

# CHAPTER 12

## Implementation and Effectiveness

This chapter summarizes the effectiveness of TRPA’s strategic objectives and initiatives, the Regional Plan, compliance measures, and the Lake Tahoe Environmental Improvement Program in moving the Region toward achieving adopted threshold standards. It also provides an overview of improvements in reporting and information systems, cumulative accounting of Regional Plan activities and development rights, and it fulfills reporting requirements established in TRPA Code of Ordinances Sections 16.6, 16.8 and 16.9.

### Strategic Direction

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TRPA’s mission is to cooperatively lead the effort to preserve, restore, and enhance the unique natural and human environment of the Lake Tahoe Region, while improving local communities, and people’s interactions with our irreplaceable environment. To realize our vision and to accomplish our mission, the TRPA Governing Board adopted the 2014 Strategic Plan ([http://www.trpa.org/wp-content/uploads/Strategic\\_Plan\\_2014\\_June2014\\_Final\\_rev1-21-15.pdf](http://www.trpa.org/wp-content/uploads/Strategic_Plan_2014_June2014_Final_rev1-21-15.pdf)) to guide the agency for the next three to five years (TRPA, 2014). The 2014 Strategic Plan includes four key strategic objectives:

- Accelerate Threshold Attainment (ATA)
  - Implement the Regional Plan—Focus on regional issues such as adapting to climate change.
  - Develop and implement new funding strategies for the Environmental Improvement Program—The Agency is confronted with constrained state funding sources and the decline of multiple federal grants that support restoration, science, and monitoring programs.
- Be a Leader in Environmental and Sustainability Programs (BLS)
  - Establish and maintain new cutting-edge, nationally recognized environmental and sustainability programs—The Agency operates on a world stage and the time is ripe for growing TRPA’s reputation nationally and internationally as a leader in environmental restoration and sustainability approaches. We will seek best practices and form new strategic alliances.
- Propel the Development and Use of Best Information, Data, and Science for Decision-Making and Accountability (UBS)
  - Provide excellent information for accountability and transparency of policy decisions and operations—TRPA is committed to continuing strong relations with the science community and improving measurement and reporting for programmatic and fiscal accountability.

- Operate as a High Performance Team (OHT)
  - Create an enduring organizational culture of high performance and continuous improvement—The Agency will implement staff development and leadership programs to build capability, ensure accountability, and grow competencies to deliver on performance targets.

These four strategic objectives are the foundation upon which TRPA staff and the Advisory Planning Commission (APC) propose priorities annually. At its annual retreat, the TRPA Governing Board considers these recommendations and selects or updates multi-year strategic initiatives. The seven current strategic initiatives for the next five years (2015 to 2020) that the Governing Board directed TRPA staff to move forward with and the strategic plan objectives they address are:

- Development Rights (ATA)
  - Identify barriers for environmentally beneficial redevelopment and evaluate the effectiveness of the system in implementing the Regional Plan, managing growth, supporting environmentally beneficial redevelopment, and accelerating sensitive land restoration.
- Shoreline (BLS/UBS)
  - Shorezone Plan and Code—update the dated prohibition on new structures in fish habitat and policies governing access and recreation.
  - Nearshore Water Quality—enhance the understanding of the ecosystem dynamics of the nearshore and explore potential policy changes, especially given the alternative climate change scenarios.
- Transportation (ATA/BLS)
  - Update the Regional Transportation Plan and lead implementation efforts to enhance the transportation system including key elements such as the pedestrian and bike trail system around the lake, improving public transit within the Region for those travelling to and from the Region.
- Forest Ecosystem Health (ATA)
  - Support the Lake Tahoe Basin Multi-Jurisdictional Fuel Reduction and Wildfire Prevention Strategy: complete fuels reduction treatments in the wildland urban interface by 2020, and extend forest management actions into the “threat zone” and “general forest” to accomplish watershed-scale multi-benefit restoration through a collaborative, multi-agency process.
- Aquatic Invasive Species Control (ATA)
  - Secure Aquatic Invasive Species (AIS) Control Program funding, prioritize, and implement effective means to push back existing populations of AIS.
- Stormwater Operations and Maintenance Funding (ATA)
  - Establish a sustainable structure and funding source for operations and maintenance of parcel-level, area-wide, and transportation-related stormwater facilities and programs.
- Streamline Monitoring and Update Thresholds (UBS)
  - Consider updates to the thresholds and monitoring systems, working with the new Tahoe Science Advisory Council and science community to 1) create a sustainable, prioritized and relevant monitoring plan, and 2) review and consider modifying the threshold standards to reflect the latest science and the significant values in the Region.

## Implementing the Regional Plan

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The TRPA Regional Plan (TRPA, 2012a) is the blueprint for attaining and maintaining the threshold standards and securing the Tahoe Region's sustainable future. Major amendments were made to the Regional Plan in 2012 and are now being made on an ongoing basis. The Regional Plan guides community development and redevelopment, enhancing ecosystem functions, creating a more effective transportation network, and revitalizing the basin economy. It pairs ecosystem restoration with redevelopment activities to promote mixed-use town centers where people can live, work, and thrive.

The priorities of the 2012 Regional Plan amendments included:

- Accelerating water quality restoration and other ecologically beneficial projects by supporting environmental redevelopment opportunities and Environmental Improvement Program investments.
- Transitioning to more permitting by local governments to create one-stop-shopping for homeowner improvements in order to return TRPA to the more regional role the Bi-State Compact originally intended.
- Creating walkable communities and increasing alternative transportation options.

To accomplish these priorities, the 2012 Regional Plan amendments established new or revised policies, including:

- Retaining the established regional growth control system. Under this system, rampant overdevelopment was stopped and open spaces preserved. Most of the growth control policies remain in place with the 2012 Regional Plan.
- Creating a more efficient planning system that integrates TRPA requirements into the plans and permits of other government agencies.
- Encouraging property owners to transfer development rights from sensitive or outlying areas to existing town centers, to restore sensitive lands and revitalize town centers.
- Eliminating regulatory barriers to environmentally beneficial redevelopment of rundown buildings.
- Simplifying burdensome regulations for homeowners while achieving threshold gains.
- Integrating with the Regional Transportation Plan to support sidewalk and bike trail projects that reduce automobile dependency and increase walkability and safety.
- Continuing to deliver restoration projects under the Environmental Improvement Program that achieve erosion control on roadways and restore forests and wetlands.

Since the adoption of the 2012 Regional Plan amendments, TRPA and its partners have been executing these policies and programs. Growth controls remain in place, and to date, three area plans have been adopted to integrate the Regional Plan policies into local plans and permits. Environmentally beneficial transfers are facilitating the removal of development from sensitive and remote areas, and property owners are encouraged to restore and redevelop aging properties through reduced regulatory barriers.

The TRPA Governing Board in March 2016 approved an Active Transportation Plan (TMPO, 2016) which envisions a range of options to promote pedestrian and bicycle infrastructure improvements that promote walkable and bicycle friendly communities around the lake. An update to the Regional Transportation Plan is expected to be released for Governing Board

approval in late 2016 or early 2017 for continued improvement of the transportation network. The Lake Tahoe Environmental Improvement Program, now in its 20<sup>th</sup> year, has completed nearly 500 projects to improve the environmental quality and the recreational experience of the Tahoe Region. These investments are critical to building resiliency in the Tahoe Region and preparing for the challenges posed by climate change, prolonged droughts, and invasive species.

### **Growth Control**

In order to provide for orderly growth, the Regional Plan meters the rate of development right allocations that TRPA releases each year. Under the 1987 Regional Plan, 6,000 residential allocations were released over 20 years (300 allocations per year), 800,000 square feet of additional commercial floor area (CFA) were authorized, and 600 additional tourist accommodation units were made available. While the 2012 Regional Plan amendments authorized some additional development rights, the additional amounts were greatly reduced: 200,000 square feet of additional CFA and 2,600 new residential allocations. No new tourist accommodation units were authorized. The growth controls were also retained, with only 130 residential allocations to be released each year and a requirement that the additional CFA not be released until the remaining CFA from the 1987 Regional Plan (TRPA 1987) amendments is exhausted.

### **Area Plans**

Area plans allow implementation of the Regional Plan through local government planning, permitting, and compliance. And, because each area plan is required to be in conformance with and a component of the Regional Plan, the adoption of area plans ensures the Regional Plan's beneficial effects on the environment are realized.

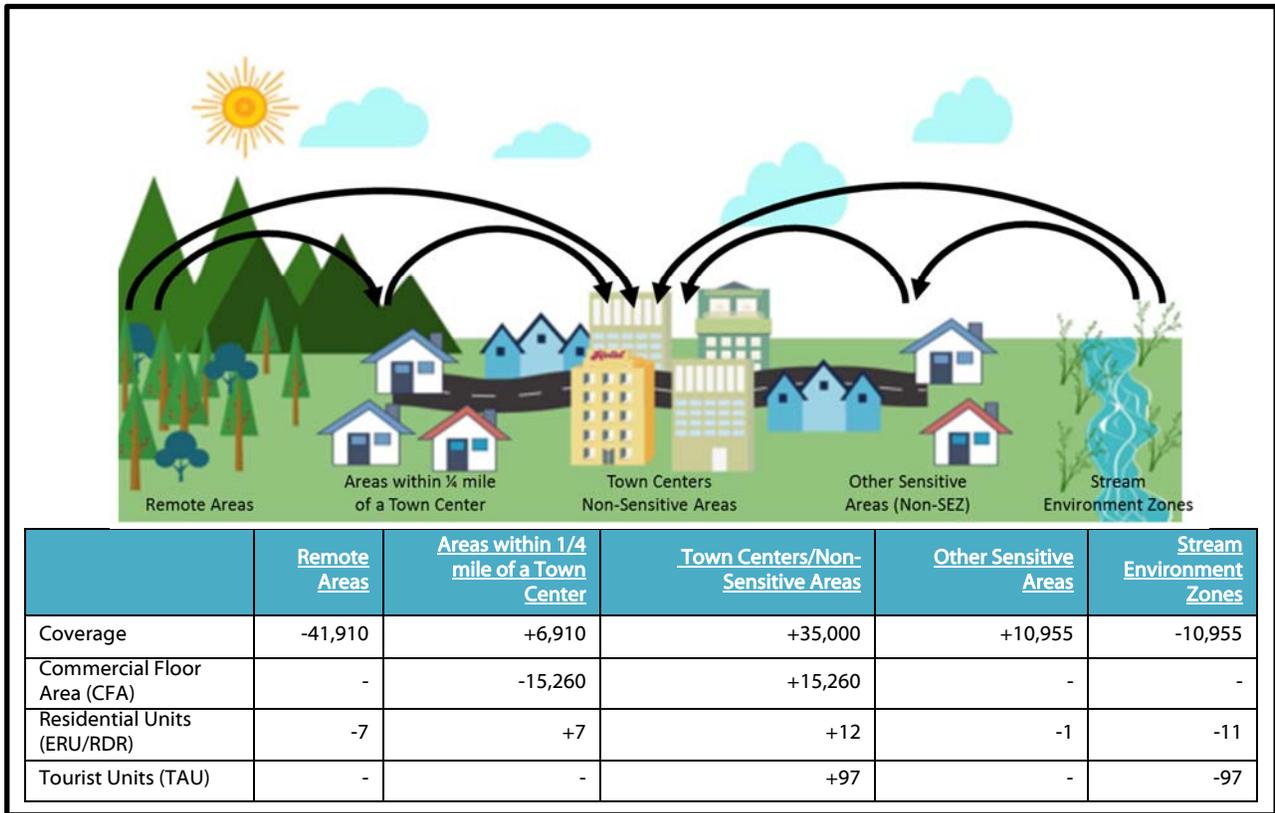
Three communities around the lake have adopted area plans that implement the Regional Plan priorities at the local level. The City of South Lake Tahoe, California has adopted two plans: the Tourist Core Area Plan and the Tahoe Valley Area Plan, which combined include nearly two-thirds of commercial floor area and more than 80 percent of tourist accommodation units in the City. Douglas County, Nevada has adopted the South Shore Area Plan, which includes more than half of the commercial floor area and three-quarters of the tourist accommodation units located within the county's portion of the Lake Tahoe Region.

