

CHAPTER 9

Scenic Resources

The visual landscape of the Tahoe Region is one of its most impressive and memorable qualities. It possesses a striking combination of rugged mountain peaks, a vast lake surface, and densely forested slopes. These landscape elements work in concert to produce a visual impression that makes the Lake Tahoe Region one of the truly unique places in the world. Despite significant development and alteration of the landscape for over a century, the Tahoe Region attracts visitors to its powerful and stunning inherent landscape character, which successfully maintains visual dominance over most of the area. It is views of natural landscapes and features from the Region's scenic corridors, recreation areas, and bike trails that the framers of the Bi-State Compact intended to preserve when they declared, "*Maintenance of the social and economic health of the region depends on maintaining the significant scenic ... values provided by the Lake Tahoe Basin.*"

TRPA Resolution 82-11 provided for the development and implementation of environmental thresholds. In 1982, the threshold study team completed the scenic resource inventory and evaluation to define and establish threshold standards for preservation of scenic quality. At that time, numerical standards were established for roadway and shoreline travel route ratings, and roadway and shoreline scenic quality ratings. TRPA also adopted a policy statement for overall community design elements. In 1993, TRPA adopted numeric standards for designated public recreation areas and bike trails.

Although the Tahoe Region's landscape is extensive and varied, viewers predominately see the landscape from major roadways or from the lake itself. Privately held lands are located around the perimeter of the lake, in most cases along major roadways, and it is on these lands that major development has occurred. Consequently, these are also the areas where the scenic quality is most threatened. Scenic deterioration results from types of development that dominate or are incompatible with the natural landscape, are in locations visible from major roadways, block important views and remove vegetation and natural features, and alter the topography. The focus of the 1982 scenic study was on identifying visual resource components and establishing thresholds for major visual resources that can be seen from major roadways and from the lake.

The 1982 scenic study established threshold standards for the protection of scenic quality and developed a methodology for measuring change in scenic quality over time with the goals of:

1. Maintain and enhance the dominant natural-appearing landscape for the vast majority of views and lands in the Region.

2. Maintain and/or improve the aesthetic characteristics of the man-made environment to be compatible with the natural environment.
3. Restore, wherever possible, damaged natural landscapes.

This chapter provides an evaluation of scenic conditions and trends in the Lake Tahoe Region. The evaluation assesses changes in scenic conditions relative to TRPA threshold standards. TRPA has adopted environmental threshold standards for scenic resources. These include numerical standards for roadway and shoreline travel units, numerical standards for other areas, and a policy statement for the built environment (TRPA, 2012a). The evaluation includes:

1. Evaluation of roadway and shoreline travel units, which are segments of roadways and shoreline with similar visual character;
2. Evaluation of specific individual features (scenic resources) of Tahoe’s natural landscape that can be seen from major roadways and from Lake Tahoe;
3. Views from and within certain public recreation areas and bike trails; and
4. Visual quality of the built environment.

This evaluation addresses the status of all numerical standards and the policy statement, as have past threshold evaluations.

Table 9-1. Summary of adopted threshold standards for the scenic resources threshold category

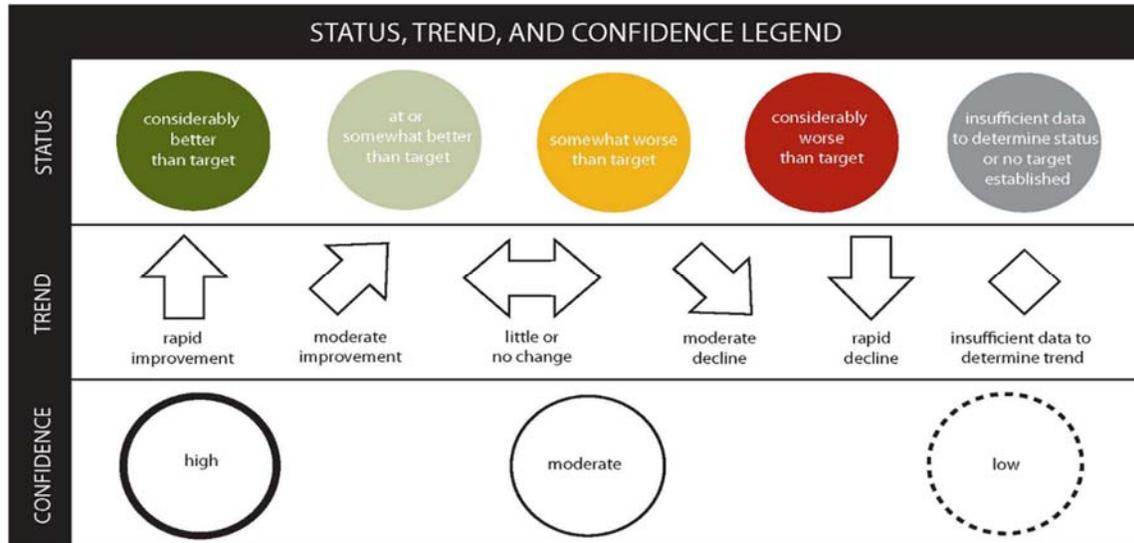
Indicator Reporting Category	Standard	Type of Standard	Indicator
Roadways and Shoreline Units	Maintain or improve the numerical rating assigned each unit, including the scenic quality rating of the individual resources within each unit, as recorded in the Scenic Resources Inventory and shown in Tables 13-3, 13-5, 13-8 and 13-9 of the Draft Study Report (TRPA, 1982a). Maintain the 1982 ratings for all roadway and shoreline units as shown in Tables 13-6 and 13-7 of the Draft Study Report (TRPA, 1982a). Restore scenic quality in roadway units rated 15 or below and shoreline units rated 7 or below.	Numerical	Composite Scenic Score
Other Areas	Maintain or improve the numerical rating assigned to each identified scenic resource, including individual subcomponent numerical ratings, for views from bike paths and other recreation areas open to the general public as recorded in the 1993 Lake Tahoe Basin Scenic Resource Evaluation (TRPA, 1993).	Numerical	Composite Scenic Score
Built Environment	It shall be the policy of the TRPA Governing Body in development of the <i>Regional Plan</i> , in cooperation with local jurisdictions, to ensure the height, bulk, texture, form, materials, colors, lighting, signing and other design elements of new, remodeled and redeveloped buildings be compatible with the natural, scenic, and recreational values of the region.	Policy Statement	Evaluation Criteria

Table 9-2: Summary of status and trend of scenic indicator reporting categories from the 2011 and 2015 Threshold Evaluation Reports.

Standard	2011	2015
Roadway and Shoreline Units		
Travel Route Ratings for Roadway Travel Units		
Travel Route Ratings for Shoreline Travel Units		
Scenic Quality Ratings for Roadway Travel Units (Scenic Resources)		
Scenic Quality Ratings for Shoreline Travel Units (Scenic Resources)		
Other Areas		
Public Recreation Areas and Bike Trails		
Built Environment (Community Design)		
Built Environment (Community Design)		

Table 9-3: Key to the reporting icon used to characterize the implementation status of management standards and policy statements.

Status Category	Description	Reporting Icon
Implemented	The management standard or policy statement has been integrated into the Regional Plan and is consistently applied to a project design or as a condition of project approval as a result of project review process. Examples of programs or actions can be identified to support the management standard’s implementation. Adopted programs or actions support all aspects of the management standard or policy statement’s implementation, or address all major threats to implementation.	
Partially Implemented	The management standard or policy statement has been integrated into the Regional Plan, but is not consistently applied during the project review process. No more than two examples of programs or actions can be identified to support the management standard’s implementation and/or adopted programs or actions support some aspects of the management standard or policy statement’s implementation, or address some major threats to implementation.	
Not Implemented	The management standard or policy statement has not been integrated into the Regional Plan and is not applied during the project review process. No examples of programs or actions can be identified to support implementation.	



In instances where there are too many standards and/or indicators to present each one in its own indicator sheet a pie chart showing the percentage of indicators in each status category are presented instead. The colors of the pie chart correspond to the status colors.

Figure 9-1: A key to the symbols used to assess status, trends, and confidence levels.

Roadway and Shoreline Units

This indicator reporting category evaluates and rates scenic conditions using two systems:

1. **Travel Route Ratings.** Used to evaluate the entire travel experience, including the view from the road or lake. This system evaluates cumulative impacts along a section of a given roadway or shoreline travel unit.
2. **Scenic Quality Ratings.** This system focuses on the relative scenic quality of individual scenic resources that are seen from the travel routes. This system evaluates changes in scenic quality resulting from small-scale uses like commercial and residential (Iverson et al., 1993).

Travel Route Ratings for Roadway Travel Units

The travel route ratings are used to assess the visual experience of traveling the Region's major roads, including all state and federal highways and Pioneer Trail. These roadways are separated into 54 segments called travel units, each of which represents a continuous, two-directional viewshed of similar visual character. After monitoring, updated travel route ratings are generated that reflect current conditions. Travel route ratings consist of a numeric composite score that represents the relative scenic quality throughout the entire travel unit. Each travel unit must achieve a minimum composite score for the threshold standard to be in attainment. There are 54 composite travel route ratings associated with roadway travel units.

Scenic roadway units are divided into three visual environments: urban, transition, and natural. Section 66.2.2 of the TRPA Code of Ordinances defines these as follows:

- A. **“Urban Scenic Corridors:** Urban scenic highway corridors are generally urbanized areas where man-made development is the dominant visual feature. When viewed from areas outside of the urban corridor, man-made developments shall blend into the natural environment. Those portions of federal and state highways and Pioneer Trail that lie within the urban areas as shown on TRPA's scenic units map overlay are designated as urban scenic highway corridors. The width of urban scenic highway corridors shall include the highway right-of-way and all properties or portions thereof up to 300 feet on either side of the highway right-of-way that are visible from the highway.
- B. **Transition Scenic Corridors:** Transition scenic highway corridors shall be generally areas of transition between urban and natural areas where the built environment is not the dominant visual feature; rather it appears well integrated into and in balance with the natural elements of the landscape. When viewed from areas outside of the transition corridor, man-made developments shall blend into the natural environment. Those portions of federal and state highways and Pioneer Trail that lie within the transition areas as shown on TRPA's scenic units map overlay are designated as transition scenic highway corridors. The width of transition scenic highway corridors shall include the highway right-of-way and all properties or portions thereof up to 1000 feet on either side of the highway right-of-way that are visible from the highway.
- C. **Natural Scenic Corridors:** Natural scenic highway corridors are generally those areas where natural landscape elements and processes are the dominant visual features. Those portions of federal and state highways that lie within the natural areas as shown on TRPA's scenic units map overlay are designated as natural scenic highway corridors. The width of natural scenic highway corridors shall include the highway right-of-way and all properties or portions thereof up to one-half mile on either side of the highway right-of-way that are visible from the highway.” (TRPA, 2012b).

The following components are identified and rated according to their effect on scenic quality within each roadway travel unit:

1. Man-made features along the roadway
2. Physical distractions to driving along the roadways
3. Roadway characteristics
4. View of the lake from the roadways
5. General landscape views from the roadways
6. Variety of scenery from the roadways

Roadway travel unit ratings reflect all six of these components. Each component is rated from one, a strong negative effect on scenic quality, to five, a strong positive effect on scenic quality. A composite rating is calculated by summing the ratings of the six components. Therefore, the composite rating for a roadway travel unit can range from six to 30. The components themselves cannot be quantitatively measured in the strictest sense. They are inherently qualitative characteristics that are assigned relative numerical ratings based on direct observation by qualified scenic quality experts. They are not measured with instrumentation. Instead, field researchers make direct visual observations of their characteristics, attributes, or conditions and then record their findings. See Appendix G of this report for more explanation of the components used for ratings.

When the scenic threshold system was implemented in 1982 there were 46 individual roadway travel units identified and mapped based on representing a continuous similar visual character. The units were evaluated according to the six components listed above, and composite ratings were calculated. The officially adopted numerical threshold standard for roadway travel units today is 15.5, 0.5 higher than it was originally. To be in attainment with the threshold standard, the current composite rating of each roadway travel unit must be at least 15.5 and equal or exceed the rating originally assigned in 1982.

In 1982, 23 of the 46 roadway travel units were rated below 15.5. Since 1982, some of the original units have been subdivided due to changes in their visual character and today there are 54 roadway travel units. Of the 54 roadway travel units evaluated in 2015, 21 were out of attainment; 17 because they fail to meet the threshold standard of 15.5, and four because their current rating is above 15.5 but lower than the original rating that was assigned in 1982. In 2015, 36 roadway units had a rating higher than their original 1982 rating, 13 had a rating equal to the original rating, and five had a rating lower than the 1982 rating.

Table 9-4 provides a summary of roadway travel unit status and trend determinations.

Table 9-4: Summary of the status and trend determinations for all roadway travel units in the Lake Tahoe Region based on the evaluation period 1982 through 2015. Detailed information on the scores of these travel units can be found in Appendix G of this report.

