



## Natural and Cultural Resources Element

### INTRODUCTION

This element provides the policy context for the City of South Lake Tahoe to achieve its vision for future natural and cultural resource protection. South Lake Tahoe is part of a unique natural and cultural environment. The city's many resources contribute to its economy and are important elements in the quality of life of South Lake Tahoe's residents. The preservation of these resources is essential for a prosperous and sustainable future. The Natural and Cultural Resources Element focuses on the preservation and enhancement of scenic, water, biological, historical and cultural, and mineral resources. The Element also addresses issues of air quality, global warming, and climate change. Goals and policies are organized under the following headings:

- Scenic Resources
- Hydrological Resources
- Biological Resources
- Archeological, Historical, and Cultural Resources
- Air Quality
- Global Warming and Energy Conservation

### NATURAL AND CULTURAL RESOURCES VISION

The following is the City of South Lake Tahoe's vision for future natural and cultural resources:

*"In 2030 South Lake Tahoe is a model community for its efforts to reduce greenhouse gas emissions, promote sustainability, improve the health of the forest, improve air quality, and improve Lake Tahoe's water clarity and restoration. In addition to achieving regional Environmental Thresholds, South Lake Tahoe has been successful at meeting the needs of its residents while not compromising the ability of future generations to meet their own needs. The City is a leader in implementing sustainable policies and programs that have helped maintain and enhance the beauty of Lake Tahoe and the Tahoe Basin."*

## SCENIC RESOURCES

Scenic quality is one of South Lake Tahoe's most apparent natural resources. Views of Lake Tahoe, mountains, and forests can be seen throughout the city. The policies in this section protect the scenic quality of South Lake Tahoe's natural environment by maintaining and restoring scenic qualities, and improving visual accessibility of Lake Tahoe.

**Goal  
NCR-1**

To protect and enhance the visual connection of South Lake Tahoe's and the Lake Tahoe Basin's scenic resources. Source: GPU Consultants

**Policy NCR-1.1: View Corridors and Passive Open Space**

The City shall use stream environment zone restoration and storm drainage basins to create view corridors and passive recreation open space, particularly to help relieve the strip commercial character of major roadways. Source: Stateline/Ski Run Community Plan

**Policy NCR-1.2: Scenic Resource Design**

The City shall require that siting and design of public and private spaces and buildings to protect, improve, and enhance the scenic quality of the built and natural environment and take full advantage of scenic resources through site orientation, building setbacks, preservation of viewsheds, and height limits. Source: GPU Consultants

**Policy NCR-1.3: Views of Lake Tahoe**

The City should ensure that views of Lake Tahoe from vantage points along public streets or public areas are not be blocked by development. Any impairment or partial obstruction of these views from new development shall be the minimum necessary to allow reasonable development. Source: Staff

**Policy NCR-1.4: Lake, Beach, and Vista Point Access**

The City shall create more access to and better facilities at Lake Tahoe, public beaches, and vista points to better serve residents and visitors. Source: Stakeholder

**Policy NCR-1.5: Scenic Enhancements**

The City shall encourage relocation of structures that encroach on meadows, floodplains, and stream environment zones (SEZ) in order enhance scenic viewsheds. Source: Staff

## HYDROLOGICAL RESOURCES

South Lake Tahoe is located at the edge of Lake Tahoe, an alpine lake of great natural beauty and environmental value. Careful consideration of the relationship between water quality and water quantity is needed in light possible future water shortages due to drought and global climate change, and potential contamination of

some water supplies by toxic substances. The policies in this section seek to protect South Lake Tahoe's hydrological resources.