Four other local area plans are under development, including plans in Douglas County and Washoe County, Nevada, and El Dorado County and Placer County, California.

### **Transfer of Development Rights and Environmental Redevelopment**

A key implementation tool in the Regional Plan is the transfer of development rights (TDR) program. The TDR program provides a range of incentives to relocate development away from sensitive, and remote areas and into highly capable lands in town centers, to create mixed use walkable areas. By transferring the rights from the remote, sensitive sending areas to the town center areas, the TDR program aims to support environmentally beneficial redevelopment that revitalizes town centers and preserves and restores sensitive lands.

Since the adoption of the 2012 Regional Plan amendments, TRPA has approved more than 50 transfer applications. These projects have removed 10,955 square feet of coverage, 97 tourist accommodation units, and 11 residential units from sensitive stream environment zones. Another 41,910 square feet of coverage and seven existing residential units were removed from remote areas and transferred to within one-quarter mile of a town center. In total, 35,000 square feet of coverage and 15,260 square feet of commercial floor area have been transferred into town centers since the adoption of the 2012 Regional Plan.



**Figure 12-1.** Summary of Environmental Benefits from Approved Transfers of Development Since 2012

**Removing Regulatory Barriers**

TRPA and its local jurisdiction partners are working to create a more transparent, understandable, and navigable permitting process with increased predictability and regional consistency. Complicated and overlapping permitting processes among multiple jurisdictions can make obtaining permits in the Lake Tahoe Region difficult and time consuming for investors in projects that would remove and replace older, obsolete, legacy development. This initiative will create a coordinated permitting assistance “Welcome Mat” program to enhance consistency and predictability in the permit process and encourage environmental redevelopment. A stakeholder assessment has already been completed and several other tasks are already underway, while other process improvements and tasks will be developed and implemented over the next few years.

**Regional Transportation Plan**

The Regional Transportation Plan: Linking Tahoe provides the framework for investment in the transportation system that supports community and regional goals set forth in the Regional Plan and the area plans. Linking Tahoe identifies planned transportation projects and programs that will shape the Region’s transportation system over the next 20 years, and lays out the funding plan necessary to implement that system. The plan focuses on transit, bicycle and pedestrian, and technology strategies to enhance mobility and the safety of the transportation network, preserve and restore the ecology of the Region, promote economic vitality, minimize the Region’s climate footprint, and improve the quality of life for residents and visitors.

Linking Tahoe draws on other approved TRPA plans to identify priority projects that should be incorporated into the Region’s future transportation system. These include the Active Transportation Plan (TMPO 2016), which focuses on bicycle and pedestrian infrastructure and

programs, the Intelligent Transportation System Strategic Plan, which focuses on technology solutions for transportation in the Region, and short- and long-range transit plans, which are still being prepared and pending Governing Board approval.

### **Environmental Improvement**

The Lake Tahoe Environmental Improvement Program (EIP) protects the natural and recreational resources of the Region. Since 1997, thousands of feet of stream channels have been restored around the Region, such as projects in the Ward Creek, Blackwood Creek, Third Creek, Incline Creek, and Upper Truckee River watersheds (TRPA, 2016a). These projects have fixed past damage from logging, cattle grazing, and urban development to improve fish and wildlife habitat and reduce erosion and the amount of clarity-robbing fine sediment washing into Tahoe. More detail on the Lake Tahoe Environmental Improvement Program results are on page 12-13 of this chapter.

## **Improving Accountability through Reporting**

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History has shown that success is only possible when stakeholders are informed and confident of the direction and results. To this end, across all sectors of government, a clarion call is driving new performance measures, accountability, and transparency. Few are aware that TRPA tracks hundreds of performance measures for the agency and the Region. And, in the search for continuous improvement, we see we can build greater confidence and momentum through more frequent and transparent reporting of what we track and measure that improves accountability and decision making.

TRPA has responded to the call for more transparency and accountability. Beginning in 2013, TRPA committed to delivering annual and quarterly reports on the agency's accomplishments and the implementation progress for all major Regional Plan programs, strategic initiatives, and work priorities. Included within the 2014 and 2015 annual reports are detailed appendices that describe TRPA's progress toward realizing the expected benefits from specific policies of the Regional Plan. These appendices include detailed reports on Regional Plan performance measures, area plan metrics, and sustainability indicators. These reports are available at <http://www.trpa.org/reports>.

### **Annual and Quarterly Reports**

The TRPA annual and quarterly reports provide a view into the progress that each division within TRPA is making in implementing the Regional Plan and driving toward TRPA's four strategic priorities: accelerating threshold attainment, using best science, being a leader in sustainability and operating as a high performance team.

### **Regional Plan Performance Measures Report**

This annual report measures whether specific regional land use patterns, travel behavior, environmental restoration, and economic measures are responding to the incentive programs and redevelopment goals of the 2012 Regional Plan amendments, and whether the policies of the plan are implemented effectively. The measures include:

#### Regional Land Use Patterns:

1. Distribution of development for land-use types
2. Annual average number of units transferred to town centers from sensitive and remote land
3. Retirement rate for existing non-residential units of use
4. Housing availability for residents and workers

#### Travel Behavior:

5. Percentage of all trips using non-automobile modes of travel (transit, bicycle, pedestrian)
6. Automobile vehicle miles traveled per capita (excluding through trips)
7. Construction of pedestrian and bicycle improvements

#### Environmental Restoration:

8. Coverage removal from stream environment zones and other sensitive lands (privately-funded)
9. Issuance of best management practices (BMP) certificates in conjunction with property improvements and area-wide BMP installations
10. TMDL performance benchmarks
11. Scenic improvement rate on urban roadways

#### Effective Regional Plan Implementation:

12. Prepare and maintain area plans in conformance with the 2012 Regional Plan
13. Complete mitigation measures identified in the Regional Plan Update EIS

#### Economic Vitality:

14. Rate of redevelopment

### **Area Plan Metrics Report**

Area plans enable coordinated planning and permitting under TRPA, local, state, and federal requirements. Area plans allow other regulatory agencies in the Region to implement the Regional Plan policies at a smaller scale and with greater flexibility.

The annual area plan report is a required, comprehensive annual review of permitting activity, audit results, corrective actions, coverage changes, and environmental benefits to determine conformance with the TRPA Code of Ordinances and area plan standards.

### **Sustainability Indicators Report**

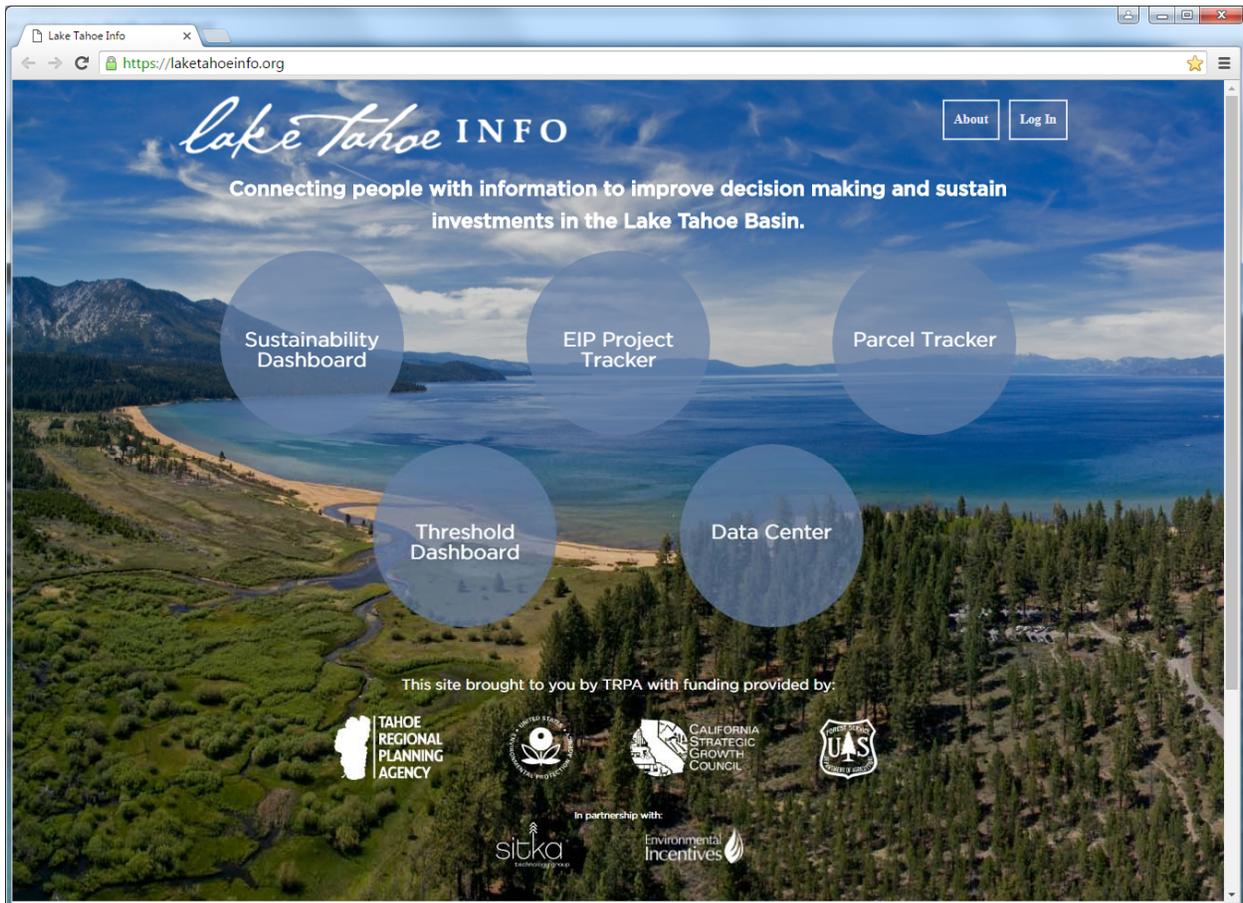
In 2013, TRPA and other Lake Tahoe Sustainable Communities Program partners and community stakeholders selected a suite of indicators representative of the Lake Tahoe Region's economic, environmental, and community health. This suite of 31 indicators in 11 categories: water quality, forest health, greenhouse gas emissions, aquatic invasive species, income, business environment, employment, housing, transportation, and healthy lifestyle--provides information on status, ongoing efforts and projects, and suggestions on how individuals can get involved.

## **Developing Transparent Information Systems and Tools**

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TRPA has also invested in enhancing the reporting capabilities in the Lake Tahoe Region using the <https://LakeTahoelInfo.org> platform. TRPA and more than 50 partners have developed the reporting platform. The platform provides access to information and resources to improve transparency and accountability for decision-making and public/private investments in projects in the Lake Tahoe Region. The development of the LakeTahoelInfo.org platform has been made possible by generous financial support from the U.S. Environmental Protection Agency, Southern Nevada Public Land Management Act, California Strategic Growth Council, Tahoe Metropolitan Planning Organization, and TRPA general fund.

The tools are hosted under a unified platform and currently include the EIP Project Tracker, Parcel Tracker, Thresholds Dashboard, and Sustainability Dashboard sites. A data center that provides centralized access to data and analytical resources and web services for automated data sharing and communication between LakeTahoeInfo.org and other tools and platforms has also been developed. Additional resources and tools will be created and supported as additional need and funding becomes available.



**Figure 12-2.** Screenshot of LakeTahoeInfo.org. Source: Tahoe Regional Planning Agency (TRPA 2016b). Lake Tahoe Info.org Accessed 9/2/2016.