Status & Trend	Scenic Roadway Travel Unit	
 <p>At or somewhat better than target with moderate improvement</p>	<ul style="list-style-type: none"> • Unit 14 (Tahoe Tavern) • Unit 15 (Tahoe City) • Unit 16 (Lake Forest) • Unit 18 (Carnelian Bay) • Unit 19 (Flick Point) • Unit 20B (Kings Beach) 	<ul style="list-style-type: none"> • Unit 30D (Round Hill) • Unit 31 (Meadow - Douglas County) • Unit 34 (El Dorado Beach) • Unit 36B (Lake Valley) • Unit 44 (Kingsbury Grade)
 <p>At or somewhat better than target with little or no change</p>	<ul style="list-style-type: none"> • Unit 2 (Camp Richardson), • Unit 3 (Emerald Bay) • Unit 4 (Bliss State Park) • Unit 5 (Rubicon Bay) • Unit 6 (Lonely Gulch) • Unit 8 (Sugar Pine Point) • Unit 10 (Quail Creek) • Unit 12 (Tahoe Pines) • Unit 20C (Brockway) • Unit 23 (Mt. Rose Highway) • Unit 24 (Washoe Meadows) • Unit 26 (Sand Harbor) 	<ul style="list-style-type: none"> • Unit 27 (Prey Meadow) • Unit 29 (Cave Rock) • Unit 30A (Lincoln Park-Skyland) • Unit 30B (Tahoe School - Douglas County) • Unit 30C (Zephyr Cove) • Unit 37 (Echo Summit) • Unit 38 (Upper Truckee River) • Unit 39 (Alpine Summit) • Unit 40 (Brockway Summit) • Unit 41 (Brockway Cutoff) • Unit 46 (Pioneer Trail South)
 <p>Somewhat worse than target with moderate improvement</p>	<ul style="list-style-type: none"> • Unit 22 (Crystal Bay) • Unit 32 (Casino Area - Douglas County) • Unit 33 (The Strip - City of South Lake Tahoe) • Unit 42 (Outlet - Placer County) • Unit 36A (Airport Area) • Unit 36C (Meyers) 	
 <p>Somewhat worse than target with little or no change</p>	<ul style="list-style-type: none"> • Unit 1 (Tahoe Valley) • Unit 7 (Meeks Bay) • Unit 9 (Tahoma) • Unit 11 (Homewood), • Unit 13 (Sunnyside) • Unit 17 (Cedar Flat) 	<ul style="list-style-type: none"> • Unit 20A (Tahoe Vista) • Unit 21 (North Stateline Casino Core) • Unit 25 (Ponderosa Area) • Unit 28 (Spooner Summit) • Unit 43 (Lower Truckee River)
 <p>Considerably worse than target with little or no change</p>	<ul style="list-style-type: none"> • Unit 35 (Al Tahoe) • Unit 45 (Pioneer Trail North) 	

One roadway unit, Unit 20B Kings Beach, moved from nonattainment into attainment. The score increased 2.5 points from the 2011 rating with scores improving in the man-made features and road structures categories. This section of Kings Beach has seen the implementation of a portion of the Kings Beach Commercial Core Improvement Project which has substantially redesigned portions of State Route 28 through Kings Beach with reduction of travel lanes and the installation of sidewalks, roundabouts, and landscaping.



Figure 9-2: Intersection of Coon Street and State Route 28 in Kings Beach before (left) and after (right) installation of a roundabout.

Scores did not drop for any scenic roadway units and scores increased for four units:

1. Roadway Unit 34 El Dorado Beach increased was already in attainment but the score increased due to the Alta Mira building being removed which increased views to the lake and the Harrison Avenue project which reconfigured parking, installed sidewalks, and improved landscaping.



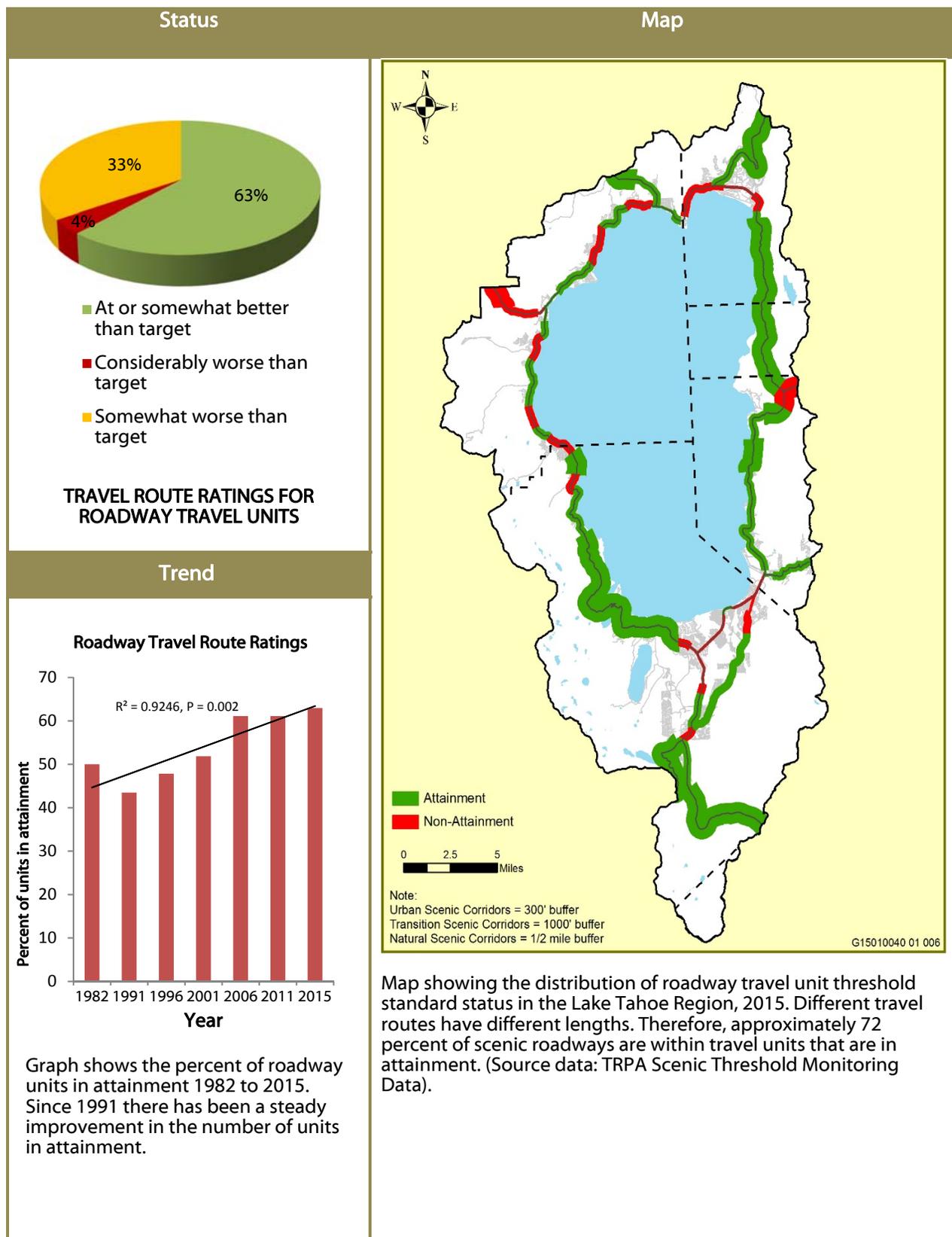
Figure 9-3: Photo of the Alta Mira building before (left) and after removal (right) which increased views to Lake Tahoe from U.S. Highway 50 in the City of South Lake Tahoe.

2. Roadway Unit 11 Homewood although still in nonattainment its score increased due to a Caltrans water quality project along State Route 89 which better defines the roadway and improved the road structure score.

3. Roadway Unit 32 Casino Area's score increased although not enough to put it into attainment. Improvements to the Hard Rock Casino and the new Chateau project were noted as improvements to aesthetic quality.
4. Roadway Unit 33 The Strip saw its score increase as well. The Caltrans project along Highway 50 which installed sidewalks and landscaping helped increase the score along with the redevelopment of the Lake Tahoe Vacation Resort which although increased the size of the building, the new siding and roof colors significantly improved the scenic quality of the buildings.

See Appendix G of the Threshold Evaluation Report for more details on scoring.

Roadway and Shoreline Units: Travel Route Ratings for Roadway Travel Units



Data Evaluation and Interpretation

BACKGROUND

Relevance – This indicator tracks long-term, cumulative changes in scenic conditions along major roadways in the Region. It accounts for the urban, transitional, and natural landscapes that the roads pass through. Tracking these changes is important because it provides a measure of how changes in land use and development over time affect scenic conditions. Today, scenic conditions along Lake Tahoe’s major roadways are, on average, better than they were in 1982. There have been continuous incremental improvements in scenic conditions along roadway travel units since 1991.

TRPA Threshold Category – Scenic Resources

TRPA Threshold Indicator Reporting Category – Travel Route Ratings

Adopted Standards – To attain the threshold standard, the composite score of roadway travel units that had a score of 15.5 or greater in 1982 must be at or greater than the level they were in 1982; and all roadway travel routes with a composite score of 15 or less must improve until a minimum score of 15.5 is reached.

Type of Standard – Numerical

Indicator (Unit of Measure) – Roadway travel unit composite score, which is a qualitative numerical rating consisting of the sum of the ratings given to six different components of the viewscape within each travel unit.

Human & Environmental Drivers – The primary drivers affecting scenic quality in the Lake Tahoe Region are land use, land and resource management activities, and the visual/aesthetic characteristics of manmade development. Along corridors that are forested, drivers such as fire and insect/disease could also affect the visual/aesthetic characteristics.

MONITORING AND ANALYSIS

Monitoring Partners – Tahoe Regional Planning Agency, U.S. Forest Service, and Nevada Division of State Parks.

Monitoring Approach – Every four years, a team of professionals examines and evaluates the quality of scenic units and resources along major roadways, the shoreline, and at certain public recreation sites and bike trails in the Lake Tahoe Region. The team also reviews ratings from prior evaluations and updates rating based on its findings.

Analytic Approach – The percentage of roadway travel units in attainment is reported for status. Trends are determined for both the percent of units in attainment and the average travel unit rating using a simple linear regression.

INDICATOR STATE

Status – Thirty-four of the 54 roadway travel units (63 percent) met the threshold standard in 2015. Overall, 63 percent were at or somewhat better than target; 33 percent were somewhat worse than target; and four percent were considerably worse than target. Four of the six roadway units furthest out of attainment are in South Lake Tahoe, highlighting the continued need for visual improvement on the South Shore.

Trend – Moderate improvement. The percentage of roadway travel units in attainment has steadily increased from 50 percent in 1982 to 63 percent in 2015. The long-term trend line shows a 0.63 percent increase in the percentage of units in attainment per year since 1982. If looking at overall attainment status throughout the region, this would be considered moderate improvement. The three roadway

travel units that have improved the most since 1982 are “The Strip” in South Lake Tahoe (Ski Run Boulevard to Stateline), as well as the downtowns of Tahoe City and Kings Beach. These scenic improvements reflect the substantial public and private redevelopment and streetscape projects underway to improve the scenic quality of the Region’s community centers and commercial cores.

Another way to assess the trend is to compare the average ratings of all roadway travel units over time. The average scores have steadily improved from 1982 to 2015, which can be seen in Figure 1. The average scenic score for all roadway travel route units has steadily increased from 16.63 in 1982 to 17.49 in 2015, with the long term trend line showing an increase of 0.17 percent per year. While this is a marked improvement, because change is occurring very slowly it would be considered little to no change using the methodology described in Chapter Two of this report.

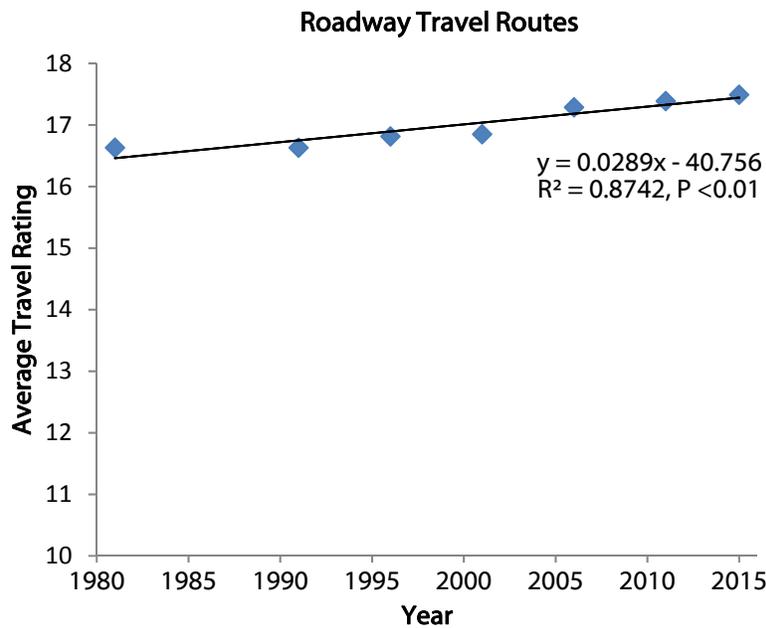


Figure 1: Change in average Roadway Travel Route Rating by year, 1982 to 2015. The average scores show a statistically significant, but slow, improving trend.

