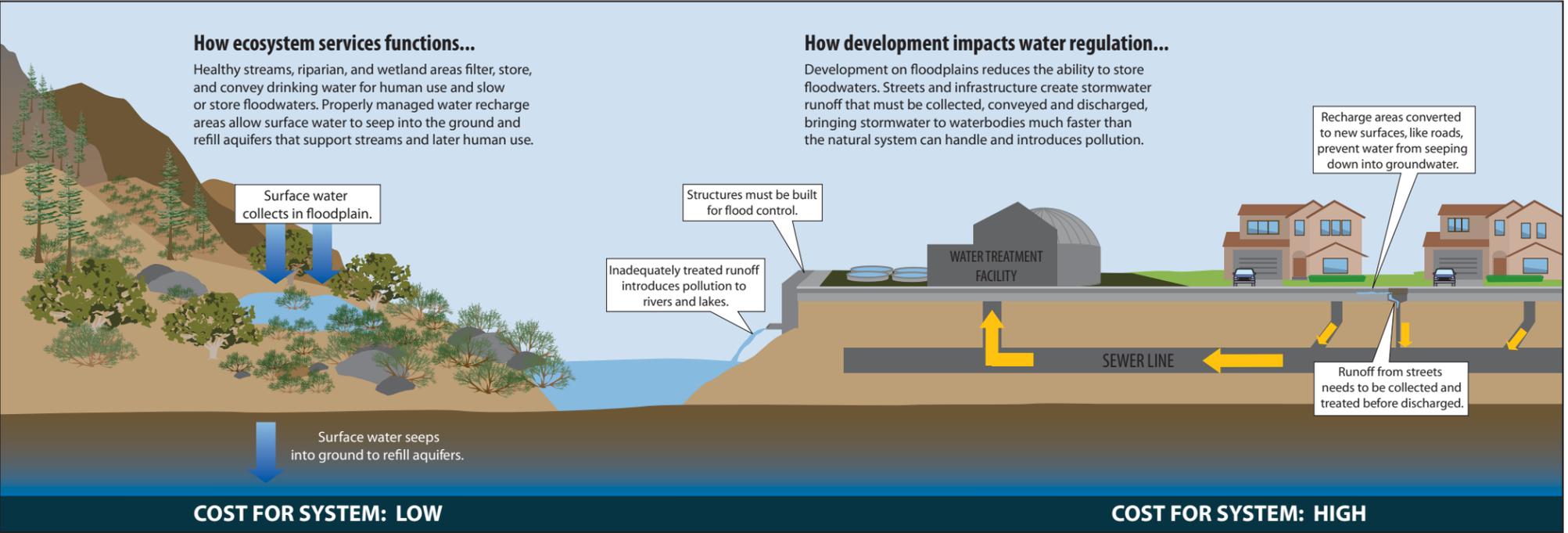
Not all open space areas provide these services and values in the same way. The role of open space in the Carson Range differs from open space in the north valleys or near Washoe Lake. Even within these areas, one piece of land may provide different values than land next to it, because it holds a valuable soil type, habitat type, is in the floodplain, or has other characteristics not shared by the adjoining land. At a very coarse level, this Plan has identified priority areas. But to make the ecosystem services concept really serve the needs of the community, a clear measure of these services and a way to trade them is critical.

Markets for environmental credits have grown in the U.S. and globally in the past two decades. These markets are mainly centered on water or air pollution issues, and usually where there are a few clear polluters that have easily measured discharges. Some special markets for wetlands and endangered species habitat have also developed in the past 10 years. But these examples focus on small opportunities – usually just for one industry or one watershed or one species. However, new models are emerging for these markets, such as carbon markets to address carbon-based climate change and new ecosystem markets to address ecosystem services comprehensively.

Ecosystem markets function as a network of mitigation solutions, effectively connecting entities needing to offset impacts with entities doing restoration projects. The entity seeking the impact offset has a mitigation

ECOSYSTEM SERVICES: Water Quality & Regulation

Properly functioning streams, rivers, and other waterbodies control, slow, and store surface water runoff during and after storms. They also assure water levels are sustained year-round for fish and wildlife.



obligation pursuant to one or more regulations, or they may desire to offset ecosystem impacts to meet a green building ethic. Land owners whose restoration activities have been certified by the market can then sell credits to those seeking the offset. Once regulatory structures are in place, the marketplace functions as a trading forum for those who have natural resources and those who need to provide environmental benefits.

The ultimate goal for this ecosystem service program is to foster such a market to support the vision of this plan. In terms of how ecosystem services are provided, not all landowners have the same level of services coming from their land. Some land may be relatively low in value – this is the ideal place to encourage and steer development when compared to higher value lands. However, lands with a higher level of ecosystem services should be invested in to assure these services continue to be provided.

This can happen through market exchanges, public investments or private donors.