**EIP Project Tracker:** <https://eip.laketahoeinfo.org/>

Over 50 entities—federal, state, and local agencies, the private sector, non-governmental organizations, and science and research groups—are involved in the restoration and planning efforts in the Lake Tahoe Region through the EIP. A new clearinghouse—the EIP Project Tracker—enables these agencies and organizations to collect, analyze and publish data and reports concerning the environmental health of the Region. The Lake Tahoe EIP Project Tracker was created to efficiently exchange this information between these groups and with the public, to improve EIP transparency and reporting and to better inform the public about these important projects that restore Lake Tahoe’s environment

The Lake Tahoe EIP Project Tracker provides EIP managers and funders the project and programmatic level data necessary to understand the environmental return on their investments and secure future funding for environmental improvement in the Tahoe Region. This tool provides

detailed tracking and reporting information needed for programmatic management. Agency management, funders, and the interested public are the target audiences.

**Parcel Tracker:** <https://parcels.laketahoeinfo.org/>

Development rights, such as land coverage, tourist accommodation units, commercial floor area and residential units of use, are essential elements of TRPA's Regional Plan policies, growth control framework and regulatory foundation. The 2012 Regional Plan amendments included targeted changes to encourage environmentally beneficial redevelopment and promote change in the existing development pattern of the Region.

To better achieve such transfers of development for threshold attainment, better tracking and reporting of available development right inventories is paramount. In 2013, TRPA launched the Parcel Tracker so that the information necessary to inform the public, assess effectiveness and develop policy improvements was available. The system streamlines the reporting of development right transfers and allocations by permitting authorities. In 2015, the Parcel Tracker was expanded to be able to record banked development rights at the parcel level, track development rights inventories on both public and private parcels, and to capture transactions in real-time, as they occur. This ensures that all parties have access to the latest information. Using this information, property owners, realtors and land banks can use the system to identify opportunities to acquire and relocate development rights and to determine the most environmentally beneficial redevelopment options.

**Sustainability Dashboard,** <https://sustainability.laketahoeinfo.org/>

Based upon the Sustainability Indicators that TRPA, other Lake Tahoe Sustainable Communities Program partners and community stakeholders selected in 2013, the Sustainability Dashboard provides a balanced and objective overview of the economic, environmental, and community health indicators for the Lake Tahoe Region.

Each dashboard category provides information on indicator status, ongoing efforts and projects, and suggestions on how individuals can get involved.

**Thresholds Dashboard,** <https://thresholds.laketahoeinfo.org/>

The soon-to-be released Thresholds Dashboard will provide an online, user-friendly site to navigate through the more than 170 Threshold Indicators in 9 categories and 34 sub-categories. This site will enable easy review of the status and trend of indicators in each threshold category, while providing access to detailed analysis, background information, monitoring data and insight into reporting methods.

## Compliance Measures

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Compliance measures are all the actions that TRPA, partner agencies, and private property owners implement to improve environmental quality and socioeconomic conditions in the Region. Implemented actions are discussed in relevant sections of the Regional Plan and can be categorized as: 1) regulations (or controls) or 2) capital improvements (or environmental restoration, public facility investments). There are 186 different compliance measures currently in place and another 47 "supplemental" measures that TRPA plans to implement or that could be implemented if necessary to ensure attainment and maintenance of threshold standards. The following summary highlights key programs and policies which have been implemented to promote attainment and maintenance of standards in each threshold category. Appendix I of this

2015 Threshold Evaluation Report contains the detailed list of all compliance measures by threshold category. Furthermore, every indicator summary page includes a discussion in the “Programs and Actions Implemented to Improve Conditions” section or implemented actions that address that indicator.

#### Water Quality

- 119 compliance measures
- Includes coverage programs, BMP requirements, SEZ encroachment and setbacks, SEZ restoration, land bank acquisition programs, Lake Tahoe TMDL, effluent limitations, marina programs, dredging and filling requirements, Environmental Improvement Program and water quality mitigation programs

#### Soil Conservation

- 68 compliance measures
- Includes SEZ encroachment and setbacks, SEZ restoration, coverage programs, land capability verification process, BMP requirements, excess coverage mitigation program, land bank acquisition programs, transfer of development programs, and Environmental Improvement Program

#### Air Quality

- 62 compliance measures
- Includes the Air Quality Mitigation Program, mass transit and shuttle programs, idling restrictions, roadway BMP implementation programs, bike and pedestrian programs, vehicle rental programs, vehicle trip reduction programs, wood heater and stationary source controls, open burning controls, prescribed burning, timber harvesting program, area plans and development right transfer incentives

#### Vegetation Preservation

- 27 compliance measures
- Includes tree removal requirements, stream restoration projects, vegetation management programs, SEZ encroachment, SEZ restoration, vegetation protections during construction and sensitive species protections

#### Wildlife

- 39 compliance measures
- Includes SEZ encroachment and setbacks, SEZ restoration, tree removal requirements, stream restoration projects, vegetation management programs, outreach and education programs, noise programs and sensitive species protections

#### Fisheries

- 45 compliance measures
- Includes fish habitat protections, SEZ encroachment and setbacks, SEZ restoration, BMP implementation, effluent limitations, marina programs, Aquatic Invasive Species programs, fish resources programs, stream restoration projects, vegetation management programs, outreach and education programs, filling and dredging requirements, and sensitive species protections

#### Noise

- 24 compliance measures
- Includes Community Noise Equivalent Level and single-event noise regulations, transportation corridor design criteria, mass transit and shuttle programs, OHV limitations, and airport noise restrictions

### Recreation

- 32 compliance measures
- Includes bike and pedestrian programs, land use planning, mass transit, trolley and shuttle programs, waterborne transit services, hiking and riding facilities, density standards, and public outdoor recreation facilities

### Scenic Resources

- 49 compliance measures
- Includes design standards, scenic quality program, historic resources protections, sign requirements, scenic quality improvement program, bike and pedestrian programs, SEZ encroachment and setbacks, vegetation protections, Nevada underground utility line program and public outdoor recreation facilities

## **Regulatory Controls**

### Project Review Processes

TRPA and partners implement regulatory compliance measures through their detailed review of project applications and code enforcement programs. The typical project review process begins before a project applicant prepares an application for a TRPA permit. Prior to applying for a permit, the applicant is required to verify the development potential of a subject parcel and most complete an “initial environmental checklist” to disclose potential environmental impacts including impacts related to threshold standards. For projects with the potential for such impacts, TRPA requires that the applicant prepare an environmental assessment or an environmental impact statement to compare project alternatives and disclose potential detrimental and beneficial environmental impacts. Once an application is complete, TRPA project review staff evaluate the proposal and associated application materials against TRPA Goals and Policies, the Code of Ordinances, and applicable area plans, community plans or plan area statements.

Upon permit issuance, the agency is required to add special permit conditions as appropriate to avoid detrimental environmental impacts and make findings that the project will not hamper the Region’s ability to achieve and maintain threshold standards. The applicant is then required to acknowledge the requirements of the permit, after which, if all conditions are met, the permit is granted. The applicant has up to three years to initiate construction of the permitted project. Prior to construction of a project, the TRPA Code Compliance Program conducts an on-site pre-grade inspection with the applicant to ensure a clear understanding of the permit conditions. TRPA Code Compliance staff may also conduct intermediate project inspections to ensure permit conditions are being adhered to during the project’s implementation. When the project is complete, TRPA staff performs a final inspection to confirm permit conditions are satisfied and the construction conforms to the approved plans.

The project review process of TRPA and partners is rigorous and multiple control points ensure the process is effective at verifying that approved projects comply with the Regional Plan and the threshold standards, and that projects are constructed in accordance with the approved conditions and requirements in order to ensure threshold attainment. Table 12-1 below summarizes the number and types of applications received between 2011 and 2015. On average, TRPA receives more than 650 project applications each year, not including administrative filings and declarations for work that is exempt from TRPA review. Over the past few years, the number of applications submitted to TRPA has steadily increased as economic conditions have improved and property owners pursue development or redevelopment projects. Many of these applications are

for verifications of existing uses or coverage<sup>1</sup>, which are preliminary actions that are required to initiate development or transfer projects.

**Table 12-1. TRPA Project Applications by Calendar Year 2011 to 2015**

	2011	2012	2013	2014	2015
<b>Applications Received <sup>A</sup></b>	<b>573</b>	<b>588</b>	<b>653</b>	<b>707</b>	<b>736</b>
Residential Projects <sup>B</sup>	117	101	115	143	134
Commercial Projects <sup>B</sup>	7	10	14	11	9
Recreation/Public Service Projects <sup>B</sup>	34	30	31	23	31
Shorezone/Lakezone Projects <sup>B</sup>	16	11	18	28	22
Grading Projects	22	30	29	23	26
Verifications and Banking <sup>C</sup>	295	353	367	396	397
Transfers of Development	20	11	26	23	29
Other <sup>D</sup>	62	42	53	60	88
<p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>A. Does not include Exempt or Qualified Exempt declarations or other Administrative applications.</li> <li>B. Includes New Development and Additions/Modification</li> <li>C. Includes Soils/Hydrology Verifications, IPES, Land Capability Verifications, Land Capability Challenges, Verifications of Coverage, Verifications of Uses, Site Assessments and standalone Banking Applications</li> <li>D. Includes Historic, Lot Line Adjustments, Temporary, Scenic, Underground Tank Removal, Subdivision of Existing Uses, Sign, Allocation Assignments, and other miscellaneous project types</li> </ul> <p><b>Source:</b> TRPA Accela Permit Records</p>					

### Code Compliance

The Code Compliance Program is responsible for inspecting and monitoring all projects in the Lake Tahoe Region for compliance with the Regional Plan. This includes TRPA-permitted projects, exempt and qualified exempt activities, and unauthorized activities. There are four basic roles of the Code Compliance Program: code enforcement, inspection of TRPA permitted projects, memorandum of understanding (MOU) monitoring, and watercraft program management.

On average, the Code Compliance Program performs more than 800 inspections (see Table 12-2) for permitted projects each year. The program also initiates code enforcement cases for unauthorized activities, complaints, permit non-compliance or other causes. TRPA regularly audits its permitting partners to ensure that the permits issued by other jurisdictions are consistent with the TRPA Regional Plan and Code of Ordinances.

<sup>1</sup> See TRPA Code of Ordinances sections 30.3.3, Land Capability Verification or 51.5.5, Verification of Existing Residential Units for more information about these types of applications.

**Table 12-2. TRPA Code Compliance Activities by Calendar Year 2013-2015**

	2013	2014	2015
Permit Inspections	638	1,009	803
Code Enforcement Cases	76	104	105
Cases Resolved/Referred	43	73	72
Staff-Level Penalties	26	21	33
GB Settlements	7	10	12
MOU Project Audits	100	100	100
Security Return Inspection Audits	50	50	50
Winterization Inspection Audits	50	50	50
<u>Source:</u> TRPA Accela Permit Records			

**Capital Improvements: The Lake Tahoe Environmental Improvement Program**

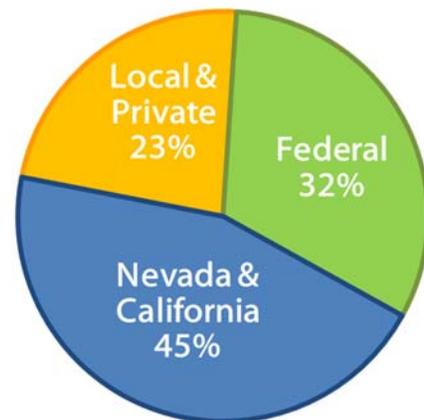
Launched in 1997, the Lake Tahoe Environmental Improvement Program (EIP) is the capital improvement arm of TRPA and the Regional Plan. The EIP is a collaborative partnership of federal, state, and local agencies, private interests, and the Washoe Tribe. The EIP was created to not only restore Lake Tahoe’s water clarity, but also improve its air quality, forest health, fish and wildlife habitat, and public recreation. The EIP protects the extraordinary natural and recreational resources of the Lake Tahoe Region, advancing the Region toward attainment and maintenance of adopted environmental threshold standards.

To date, nearly 500 EIP projects have been completed and hundreds more are in progress. More than \$1.9 billion has been invested in the Tahoe Region since 1997, including \$635 million from the federal government, \$759 million from California, \$124 million from Nevada, \$99 million from local government, and \$339 million from the private sector.