Confidence –

Status – High. A documented, reviewed, and accepted monitoring protocol guides the collection, analysis, and reporting of the scenic monitoring data. Monitoring data is collected according to procedures outlined in the 1982 *Study Report for the Establishment of Environmental Threshold Carrying Capacities* (TRPA, 1982a), and the *Status and Trend Monitoring Report for Scenic Resources in the Lake Tahoe Basin* (TRPA, 2010), which set forth a methodology for measuring change in scenic quality over time. The methods are consistent with those employed by the U.S. Forest Service, and are considered standard practice. This results in a high level of confidence in the status determination.

Trend – High. There is high statistical confidence in the improving trend line for the percent of units in attainment ($R^2 = 0.9246, P = 0.002$) and the overall average scores ($R^2 = 0.8742, P < 0.01$). In 2001, three roadway units were further segmented into 11 independent units to better characterize each roadway segment. However, this does not lower the overall confidence in the trend because the same scenic resources have been evaluated consistently since 1982, regardless of the number of roadway units.

Overall – High.

IMPLEMENTATION AND EFFECTIVENESS

Programs and Actions Implemented to Improve Conditions – The TRPA Code of Ordinances specifies minimum design standards and guidelines for new development and redevelopment projects. Area plans and community plans provide specific design standards and guidelines applicable to local areas. The Scenic Quality Improvement Program, which was adopted by TRPA in 1989, identifies a host of projects that are necessary to improve scenic conditions. These projects are implemented either through the Environmental Improvement Program (EIP) or as a part of private redevelopment or development projects. As necessary, specific measures to improve the aesthetics of individual projects are sometimes required by TRPA or local jurisdictions as a condition of the permit that is issued.

Effectiveness of Programs and Actions – Scenic status and trend data for this indicator suggests that currently implemented programs and actions have improved overall scenic conditions. However, many units remain out of attainment and need to be addressed.

Areas that still need to be addressed in order to raise the scores in nonattainment units into attainment include:

- Significant roadwork in some units is still in the planning stage. Once constructed these improvements should raise the road structure scores as they have in other roadway units.
- Although redevelopment of existing buildings has occurred and are noted as improvements, not enough redevelopment has occurred to increase the score into attainment.
- Unauthorized roadway parking is occurring along a number of roadway units and in some cases is extensive. This is causing visual distraction and blocking views to Lake Tahoe and has put a number of roadway units at risk of scores dropping (see Figure 2).



Figure 2: Uncontrolled parking along many sections of scenic roadway units continues to cause roadway distractions and blocks views to the lake putting these scenic units at risk of falling out of attainment. Highway 50 near Zephyr Cove Beach September 2016.

Interim Target – Increase the number of units in attainment by the next evaluation in 2019.

Target Attainment Date – Because roadway travel route unit ratings depend heavily on redevelopment that does not happen at a predictable rate, a target attainment date cannot be set. Based on the historic

pace of redevelopment it will take a significant amount of time for all units to reach attainment.

RECOMMENDATIONS

Analytic Approach – No changes recommended.

Monitoring Approach – No changes recommended.

Modification of the Threshold Standard or Indicator – No changes recommended.

Attain or Maintain Threshold – Continue existing programs and actions. Continue to monitor status and trend of scenic conditions. Update the Scenic Quality Improvement Program based on current roadway travel unit monitoring data, including information on the locations and individual components of the travel unit scores that are out of attainment.

Travel Route Ratings for Shoreline Travel Units

The shoreline travel unit rating reflects scenic conditions looking toward the shore from the surface of Lake Tahoe. The lake's 72-mile shoreline is separated into 33 individual units, each representing a varying length of the shoreline that exhibits similar visual character. Updated travel route ratings that reflect current conditions are generated during shoreline monitoring. Shoreline travel route unit ratings consist of a numeric composite score that represents the relative scenic quality throughout the entire travel unit. Three components are considered and rated for each shoreline travel unit:

1. Man-made features along shoreline
2. General landscape views within the shoreline unit
3. Variety of scenery within the shoreline unit

Each component is rated from one (low or absent) to five (high). A composite rating is obtained by summing the ratings of the three components. Therefore, the composite rating for an individual shoreline travel unit can range from three to 15.

The adopted numerical standard for shoreline travel units today is 7.5, 0.5 higher than it was originally in 1982, when the scenic resources evaluation system was adopted (TRPA, 1982a). To be in attainment of the threshold standard, the composite rating of any shoreline travel unit must be at least 7.5, and must also be at least equal to the rating originally assigned in 1982. Therefore, if the current rating for a shoreline travel unit is below the standard of 7.5, the unit is out of attainment. Additionally, if the current rating is below its original 1982 rating, even if the current rating is above 7.5, the unit is out of attainment.

Table 9-5 provides a summary of shoreline travel unit status and trend determinations.

Table 9-5 Summary of the status and trend determinations for all shoreline travel units in the Lake Tahoe Region based on the evaluation period 1982 through 2015. Detailed information on the scores of these travel units can be found in Appendix G of this report.

Status & Trend	Scenic Shoreline Travel Unit
 At or somewhat better than target with moderate improvement	<ul style="list-style-type: none"> • Unit 32 (Al Tahoe)
 At or somewhat better than target with little or no change	<ul style="list-style-type: none"> • Unit 1 (Tahoe Keys) • Unit 2 (Pope Beach) • Unit 3 (Jameson Beach) • Unit 4 (Taylor Creek Marsh) • Unit 5 (Ebright) • Unit 6 (Emerald Bay) • Unit 7 (Bliss State Parks) • Unit 8 (Rubicon Point), • Unit 10 (Meeks Bay) • Unit 11 (Sugar Pine Point) • Unit 12 (McKinney Bay) • Unit 13 (Eagle Rock) • Unit 17 (Dollar Point) • Unit 20 (Flick Point) • Unit 21 (Agate Bay) • Unit 24 (Sand Harbor) • Unit 25 (Skunk Harbor) • Unit 28 (Tahoe School) • Unit 29 (Zephyr Cove) • Unit 31 (Bijou) • Unit 33 (Truckee Marsh)
 Somewhat worse than target with moderate improvement	<ul style="list-style-type: none"> • Unit 19 (Carnelian Bay)
 Somewhat worse than target with little or no change	<ul style="list-style-type: none"> • Unit 9 (Rubicon Bay) • Unit 14 (Ward Creek) • Unit 18 (Cedar Flat) • Unit 22 (Brockway) • Unit 26 (Cave Rock) • Unit 27 (Lincoln Park) • Unit 30 (Edgewood)
 Considerably worse than target with little or no change	<ul style="list-style-type: none"> • Unit 15 (Tahoe City) • Unit 16 (Lake Forest)
 Considerably worse than target with moderate decline	<ul style="list-style-type: none"> • Unit 23 (Crystal Bay)

No scores for shoreline scenic units dropped since the 2011 scores and scores either stayed the same or improved. One shoreline unit, Unit 8 Rubicon Point increased in score in 2015 which moved this unit into attainment. The score increased due to the existing vegetation between structures and the lake growing providing more screening of the structures when viewed from the lake.

Scores for two other shoreline units increased as well. Shoreline Unit 12 McKinney Bay was already in attainment but the score increased. Screening of a boat storage area and a marina is effective and numerous residential rebuilds that comply with the scenic shoreland ordinances increased the man-made features score. Shoreline Unit 22 Brockway, a unit that is in nonattainment, remained in nonattainment but its score increased due to the repainting of the Cal Neva building to a shade that blends into the background (see Figure 9-4).

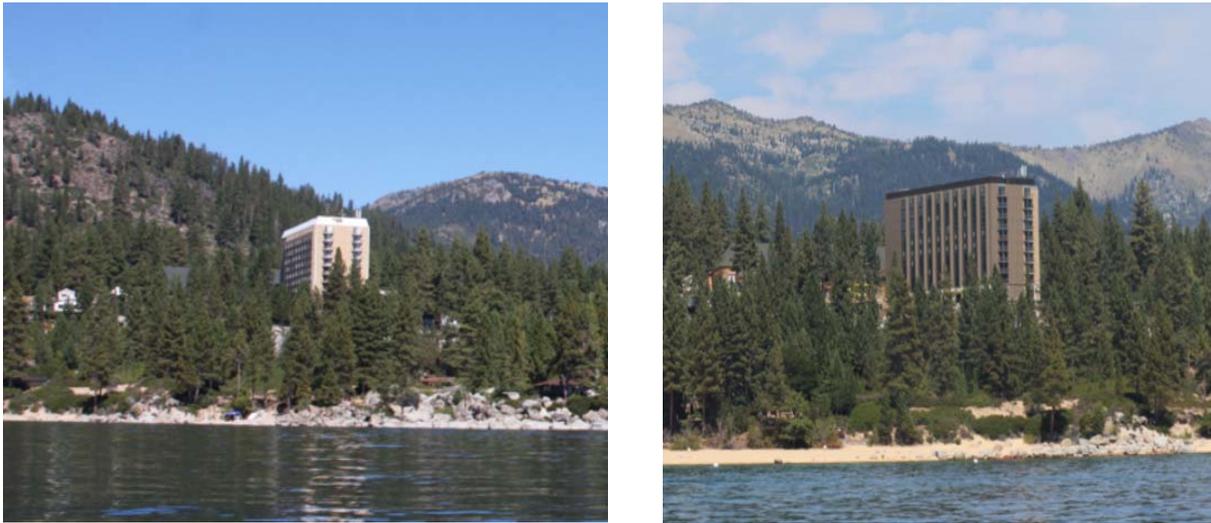
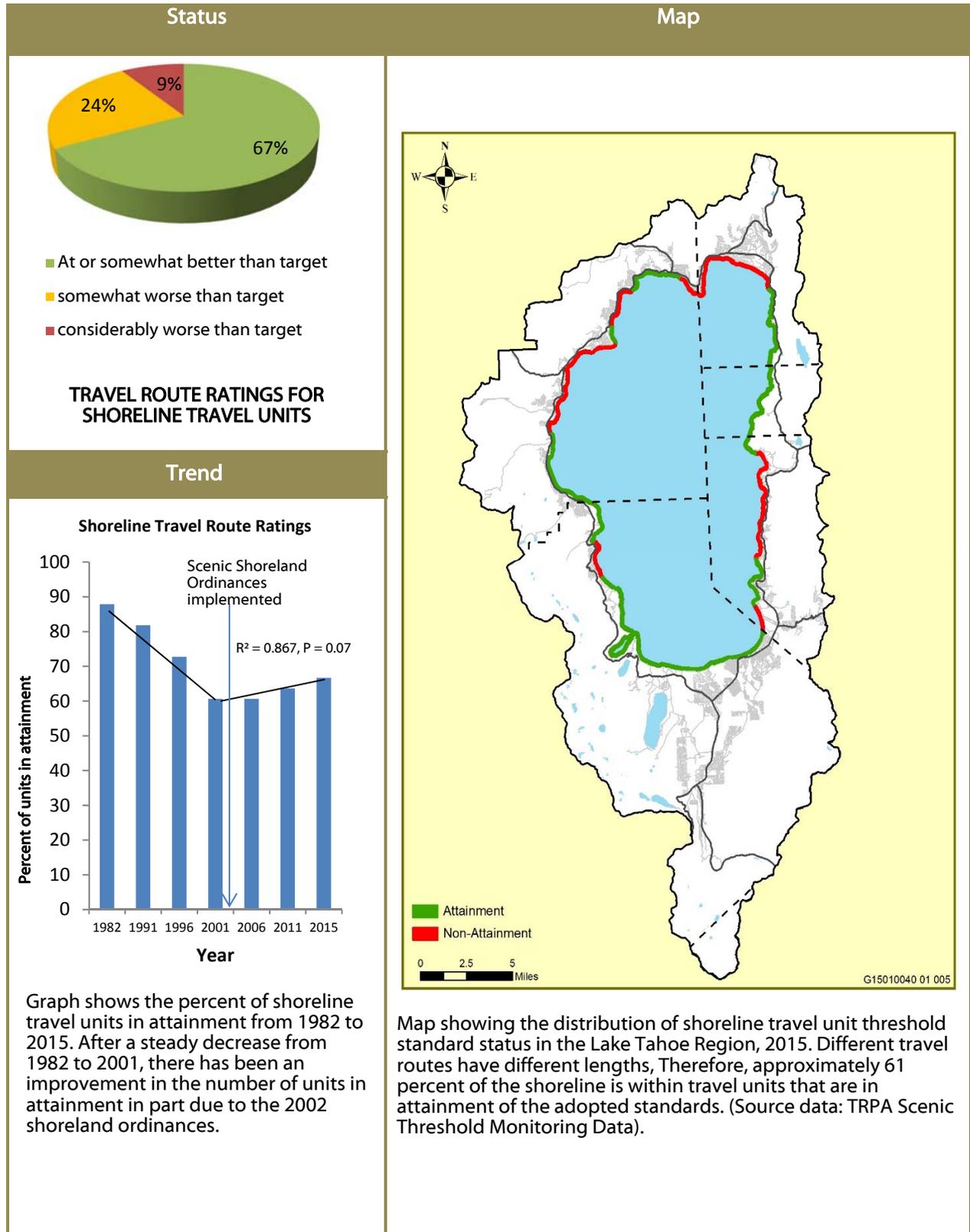


Figure 9-4: Cal Neva hotel as seen from the lake in 2011 (left) and in 2015 (right) after exterior was painted.