The following goals and policies set the stage for the process of developing such a system in our region. The critical components are:

- Convene an oversight body to provide guidance and scientific review;
- Develop an agreed upon accounting method to measure the services provided;
- Establish a framework for trading and exchanges; and
- Develop requirements for participation in the market as appropriate.

The goal of this program is to put in place an agreed upon series of steps required to measure the type and



WASHOE COUNTY

Sustainability is defined by what we do each day.

level of ecosystem services provided by a site. This would normally take the form of an assessment performed by qualified staff. These reviews then generate a report on the services that are being provided or that may be impacted by other uses. This system allows people wishing to be paid for protecting these services to enter the market and trade with those who are unable to avoid impacting them.

As a first step towards this program, ecosystem service assessments are proposed to be required of all major developments. This assessment would provide data and a testing ground for the initial measurement system. It will provide a basic measure of the potential and the challenges that face full implementation. Through examination of the assessments, a measurement system and fully functioning market can emerge and regional goals for service levels defined. Ultimately, future needs for flood protection, drinking water or fire prevention may be provided through investments in restoring or protecting natural areas instead of spending on structures, plants or treatments.

GOAL 1: Institutionalize the concept of ecosystem services within the region.

- 1.1 The County and its planning partners within the region will regard the natural functions our communities rely on as critical ecosystem services providing value as “green infrastructure” which, if impacted, must be replaced.

GOAL 2: Manage open space and natural resources for “no net loss.”

- 2.1 The County, in conjunction with resource experts, will develop a future regulatory structure that requires development, land transfer and open space decisions to demonstrate compliance with the “no net loss” goal for important ecosystem services.
- 2.2 Revenues generated through any offset program

will be managed to fund targeted necessary ecosystem service preservation or restoration projects.

- 2.3 The County will encourage the location of higher density development closer to urbanized areas and support the voluntary limitation on development in rural areas with high biodiversity or ecosystem service value. The County should explore the establishment of a transferable development rights program to provide compensation for landowners in areas identified as not being able to support higher density limits.

GOAL 3: Ensure future open space and natural resource land acquisitions meet as many goals and policies as possible from this Plan.

- 3.1 Future land acquisition or sales will be evaluated using the resource goals, policies and mapping included in this Plan. Acquisition through dedication or donation will strive to acquire the premier lands for preservation as open space and avoid those lands of marginal natural, cultural or recreational value.

Sustainability

Open space and natural resource planning is one part of Washoe County’s commitment to protecting the environment. This commitment is reflected in almost everything we do. Our strategic priorities call for responsible practices, products and policies that result in environmental as well as financial savings.

Our Quality of Life task force, which is comprised of representatives from Department of Regional Parks & Open Space, Public Works, Air Quality, Water Resources, Regional Transportation Commission, Building & Safety, and Libraries, work collaboratively to implement the County’s strategic priorities to “Preserve and Enhance our Quality of Life.”

The Quality of Life task force works to protect and cooperatively plan regional parks, open space, trails

Washoe County has long been a supporter of environmental stewardship in our region.

From protecting thousands of acres of open space for future generations, to enacting a recycle and reuse policy that guides how we conduct business, to environmental restoration of our rivers and wetlands, to incorporating sustainable building practices into our capital projects, Washoe County sets the example for our region that taking care of our environment is everyone’s responsibility and privilege.

KATY SINGLAUB
COUNTY MANAGER

and ecosystems; improve traffic flow in the region; integrate water resources planning and management in regional processes; pursue a leadership role in efforts to maintain an environmentally responsible community; and pursue a leadership role in arts, culture and literacy.

Washoe County has recently gone one step further in their commitment to protecting the environment and has formed the Green Team chaired by Andrew Goodrich, Director of Washoe County Air Quality and the chairman for the State of Nevada Governor’s committee on climate change.

The Green Team will be charged with furthering the vision and mission for Washoe County to play a leadership role in environmental and sustainable policies and practices in all facets of business and the community.

We invite our planning partners and the community to join us in this shared vision for protecting and enhancing our Quality of Life in Washoe County and to work collaboratively for a sustainable future.

Implementation Plan

Introduction

The Regional Open Space and Natural Resource Management Plan is an action-oriented plan with a 20-year horizon, focusing upon the projects and activities that need to be undertaken to carry out a clearly defined vision, a set of guiding principles, and desired outcomes for the future.

How will the Plan be carried out?

As noted earlier, the Regional Open Space and Natural Resource Management Plan is a long-term plan for the management of the county’s open spaces and natural resources over the course of the next 20 years, in alignment with the County’s Comprehensive Plan. The Implementation Plan being recommended to carry out the Regional Open Space and Natural Resource Management Plan focuses on the following:

- Recommended changes to the County’s Comprehensive Plan, Development Code and implementing ordinances to facilitate carrying out the goals and policies of this Plan;
- Recommended actions to carry out the goals and policies for achieving the Plan’s envisioned, desired outcomes;
- Recommended areas for acquisition and retention for conservation, protection and management of open spaces and natural resources; and
- A suggested time frame for initiating key actions and projects.