**EIP ACCOMPLISHMENTS (1997 to 2015)**

- Nearly 500 projects completed
- 16,343 acres of wildlife habitat restored
- 1,558 acres of stream environment zone restored<sup>2</sup>
- 2,770 feet of shoreline made public
- 65,380 acres of treatment to clear forests of hazardous fuels
- 729 miles of roadways upgraded to reduce erosion and storm water pollution
- 46,853 boats inspected for aquatic invasive species
- 23,502 boats decontaminated
- 152 miles of bike and pedestrian routes constructed
- 39 transit facilities updated
- 41 acres treated for invasive clams and plants

**EIP INVESTMENT BY SECTOR:  
1997 to 2015**

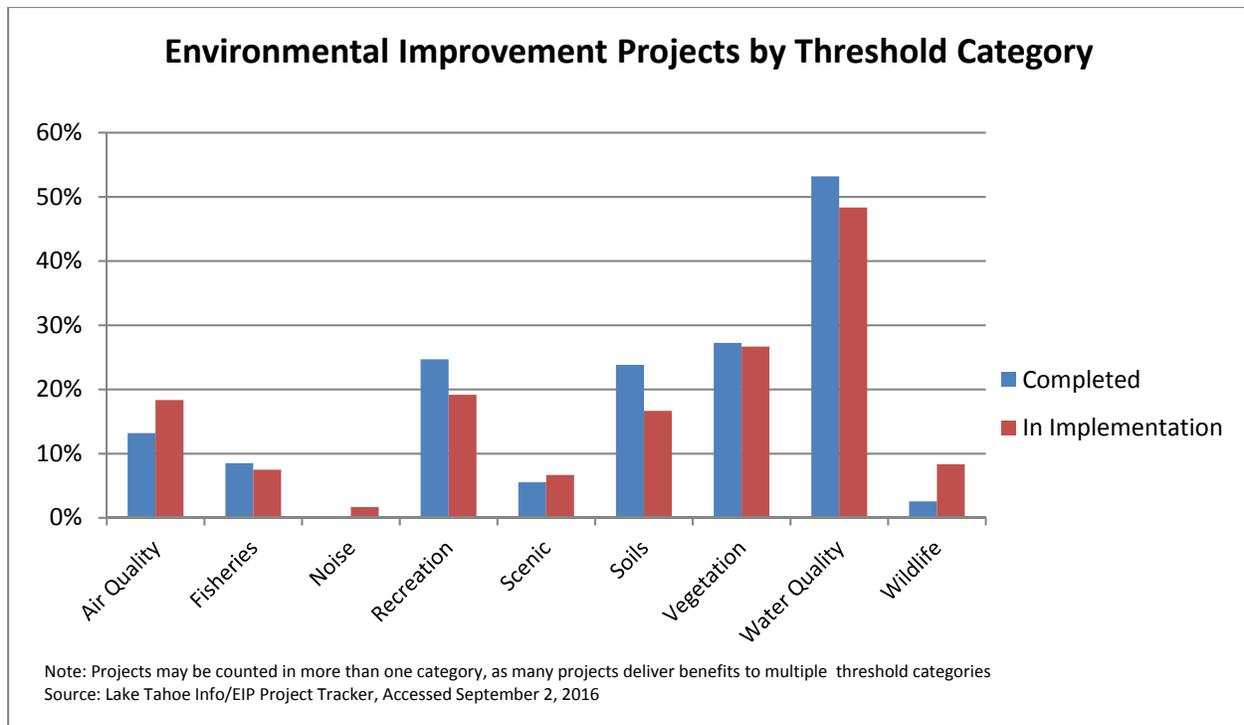


**Figure 12-3. Lake Tahoe Environmental Improvement Program Funding and Accomplishments 1997-2015. Source: TRPA 2016a**

<sup>2</sup> This includes the 592 acres of the Upper Truckee River Marsh Restoration Project, which is currently in the planning phase. The project will be one of the largest SEZ restorations undertaken at Lake Tahoe. The Upper Truckee River watershed is the largest contributor of fine sediment to the lake.

The EIP has six EIP focus areas—Watersheds, Water Quality, and Habitat; Forest Management; Air Quality and Transportation; Recreation and Scenic Resources; Applied Science; and Program Support. EIP projects are prioritized to provide the greatest benefit for multiple threshold categories. The following is an outline of these EIP focus areas and programs and the thresholds standards they support:

- Watersheds, Water Quality, and Habitat
  - Stormwater Management Program: surface runoff, lake and stream habitat conditions, soil conservation, stream environment zones, and water quality
  - Watershed Management Program: deciduous, meadow, and wetland riparian vegetation, uncommon plant communities, habitats of special significance, stream habitat, stream environment zones and impervious coverage, tributary water quality, and scenic quality
  - Threatened, Endangered and Sensitive Species Program: special interest wildlife and fishes, uncommon plant communities, and rare plants
  - Invasive Species Program: lake and stream habitat conditions, water quality, recreation, and non-threshold socioeconomic issues
- Forest Management
  - Forest Ecosystems and Hazardous Fuels Reduction Program: common vegetation and late seral, and old forest ecosystem
- Air Quality and Transportation
  - Air Quality and Transportation Program: ozone, particulate matter, carbon monoxide, nitrate deposition, oxides of nitrogen, and transportation corridor noise
- Recreation and Scenic Resources
  - Recreation Program: recreation quality and public access to recreational opportunities
  - Scenic Program: scenic resources
- Applied Science
  - Monitoring Program: threshold-related monitoring
  - Applied Research Program: agency research needs
  - Data and Information Management and Reporting Program: threshold-related monitoring
- Program Support, Reporting and Technical Assistance Program
  - Public outreach, operations and maintenance, and technical needs and the tracking of expenditures and accomplishments for the EIP



**Figure 12-4. Lake Tahoe Environmental Improvement Projects by Threshold Category**

## Major EIP Project Highlights from 2011 to 2015

### Water Quality

- Area Wide Stormwater Treatments
  - Bijou Area Erosion Control Project
  - Harrison Avenue Streetscape Improvement & Bike Trail
- Incline Creek/Third Creek restoration projects
- State Route 89 water quality improvement projects
- Lake Tahoe Total Maximum Daily Load (TMDL) implementation
- Upper Truckee River restoration projects
- Emerald Bay invasive species removal and control

### Forest Health

- Completion of the Angora Fire Restoration
- Wildland Urban Interface Hazardous Fuels Reduction and Forest Health treatments
- Tahoe Yellow Cress Conservation Strategy

### Air Quality & Transportation

- Kings Beach Commercial Core Improvement Project
- 30+ Miles of Bicycle and Pedestrian Facilities: Including Stateline to Stateline, Sawmill, Harrison Avenue Bike Paths

### Recreation and Scenic

- Van Sickle Bi-State Park
- Heavenly Epic Discovery Activities
- California and Nevada Land Bank Restoration Activities and Land Acquisitions

## Science

- Lake Tahoe Aquatic Invasive Species Management Plan
- Establishment of Bi-State Science Advisory Council
- “Eyes on the Lake” Education and Stewardship Program

## Program Support

- Implementation of LakeTahoelInfo.org and the EIP Project Tracker

## Cumulative Accounting of Regional Plan Activities

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The TRPA Code of Ordinances, Subsection 16.8.2, requires TRPA to maintain a cumulative account of units of use, resource utilization, and threshold attainment and maintenance. The purpose of this accounting is to enable assessment of the cumulative beneficial and negative environmental impacts of the Regional Plan and its role in moving the Tahoe Region toward achieving interim targets and threshold standards. The interim targets (according to Subsection 16.5 of the Code of Ordinances) identify major intervals for each threshold standard, and state and federal air and water quality standards are part of the threshold attainment schedules required in the Code.

The Code of Ordinances states that the cumulative accounting shall include the following items:

- A. Units of Use: residential, commercial, tourist, and recreational allocations
- B. Resource Utilization: additional vehicle miles traveled, vehicle trip ends, impervious coverage, water demand, sewage disposal capacity, area of stream environment zone (SEZ) disturbance
- C. Threshold Attainment and Maintenance: value of investments in water quality, air quality, transportation and coverage mitigation programs; area of SEZ restoration

### **Unit of Use**

The Regional Plan establishes units of use for specific types of development (residential, tourist accommodation, commercial, and recreation). Units of use are essentially rights that allow development of specific project types. Allocations of new or additional units are required to be made by TRPA and local jurisdictions. By metering development, this growth management mechanism ensures that development is consistent with progress toward meeting environmental thresholds. Table 12-3 summarizes the current inventory of existing units of use in the Region, estimated banked units, remaining allocations and total development potential for residential units, commercial floor area and tourist accommodation units. Detailed tables for each type of unit of use follow.

**Table 12-3. Summary of units of use, bonus units, and commercial floor area inventory**

	Existing <sup>A</sup>	Banked <sup>B</sup>	Remaining Allocations/ Bonus Units/Units of Use	Total Existing and Potential Development
Residential Units	47,183 Existing Residential Units (ERUs)	116 ERUs	3,987 (311 Unused Residential Allocations Released to Local Jurisdictions) <sup>C</sup> (1,474 Residential Bonus Units) <sup>D</sup> (2,202 Unreleased Residential Allocations) <sup>E</sup>	51,286
Commercial Floor Area (CFA) (in sq. ft.)	6,349,051	114,107	569,110 (369,110 Remaining from 1987 Plan) (200,000 Allocated by 2012 Regional Plan) <sup>F</sup>	7,032,268
Tourist Accommodation Units (TAUs)	11,584	523	342 (130 in Area/Community Plans) (90 Reserved for Homewood/Boulder Bay Projects) (122 in TRPA Bonus Unit Pool)	12,449
Notes:				
A. Existing as of December 31, 2015. Estimated based on a GIS query of county assessor's data, 2010 Lidar Data and TRPA permit data from 2010-2015. Approved projects that are not yet completed are not counted as existing and their development rights remain in the development potential.				
B. Updated Banked totals based on TRPA analysis of file/permit data, communications with CA/NV land banks and local jurisdictions. Banked units in the local jurisdiction lines include public and privately owned parcels with approved banked development rights. Includes units received from transfers but not yet constructed.				
C. Includes remaining Residential Allocations from 1987 Regional Plan and remaining Residential Allocations released to local jurisdictions from the 2012 Regional Plan allocations.				
D. Includes the 2012 Regional Plan allocation of 600 Residential Bonus Units that shall only be used in Centers.				
E. The 2012 Regional Plan authorized 2,600 new Residential Allocations to be released through 2032, with a yearly allocation of units to the local jurisdictions. To date, TRPA has released 398 Residential Allocations from this authorization (see Table 12-7).				
F. The 2012 Regional Plan allocation of 200,000 square feet of CFA will not be made available until the remaining CFA from the 1987 Regional Plan is exhausted.				
<i>Source: LakeTahoelInfo.org/Parcel Tracker, TRPA Accela Permit Records, TRPA project application files, and local jurisdiction accounting records.</i>				

### Relation to 2012 Regional Plan Amendments Analysis

The final environmental impact statement (FEIS) for the 2012 Regional Plan amendments, Appendix E, Existing Development, TRPA Code section 50.4, and Goals and Policies DP-2.2, reported on the existing, banked, remaining and total development potential for residential units, commercial floor area and tourist accommodation units as of October 2012. The figures reported in Table 12-3 vary slightly from the 2012 Regional Plan amendments analysis in four areas:

1. TRPA has improved its analysis and tracking of banked development rights, including the identification of some units that were not previously counted as banked in the 2012 analysis. The next section, *Banked Development Rights*, includes more detail on the analysis conducted to identify these banked units.
2. TRPA re-verified the remaining residential allocations through coordination and reconciliation with the local jurisdictions. This process identified 35 additional remaining residential allocations from the 2009 and 2011 releases, for a total of 149 residential allocations remaining from the 1987 Plan, compared to 114 previously reported.
3. The CFA remaining from the 1987 Regional Plan was corrected from the FEIS to reflect the actual balance remaining from the 1987 Regional Plan figure of 383,579 instead of the

rounded figure of 383,600; total existing and potential development from the 2012 Regional Plan amendments changes from 7,011,735 to 7,011,714 as a result.