Roadway and Shoreline Units: Travel Route Ratings for Shoreline Travel Units



Data Evaluation and Interpretation

BACKGROUND

Relevance – This indicator tracks long-term, cumulative changes in scenic conditions along the shoreline of Lake Tahoe. It accounts for developed and natural-appearing shoreline areas. Tracking these changes is important because it provides a measure of how changes in land use and development affect scenic conditions over time. From 1982 to 2001, scenic conditions along Lake Tahoe’s shoreline deteriorated. In response to this deterioration, TRPA adopted new development regulations for shoreline projects in 2002. By 2006, scenic conditions began to improve and have continued to gradually improve through 2015.

TRPA Threshold Category – Scenic Resources

TRPA Threshold Indicator Reporting Category – Travel Route Ratings

Adopted Standards – The composite score of those shoreline travel routes with a 1982 score of 7.5 or greater must be maintained at or greater than the level they were in 1982; and the composite score of all shoreline travel routes with a 1982 score of seven or less, must improve until the minimum score of 7.5 is reached.

Type of Standard – Numerical

Indicator (Unit of Measure) – Shoreline travel unit composite score, which is a qualitative numerical rating consisting of the sum of the ratings given to three different components of the viewscape within each travel unit.

Human & Environmental Drivers – The primary drivers affecting scenic quality in the shoreline areas of Lake Tahoe are land use, and the visual exposure and visual/aesthetic characteristics of development visible from Lake Tahoe. In areas where the view is primarily forested, fire and tree disease can affect scenic quality.

MONITORING AND ANALYSIS

Monitoring Partners – Tahoe Regional Planning Agency, U.S. Forest Service, and Nevada Division of State Parks

Monitoring Approach – Every four years, a team of professionals examines and evaluates the quality of scenic units and resources along major roadways, the shoreline, and at certain public recreation sites and bike trails in the Lake Tahoe Region. The team also reviews ratings from prior evaluations and updates rating based on its findings.

Analytic Approach – The percentage of shoreline travel units in attainment are reported for status. Trends are determined, for both the percent of units in attainment and the average travel unit rating, using a simple linear regression.

INDICATOR STATE

Status – 22 of the 33 shoreline travel units (67 percent) met the threshold standard in 2015. Sixty-seven percent of units were somewhat better than target; 24 percent were somewhat worse than target; and 9 percent were considerably worse than target. The four units that are furthest out of attainment are on the North Shore (Lake Forest, Crystal Bay, Tahoe City, and Carnelian Bay).

Trend – The percentage of shoreline travel units in attainment has decreased overall from 88 percent in attainment in 1982 to 67 percent in attainment in 2015. However, there are two separate trends evident. From 1982 to 2001, attainment dropped sharply by 27 percent due to increased visibility of residential structures along the shoreline of Lake Tahoe. After the 2002 Scenic Shoreland Ordinance was adopted,

there has been a steady improving trend. Since 2001, the number of shoreline units in attainment has increased. However, when calculating the trend over the entire period since 1982, the percentage of shoreline units in attainment has grown at a rate of approximately 0.4 percent per year which would be considered little to no change. This improving trend will need to continue in order to reach the 1982 levels.

Another way to look at trend is to compare the average ratings of all shoreline units through the years. Average shoreline travel route ratings show a similar trend where from 1982 to 2001 there was a significant worsening trend, and since 2001 there has been a significant improving trend. This trend is demonstrated in Figure 1. Average scores have almost fully rebounded to 1982 levels.

Shoreline Travel Routes

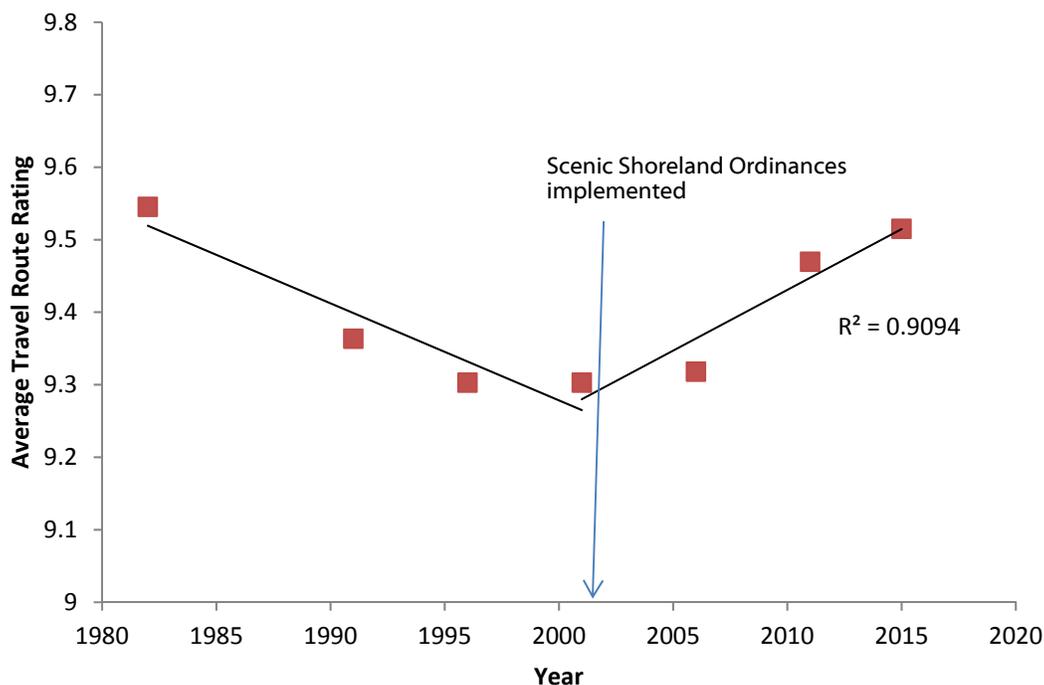


Figure 1: Change in average shoreline travel route rating by year, 1982 to 2015. Overall scores have rebounded to what they were in 1982 after significant decreases from 1982 to 2001.

Confidence –

Status – High. A documented, reviewed, and accepted monitoring protocol was used to guide the collection, analysis, and reporting of the scenic monitoring data. Monitoring data was collected according to procedures outlined in the 1982 *Study Report for the Establishment of Environmental Threshold Carrying Capacities* (TRPA, 1982a), and the *Status and Trend Monitoring Report for Scenic Resources in the Lake Tahoe Basin* (TRPA, 2010), which set forth a methodology for measuring change in scenic quality over time. The methods are consistent with those employed by the U.S. Forest Service and are considered standard practice. This equates to a high level of confidence in the status determination.

Trend – High. There is high statistical confidence in the increasing percentage of units in attainment from 2001 through 2015 ($R^2 = 0.867$, $P = 0.07$).

Overall – High.

IMPLEMENTATION AND EFFECTIVENESS

Programs and Actions Implemented to Improve Conditions – The TRPA Code of Ordinances specifies design standards and guidelines for new development and redevelopment projects along the shoreline. The Code of Ordinances also includes minimum design standards for development or redevelopment in upland areas that could be visible from Lake Tahoe. In 2002, Chapter 66 of the Code of Ordinances was amended to include design standards to protect shoreline areas from scenic degradation due to development. This amendment is known as the Scenic Shoreland Ordinances and is intended to attain the threshold standards as older development is gradually replaced with newer development that has reduced visual impacts. The Scenic Quality Improvement Program also identifies a host of projects that are necessary to improve scenic conditions where needed to facilitate achievement of adopted scenic threshold targets. All proposed projects are evaluated pursuant to TRPA environmental review requirements and, as necessary, specific measures to reduce scenic impacts or improve the aesthetics of individual projects are required by TRPA or local jurisdictions as a condition of permit approval.

Effectiveness of Programs and Actions – The long-term scenic monitoring data suggests that the programs and actions intended to improve scenic conditions were inadequate prior to 2001, but those implemented since then (e.g., scenic shoreland ordinances) have improved scenic conditions, as evidenced by data from 2006 through 2015.

Areas that still need to be addressed in order to raise the scores in nonattainment units into attainment include:

- Light colored piers, pier pilings, and fences along the shoreline detract from scenic quality.
- Parking lots near the shoreline are not adequately screened and the parked cars are visible from the lake. This is also true for areas where cars are being parked along roadways where the roads are near the shoreline.
- Existing houses are light in color and have not been repainted and still distract.
- Screening trees (trees located between the lake and the building) are being significantly limbed in many cases reducing vegetative screening of structures.
- Existing shoreline revetments within shoreline units are inconsistent, in disrepair, and contrast.
- Powerlines along sections of roadways near the shoreline are obvious. Undergrounding these lines would improve conditions.

Interim Target – By the next evaluation period, increase the number of units in attainment and the average shoreline travel unit rating.

Target Attainment Date – Because shoreline travel route ratings depend heavily on redevelopment that does not happen at a predictable rate, a target attainment date cannot be set. Based on the historic pace of redevelopment, it will take a significant amount of time for all units to be in attainment.

RECOMMENDATIONS

Analytic Approach – No changes recommended.

Monitoring Approach – No changes recommended.

Modification of the Threshold Standard or Indicator – No changes recommended.

Attain or Maintain Threshold – Continue existing programs and actions. Continue to monitor status and trend of scenic conditions. Update the Scenic Quality Improvement Program based on current shoreline travel unit monitoring data, including information on the locations and individual components of the shoreline unit scores that are out of attainment.

Scenic Quality Ratings for Roadway Travel Units (Scenic Resources)

In contrast to travel route ratings that reflect the positive or negative effects of the landscape on scenic quality throughout an entire travel unit, the scenic quality rating for roadway travel units is a score for individual views or features of the landscape, referred to as scenic resources, as seen from a specific location within a roadway travel unit. These specific views or features are defined, documented, and mapped by TRPA. Scenic resources visible from roadways include:

1. Foreground, middleground, and background views of the natural landscape.
2. Views to the lake from roadways.
3. View of the lake and natural landscape from roadway entry point into the Basin.
4. Unique regional landscape features such as streams, beaches, and rock formations that add interest and variety. (TRPA, 1982b).

Scenic quality is measured by rating each of four subcomponents, and summing the values to produce a composite score. The following visual characteristics comprise the subcomponents. These characteristics are well documented in academic and professional literature as useful and objective measures of relative scenic value:

- **Unity.** A *unified* landscape is one where the visual resources join together to form a single, coherent, harmonious visual unit.
- **Vividness.** Also described as distinctiveness, can be expressed by contrasting elements such as color, line, and shape, or marked differences in elements seen as related, or repetition of similarities.
- **Variety.** Variety or richness usually consists of numerous of different parts seen together.
- **Intactness.** Intactness describes the degree to which modifications emphasize or enhance the natural condition of the landscape. (Iverson, Sheppard, Strain 1993)

Each characteristic is rated from zero (absent) to three (high). A composite rating is obtained by summing the ratings of the four characteristics; therefore, the composite rating for an individual shoreline scenic resource can range from zero to 12.

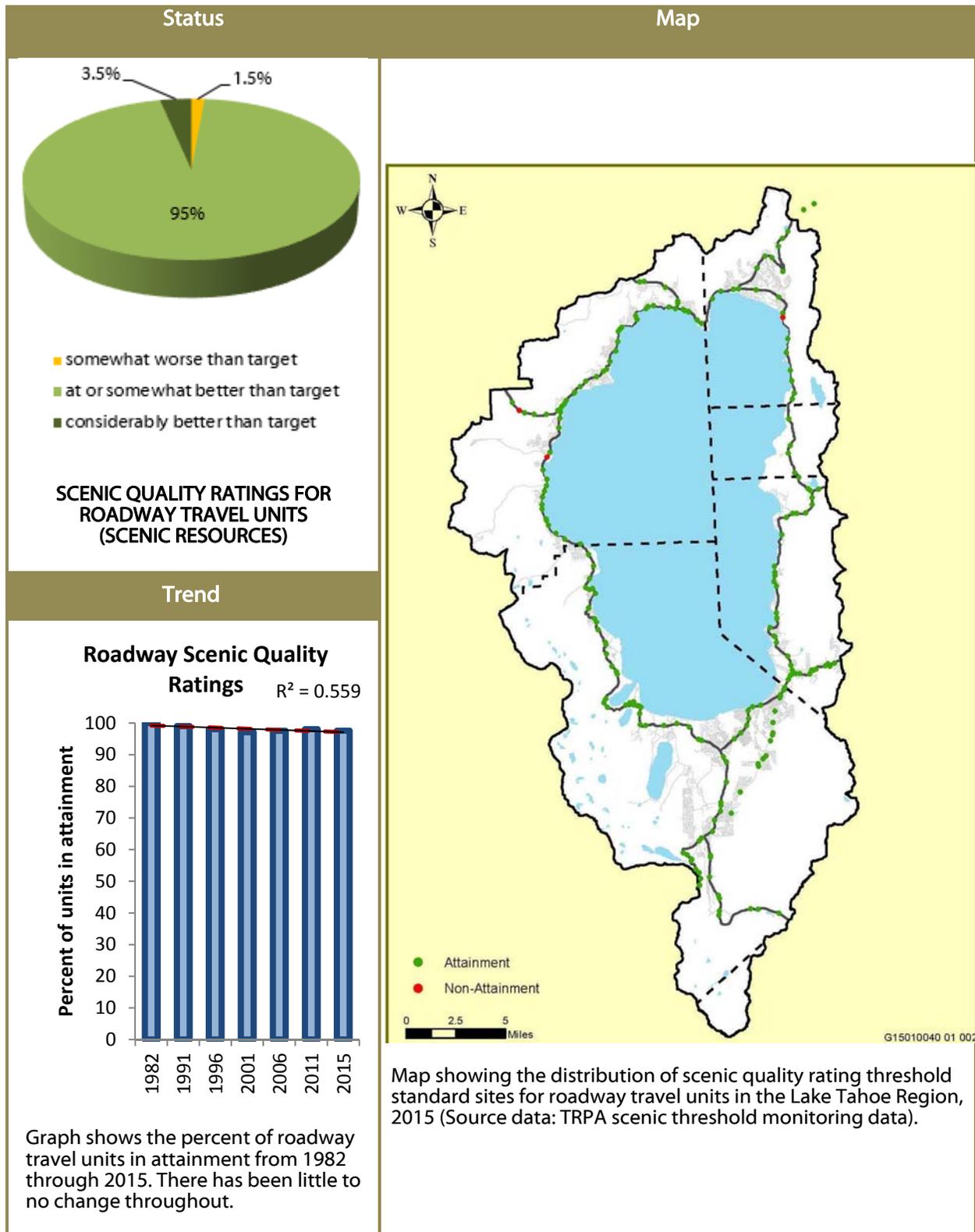
In 1982, an inventory of scenic resources in the Lake Tahoe Region was completed and 205 scenic resources within roadway travel units were identified. Since then, three scenic resources were added to the inventory. A composite score for each resource was calculated by summing the ratings assigned to each of four sub-components and the 1982 score was adopted as the numerical standard for that resource. To be in attainment, the original score for each roadway unit scenic resource must be maintained or improved. Over time, if the composite score for any resources or the score for any of its subcomponents drops below what it was in 1982, the resource is out of attainment. It remains out of attainment until conditions improve, and the score returns to the original rating or higher.