Accordingly, it is recommended that the County review the Regional Open Space and Natural Resource Management Plan on a regular basis, and make amendments to the Plan as opportunity or changing community and economic circumstances necessitates. Should there be a desire to change the guiding principles or shift the emphasis of a

This Plan will be implemented in pieces, or components, over time, with some actions in 2008 and others initiated in the years to follow.

particular goal or policy, this plan update process provides the mechanism for doing so within the context of reviewing the plan as a whole.

Finally, realizing that not everything can be done within a short time frame and that there are other community priorities to be addressed, those seen as having the most importance to undertake within the first 3 years are highlighted in a Short-Term Action Plan (see discussion below).

Programming Recommendations

This Plan will be implemented in pieces, or components, over time, with some actions in 2008 and others initiated in the years to follow. An initial list of recommended actions, next steps and projects has been compiled and can be found in the Implementation Plan, one of the three key components of the Regional Open Space and Natural Resource Management Plan. These recommended actions and projects have been categorized and prioritized with regard to relative timing (e.g., 1-3 years, 4-6 years, 7-10 years, and longer-term). This list of actions and suggested programming can be found in the Implementation Plan, this Plan’s companion document.

Short-Term Action Plan

As mentioned earlier in this summary Plan, there are many projects and actions recommended for carrying out the Regional Open Space and Natural Resource

Management Plan. A rapidly-growing region such as Washoe County has a number of important projects and programs competing for limited time and financial resources. The Plan’s Implementation Plan includes a summary matrix that shows recommended actions and projects for implementing the Plan over time.

As the County and its planning partners cannot carry out all the projects and actions identified within the Implementation Plan at once, a short-term prescription for initiating those actions which are most critical to the realization of the Plan and its vision is of utmost importance. The recommended projects and actions within this initial short-term period must combine visible improvements with initially invisible efforts that will enable and encourage envisioned change to occur. This smaller list of high-priority projects is intended to respond to the question, “What is the short list of actions that can be undertaken within the first 3 years to initiate and demonstrate movement and set the stage for other actions to follow?” The actions in this initial short-term plan are organized into three categories: process improvements, projects and actions, and organizational or partnership improvements.

This incremental strategy is envisioned to serve as a 3-year, renewable/rolling, short-term action plan that would be annually updated, with a regularly scheduled monitoring and updating process and a supporting budget. A description of how such a program will operate is provided below.

Example: In developing this Incremental Implementation Plan, each of the Plan’s goals and policies would be examined annually to ascertain their current status. Actions for moving ahead in each of the next 3 years would be identified and planned for. The activities for Year 1 would be tied to the county’s annual operating budget. The activities identified for



LYNDA NELSON

The region's landscape is crossed by federal, tribal, state, local and private ownership boundaries, and successful implementation will require partnering among these land managers.

Year 2 and Year 3 would serve as a placeholder or indication of anticipated action-related resource needs for the coming 2 years.

Once Year 1 is nearly complete, the status of activities would be reviewed, and the activities for Year 2 would be adjusted as necessary, as it will become the new Year 1. Year 3 would be adjusted as appropriate in readiness for its becoming the new Year 2, and activities for a new Year 3 would be identified. The County would identify the coordinating body responsible for the monitoring, developing and updating of the Incremental Implementation Plan, and for the coordination of the various County departmental activities to fund and/or carry out the strategy. County staff or the identified coordinating body would provide the Board of County Commissioners with a regularly scheduled status report on implementation activities.

This regular monitoring, reporting and updating will help to keep the Plan's Implementation Plan flexible

and current, keep all county departments focused on carrying out this important public policy objective, and keep the Regional Open Space and Natural Resources Management Plan and its implementation on the "front burner."

It is recommended that the County and its planning partners jointly monitor and review the Plan and its Implementation Plan on a regularly scheduled basis. It is further recommended that the County's jurisdictional and agency planning partners also use the Implementation Plan to inform the development and updating of their budgets and work programs.

As indicated above, in order to maintain the value of this Plan as a stand-alone authority, the initially recommended improvements and actions are not provided here so that the County and its planning partners can revisit and revise the Implementation Plan and Short-Term Action Plan as opportunities arise, priorities change, or the capacity to undertake additional projects increases.

"Angry as one may be at what heedless men have done and still do to a noble habitat, one cannot be pessimistic about the West. This is the native home of hope. When it fully learns that cooperation, not rugged individualism, is the quality that most characterizes and preserves it, then it will have achieved itself and outlived its origins. Then it has a chance to create a society to match its scenery."

WALLACE STEGNER
Sound of Mountain Water

In addition to the plans, references and documents used to support the planning process and listed here, the process also developed and relied on three Inventory and Assessment Reports as follows:

Natural Resource Inventory and Assessment Report

Open Space Inventory and Assessment Report

Recreational Resources Inventory and Assessment Report

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