4. The 2015 evaluation includes development projects that have been constructed since 2012, which changes the existing and banked units of use, including allocations of new development and the removal, restoration and banking of previously existing development. Pending projects that have been approved, but which are not yet constructed are not counted in the existing development totals and any associated allocations remain in the remaining column.

By including these changes rights, the total existing and potential development for each type of unit of use increased slightly—residential units by 0.1 percent, commercial floor area by 0.3 percent, and tourist accommodation units by 0.9 percent.

**Table 12-4. Summary Units of Use Changes from 2012 Regional Plan Amendments to 2015 Threshold Evaluation**

	2012 Regional Plan <sup>A</sup>				2015 Threshold Evaluation				Difference
	Existing	Banked	Remaining Allocations/ Bonus Units/Units of Use	Total Existing and Potential Development <sup>B</sup>	Existing	Banked	Remaining Allocations/ Bonus Units/Units of Use	Total Existing and Potential Development <sup>B</sup>	
Residential Units	46,962	87	4,188	51,237	47,183	116	3,987	51,286	+49
Commercial Floor Area (CFA)	6,403,893	24,242	583,579 <sup>C</sup>	7,011,714 <sup>C</sup>	6,349,051	114,107	569,110	7,032,268	+20,554
Tourist Accommodation Units (TAUs)	11,947	48	342	12,337	11,584	523	342	12,449	+112

Notes:  
A. Final Environmental Impact Statement for the Regional Plan, Appendix E, Existing Development, TRPA Code section 50.4, and Goals and Policies DP-2.2  
B. Includes existing, banked and remaining allocations, bonus units and units of use.  
C. Corrected from FEIS to reflect actual balance remaining from 1987 Regional Plan of 383,579 instead of rounded 383,600.

### Banked Development Rights

The Regional Plan provides for the verification and banking of several types of legally existing development for use onsite at a later date or for transfer to another parcel. TRPA uses the term “banking” to describe the recording of a particular amount of previously existing development with TRPA that is now available for use. Only development legally established prior to and existing on October 15, 1986 or permitted by TRPA after October 15, 1986 is eligible to be banked. In order to be banked, legally existing development must first be field verified, subsequently removed, and the site restored in accordance with a restoration plan approved by TRPA. The following types of legally existing development are eligible for banking:

- Existing Land Coverage (hard or soft)
- Potential Land Coverage
- Commercial Floor Area
- Tourist Accommodation Units
- Residential Units
- Residential Development Right
- Cubic Volume
- Residential or Tourist Accommodation Floor Area

Over the past year, TRPA has developed tools to better track development rights that have been banked by private and publicly-owned parcels not associated with the existing land banks (California Tahoe Conservancy and Nevada Division of State Lands). These tools improve the

accuracy of the accounting of these banked development rights. To create this accounting, TRPA staff reviewed more than 1,000 files related to banking and verifications. Additional file review was then done to ensure that banked development rights had not been subsequently transferred or used for onsite development projects since the banking was approved by TRPA. Finally, the remaining records were entered into the TRPA Parcel Tracker and are summarized in Table 12-5 below.

Banking is a leading indicator of future development potential, as it is the required first step in transferring development rights. Moreover, because the 2012 Regional Plan provides incentives to relocate development from sensitive and remote areas into town centers, analysis of banked development rights in these areas can provide valuable insight into potential future development. For example, more than 7,100 square feet of banked CFA, 53 TAUs and nearly 380,000 square feet of associated coverage have been banked and removed from stream environment zones and 14,450 square feet of banked CFA and 769,000 square feet of associated coverage has been banked and removed from remote areas.

**Table 12-5. Estimated banked development rights<sup>A</sup> by location as of December 31, 2015**

Development Rights	Total Banked	Stream Environment Zones <sup>B</sup>	Remote Areas <sup>B,C</sup>
Commercial Floor Area	88,644	7,119	14,454
Tourist Accommodation Units	314	53	5
Existing Residential Units	63	3	20
Residential Development Rights	66	1	63
Coverage <sup>D</sup>	910,982	379,634	769,346
Notes:			
A. Includes private- and publicly-owned parcels not associated with the existing land banks.			
B. <i>Stream Environment Zones</i> and <i>Remote Areas</i> are not mutually exclusive; some parcels may qualify in both categories.			
C. Remote Areas include all areas greater than ¼-mile from a town center.			
D. Coverage includes banked hard and soft coverage (potential coverage is not included).			
<i>Source: LakeTahoeInfo.org/Parcel Tracker; TRPA and Local Jurisdiction Tracking as of May 6, 2016.</i>			

## Residential

The Lake Tahoe Region is approaching full build-out for residential development, and TRPA's growth controls will meter out most of this remaining development over the next two decades. As of December 31, 2015, 92 percent of the maximum allowable residential development exists within the Region. Less than 1 percent of the remaining residential development potential is currently available for construction; including previously existing residential units that have been removed, restored and banked for future use; and remaining unused residential allocations that have been released to the jurisdictions. The remainder of the residential units are to be metered out over the next 17 years or are to be used as bonus incentives for the construction of affordable housing, sensitive lot retirement, or the transfer of residential development to town centers.

### Existing Residential Units and Residential Allocations

As of December 31, 2015, there were 47,183 existing residential units within the Region. In addition, 116 previously existing residential units have been banked for future use onsite or for transfer to another site.

TRPA regulates the rate and timing of new residential growth by issuing a limited number of residential allocations each year to local jurisdictions. The 2012 Regional Plan amendments authorized 2,600 new residential allocations to be released through 2032, with a yearly allocation

of 130 units to be released based on achievement of environmental and permit compliance performance measures. Since 2012, TRPA has released 368 residential allocations to local jurisdictions, of which 44 percent have been subsequently assigned to new residential development projects. TRPA has also placed 30 residential allocations into the TRPA Incentive Pool, for the assignment of bonus units to projects that result in sensitive lot retirement, affordable and moderate-income housing, or the transfer of residential development from remote areas into town centers. The maximum development potential for residential units in the Region is 51,286 units.

**Table 12-6. Residential units accounting as of December 31, 2015**

Jurisdiction	Estimated Total Existing Residential Units <sup>A</sup>	Banked Existing Residential Units <sup>B</sup>	Remaining Unused Allocations Released to Local Jurisdictions <sup>C</sup>	Remaining Unreleased Residential Allocations <sup>D</sup>	Residential Bonus Units	Total Development Potential
City of SLT	15,559	30	27	-	109	15,725
Douglas Co.	4,359	7	21	-	67	4,454
El Dorado Co.	8,690	9	56	-	0	8,755
Placer Co.	11,215	10	88	-	53	11,366
Washoe Co.	7,359	7	97	-	120	7,583
Carson Co.	1	0	-	-	-	1
TRPA Incentive Pool	-	-	22	2,202	1,125 <sup>E</sup>	3,349
California Tahoe Conservancy	-	53	-	-	-	53
Nevada Division of State Lands	-	0	-	-	-	0
<b>TOTALS</b>	<b>47,183</b>	<b>116</b>	<b>311</b>	<b>2,202</b>	<b>1,474</b>	<b>51,286</b>
<b>Notes:</b>						
A. Estimated based on a GIS query of county assessor's data, 2010 Lidar Data and TRPA permit data from 2010-2015.						
B. Updated Banked totals based on TRPA analysis of file/permit data, communications with CA/NV land banks and local jurisdictions. See Banked Development Rights section, Page 12-18, Table 12-5. Banked units include public and privately owned parcels with approved banked development rights.						
C. Includes remaining residential allocations from the 1987 Regional Plan and remaining residential allocations released since 2012 (see table 12-7).						
D. The 2012 Regional Plan authorized 2,600 new Residential Allocations to be released through 2032, with a yearly allocation of 130 units. Remaining unreleased residential allocations will be given out to local jurisdictions annually, which will increase the future development potential for each jurisdiction by the corresponding amount.						
E. Includes the 2012 Regional Plan allocation of 600 Residential Bonus Units that shall only be used in Centers.						
<i>Source: LakeTahoeInfo.org/Parcel Tracker, TRPA Accela Permit Records</i>						

Table 12-7 shows the number of residential allocations provided to local jurisdictions between 2009 and 2015. As of December 31, 2015, there are 311 unused residential allocations remaining that have been released to the jurisdictions and are available for use (see Table 12-6).

**Table 12-7. Residential Allocations Provided to Jurisdictions**

Jurisdiction	2009	2010 <sup>A</sup>	2011	2012 <sup>A</sup>	2013	2014	2015
City of SLT	32	0	14	0	18	20	33
Douglas Co.	15	0	7	0	8	9	10
El Dorado Co.	69	0	27	0	45	47	30
Placer Co.	50	0	20	0	26	31	37
Washoe Co.	40	0	18	0	22	22	10
TRPA Incentive Pool <sup>B</sup>	0	0	0	0	9	1	20
<b>Total</b>	<b>206</b>	<b>0</b>	<b>86</b>	<b>0</b>	<b>128</b>	<b>130</b>	<b>140</b>

**Notes:**  
 A. Estimated TRPA did not release Residential Allocations to the local jurisdictions in 2010 or 2012.  
 B. Per TRPA Code Subparagraph 50.5.1.D, the TRPA Incentive Pool may be used for sensitive lot retirements, moderate income housing or development right transfers to centers.  
*Source: LakeTahoeInfo.org and TRPA Governing Board reports.*

**Commercial**

The Tahoe Regional Planning Agency regulates commercial structures in the Lake Tahoe Region by issuing commercial floor area (CFA) and tourist accommodation units (TAUs) to local jurisdictions in accordance with Sections 50.6 and 50.7 of the TRPA Code of Ordinances.

Commercial Floor Area

Commercial floor area is based on the square footage within the outer wall of a commercial building, not including stairwells and airshafts. Accessory features such as parking areas, driveways, outside stairways, and walkways are not included in the calculation of CFA. CFA is allocated by TRPA through the Regional Plan and local jurisdictions primarily through an adopted area plan or community plan.

As of December 31, 2015, approximately 6.35 million square feet of CFA, or over 90 percent of the maximum development potential, is built within the Region. In addition, more than 114,000 square feet of previously existing CFA has been removed, restored, and banked for future use or transfer. These figures do not include more than 92,000 square feet of CFA that has been allocated and/or transferred to permitted projects that were not yet constructed as of December 2015.

**Table 12-8: Commercial floor area accounting as of December 31, 2015**

Jurisdiction	Total Existing CFA <sup>A</sup>	Banked CFA <sup>B</sup>	Remaining from 1987 Plan and 2012 Allocation	Total Existing and Potential Development
City of SLT	2,869,065	9,481	40,170	2,918,716
Douglas Co.	700,935	5,572	33,520	740,027
El Dorado Co.	329,044	1,550	33,395	363,989
Placer Co.	1,292,176	23,570	68,441	1,384,187
Washoe Co.	1,157,831	48,471	10,000	1,216,302
TRPA Pool	-	-	383,584 <sup>C</sup>	383,584
California Tahoe Conservancy	-	25,463	-	25,463
Nevada Division of State Lands	-	0	-	0
<b>TOTALS</b>	<b>6,349,051</b>	<b>114,107</b>	<b>569,110</b>	<b>7,032,268</b>

**Notes:**

A. Estimated based on a GIS query of county assessor's data, 2010 Lidar Data and TRPA permit data from 2010-2015. Approved projects that are not yet completed are not counted as existing and their development rights remain in the development potential.

B. Updated Banked totals based on TRPA analysis of file/permit data, communications with CA/NV land banks and local jurisdictions. See Banked Development Rights section, Page 12-18, Table 12-5. Banked units include public and privately owned parcels with approved banked development rights.

C. The 2012 Regional Plan allocation of 200,000 square feet of CFA will not be made available until the remaining CFA from the 1987 Regional Plan is exhausted.