**Goal  
NCR -2**

To protect and enhance the clarity of Lake Tahoe and water quality in the area's rivers, creeks, and groundwater. Source: GPU Consultants

**Policy NCR-2.1: Stormwater Runoff Retention**

The City shall require new projects and, working with TRPA, encourage existing developed properties to retain runoff onsite wherever physically possible and economically efficient or, if not possible or efficient, to contribute to the construction and long-term maintenance of off-site water quality measures. Source: Bijou/Al Tahoe Community Plan, TRPA BMP retrofit requirements

**Policy NCR-2.2: Hazardous Materials**

The City shall ensure hazardous materials do not reach Lake Tahoe, any of its tributaries, or contaminate Stream Environment Zones or groundwater resources. Source: South Lake Tahoe 1999 General Plan; GPU Consultants, Storm Water Management Plan 2007

**Policy NCR-2.3: Stormwater Quality Management Improvement** 

The City shall improve stormwater quality management by including, along with other proven options, the use of swales and natural treatment systems and integration of runoff into functional design elements and public art. The City shall also incorporate the latest technologies for water quality treatment facilities into restoration efforts. Source: Sustainability Plan, Draft Tahoe Valley Community Plan.

**Policy NCR-2.4: Green Streets** 

The City shall investigate green streets as an option for improving water quality and enhancing watershed health. Source: Sustainability Plan.

**Policy NCR-2.5: Pervious Materials in Parking Areas** 

The City shall explore the use of pervious materials for parking areas and test on some street sections. Source: Sustainability Plan.

**Policy NCR-2.6: Water Quality Improvements and Neighborhood Character** 

The City shall respect neighborhood character when planning and implementing water quality improvements. Source: Sustainability Plan.

**Policy NCR-2.7: Water and Wastewater Management Strategy** 

The City shall coordinate with STPUD and other water purveyors to develop an innovative water and wastewater management strategy that considers sustainable water supply and treatment systems. Source: Sustainability Plan.

**Policy NCR-2.8: Industrial and Commercial Area Protection**

The City shall protect industrial and commercial areas from accidental hazardous spills or industrial site/process discharges. To this end, the City shall incorporate appropriate water protection and site-specific best management practices including pretreatment technologies, and require as part of the project review process where appropriate. Source: Draft Tahoe Valley Community Plan.

**Policy NCR-2.9: Land Dedication in 100-Year Floodplains**

The City shall require property owners and developers to dedicate land within 100-year floodplains, conservation easements, and Stream Environment Zones (SEZ) to the City or other City-designated entity when a development project is approved. Source: GPU Consultant, Staff

**Policy NCR-2.10: Water Pollution Education**

The City shall continue to support efforts to inform the public about practices and programs to minimize water pollution. Source: Staff, NPDES Municipal MS4 Storm Water Permit, Storm Water Management Plan 2007

**Policy NCR-2.11: Marina Redevelopment and Expansion**

The City shall ensure that redevelopment or expansion of existing marinas do not result in adverse environmental or shore-zone conditions at Lake Tahoe. Source: South Lake Tahoe 1999 General Plan

**Policy NCR-2.12: Incentives to Remove Property from Stream Environment Zones and 100-Year Floodplains**

The City shall provide incentives to remove public and private development from Stream Environment Zones and 100-year floodplains in order to reduce drainage problems and damage to public and private property. Source: South Lake Tahoe 1999 General Plan

**Policy NCR-2.13: Minimize the Use of Fertilizers and Pesticides **

The City shall implement or support education programs to inform the public and encourage behavior to reduce water pollution caused by excessive use of irrigation, fertilizers and pesticides. Source: Sustainability Plan, Municipal NPDES permit

**Policy NCR-2.14: Pollutant Load Reduction Prioritization**

The City shall prioritize water quality improvement projects based primarily on their ability to reduce pollutant loads. Higher pollutant loading rate land uses include roadways, commercial, industrial, and multi-family uses. Source: Staff, Municipal NPDES Permit, SWMP)

## BIOLOGICAL RESOURCES

The biological resources in South Lake Tahoe are varied and abundant. Consequently, numerous special-status plant and wildlife species are found in South Lake Tahoe. The policies in this section preserve and protect biological resources and biodiversity, and encourage healthy habitats.