Of the 208 identified and mapped scenic resources associated with roadway travel units, 202 (97 percent) are in attainment because they have composite scores equal to or greater than their original scores. Eight have scores that are considerably better than the target, five are somewhat worse than the target, and one is considerably worse than the target. Overall, 94 percent of roadway scenic resources show little or no change in their composite rating, and 3.5 percent show a moderate improvement. Detailed information on the scores of the scenic resources can be found in Appendix G of this report.

None of the scores for roadway scenic resources dropped in 2015 but three scores did increase for resources whose scores were already in attainment:

1. Roadway Scenic Resource Number 34.2 increased because of the removal of the Alta Mira building which increased views to the lake (see Figure 9-3).
2. Roadway Scenic Resource Number 20.4 score included due to the streetscape improvements for the Kings Beach Commercial Core Improvement project.
3. Roadway Scenic Resource 11.4 increased as a result of curb and gutter installation as part of a Caltrans water quality improvement project which improved the unity score for this resource.

Roadway and Shoreline Units: Scenic Quality Ratings for Roadway Travel Units (Scenic Resources)



Data Evaluation and Interpretation

BACKGROUND

Relevance – This indicator tracks changes in scenic quality of 208 specific scenic resources associated with roadway travel units. Tracking these changes is important because it provides a measure of how changes in land use and development over time affect these resources.

TRPA Threshold Category – Scenic Resources

TRPA Threshold Indicator Reporting Category – Roadway Scenic Quality Ratings

Adopted Standards – The composite score of each roadway scenic resource must meet or exceed the composite scenic score identified in TRPA (TRPA, 1982a).

Type of Standard – Numerical

Indicator (Unit of Measure) – Scenic quality composite score, which is a numerical rating consisting of the sum of the ratings given to four different visual characteristics.

Human & Environmental Drivers – The primary drivers affecting scenic quality in the Lake Tahoe Region are land use, land and resource management activities, and the visual/aesthetic characteristics of human-made development.

MONITORING AND ANALYSIS

Monitoring Partners – Tahoe Regional Planning Agency, U.S. Forest Service, and Nevada Division of State Parks

Monitoring Approach – Every four years, a team of professionals examines and evaluates the quality of scenic units and resources along major roadways, the shoreline, and at certain public recreation sites and bike trails in the Lake Tahoe Region. The team also reviews ratings from prior evaluations and updates rating based on its findings.

Analytic Approach – The percentage of roadway travel unit scenic quality rating units in attainment are reported for status and trends. Average scores are also used to inform trend.

INDICATOR STATE

Status – As of 2015, 205 of the 208 roadway scenic resources met the threshold standard. Ninety-five percent of units were at or somewhat better than target; three and a half percent of units were considerably better than target; one and a half percent of units were somewhat worse than target; and no units were considerably worse than target.

Trend – The percentage of roadway scenic resources in attainment has remained similar from 1982 through 2015. There has been a slight decrease from 100 percent attainment in 1982 to 97.5 percent attainment in 2015. The long term trend line shows a statistically insignificant 0.19 percent decrease in units in attainment per year. If judging the Region as a whole, this trend would be considered little to no change.

Another way to look at trend is to compare the average ratings of all roadway scenic resources over time. Average roadway scenic resource ratings show a slight improving trend from 1982 to 2015. However, it is so slight that it would be considered little to no change (see Figure 1).

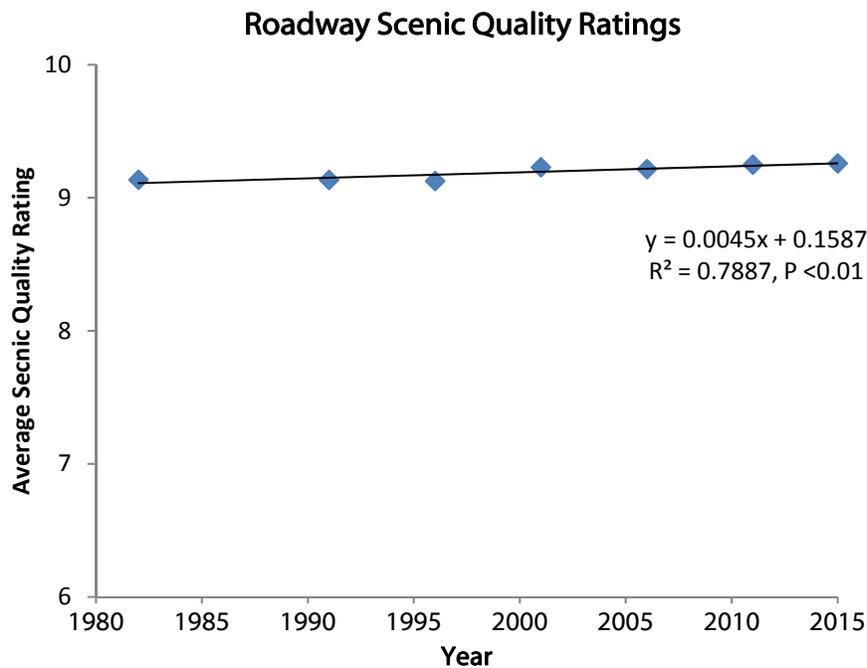


Figure 1: Change in average roadway scenic resource rating by year, 1982 to 2015. Overall scores show a very slight improvement, which overall would be considered “little to no change”.

Confidence –

Status – High. A documented, reviewed, and accepted monitoring protocol is used to guide the collection, analysis, and reporting of the scenic monitoring data. Monitoring data is collected according to procedures outlined in the 1982 *Study Report for the Establishment of Environmental Threshold Carrying Capacities* (TRPA, 1982a), and the *Status and Trend Monitoring Report for Scenic Resources in the Lake Tahoe Basin* (TRPA, 2010), which set forth a methodology for measuring change in scenic quality over time. The methods are consistent with those used by the U.S. Forest Service and are considered standard practice. This results in a high level of confidence in the status determination.

Trend – High. While no statistically significant trend was established for the percent of units in attainment through the years ($R^2 = 0.2957$, $P = 0.26$), there is high confidence that there has been little to no change based on standardized, high quality surveys.

Overall – High.

IMPLEMENTATION AND EFFECTIVENESS

Programs and Actions Implemented to Improve Conditions – The TRPA Code of Ordinances specifies minimum design standards and guidelines for new development and redevelopment projects. Area plans and community plans provide specific design standards and guidelines applicable to local areas. The Scenic Quality Improvement Program, which was adopted by TRPA in 1989, identifies a host of projects that are necessary to improve scenic conditions. These projects are implemented either through the Environmental Improvement Program (EIP) or as a part of private redevelopment or development projects. As necessary, specific measures to improve the aesthetics of individual projects are sometimes required by TRPA or local jurisdictions as a condition of the permit that is issued.

Effectiveness of Programs and Actions – Scenic status and trend data for this indicator suggests that currently implemented programs and actions have prevented scenic quality ratings from decreasing. However, some resources remain out of attainment and need to be addressed.

Areas that still need to be addressed in order to raise the scores in nonattainment units into attainment include:

- Extensive parking along the side of roadways threatens the scores for a number of scenic resources. This is noted in a number of areas including Emerald Bay, the east shore of Lake Tahoe along State Route 28, and near Zephyr Cove beach.

Interim Target – By the next evaluation period, increase the number of resources in attainment and the average rating for scenic resources.

Target Attainment Date – Because ratings depend heavily on redevelopment that does not happen at a predictable rate, a target attainment date cannot be set.

RECOMMENDATIONS

Analytic Approach – No changes recommended.

Monitoring Approach – No changes recommended.

Modification of the Threshold Standard or Indicator – No changes recommended.

Attain or Maintain Threshold – Continue existing programs and actions. Continue to monitor status and trend of scenic conditions. Update the Scenic Quality Improvement Program based on monitoring data and information on the individual scenic resources that are out of attainment.

Scenic Quality Ratings for Shoreline Travel Units (Scenic Resources)

The scenic quality rating for shoreline travel units is a composite score of four subcomponents that are assessed for individual views or features of the landscape, referred to as scenic resources, as viewed from a specific location on the lake. These specific views or features are defined, documented, and mapped by TRPA. Four visual characteristics guide this evaluation: unity, vividness, variety, and intactness. Each characteristic is rated from zero (absent) to three (high). A composite rating is obtained by summing the ratings of the four characteristics; therefore, the composite rating for an individual shoreline scenic resource can range from zero to 12. Scenic resources visible from Lake Tahoe looking back at the shoreline include:

1. Foreground views of the natural landscape along the lake's shoreline.
2. Background views to the mountainous ridgeline defining the topographic basin.
3. Unique natural and cultural features seen from the lake, including rock formations, historic lumbermill piling, and stream mouths (TRPA, 1982b).

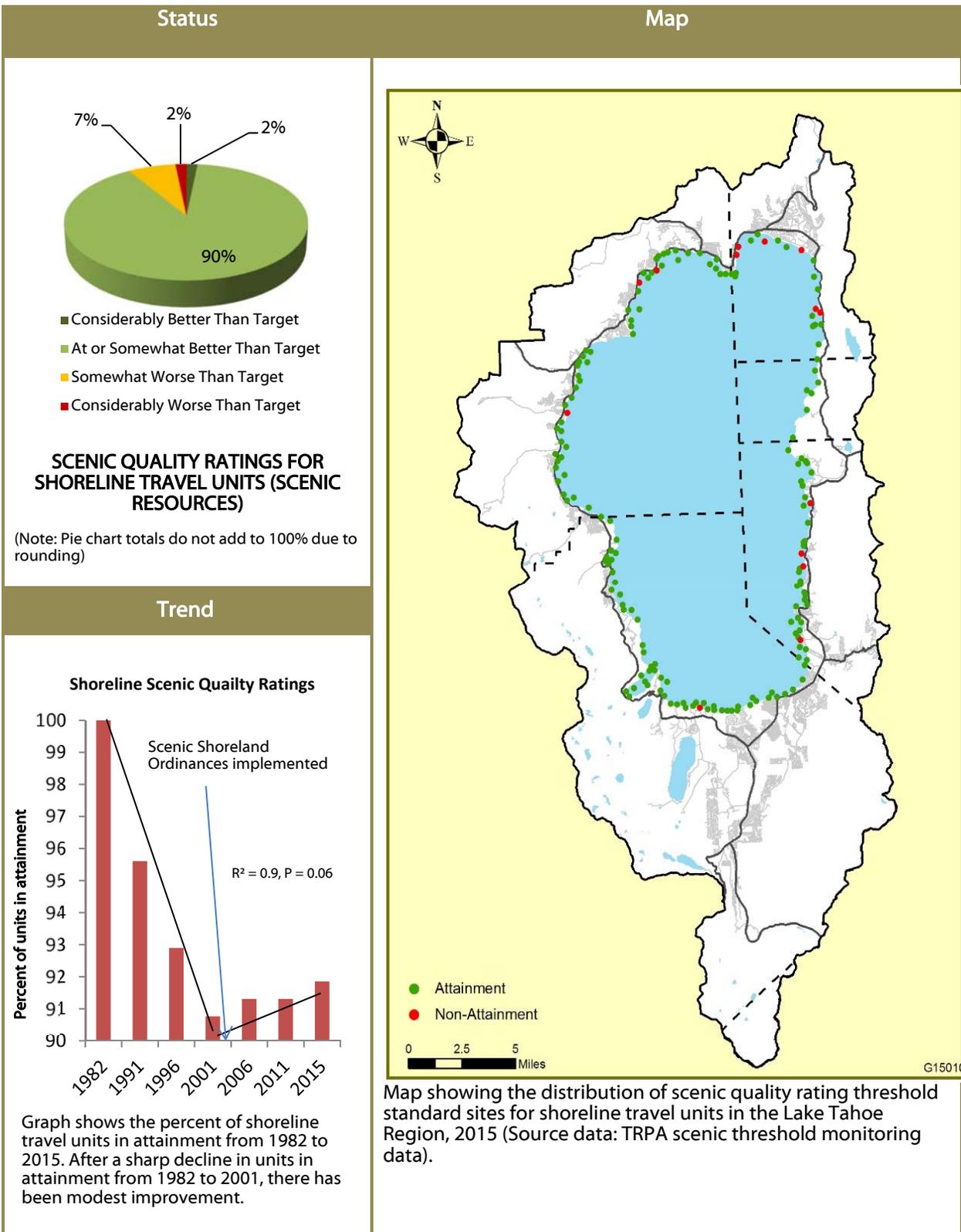
In 1982, an inventory of scenic resources in the Lake Tahoe Region was completed. At that time, a total of 183 scenic resources within shoreline travel units were identified. Since then, one scenic resource has been added to the inventory. The original composite score of each resource was adopted as the numerical standard for that resource. To be in attainment, the original score for each shoreline unit scenic resource must be maintained or increased. Over time, if the composite score for any resource, or the score any of its subcomponents drops below what it was in 1982, the resource is considered to be out of attainment. It remains out of attainment until conditions improve, and the score returns to the original rating or higher.