*Source: LakeTahoeInfo.org/Parcel Tracker, TRPA Accela Permit Records, TRPA project application files, and City of South Lake Tahoe accounting records.*

**Table 12-9. Existing commercial floor area by land capability and land use district as of December 31, 2015**

Jurisdiction	Total Existing CFA <sup>A</sup>	ESTIMATED EXISTING CFA BY LAND CAPABILITY			ESTIMATED CFA BY LAND USE DISTRICT		
		Stream Environment Zone (Class 1b)	Sensitive Lands (Classes 1a, 1c, 2 & 3)	Non-Sensitive Lands (Classes 4, 5, 6 & 7)	Town Centers	Areas within 1/4 Mile of a Center	Remote Areas (More than 1/4 mile away from a town center)
City of SLT	2,869,065	1,226,811	19,110	1,623,144	1,882,559	542,997	443,509
Douglas Co.	700,935	12,588	542,929	145,418	389,323	26,900	284,712
El Dorado Co.	329,044	89,406	69,868	169,770	120,800	61,993	146,251
Placer Co.	1,292,176	477,703	21,022	793,451	690,369	29,754	572,053
Washoe Co.	1,157,831	9,855	138,281	1,009,695	973,321	15,843	168,667
<b>TOTALS</b>	<b>6,349,051</b>	<b>1,816,363</b>	<b>791,210</b>	<b>3,741,478</b>	<b>4,056,372</b>	<b>677,487</b>	<b>1,615,192</b>

**Notes:**

A. Estimated based on a GIS query of county assessor's data, 2010 Lidar Data and TRPA permit data from 2010-2015.

*Source: LakeTahoeInfo.org/Parcel Tracker, TRPA Accela Permit Records, TRPA project application files, and City of South Lake Tahoe accounting records.*

Under the Regional Plan, new allocations of CFA are made by local jurisdictions based on the availability of CFA in adopted community plan and area plan pools. Additional bonus pools of CFA are held by TRPA and can be used for certain projects that result in significant environmental improvements, such as EIP projects and community enhancement projects. Finally, existing CFA may be banked onsite for use by projects in the future on the same parcel, or for transfers to other parcels.

Table 12-10 summarizes CFA allocations from local jurisdictions from 2011 through 2015.

**Table 12-10. Commercial Floor Area Allocations<sup>A,B</sup> (in square feet)**

Jurisdiction	2011	2012	2013	2014	2015
City of SLT	0	0	8,847	0	11,429
Douglas Co.	0	0	0	2,730	0
El Dorado Co.	0	2,500	255	0	0
Placer Co.	0	0	5,104	0	4,375
Washoe Co.	0	0	0	0	-8,000 <sup>C</sup>
<b>Total</b>	<b>0</b>	<b>2,500</b>	<b>14,206</b>	<b>2,730</b>	<b>7,804</b>

**Notes:**  
A. Does not include minor CFA additions per TRPA Code 50.6.1.B (2).  
B. All CFA associated with project approvals are reported. Allocations of CFA to projects with expired permits are returned to TRPA allocation pools.  
C. 8,000 sq.ft. was returned to the Washoe County CFA pool from an expired project in 2015.

*Source: LakeTahoeInfo.org/Parcel Tracker, TRPA Accela Permit Records, TRPA project application files, and City of South Lake Tahoe accounting records.*

### Tourist Accommodation Units

TAUs are defined as units with one or more bedrooms and with or without cooking facilities that are primarily designed to be rented by the day or week and occupied on a temporary basis<sup>3</sup>. TAU bonus units are reserved for special projects<sup>4</sup> that transfer existing units from sensitive lands that have been restored, as incentives for the transfer of existing development to centers<sup>5</sup>, or as incentives for the removal and retirement of excess coverage<sup>6</sup>.

As of December 31, 2015, there are 11,584 existing TAUs within the Region, over 94 percent of the maximum development potential for tourist units. In addition, 329 previously existing TAUs have been removed, restored and banked for future use or transfer. These figures do not include 393 units that have been allocated and/or transferred to permitted projects which are not yet constructed. Since 2000, no TAUs or TAU Bonus Units have been allocated to projects by TRPA or local jurisdictions.

TRPA has approved one project (Boulder Bay in Washoe County) that will receive an allocation of 31 TAUs from Washoe County, however these units are not counted as the project permit has not yet been acknowledged. Additionally, the Boulder Bay and Homewood Mountain Resort projects have been approved to receive an allocation of 40 units and 50 units respectively from the TRPA bonus unit pool (previously the Community Enhancement Program Pool); these units are similarly not counted as neither project permit has been acknowledged.

<sup>3</sup> TRPA Code section 90.2

<sup>4</sup> TRPA Code subsections 50.6.4.D and 50.7.1.C.

<sup>5</sup> TRPA Code subsection 51.5.3

<sup>6</sup> TRPA Code subsection 30.6.3

Several projects have been approved that used banked or transferred TAUs. For example, in 2014 TRPA approved the Edgewood Lodge and Golf Course Improvement Project. This project will result in a new lodge building, which is proposed to include 194 TAUs. These units will be sourced from transfers of previously existing, banked units, including 97 TAUs approved for transfer from an environmentally non-compliant motel located within a stream environment zone. A dilapidated motel was demolished within a SEZ and the site restored prior to the approval of this transfer.

**Table 12-11. Tourist accommodation units accounting as of December 31, 2015**

Jurisdiction	Total Existing TAUs <sup>A</sup>	Banked/Received TAUs <sup>B</sup>	Remaining from 1987 Plan and 2012 Allocation	Total Development Potential
City of SLT	6,674	240	25	6,939
Douglas Co.	2,651	194 <sup>C</sup>	25	2,870
El Dorado Co.	113	0	10	123
Placer Co.	1,329	69	37	1,435
Washoe Co.	817	5	33	855
TRPA Pool	-	-	212 <sup>D</sup>	212 <sup>D</sup>
California Tahoe Conservancy	-	15	-	15
Nevada Division of State Lands	-	0	-	0
<b>TOTALS</b>	<b>11,584</b>	<b>523</b>	<b>342</b>	<b>12,449</b>

**Notes:**

- A. Estimated based on a GIS query of county assessor's data, 2010 Lidar Data and TRPA permit data from 2010-2015. Approved projects that are not yet completed are not counted as existing and their development rights remain in the development potential.
- B. Updated Banked totals based on TRPA analysis of file/permit data, communications with CA/NV land banks and local jurisdictions. See Banked Development Rights section, Page 12-18, Table 12-5. Banked units include public and privately owned parcels with approved banked development rights.
- C. Includes 194 units transferred to Douglas County for the Edgewood Lodge project, which is not yet constructed.
- D. The TRPA Pool includes 90 Bonus TAUs that have been permitted for projects at Homewood Mountain Resort (50 units) and Boulder Bay (40 units) but are not yet acknowledged.

*Source: LakeTahoelInfo.org/Parcel Tracker, TRPA Accela Permit Records, TRPA project application files, and City of South Lake Tahoe accounting records.*

**Table 12-12. Existing tourist accommodation units by land capability and land use district as of December 31, 2015**

Jurisdiction	Total Existing TAUs <sup>A</sup>	ESTIMATED EXISTING TAUs BY LAND CAPABILITY			ESTIMATED TAUs BY LAND USE DISTRICT		
		Stream Environment Zone (Class 1b)	Sensitive Lands (Classes 1a, 1c, 2 & 3)	Non-Sensitive Lands (Classes 4, 5, 6 & 7)	Town Centers	Areas within 1/4 Mile of a Center	Remote Areas (more than 1/4 mile of a center)
City of SLT	6,674	1,772	188	4,714	5,730	554	390
Douglas Co.	2,651	289	560	1,802	2,493	0	158
El Dorado Co.	113	0	93	20	0	0	113
Placer Co.	1,329	400	50	879	646	98	585
Washoe Co.	817	0	38	779	787	30	0
<b>TOTALS</b>	<b>11,584</b>	<b>2,461</b>	<b>929</b>	<b>8,194</b>	<b>9,656</b>	<b>682</b>	<b>1,246</b>

**Notes:**  
A. Estimated based on a GIS query of county assessor's data, 2010 Lidar Data and TRPA permit data from 2010-2015. Approved projects that are not yet completed are not counted as existing and their development rights remain in the development potential.

*Source: LakeTahoeInfo.org/Parcel Tracker, TRPA Accela Permit Records, TRPA project application files, and City of South Lake Tahoe accounting records.*

### Recreation

TRPA regulates the rate and distribution of new recreation facilities in the Region by issuing PAOT, which are defined as “people at one time.” PAOT is a measure of recreation capacity specifying the number of people that a developed recreation facility can accommodate at any one time. PAOT are assigned to three categories of facilities: summer day use, winter day use, and overnight use. The TRPA Code of Ordinances section 50.9 establishes maximum allowances for these categories: 6,114 PAOT in overnight facilities, 6,761 PAOT in summer day-use facilities, and 12,400 PAOT in winter day-use facilities. Projects that require additional PAOT must receive an allocation approved by TRPA. Table 12-13 shows the current inventory of PAOT categories and the remaining balances for each category.

**Table 12.13: Cumulative accounting of PAOT allocations**

PAOT Categories	Regional Plan Allocations	Assigned as of 2011 Evaluation	Assigned 2011 to 2015	PAOTs Remaining	Percent of All PAOTs Assigned
Summer Day Use <sup>A</sup>	6,761*	1,192	530	5,039	25.5%
Winter Day Use <sup>B</sup>	12,400	5,267	0	7,133	42.5%
Summer Overnight <sup>C</sup>	6,114	394	0	5,720	6.4%
Total	25,275	6,853	530	17,892	29.2%

Notes:

- A. Per TRPA Code Subsection 50.9.3.C.2, 2,000 PAOTs are reserved for marina and boat launching facility expansion pursuant to a master plan. These PAOTs apply to all marinas, boat launching facilities, rural sports, golf courses, visitor information centers, off-road vehicle courses, and tour boat operations. PAOTs apply when a federal agency or state department of parks and recreation (or their permittees) operate a recreation center, participant sports facility, sport assembly facility, or beach recreation or day use area.
- B. For downhill ski areas pursuant to a master plan pursuant to TRPA Code Subsection 50.9.3.c.3.
- C. These PAOTs apply to certain developed campgrounds, group facilities, and RV parks.

*Source: TRPA Accela Permit Records, Prior TRPA Threshold Evaluations*

TRPA allocated 470 summer day-use PAOT to Heavenly Ski Resort (under lease with U.S. Forest Service, Lake Tahoe Basin Management Unit) for the Epic Discovery project, and 60 PAOT to the Beach Shack project in Placer County during the reporting period (Table 12-14).

**Table 12-14. Recreational allocations in Persons At One Time (PAOTs)**

	2011	2012	2013	2014	2015
All Jurisdictions	0	470	0	60	0

*Source: TRPA Accela Permit Records*

## Resource Allocations

### Additional Vehicle Miles Traveled and Vehicle Trip Ends

TRPA measures changes in highway traffic by measuring vehicle miles traveled (VMT) and daily vehicle trip ends (DVTE). VMT represents the total miles traveled by vehicles during a given period within the Lake Tahoe Region. In 2014, the most recent year for which traffic modeling data were available, there were an estimated 1,937,070 VMT in the Lake Tahoe Region<sup>7</sup> (see VMT indicator sheet in the Air Quality chapter of this evaluation). Trip ends are the total of all trips entering plus all trips exiting a project area during a given period of time; one daily vehicle trip end is counted each time a vehicle enters or exits a property.

As Table 12-15 indicates, DVTE and VMT have fluctuated annually during the five-year reporting period. Overall, the change in DVTE and VMT indicate 236 fewer daily trip ends and 21,991 fewer vehicle miles travelled during the period. As indicated in the air quality chapter of this report, overall VMT levels are at or somewhat better than target.

<sup>7</sup> Based on TRPA TransCAD model using California Department of Transportation and Nevada Department of Transportation traffic counts.