**Goal  
NCR -3**

To protect, restore, and enhance biological habitats and wildlife species in South Lake Tahoe. Source: GPU Consultants

**Policy NCR-3.1: Natural Habitat Preservation** 

The City shall protect, maintain, and restore key riparian areas, natural open space meadows, and Stream Environment Zones for the preservation of natural habitats. Source: South Lake Tahoe 1999 General Plan, Sustainability Plan

**Policy NCR-3.2: Large Scale Development Adjacent to Stream Environment Zones**

The City shall minimize the impacts to Stream Environment Zones (SEZ) and sensitive habitat areas from adjacent new large-scale developments. Source: Staff

**Policy NCR-3.3: Vegetation Preservation**

The City shall preserve as much vegetation as possible on site and require revegetation for all proposed development as a condition of approval, so long as it does not conflict with adequate fire abatement. Source: South Lake Tahoe 1999 General Plan

**Policy NCR-3.4: Natural Growth Protection**

The City shall limit the extent of construction to provide a natural growth zone for vegetation. Source: South Lake Tahoe 1999 General Plan

**Policy NCR-3.5: Neighborhood Design and the Natural Environment**

The City shall design neighborhoods, sites, and buildings to help improve the natural environment. Source: Draft Tahoe Valley Community Plan.

**Policy NCR-3.6: Stream Environment Zone (SEZ) Restoration and Enhancement**

The City shall increase the area of naturally functioning SEZs by preserving existing SEZ and restoring/rehabilitating disturbed SEZ. Source: Draft Tahoe Valley Community Plan.

**Policy NCR-3.7: Green Building**

The City shall encourage green building features be incorporated into the design, construction, and operation of new construction and major renovations. Source: Draft Tahoe Valley Community Plan.

**Policy NCR-3.8: Bear-Proof Trash Receptacles**

The City shall require the installation of bear-proof trash receptacles in new developments, at public facilities, and at public gathering spaces and parks. Source: Staff

**Policy NCR-3.9: Wildlife Awareness and Safety Program**

The City shall develop and implement a coyote, mountain lion, beaver, and bear awareness and safety program. Source: Staff

**Policy NCR-3.10: Stream Environment Zone Management**

City shall consider stream stability, water quality objectives, fisheries and wildlife, open space, and public health and safety in maintaining or managing Stream Environment Zone (SEZ) restoration projects. Source: Staff

**Policy NCR-3.11: Natural Habitat and Open Space Management**

The City shall encourage and support public agencies formed to acquire and manage important natural habitat areas, and other open space lands. Source: Staff

**Policy NCR-3.12: Tree Preservation**

The City shall adopt a tree preservation ordinance that protects large native trees, trees with historic importance, and trees that support sensitive species and healthy forest habitat. Source: Staff

**Policy NCR-3.13: Improving Wildlife Habitat Values**

The City shall encourage the use of native or compatible non-native, non-invasive plant species as part of project landscaping to improve wildlife habitat values. Source: Staff

**Policy NCR-3.14: Diseased Tree Removal**

The City shall support awareness and removal of diseased trees to reduce the threat of urban fires. Source: Stakeholder

**Policy NCR-3.15: Preventing the Spread of Quagga and Zebra Mussels**

The City shall support efforts to prevent the spread of the invasive Quagga and Zebra mussels into Lake Tahoe. Source: Staff

**Policy NCR-3.16: New Development and Lake Tahoe Interactions**

The City shall ensure that new development does not negatively impact beach erosion, prime fish habitat, water quality and clarity, and public needs. Source: South Lake Tahoe 1999 General Plan

## ARCHEOLOGICAL, HISTORIC, AND CULTURAL RESOURCES

South Lake Tahoe has a diverse archaeological and cultural history. Preservation of historic and cultural resources is important to the city's identity, and having these distinct and identifiable places tend to make the community more enjoyable places for residents and more attractive to visitors. The policies in this section seek to protect and enhance the historical and cultural amenities in South Lake Tahoe.