Of the 184 identified and mapped scenic resources associated with shoreline travel units, 169 (91.8 percent) are in attainment in 2015. Three have scores that are considerably better than the target, while 12 are somewhat worse than the target, and three are considerably worse. Overall, 92 percent of shoreline scenic resources show little or no change in their composite ratings. Three percent show a moderate improvement, four percent show a moderate decline, and one percent show rapid improvement. Detailed information on the scores of scenic resources can be found in Appendix G of this report.

One scenic shoreline resource moved into attainment and none of the scores dropped. Resource 12.6 in McKinney Bay came into attainment in 2015. The redevelopment of older homes along the shoreline and maturation of vegetation that screens existing structures resulted in an increased scenic score. Other shoreline scenic resources that had increased scores in 2015 were:

- Shoreline Scenic Resources 8.3 and 12.3. Scores for these increased due to maturing screening vegetation.
- Shoreline Scenic Resource 22.6. In 2015 the score for this scenic resource increased 0.5 points in the unity category because the exterior of the building had been painted (see Figure 9-4).
- Shoreline Scenic Resource 34.2. Score increased due to the completion of the Lakeview Commons project.

Roadway and Shoreline Units: Scenic Quality Ratings for Shoreline Travel Units (Scenic Resources)



Data Evaluation and Interpretation

BACKGROUND

Relevance – This indicator tracks changes in the scenic quality of 184 scenic resources associated with shoreline travel units. Tracking these changes is important because it provides a measure of how changes in land use and development affect these resources over time.

TRPA Threshold Category – Scenic Resources

TRPA Threshold Indicator Reporting Category – Shoreline Scenic Quality Ratings

Adopted Standards – The composite scores of shoreline scenic resources must be at or higher than they were in 1982.

Type of Standard – Numerical

Indicator (Unit of Measure) – Scenic quality composite score, which is a numerical rating consisting of the sum of the ratings given to four different visual characteristics.

Human & Environmental Drivers – The primary drivers affecting scenic quality in the Lake Tahoe Region are land use, land and resource management activities, and the visual/aesthetic characteristics of manmade development.

MONITORING AND ANALYSIS

Monitoring Partners – Tahoe Regional Planning Agency, U.S. Forest Service, and Nevada Division of State Parks

Monitoring Approach – Every four years, a team of professionals examines and evaluates the quality of scenic units and resources along major roadways, the shoreline, and at certain public recreation sites and bike trails in the Lake Tahoe Region. The team also reviews ratings from prior evaluations and updates rating based on its findings.

Analytic Approach – The percentage of shoreline travel unit scenic quality ratings in attainment are reported for status and trends. Average scores are also used to inform trend.

INDICATOR STATE

Status – As of 2015, 169 of the 184 shoreline scenic resources (91.85 percent) meet the threshold standard. One hundred sixty-six (90.02 percent) units are at or somewhat better than target; three (1.63 percent) are considerably better than target; twelve (6.52 percent) are somewhat worse than target; and three (1.63 percent) are considerably worse than target.

Trend – The percentage of shoreline scenic resources in attainment decreased five percent between 1991 and 2001. Since 2001, there has been a small but steady (0.08 percent per year) increase in the percent of units in attainment. While this improvement has occurred since 2001, it is small enough to be considered little to no change. The percent of units in attainment have not rebounded to 1982 or 1991 levels.

Another way to look at trend is to compare the average shoreline scenic quality ratings over time. Average shoreline scenic resource ratings show a very similar trend where overall scores decreased from 1982 to 2001, and have steadily increased since 2001. However, the increase since 2001 is so slight that it would be considered little to no change (see Figure 1).

Shoreline Scenic Quality Ratings

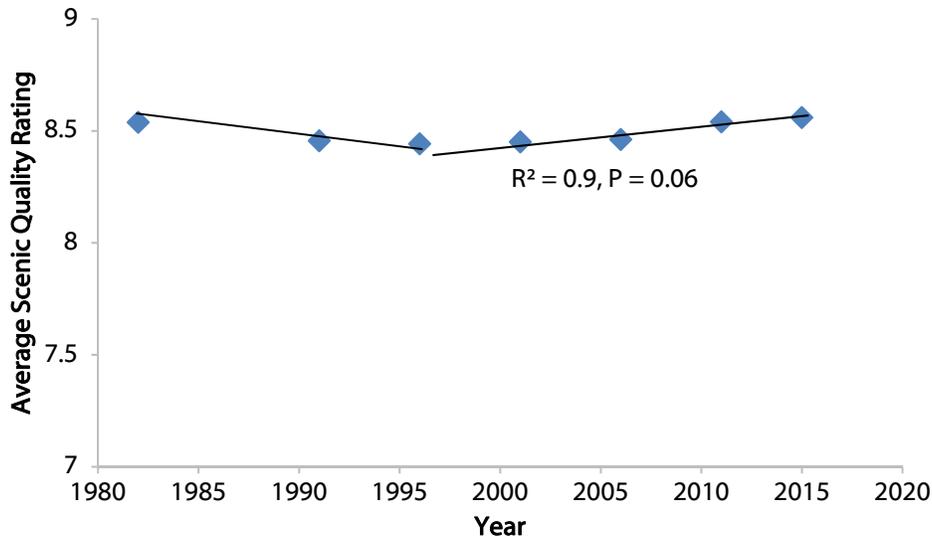


Figure 1: Change in average shoreline scenic resource rating by year, 1982 to 2015. Scores dropped from 1982 to 2001, but since 2001 there has been a separate improving trend. Overall scores show a very slight improvement since 1982, but overall would be considered little to no change.

Confidence –

Status – High. A documented, reviewed, and accepted monitoring protocol is used to guide the collection, analysis, and reporting of the scenic monitoring data. Monitoring data is collected according to procedures outlined in the 1982 *Study Report for the Establishment of Environmental Threshold Carrying Capacities* (TRPA, 1982a), and the *Status and Trend Monitoring Report for Scenic Resources in the Lake Tahoe Basin* (TRPA, 2010), which set forth a methodology for measuring change in scenic quality over time. The methods are consistent with those employed by the U.S. Forest Service, and are considered standard practice. This equates to a high level of confidence in the status determination.

Trend – High. There is a statistically significant slowly increasing trend in the percent of units in attainment since 2001 ($R^2 = 0.9$, $P = 0.06$).

Overall – High.

IMPLEMENTATION AND EFFECTIVENESS

Programs and Actions Implemented to Improve Conditions – The TRPA Code of Ordinances specifies design standards and guidelines for new development and redevelopment projects. In 2002, Chapter 66 of the Code of Ordinances was amended to include design standards to protect shoreline areas from scenic degradation due to development. This amendment is known as the Scenic Shoreland Ordinances. The Scenic Quality Improvement Program identifies a host of projects that are necessary to improve scenic conditions to facilitate achievement of adopted scenic threshold targets. As necessary, specific measures to improve the aesthetics of individual projects are required by TRPA as special permit conditions.

Effectiveness of Programs and Actions – Scenic status and trend data for this indicator, particularly after the Scenic Shoreland Ordinances was adopted in 2002, suggests that implemented programs and actions, overall, are improving scenic conditions. However, some resources remain out of attainment

and need to be addressed, and the percent of resources in attainment are still below 1991 levels.

Areas that still need to be addressed in order to raise the scores in nonattainment units into attainment include:

- Roadside parking is also affecting scenic resources viewed from the Lake.

Interim Target – By the next evaluation period, increase the number of resources in attainment and the average scenic quality rating.

Target Attainment Date – Because ratings depend heavily on redevelopment that does not happen at a predictable rate, a target attainment date cannot be set.

RECOMMENDATIONS

Analytic Approach – No changes recommended.

Monitoring Approach – No changes recommended.

Modification of the Threshold Standard or Indicator – No changes recommended.

Attain or Maintain Threshold – Continue existing programs and actions. Continue to monitor status and trend of scenic conditions. Update the Scenic Quality Improvement Program based on current monitoring data, including information on the individual scenic resources that are out of attainment.

Other Areas (Public Recreation Areas & Bike Trails)

The other areas indicator reporting category applies to specific scenic resources at certain public recreation areas and bike trails.

In 1993, a total of 382 scenic resources were identified for 37 public recreation areas (including beaches, campgrounds, and ski areas), and 11 segments of class I and class II bicycle trails (class I trails are separated from roadways and class II trails are part of the roadway). Since then, eight scenic resources have been added to the inventory. The recreation areas and bike trails are mapped and listed in an inventory maintained by TRPA. Baseline conditions were established after they were first evaluated in 1993, or when the scenic resources were later added to the inventory. The original composite score for each public recreation area and bike trail resource was adopted as the numerical standard for that resource. To be in attainment, the original score for a scenic resource must be maintained or improved. Over time, if the composite score for any resource drops below what it was originally, the resource is considered to be “out of attainment.” It remains out of attainment until conditions improve such that the score returns to the original score or higher.

The public recreation area and bike trails threshold standard addresses three general types of scenic resources:

1. Views of the lake and natural landscape from the recreation area or bicycle trail,
2. Views of natural features that add interest and variety to the views, and
3. Visual quality of man-made features (the built facilities) within the recreation area or adjacent to the trail that influence the viewing experience (TRPA, 1993).

Ratings were generated for all three types. For bicycle trails, lake views are also included and rated. Scenic quality of views from the recreation area or bicycle trail (type 1 scenic resources) and views of natural features and lake views (type 2) is measured by rating each of four subcomponents and summing the values to produce a composite scenic quality rating. The following visual characteristics comprise the subcomponents:

- Unity. A unified landscape is one in which the visual resources join together to form a single, coherent, harmonious visual unit.
- Vividness. Vividness can be expressed by contrasting elements, such as color, line, and shape, marked differences in related elements or repetition of similarities. The visual quality of vividness can also be described as distinctiveness.
- Variety. Variety usually refers to numerous or different parts seen together and can also be described as richness.
- Intactness. The degree to which a landscape retains its natural condition, or the degree to which modifications emphasize or enhance the natural condition of the landscape (TRPA, 1993).