**Table 12-15. Change ( $\Delta$ ) in Daily Vehicle Trip Ends (DVTE) and Vehicle Miles Traveled (VMT)**

Jurisdiction	2010	2011	2012	2013	2014	Total $\Delta$ by Jurisdiction
<b>Douglas</b>						
DVTE	800	1,259	-1,549	-2,732	3,724	<b>1,502</b>
VMT	3,200	11,353	-14,628	-12,649	15,082	<b>2,358</b>
<b>Washoe</b>						
DVTE	0	251	-892	-378	981	<b>-38</b>
VMT	0	6,171	-14,495	-1,908	6,565	<b>-3,667</b>
<b>El Dorado</b>						
DVTE	-1,500	4,200	-200	0	-7,900	<b>-5,400</b>
VMT	-5,643	13,935	-10,840	0	-33,866	<b>-36,414</b>
<b>Placer</b>						
DVTE	-800	1,000	-500	0	4,000	<b>3,700</b>
VMT	-4,040	14,477	-12,185	0	17,480	<b>15,732</b>
<b>Annual <math>\Delta</math></b>						
DVTE	<b>-1500</b>	<b>6,710</b>	<b>-3,141</b>	<b>-3,110</b>	<b>805</b>	<b>-236</b>
VMT	<b>-6,483</b>	<b>45,936</b>	<b>-52,148</b>	<b>-14,557</b>	<b>5,261</b>	<b>-21,991</b>
Notes: Based on traffic counts collected by Caltrans and NDOT. VMT is calculated by TRPA using average trip length, survey data and modeling.						
Source: TRPA, Caltrans and NDOT Annual Traffic Count Programs						

### Impervious Land Coverage and Area of Stream Environment Zone Disturbance

Additional impervious land coverage for the 2011-2015 reporting period is shown in Table 12-16. New land coverage in this table was calculated using water quality mitigation fee collection data for TRPA approved projects, including projects approved by local jurisdictions through delegation memorandums of understanding.

**Table 12-16. New impervious land coverage acres<sup>A</sup> by evaluation period**

Jurisdiction	1991-1995	1996-2000	2001-2005	2006-2010	2011-2015
	Acres	Acres	Acres	Acres	Acres
Douglas	7.0	6.0	6.5	3.4	0.5
Washoe	29.7	17	15.7	5.6	10.9
El Dorado	32.1	40.4	46.1	28.1	4.2
Placer	25.5	28.7	35.1	15.3	3.3
<b>Total</b>	<b>94.4</b>	<b>92.1</b>	<b>103.4</b>	<b>52.4</b>	<b>18.9</b>
Notes:					
A. Acres are calculated from underlying square feet; totals may not sum due to rounding.					
B. This figure does not account for reductions of land coverage for environmental restoration projects or excess land coverage mitigation (pursuant to Chapter 30 of the Code of Ordinances).					
Source: TRPA Threshold Evaluations and Water Quality Mitigation Fee collection data from TRPA Accela Permit Records					

New land coverage is different from “transferred” and “relocated” land coverage, which is not considered “new” by definition in Chapter 90 of the Code of Ordinances and is not reflected in Table 12-16 for this reason. Similarly, Table 12-16 does not account for decreases in land coverage

that have occurred due to coverage removal for banking purposes; nor does the table reflect decreases in land coverage that occurred pursuant to TRPA's excess land coverage mitigation programs included in Chapter 30 of the Code of Ordinances.

As Table 12-16 indicates, there was a significant decrease in the amount of new land coverage created from 2011 to 2015 compared to prior periods. This decrease is likely related to the overall economic conditions during this period and a decrease in developable vacant land in the Region as it approaches "build-out."

Total new land coverage created from 1991 through the end of 2015 equaled 361 acres or 15.7 million square feet. This figure does not account for reductions of land coverage for environmental restoration projects or excess land coverage mitigation.

Table 12-17 summarizes the placement of impervious cover in Lake Tahoe Region using the Bailey (Bailey 1974) land capability classes. This table summarizes the data from Table 5-5 in the soils conservation chapter of this report for impervious coverage in each category. Based on these findings, impervious coverage in land capability class 1b (SEZ) and class 2 are estimated to exceed allowable coverage limits while all other land capability classes are below the allowable levels. However, this analysis shows that more than 10 acres of impervious coverage in class 1b (SEZ) were removed between 2010 and 2015.

**Table 12-17. Total area and estimated impervious cover within each land capability class in 2015.**

Land Capability Class	Total Area Within Class (Acres)	Allowable Impervious Cover (Acres/% Impervious)	Estimated Impervious Cover 2010 (Acres/% Impervious)	Change August 2010-August 2015 (Acres)	Estimated Impervious Cover 2015 (Acres/% Impervious)
Class 1a	23,558	236 (1%)	175 (0.7%)	0.82 removed	174 (0.7%)
Class 1b	11,304	113 (1%)	783 (6.9%)	10.39 removed	773 (6.8%)
Class 1c	53,957	540 (1%)	505 (0.9%)	0.17 added	505 (0.9%)
Class 2	23,648	236 (1%)	279 (1.2%)	0.03 removed	279 (1.2%)
Class 3	16,920	846 (5%)	358 (2.1%)	0.06 added	358 (2.1%)
Class 4	32,386	6,477 (20%)	1,263 (3.9%)	2.42 added	1265 (3.9%)
Class 5	10,347	2,587 (25%)	1,099 (10.6%)	4.90 added	1104 (10.7%)
Class 6	24,308	7,292 (30%)	2,214 (9.1%)	6.93 added	2221 (9.1%)
Class 7	5,525	1,658 (30%)	1,283 (23.2%)	3.52 added	1287 (23.3%)
<b>Total</b>	<b>201,953</b>	<b>19,984 (9.9%)</b>	<b>7,959 (3.9%)</b>	<b>6.75 added</b>	<b>7974 (3.9%)</b>

*Source: Land capability data is based on the 2007 NRCS Soil Survey (USDA-NRCS 2007). Impervious cover estimates based on evaluations of high resolution LiDAR and multispectral data collected in August 2010 and permitted development between August 2010 and August 2015.*

## Water Demand

Water rights in the Lake Tahoe Region are controlled by the Truckee River Operating Agreement (TROA), which was signed on September 6, 2008 and went into effect in 2015. The TROA formalizes, regulates and monitors water rights and water use in the Tahoe Region, the Truckee River watershed, and the final outflow areas of Pyramid Lake and the Carson River in Nevada. Under the TROA, total water extractions in the Tahoe Region are capped at 34,000 acre feet per year, limiting each state as follows:

California: 23,000 acre feet per year  
 Nevada: 11,000 acre feet per year

The Tahoe Region has numerous public water systems, including large-scale and small-scale (i.e., less than 200 households) systems. In addition, there are many single-use intake lines along Lake Tahoe’s shoreline and wells. The large-scale water and wastewater treatment systems in the Tahoe Region are provided by public utility districts (PUDs) and general improvement districts (GIDs). On the California side of the Region, PUDs may acquire, construct, own, complete, use, and operate a variety of services, including water, electricity, recreational facilities, drainage facilities, street lighting, and fire protection. Similarly, Nevada GIDs oversee the development, maintenance, and use of public facilities such as water and sewer systems, streets and sidewalks, and parks and open space. Since 1968, all wastewater in the Tahoe Region has been treated and pumped out of the Region to avoid discharge into the lake. Districts are bound by service areas and directed through boards created by local governments.

The following PUDs and GIDs operate within the Tahoe Region:

Cave Rock Estates GID	Oliver Park GID
Incline Village GID	Round Hill GID
Kingsbury GID	South Tahoe PUD
Lakeridge GID	Tahoe City PUD
Logan Creek Estates GID	Zephyr Cove GID
Marla Bay GID	Zephyr Heights GID
North Tahoe PUD	Zephyr Knolls GID

The Tahoe Water Suppliers Association (TWSA, 2015) consists of public water suppliers in the Lake Tahoe Region that use Lake Tahoe as their source of drinking water. TWSA consists of:

Cave Rock Water System (Cave Rock; Douglas County)
Edgewood Water Company (Edgewood)
Glenbrook Water Cooperative (Glenbrook)
Incline Village General Improvement District (IVGID)
Kingsbury General Improvement District (KGID)
Lakeside Park Association (LPA)
Cave Rock Water System (Cave Rock; Douglas County)
North Tahoe Public Utility District (NTPUD)
Round Hill General Improvement District (RHGID)
Skyland Water Company (Skyland; Douglas County)
South Tahoe Public Utility District (STPUD)
Tahoe City Public Utility District (TCPUD)
Zephyr Water Utility (Zephyr; Douglas County)
North Tahoe Public Utility District (NTPUD)

In 2015, TWSA suppliers served approximately 20,597 service hookups, supplying water to approximately 34,410 residents. The average daily water flow for TWSA suppliers ranges from 100,000 gallons per day (gpd) to 2,690,000 gpd. Peak daily water flow ranges from 424,000 gpd to 5,945,000 gpd (TWSA, 2015).

Numerous water purveyors distribute water from groundwater sources throughout the Region, including South Tahoe Public Utility District, Lukins Brothers Water and the Tahoe Keys Water Company.

Water demand in the Lake Tahoe Region varies year to year due to changes in resident and/or visitor populations, length of summer growing seasons (for outdoor irrigation), and drought conditions (which can lead to local water restrictions imposed by local utility districts). Water conservation is encouraged by many Lake Tahoe water purveyors. The South Tahoe Public Utility District (STPUD), for example, provides a lawn turf buy-back program, water-efficient appliance rebates, leak detection assistance, and irrigation efficiency evaluations.

### **Sewage Disposal**

The Porter-Cologne Act in California, and an executive order by the Governor of Nevada dated January 27, 1971, prohibit discharges of domestic, municipal or industrial wastewaters to Lake Tahoe, its tributaries, groundwater, or the portion of the Truckee River within the Tahoe Region.<sup>8</sup> As a result, Tahoe Region wastewater is generally collected, treated, and discharged to locations outside of the Region in one of the following four sewer export systems:

1. South Tahoe Public Utility District – Wastewater for the City of South Lake Tahoe and unincorporated portions of El Dorado County (south of Emerald Bay) is exported to Alpine County, California, via a sewer export line over Luther Pass (California State Route 89).
2. Douglas County Sewer Improvement District – Wastewater for Douglas County is exported to the Carson Valley in Nevada, via a sewer export line over Daggett Pass (Nevada State Route 207, Kingsbury Grade).
3. Incline Village General Improvement District – Wastewater for Washoe County is exported to the Carson City/Stewart area, Nevada, via a sewer export line over Spooner Summit (U.S. Highway 50).
4. Tahoe City and North Tahoe Public Utility Districts – Wastewater for Placer County and the portion of El Dorado County north of Emerald Bay is exported to the town of Truckee, California, via a sewer export line in the Truckee River Canyon (along California State Route 89).

Exceptions may be granted to discharges under alternative plans (for wastewater disposal authorized by state law, and approved by a state agency with appropriate jurisdiction). TRPA may also approve sewage holding tanks or other no-discharge systems in accordance with Subparagraph 60.1.3.C of the TRPA Code of Ordinances as a temporary measure, or as a permanent measure in remote public or private recreation sites, where a sewer system would create excessive adverse environmental impacts.

The California Water Quality Control Board, Lahontan Region, has authority to issue wastewater discharge waivers in the California portion of the Lake Tahoe Region. In Nevada, this authority rests with the Nevada Department of Environmental Protection (NDEP). Exceptions have been given to cabins in remote summer home tracts on the California side of the Region (including Upper and Lower Echo Lakes, Fallen Leaf Lake, Lily Lake, Glen Alpine, and Emerald Bay). Some summer homes are allowed to discharge “gray water” to leach field systems, but are also required to contain and transport “black water” sewage to an approved sewer dump station for treatment in a sewer plant.