**Goal  
NCR -4**

To preserve and maintain sites and structures that serve as significant, visible connections to South Lake Tahoe's social, cultural, and architectural history. Source: GPU Consultants

**Policy NCR-4.1: Significant Site Preservation**

The City shall preserve sites of historical, cultural and architectural significance within the city. Source: South Lake Tahoe 1999 General Plan

**Policy NCR-4.2: Historic Landmark Designation**

The City shall designate structures or sites having special character or special historic, architectural, or aesthetic interest or value as local historic landmarks. The City shall protect local historic landmarks from demolition and inappropriate alterations, develop criteria for evaluating the appropriateness for sites or structures to be designated as local historic landmarks, and provide incentives for preservation of local historic landmarks. Source: Staff

## AIR QUALITY

South Lake Tahoe is located within the Lake Tahoe Air Basin (LTAB). Air quality concerns within the LTAB are predominantly associated with adverse effects on human health, distance visibility, Lake Tahoe water clarity, and forest health. Primary factors known to influence air quality within the LTAB include topography and climate, which can affect pollutant transport and dispersion from sources located within and outside of the LTAB. Additional air quality concerns within the Basin relate to the exposure of sensitive receptors to localized pollutant concentrations, including airborne concentrations of odors and toxic air contaminants (TACs), as well as increases in greenhouse gas emissions. The policies in this section seek to improve air quality by reducing the number of vehicles on the roadways and encouraging walking, biking, and use of public transit.

**Goal  
NCR -5**

To incorporate air quality improvements and emission reductions directly with land use and transportation planning. Source: GPU Consultant

**Policy NCR-5.1: Pedestrian and Bicycle Facilities**

The City shall encourage the use of alternative modes of transportation by encouraging public transit, neighborhood electric vehicles, bicycle, and pedestrian modes in City transportation planning and by requiring new development to provide safe and separate pedestrian circulation and adequate bikeway circulation and facilities. Source: GPU Consultant

**Policy NCR-5.2: Employer Programs**

The City shall encourage employers in South Lake Tahoe to provide bicycle facilities, alternative work schedules, ridesharing, telecommuting, work-at-home programs, employee education (including information on alternatives to single-occupancy travel), preferential parking for carpools/vanpools, and alternative transportation mode subsidies. Source: GPU Consultant

**Policy NCR-5.3: City Fleet Vehicles**

The City shall replace City fleet vehicles with lowest emission technology vehicles, wherever possible. Source: Staff

**Policy NCR-5.4: Public Transit Bus Fleet**

The City shall encourage the use of low-emission technology buses in the public transit fleet. Source: Staff

**Policy NCR-5.5: Traffic Calming Measures**

The City shall install traffic calming measures where there is demonstrated need and neighborhood resident support (e.g., traffic circles, curb extensions, and median islands). Source: GPU Consultant

**Policy NCR-5.6: Off-Peak Deliveries**

The City shall encourage business owners to schedule deliveries at off-peak traffic hours. Source: GPU Consultant

**Policy NCR-5.7: Mixed-Use Development**

The City shall support appropriately located mixed-use developments that include homes, schools, civic uses, retail and commercial services, and daycare facilities within walking distance of each other. Source: GPU Consultant

**Policy NCR-5.8: Child Safety Programs**

The City shall support infrastructure and programs that encourage children to walk or ride a bicycle safely to school. Source: GPU Consultant

**Policy NCR-5.9: Bicycle, Pedestrian, and Bus Transit Integration**

The City shall encourage interconnected bicycle, pedestrian, and bus transit circulation in the design of all commercial, industrial, and multi-family housing. Source: Staff

## **GLOBAL WARMING AND ENERGY CONSERVATION**

Emissions of greenhouse gases into the atmosphere by human activities, predominantly resulting from the burning of fossil fuels, is increasing the potency of the greenhouse effect and leading to global climate change. Not only is there a concern for worldwide impacts, but there are also new and emerging legal and regulatory issues that local governments in California must address. The most important of these is Assembly Bill 32. Passed in 2006, this law requires local governments to inventory greenhouse emissions. The policies in this section encourage energy conservation that leads to lowering South Lake Tahoe's carbon footprint.

**Goal  
NCR -6**

To encourage energy conservation in new and existing developments in order to reduce greenhouse gas emissions, limit their effect on global warming, and to create a more sustainable environment. Source: GPU Consultant

**Policy NCR-6.1: Decreasing Reliance on Non-Renewable Energy Sources** 

The City shall shift away from reliance on non-renewable sources, should emerging research show net environmental benefits in the use of bio-fuel. Source: Sustainability Plan.