Man-made features (type 3) are rated for the following characteristics:

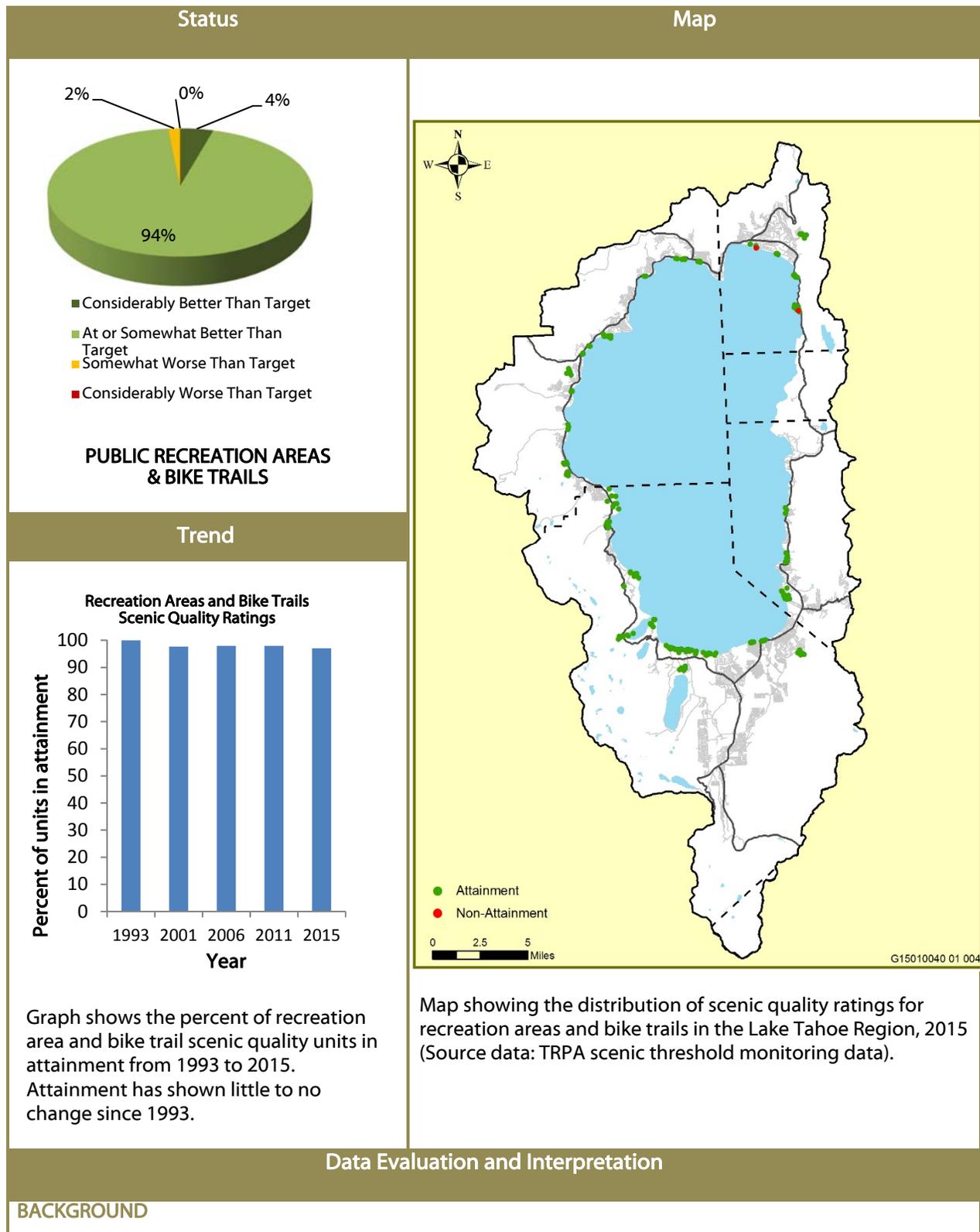
- Coherence – a coordinated appearance possessing some unifying characteristic or quality
- Condition – the general physical condition and maintenance and age of the facilities
- Compatibility – the sense of the surrounding natural landscape. Man-made features that are highly compatible blend in with their surroundings and defer to the form, colors, and textures of the natural landscape

- Design quality – the presence of architectural qualities that make the man-made elements distinctive and valued visual features

Recreation areas and bike trails in the TRPA inventory and shown on the map are visited in the field. While observing type 1 and type 2 scenic resources, the characteristics of unity, vividness, variety, and intactness are assigned a value from one (low) to five (high). Type 3 scenic resources (man-made features) are rated for coherence, condition, compatibility and design quality, according to the same scale.

In 2015, 381 of the 390 scenic resources associated with recreation sites and bicycle trails were in attainment because they had composite scores equal to or greater than their original 1993 scores. A total of 360 had scores that were at or somewhat better than the target, 21 were considerably better than target, nine were somewhat worse than target, and none were considerably worse than target. Overall, 90 percent of the scenic resources show little or no change in their composite ratings. Five percent showed a rapid improvement, 3.5 percent showed a moderate improvement, and 1.5 percent showed a moderate decline. The scenic resources that showed a moderate decline were the result of the gradual deterioration of older recreation areas. Detailed information on the scores of these areas can be found in Appendix G of this report.

Other Areas: Public Recreation Areas and Bike Trails



Relevance – This indicator tracks changes in scenic quality of specific views associated with TRPA-listed public recreation areas and bike trails, and the aesthetic condition of facilities at the recreation sites themselves. Tracking these changes is important because it provides a measure of how changes in land use and development over time affect these resources, and how the aesthetic conditions of recreation facilities affect the visual quality of the area. Today, the scenic quality of scenic resources associated with public recreation sites is nearly the same as it was in 1993. The trend has been for little change in conditions since then. Changes that have occurred have been mostly beneficial, with some declines due to the gradual deterioration of recreation facilities.

TRPA Threshold Category – Scenic Resources

TRPA Threshold Indicator Reporting Category – Other Areas

Adopted Standards – To attain the threshold standard, the composite score and subcomponent scores of scenic resources associated with public recreation areas and bike trails, must be at or higher than they were in 1993 or when they were first evaluated.

Type of Standard – Numerical

Indicator (Unit of Measure) – Scenic quality composite score, which is a numerical rating consisting of the sum of the ratings given to four different visual characteristics.

Human & Environmental Drivers – The primary drivers affecting scenic quality in the Lake Tahoe Region are land use, land and resource management activities, and the visual/aesthetic characteristics of manmade development.

MONITORING AND ANALYSIS

Monitoring Partners – Tahoe Regional Planning Agency, U.S. Forest Service, and Nevada Division of State Parks

Monitoring Approach – Every four years, a team of professionals examines and evaluates the quality of scenic units and resources along major roadways, the shoreline, and at certain public recreation sites and bike trails in the Lake Tahoe Region. The team also reviews ratings from prior evaluations and updates rating based on its findings.

Analytic Approach – The percentage of recreation area and bike trail scenic quality rating units in attainment are reported for status and trends. Average scores are also used to inform trend.

INDICATOR STATE

Status – As of 2015, 381 of the 390 public recreation area and bike trail scenic resources (97.6 percent) met the threshold standard. Ninety-four percent of units were at or somewhat better than the target; four percent were considerably better than target; two percent were somewhat worse than target; and none were considerably worse than target.

Trend – As of 2015, the scenic quality of scenic resources associated with public recreation sites is nearly the same as it was in 1993. No trend exists in the percent of units in attainment as it has virtually stayed the same in all years with percent attainment varying between 97 percent and 98 percent each monitoring period.

Another way to look at trend is to compare the average ratings of all recreation area and bike trail scenic resources through the years. Average scenic quality ratings for all units have gone up 0.14 percent per year since 1993, which would be considered little to no change (see Figure 1).

Recreation Areas and Bike Trails Scenic Quality Ratings

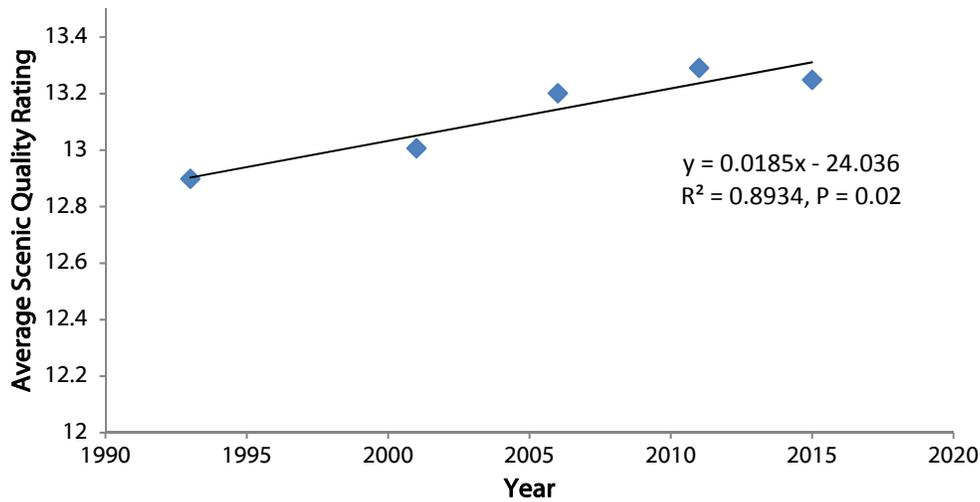


Figure 1: Change in average scenic quality rating by year, 1993 to 2015. Overall scores show a slight improvement of 0.14 percent per year, but according to the methodology described in this report; this is considered little to no change.

Confidence –

Status – High. A documented, reviewed, and accepted monitoring protocol was used to guide the collection, analysis, and reporting of the scenic monitoring data. Monitoring data was collected according to procedures outlined in the 1982 *Study Report for the Establishment of Environmental Threshold Carrying Capacities* (TRPA, 1982a), and the *Status and Trend Monitoring Report for Scenic Resources in the Lake Tahoe Basin* (TRPA, 2010), which set forth a methodology for measuring change in scenic quality over time. The methods are consistent with those employed by the U.S. Forest Service, and are considered standard practice. This results in a high level of confidence in the status determination.

Trend – High. Because the percent of units in attainment has remained largely unchanged through the years, confidence that there has been little to no change is high.

Overall – High.

IMPLEMENTATION AND EFFECTIVENESS

Programs and Actions Implemented to Improve Conditions – The TRPA Code of Ordinances specifies design standards and guidelines for new development and redevelopment projects. The U.S. Forest Service designs new recreation facilities in compliance with its national Built Environment Image Guide. The Scenic Quality Improvement Program identifies a host of projects that are necessary to improve scenic conditions and achieve scenic threshold targets. As necessary, specific measures to improve the aesthetics of individual projects are required by TRPA or a local jurisdiction as a condition of the permit that is issued.

Effectiveness of Programs and Actions – Scenic status and trend data for this indicator (at or somewhat better than target, with little or no change) suggests that implemented programs and actions, overall, have maintained scenic conditions. However, some units remain out of attainment and need to be addressed.

Interim Target – By the next evaluation period, increase the number of units in attainment and the average rating for scenic resources.

Target Attainment Date – Because ratings depend heavily on public investments in recreation facilities and re-development that does not happen at a predictable rate, a target attainment date cannot be set.

RECOMMENDATIONS

Analytic Approach – No changes recommended.

Monitoring Approach – As noted in a recommendation in the Recreation Chapter of the 2015 Threshold Evaluation Report, an improved monitoring approach could consider coordinating and combining the scenic threshold monitoring system’s regular assessment of recreation site with recreation quality data collection and surveys for efficiency.

Modification of the Threshold Standard or Indicator – No changes recommended.

Attain or Maintain Threshold – Continue existing programs and actions. Continue to monitor status and trend of scenic conditions. Update the Scenic Quality Improvement Program based on current monitoring data, including information on the individual scenic resources that are out of attainment.

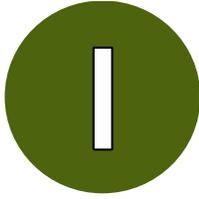
Built Environment (Community Design)

The threshold standard associated with the built environment indicator reporting category, often referred to as “community design,” is a policy statement that applies to the built environment (e.g. houses, commercial buildings, etc.) and is not restricted to roadway or shoreline units. As stated in TRPA Resolution 82-11, “It shall be the policy of the TRPA Governing Body in development of the Regional Plan, in cooperation with local jurisdictions, to ensure the height, bulk, texture, form, materials, colors, lighting, signing and other design elements of new, remodeled and redeveloped buildings be compatible with the natural, scenic, and recreational values of the region.” To achieve this threshold standard, TRPA and its partner jurisdictions must implement design standards and guidelines that result in new or redeveloped buildings that are compatible with the area’s natural, scenic, and recreational values.

Design standards and guidelines must address the key elements of design that affect community character including mass, color, materials, architectural design, and other design elements outlined in the policy statement. To be compatible with the Region’s values, design standards and guidelines also need to be sensitive to the context in which they are applied. In more natural areas, design standard and guidelines should, in most cases, focus on minimizing the visibility of development to reduce distractions from the natural scenery. In more developed areas, design standards and guidelines should seek to achieve visual interest and be consistent with the desired character of the individual community in which they are located, as well as promote design that blends with the natural environment. Design standards and guidelines apply to new, redeveloped, or remodeled buildings, but they do not address existing structures. As a result, progress is made toward implementing the community design threshold standard as more development and redevelopment projects occur and replace development that is inconsistent with design standards and guidelines.

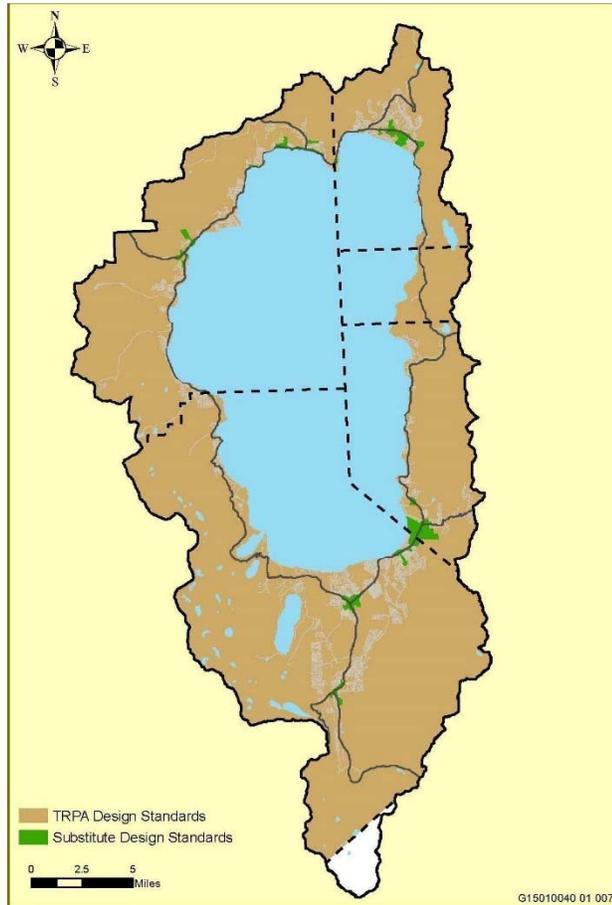
Scenic: Built Environment (Community Design)

Status



BUILT ENVIRONMENT (COMMUNITY DESIGN)

Status: Implemented



The map shows the location of adopted Community Plans and Area Plans where community-specific substitute design standards apply to new development and redevelopment projects. TRPA design standards apply throughout the region unless they are replaced by substitute standards. Note that topic-specific substitute standards for signage, parking, and other topics apply in other areas outside of Community Plans and Area Plans.