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<sup>8</sup> See section 60.1, TRPA Code of Ordinances

There are five sewer treatment plants located in the Tahoe Region, each of which exports treated sewage into one of the four export lines noted above. Existing sewage capacity for these plants, including “reserved” capacity, is summarized in Table 12-18, below. As the table indicates, none of the five Tahoe sewer treatment plants are near their total capacity. In discussions with sewer plant officials, all five sewer plants were originally designed for a much larger population than currently expected at Lake Tahoe. Excess plant capacity is a result of a number of factors, including TRPA growth controls and localized population decreases, combined with water conservation efforts, and public purchases of environmentally sensitive lands.

**Table 12-18. 2015 Sewage Disposal Capacity in Millions of Gallons per Day (MGD)**

Sewer Collection District	Approximate 2015 Peak Sewer Flow	Approximate Capacity <sup>1</sup>	Approximate Reserve Capacity
North Tahoe PUD	0.65 <sup>3</sup>	6.00	5.35
Tahoe City PUD <sup>2</sup>	1.16	7.80	6.64
South Tahoe PUD	4.93	7.70	2.77
Incline Village GID	1.61	3.00	1.39
Douglas County SID	2.31	3.75	1.44

**Notes:**

- The North Tahoe and Tahoe City Public Utility Districts share a common North Shore sewer export line to Truckee, where sewage is combined with four other sewer collection districts for treatment by the Tahoe-Truckee Sanitation Agency (T-TSA). Sewer plant capacity for NTPUD and TCPUD is, therefore, a factor of export line capacity and total capacity of the T-TSA treatment facility (9.60 million gallons per day).
- TCPUD’s sewer collection is split between a North Shore and a West Shore collection system. TCPUD’s portion of the shared TCPUD-NTPUD North Shore export line has a capacity of 3.5 MGD. TCPUD’s West Shore collection system has a capacity of 4.3 MGD, and is “fixed” by pumping capacity at their Sunnyside pump station.
- Equals 2015 average sewer flow. A peak flow estimate was not available from NTPUD.

*Source: Tahoe Region Sewer Districts*

**Area of SEZ Restoration**

Stream environment zones are defined in Chapter 90 of the TRPA Code of Ordinances and include marshes and meadows that are critical filters for water flowing into Lake Tahoe. Significant SEZ disturbance, especially in urbanized areas close to Lake Tahoe, is allowing sediments and nutrients to flow into the Lake above natural levels, and is contributing to water quality decline.

All stream environment zones in the Region are protected from additional development, and legacy development in SEZs is acquired and restored where possible. As described in the soil conservation chapter of this report and detailed in Appendix E, the U.S. Forest Service, California Tahoe Conservancy, and Nevada Division of State Lands acquire and protect SEZs (TRPA 1988), and TRPA’s permit review process and development restrictions prevent the degradation of non-protected SEZs. Approximately 924 acres of SEZ have been restored in the Lake Tahoe Region since 1980. This accounting of SEZ restoration projects does not include restoration projects completed by the U.S Forest Service in the mid-1980s, which included restoration of 680 acres between 1984 and 1987 (TRPA 1988). By including these additional acres, the total area of SEZ r

**Threshold Attainment and Maintenance**

**Investments in Water Quality, Air Quality, Transportation, and Coverage Mitigation Programs**

Subparagraph 16.8 of the TRPA Code of Ordinances requires the agency to report the value of investments in water quality, air quality, transportation, coverage mitigation programs, and the area of stream environment zone (SEZ) restoration. To satisfy this requirement, Table 12-19 includes

the balances, contributions to, and expenditures from the various mitigation funds maintained for this purposes from 2010 through 2015.

**Table 12-19: TRPA capital improvement expenditures 2010-2015**

TRPA Trust Fund Account	Beginning Balance July 1, 2010	Contributions and Interest July 1, 2010 through June 30, 2015	Expenditures <sup>A</sup> July 1, 2010 through June 30, 2015	Ending Balance, June 30, 2015
Water Quality Mitigation	\$1,884,850	\$2,480,477	\$2,409,002	\$1,956,326
Stream Zone Restoration Program	\$1,597,897	\$567,665	\$1,051,012	\$1,114,551
Air Quality Mitigation	\$2,024,101	\$1,932,224	\$2,621,254	\$1,335,070
Operations & Maintenance	\$553,434	\$443,022	\$76,909	\$919,547
Excess & Offsite Land Coverage Mitigation	\$10,918,318	\$3,566,559	\$13,652,048	\$832,829
<b>Total</b>	<b>\$16,978,600</b>	<b>\$8,989,948</b>	<b>\$19,810,226</b>	<b>\$6,158,324</b>
<b>Notes:</b>				
A. Includes refunds and approved transfers between funds.				
<i>Source: TRPA Mitigation fund accounting records.</i>				

TRPA collects mitigation fees for projects approved by the agency or one of its partners (through memoranda of understanding) in place of physical mitigation incorporated into approved projects. Priority for release of “in-lieu” mitigation funds is given to restoration projects or capital improvement needs listed in the Environmental Improvement Program (EIP) in accordance with Chapter 15 of the TRPA Code of Ordinances. The types of projects that were allocated these funds between 2010 and 2015 are listed in Table 12-20 for each mitigation category.

**Table 12-20: Project type by mitigation fund source (percent of funds expended and obligated)**

Expenditures & Obligations July 1, 2010 through June 30, 2015	Air Quality Mitigation	Water Quality Mitigation	Stream Zone Restoration Program	Operations & Maintenance	Excess & Offsite Land Coverage Mitigation
Bike and Pedestrian Lane Improvement Projects	73%	-	-	6%	-
Erosion Control Projects	-	29%	100%	-	-
Fire Rehabilitation	-	19%	-	-	-
Roadway Capital Improvement Projects	3%	8%	-	55%	-
Street Sweepers	20%	6%	-	16%	-
Transit Services Equipment Purchase	4%	-	-	-	-
Water Quality Maintenance and Operational Support	-	39%	-	23%	-
Land Bank and Operational Support	-	-	-	-	100%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

### Water Quality Mitigation Funds

The TRPA Water Quality Mitigation Fund was established to provide local jurisdictions with funding to implement water quality improvements, erosion control or stream environment zone restoration projects. Water quality mitigation fees are required to be paid for any new land coverage that is created by projects.

From July 1, 2010 through June 30, 2015, TRPA allocated water quality mitigation fund expenditures totaling \$2.4 million. Of these expenditures, 29 percent were invested in water quality treatments, including erosion control and source runoff improvements, and the implementation of best management practices on developed properties. An additional 39 percent was allocated for water quality maintenance and operational support. Combined, roadway capital improvement projects and the purchase of street sweepers accounted for 14 percent of expenditures. The remaining 19 percent was invested in forest fuels reduction and thinning to reduce fire risks and improve forest health (Table 12-20).

From July 1, 2010 through June 30, 2015, TRPA has approved Stream Zone Restoration Program expenditures and obligations totaling nearly \$1.05 million. All of these funds were invested in water quality treatments, including erosion control and source runoff improvements, and the implementation of best management practices on developed properties (Table 12-20).

### Air Quality Mitigation Fund

The TRPA Air Quality Mitigation Fund is used to offset the regional and cumulative traffic and air quality impacts of additional development, typically projects that add commercial floor area or otherwise increase daily trips. These funds are distributed to local jurisdictions or the Tahoe Transportation District (TTD) for expenditure consistent with the Regional Transportation Plan or 1992 Air Quality Plan, in accordance with Section 65.2.6 of the Code of Ordinances. In general, these mitigation funds are used to build bicycle trails, improve intersections, purchase and operate street sweepers, and enhance public transportation systems.

From July 1, 2010 through June 30, 2015, TRPA has allocated air quality mitigation fund expenditures totaling \$2.6 million. Of these funds, 73 percent was invested in pedestrian and bike trails supporting air quality improvements and enhanced recreation. Seven percent was invested in transit fleet buses and equipment, and roadway improvements and 20 percent was invested in street sweepers (Table 12-20).

### Operations and Maintenance Mitigation Fund

The TRPA Operations and Maintenance Fund was established to fund the repair and maintenance of EIP projects, such as bike lane/path restriping or surface repairs, and water quality treatment facility maintenance, or EIP project related operations of either a one-time or limited duration, such as project effectiveness monitoring, project implementation management, and expanded transit operations. Up to 25 percent of the air and water quality mitigation funds received into the accounts above may be set aside for EIP project/program related administration, operations and maintenance, or effectiveness monitoring expenditures.

From July 1, 2010 through June 30, 2015, TRPA allocated operations and maintenance fund expenditures totaling nearly \$77,000. Of these funds, 55 percent was invested in roadway maintenance and capital improvement projects, 16 percent was invested in the operation and maintenance of street sweepers, 23 percent went to the maintenance and operation of water quality improvements, and 6 percent went to pedestrian and bike trail maintenance (Table 12-19).

### Excess and Offsite Land Coverage Mitigation Fund

The TRPA Excess Land Coverage Mitigation Fund is established in Subsection 30.6 of the Code of Ordinances, and is collected in lieu of on-site or off-site land coverage reductions for projects with excess land coverage. Excess land coverage is the amount of legally created land coverage existing within a project area that exceeds the area's base allowable land coverage. Excess land coverage can be mitigated several ways: 1) through the payment of an excess coverage mitigation fee; 2) by reducing land coverage onsite or offsite; or 3) by expanding the project area.

Excess and Offsite Land Coverage Mitigation Funds are provided by TRPA to land banks operated by the California Tahoe Conservancy (Conservancy) and Nevada Division of State Lands (NDSL) to provide land coverage/impervious surface reduction. Land banks achieve land coverage reductions through the purchase of vacant parcels with development potential and placement of deed restrictions on them, or the purchase of properties with coverage and subsequent removal of coverage. Reducing land coverage has been demonstrated to improve water quality and habitat quality because it allows water to infiltrate the soil rather than flow directly into surface waters, and allows for the reestablishment of native vegetation important for wildlife.

From 2007 to 2011, the Conservancy withdrew approximately \$500,000 per year from the excess and offsite land coverage mitigation fund. However, in recent years, these withdrawals increased significantly, with nearly \$10.8 million in reimbursements to the Conservancy occurring between 2011 and 2015, primarily to compensate the Conservancy for previously unreimbursed land purchases and coverage retirements. NDSL withdrew more than \$2.4 million between 2011 and 2015. Incoming contributions and interest totaled more than \$3.5 million during this period. As a result of these withdrawals, the fund balance was \$832,829 at the end of fiscal year 2015.

### **Other Mitigation Funds**

#### Shorezone Mitigation Funds

Mitigation fees collected for certain shorezone projects are used to fund studies assessing existing or potential impacts created by shorezone structures, methods for achieving restoration within the shorezone, or to fund fish habitat restoration projects (Subparagraph 86.6, Code of Ordinances). Currently there is approximately \$97,000 in this fund.

#### Rental Car Mitigation Fund

Chapter 65.4 of the Code of Ordinances establishes a Rental Car Mitigation Program, which is intended to assist the achievement and maintenance of threshold standards for air, and water quality. TRPA collects and transfers funds from its Rental Car Mitigation Program fund to the Tahoe Transportation District (TTD) when it finds that the expenditure is consistent with the Regional Transportation Plan and Air Quality Plan (RTP-AQP 1992). The TTD primarily uses these funds to support public transportation systems and the administration of TTD. Revenue and expenses for the TRPA Rental Car Mitigation Program from fiscal years 2011 to 2015 are summarized in Table 12-21, below. The net differences between revenues and expenses are related to the timing of the receipt of funds and subsequent distributions to TTD.

**Table 12-21: Rental car mitigation fee revenue and expenses (by fiscal year, in dollars).**

	2011	2012	2013	2014	2015	Total
Revenue	\$81,641	\$67,130	\$91,312	\$76,147	\$82,363	\$398,591
Expenses	\$89,725	\$92,922	\$141,482	\$77,577	\$71,154	\$472,859
Net	-\$8,084	-\$25,792	-\$50,171	-\$1,430	\$11,209	-\$74,269

*Source: Tahoe Transportation District*

## Chapter 12 Implementation and Effectiveness References

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