**Policy NCR-6.2: Greenhouse Gas Emission Reduction Strategy** 

The City shall develop a comprehensive strategy to reduce GHG emissions and climate impacts. Source: Sustainability Plan.

**Policy NCR-6.3: Local, Clean, and Renewable Energy Support** 

The City shall increase energy efficiency, reduce emissions and support local, clean, and renewable energy sources. Source: Sustainability Plan.

**Policy NCR-6.4: Increasing Economic Efficiency and Performance** 

The City shall increase economic efficiency and performance by reducing the consumption of nonrenewable resources. Source: Sustainability Plan.

**Policy NCR-6.5: Creating Environmental Impact Action Tools** 

The City shall identify action items for residents and businesses that improve energy efficiency and reduce environmental impact. Source: Sustainability Plan.

**Policy NCR-6.6: Green Building Credits and Incentives**

The City shall develop credits and incentives for green building construction. Source: Stakeholder

**Policy NCR-6.7: LEED Certified Public Buildings**

The City shall develop all new City buildings to meet LEED standards. Source: GPU Consultant

**Policy NCR-6.8: Building Design and Components**

The City shall encourage use of cost-effective and innovative emission-reduction technologies in building components and design. Source: GPU Consultant

**Policy NCR-6.9: Sustainable Design**

The City shall promote the use of sustainable design strategies for “cool communities” such as reflective roofing and light colored pavement. Source: GPU Consultant

**Policy NCR-6.10: Renewable Energy Incentive Programs**

The City shall encourage voluntary participation in programs to increase the use of renewable energy. Source: GPU Consultant

**Policy NCR-6.11: Solar Photovoltaic System Program**

The City shall promote voluntary participation in programs to increase the use of solar photovoltaic systems in new and existing residential, commercial, institutional, and public buildings. Source: GPU Consultant

**Policy NCR-6.12: Solar Photovoltaic System Incentives**

The City should explore offering incentives (e.g., expedited processing and fee reductions/waivers) to property owners and developers who exceed State Title 24 energy efficiency standards. Source: GPU Consultant

**Policy NCR-6.13: Residential Rehabilitations and Improvements**

The City shall encourage the rehabilitation and improvement of existing single-family homes and multi-family homes to achieve greater energy efficiency. Source: GPU Consultant

**Policy NCR-6.14: EPA Energy Star Certified Appliances**

The City shall encourage the use of “EPA Energy Star” certified appliances (e.g., water heaters, swimming pool heaters, cooking equipment, refrigerators, furnaces and boiler units) for new private development and public facilities, where feasible. Source: GPU Consultant

**Policy NCR-6.15: Expedited Review for Installing Photovoltaic Systems**

The City should reduce/remove the building review fee, use a standardized submittal procedure, and provide an expedited application review process for installing photovoltaic systems. Source: GPU Consultant

**Policy NCR-6.16: Waste Diversion Plan**

The City should require developers of commercial, industrial, and multi-family projects to prepare a waste diversion plan to recycle at least 50 percent of the materials generated for discard by their project during the construction phase. The waste diversion and recycling plan shall use best management practices in order to achieve the recycling target. The plan shall be subject to City’s Community Development Department review and approval. Source: GPU Consultant

**Policy NCR-6.17: City Employee Education Programs**

The City shall implement programs to train and educate City employees on energy conservation measures, subject to available funding. Source: GPU Consultant

**Policy NCR-6.18: Energy Efficient City Facilities**

The City shall replace existing traffic lights, street lights, and other electrical uses with energy efficient bulbs and appliances in the course of ongoing maintenance/replacement. Source: GPU Consultant

**Policy NCR-6.19: Financing Sustainable Energy Practices**

The City should evaluate opportunities for supporting new programs and promoting sustainable energy practices through financing mechanisms, such as pooled project funding, low-interest loans and State funds earmarked for energy efficiency and renewable energy. Additionally, the City should work with energy providers and State and Federal agencies to secure tax exemptions and tax rebates for residential energy performance improvements. Source: GPU Consultant

**Policy NCR-6.20: Protection from Climate Change**

The City shall develop strategies to protect the city from the impacts of climate change, such as reduced snow pack, lower lake levels, and natural disasters. Source: Staff