Data Evaluation and Interpretation

BACKGROUND

Relevance – Improvements in the built environment contribute to the attainment of travel route ratings. The replacement of older structures with newer structures that conform to the design standards and guidelines has been a primary driver of the increase in travel unit scores. Redevelopment projects can result in notable improvements to the man-made features component of the scenic score. As more development and redevelopment projects are implemented, the aesthetic and visual quality of the built environment will continue to improve.

TRPA Threshold Category – Scenic Resources

TRPA Threshold Indicator Reporting Category – Built Environment

Adopted Standards – It shall be the policy of the TRPA Governing Body in development of the Regional Plan, in cooperation with local jurisdictions, to ensure the height, bulk, texture, form, materials, colors, lighting, signing and other design elements of new, remodeled and redeveloped buildings be compatible with the natural, scenic, and recreational values of the region.

Type of Standard – Policy Statement

Indicator (Unit of Measure) – Two evaluation criteria were evaluated to determine the implementation status of the built environment policy statement, including:

1. Has TRPA adopted policies, regulations or implemented other programmatic efforts to satisfy the policy statement adopted in Resolution 82-11?
2. Is there evidence to suggest these actions are achieving the intent of the policy statement?

Human & Environmental Drivers – The primary drivers affecting the built environment in the Lake Tahoe Region are the rate and type of development and redevelopment, and the effectiveness of design standards and guidelines.

MONITORING AND ANALYSIS

Monitoring Partners - Tahoe Regional Planning Agency, U.S. Forest Service, and Nevada Division of State Parks

Monitoring Approach – Every four years, a team of professionals examines and evaluates the quality of scenic units and resources along major roadways, the shoreline, and at certain public recreation sites and bike trails in the Lake Tahoe Region. The team also reviews ratings from prior evaluations and updates rating based on its findings.

Analytic Approach – Not applicable.

INDICATOR STATE

Status – Implemented. The policy statement has been implemented. A review of the TRPA policies, ordinances, and programs found that the Regional Plan and TRPA programs support attainment of the policy statement. Scenic monitoring data shows a moderate improvement in roadway travel unit scores that is in large part due to redeveloped buildings that comply with community design requirements. An evaluation of recent development and redevelopment projects found that the projects were consistent with applicable design standards and guidelines, and the application of those standards and guidelines was consistent with the policy statement.

IMPLEMENTATION AND EFFECTIVENESS

Programs and Actions Implemented to Improve Conditions – TRPA has established policies and ordinances, in coordination with local jurisdictions, that support attainment of the policy statement. The Regional Plan Goals and Policies (TRPA, 2012c) contain a community design sub-element within the land use element, which sets forth goals and policies for new and existing development. The following goals in the Regional Plan guide implementation of the policy statement.

- Goal Community Design-1 - Ensure preservation and enhancement of the natural features and qualities of the Region, provide public access to scenic views, and enhance the quality of the built environment.
- Goal Community Design-2 - Regional building and community design criteria shall be established to ensure attainment of scenic threshold standards, maintenance of desired community character, compatibility of land uses, and coordinated project review.

Direction on achieving these goals is provided in three policies, including policy CD-2.1, which provides specific requirements for area plans to address community design, site design, building design, landscaping, lighting, and signing. The community design goals and policies are implemented in two ways. The Code of Ordinances includes minimum requirements for design standards, height, and signs in chapters 36, 37, and 38. In addition, design standards and guidelines are tailored to the needs and desires of individual communities through community plans and area plans. Design standards in community or area plans are considered “substitute” standards because they replace all or portions of TRPA ordinances that regulate the same subject area. This approach establishes minimum requirements that apply throughout the Region, but allows standards in individual communities to be more specific in order to achieve the desired community character of specific communities. Placer County, Washoe County, Douglas County, El Dorado County, and the City of South Lake Tahoe have adopted design standards and guidelines through the community plan or area plan processes. Additional area plans are being prepared throughout the Region that include detailed design standards and guidelines. The design standards and guidelines are implemented through the review and permitting of new development and redevelopment projects by TRPA and partner jurisdictions.

Effectiveness of Programs and Actions – The scenic monitoring team evaluated several development or redevelopment projects that have been approved and constructed since the 2011 Threshold Evaluation Report. The purpose of the evaluation was to assess whether recent projects have been constructed consistent with the required design standards, and whether the design standards are achieving the desired community character and supporting implementation of the policy statement. Results of this assessment can also be used to inform the application of design standards and guidelines on future projects. Table 9-6 lists the projects evaluated by the monitoring team, and identifies aspects of the design that contribute positively to implementation of the policy statement and design elements where improvements in the application of the design standards could enhance community design.

The evaluation determined that recently constructed development and redevelopment projects were consistent with the applicable design standards and guidelines, and the application of those standards and guidelines resulted in development that supports the attainment of the policy statement. The observed projects, overall, contributed positively to the community character in their respective locations and included appropriate design relative to height, bulk, texture, form, materials, colors, lighting, and signing. While the design standards generally supported attainment of the policy statement, the evaluation identified opportunities to improve the application of those standards. In many cases, projects met the requirements of the applicable design standards, but in some instances, more thoughtful application of those standards such as darker colors, modified sign design, additional building articulation, and more extensive or mature landscaping would have resulted in increased benefits to the threshold standard. In several cases projects did not comply with requirements for screening of dumpsters and utilities, and increased enforcement of those design standards would improve community character.

RECOMMENDATIONS

Analytic Approach – No changes recommended.

Monitoring Approach – No changes recommended.

Modification of the Threshold Standard or Indicator – No changes recommended.

Attain or Maintain Threshold – Continued attainment of the threshold standard should be supported by continued rigorous application of design standards. Approaches to promote improved design could include refining design standards and guidelines to provide greater direction on desirable design elements; providing incentives, awards, or recognition for projects that include exemplary design; and/or providing planners with greater discretion to require reasonable design modifications that could clearly increase community character.

Table 9-6: Community Design Evaluation of Recent Development

Project Description and General Location	Positive Design Elements	Opportunities for Improvement	Photograph of Building/Site
<p>Domus affordable housing project, Kings Beach, California</p>	<ul style="list-style-type: none"> • Materials and colors blend with natural environment • Textured concrete adds visual interest • Underground parking with vegetative screening minimizes views of vehicles 	<ul style="list-style-type: none"> • Greater setback and/or upper story setbacks from the road would create a less imposing structure • Screening of utility box in front of building would improve character • Greater articulation of front façade would improve visual interest and consistency of scale with surrounding structures • Planting more mature trees would reduce the time needed for landscaping to provide visual screening 	
<p>Chateau at Heavenly Village, South Lake Tahoe, California</p>	<ul style="list-style-type: none"> • Excellent landscaping and public pedestrian amenities are integrated into the development • Pedestrian areas provide vibrant, usable space that is physically separated from the road • Public spaces provide room for both outdoor seating/dining and wide walkways 	<ul style="list-style-type: none"> • A more natural color for the metal roof material would better blend with the natural environment 	

Project Description and General Location	Positive Design Elements	Opportunities for Improvement	Photograph of Building/Site
AutoZone, South Lake Tahoe, California	<ul style="list-style-type: none"> Architectural details (e.g., faux windows) provide visual interest Majority of parking is on the side of the building, which reduces its visibility Mostly natural materials and colors, which blend with the natural environment 	<ul style="list-style-type: none"> Additional landscaping, especially between the road and parking lot, would screen development and reduce the appearance of barren ground Screening of dumpster and utilities in front of the building would improve appearance and community character Stucco material is not compatible with the desired community character 	
BevMo!, South Lake Tahoe, California	<ul style="list-style-type: none"> Screening of the dumpster blocks it from view Parking islands incorporate infiltration cobbles and vegetation, which are visually compatible and provide stormwater infiltration benefits 	<ul style="list-style-type: none"> A different orientation of the building would reduce the visual prominence of the structure Greater consistency between the sign material and the sign base would improve compatibility 	

Project Description and General Location	Positive Design Elements	Opportunities for Improvement	Photograph of Building/Site
<p>SUP Tahoe – South Shore Bikes, South Lake Tahoe, California</p>	<ul style="list-style-type: none"> • Architectural details, signs, and materials provide a visually interesting and contemporary design that reflects the natural environment • Minimal and targeted use of exterior lighting provides interest without light pollution • Parking on the side of the building improves character 	<ul style="list-style-type: none"> • No comments 	 <p>A photograph of a two-story building with a grey gabled roof and four dormer windows. A sign above the entrance reads 'SUP TAHOE SOUTH SHORE BIKES'. The building is surrounded by tall pine trees. In the foreground, there is a paved parking area with several orange traffic cones.</p>
<p>Raley's Car Wash and Gas Station, South Lake Tahoe, California</p>	<ul style="list-style-type: none"> • Screening fence along road provides visual interest and blocks views of fueling vehicles • Landscaping is aesthetically appealing and screens views • Exterior lighting is small and flush with surfaces, reducing light pollution 	<ul style="list-style-type: none"> • An earth-tone color for the underside of the gas station canopy would be more compatible with the surrounding buildings and better blend with the natural environment 	 <p>A photograph of a gas station with a large canopy supported by stone pillars. The canopy has a 'Raley's' logo and a blue arrow sign. Several cars are parked at the pumps. The background shows tall pine trees under a blue sky.</p>

Project Description and General Location	Positive Design Elements	Opportunities for Improvement	Photograph of Building/Site
<p>Bob Dog's Pizza, Meyers, California</p>	<ul style="list-style-type: none"> Materials provide visual interest and character and reflect the natural mountain setting Parking in the rear of the building blocks views of vehicles and improves character Separated pedestrian access from the road improves the character and accessibility of the site 	<ul style="list-style-type: none"> Screening of the dumpster would improve the aesthetic 	
<p>The Aspens at South Lake, South Lake Tahoe, California</p>	<ul style="list-style-type: none"> The third story is integrated into the roofline reducing the overall building height and mass Landscaping and dumpster screening along the road screens visual distractions 	<ul style="list-style-type: none"> A more earth-toned color would be more compatible with the character of surrounding buildings and the natural environment Silver utility box adjacent to Pioneer Trail should be painted an earth-tone color and screened 	

Project Description and General Location	Positive Design Elements	Opportunities for Improvement	Photograph of Building/Site
Private Residence, Homewood, California	<ul style="list-style-type: none"> • Building articulation provides visual interest and breaks up façade • Dark color and natural materials blend into the natural environment 	<ul style="list-style-type: none"> • No comments 	
Private Residence, Carnelian Bay, California	<ul style="list-style-type: none"> • Rock material matches the backdrop and blends into the natural environment • Articulation breaks up façade and makes the building appear smaller • Vegetation screening reduces the visibility of the building 	<ul style="list-style-type: none"> • No comments 	

Project Description and General Location	Positive Design Elements	Opportunities for Improvement	Photograph of Building/Site
<p>Tahoe City Transit Center, Tahoe City, California</p>	<ul style="list-style-type: none"> • Architecture is interesting and unique but still includes colors, materials, and textures that reflect the natural mountain setting • Excellent use of natural materials • Integration of interpretive features provides interest for pedestrians 	<ul style="list-style-type: none"> • No comments 	
<p>Hard Rock Hotel and Casino, Stateline, Nevada</p>	<ul style="list-style-type: none"> • Outdoor seating and gathering areas provide visual interest and enhance the character of the area • Public artwork and architectural details provide interest and provide pedestrian-scaled elements 	<ul style="list-style-type: none"> • Darker colors on the hotel tower would help the tall buildings to blend into the backdrop when viewed from a distance 	

Chapter 9 Scenic Resources References

- Iverson, W.D., Sheppard, S.R.J., Strain, R.A., 1993. Managing Regional Scenic Quality in the Lake Tahoe Basin. *Landscape Journal* 12, 23–39.
- TRPA, 2012a. Resolution No. 82-11. Tahoe Regional Planning Agency, Stateline, NV.
- TRPA, 2012b. Code of Ordinances. Tahoe Regional Planning Agency, Stateline, NV.
- TRPA, 2012c. Regional Plan. Tahoe Regional Planning Agency, Stateline, NV.
- TRPA, 2010. Status and Trend Monitoring Report for Scenic Resources in the Lake Tahoe Basin, Draft. Tahoe Regional Planning Agency, Stateline, NV.
- TRPA, 1993. Regional Plan for the Lake Tahoe Basin, 1993 Lake Tahoe Basin Scenic Resources Evaluation. Tahoe Regional Planning Agency, Stateline, NV.
- TRPA, 1982a. Environmental Impact Statement for the Establishment of Environmental Threshold Carrying Capacities. Tahoe Regional Planning Agency, Stateline, NV.
- TRPA, 1982b. Lake Tahoe Basin Scenic Resource Inventory.