

**Maintenance Memo**

September 23, 2009

Prepared for: Tahoe Regional Planning Agency

Prepared by: Lauren Ledbetter, Alta Planning + Design

**Table of Contents**

1. Introduction ..... 4

    1.1. Importance of Proper Maintenance..... 4

    1.2. Primary Maintenance Functions ..... 4

    1.3. Obstacles to Proper Maintenance..... 5

2. Research Methodology..... 5

3. Research Findings..... 6

    3.1. Maintenance Activities ..... 7

        3.1.1. Basic Maintenance ..... 7

        3.1.2. Long-Term Maintenance ..... 9

    3.2. Maintenance Challenges ..... 9

    3.3. Summary of Local Cost Experience ..... 10

    3.4. Tahoe Region Funding Mechanisms ..... 11

        3.4.1. Inclusion within Maintenance and Operations Budgets ..... 11

        3.4.2. Voter-Supported Bond Measures..... 12

        3.4.3. Business Improvement Districts ..... 12

        3.4.4. Assessment Districts ..... 12

        3.4.5. Community Facilities Maintenance Districts..... 13

        3.4.6. Caltrans Funding ..... 14

        3.4.7. Grant Funding ..... 14

        3.4.8. Maintenance Requirements as Part of Trail Construction Grants ..... 14

    3.5. Potential Funding Mechanisms..... 15

        3.5.1. Transient Occupancy Tax ..... 15

        3.5.2. Parcel-Based Improvement Districts ..... 15

        3.5.3. Iron Rangers..... 15

        3.5.4. Adopt-A-Trail ..... 15

    3.6. Experiences from Other Areas..... 15

        3.6.1. Truckee, California ..... 15

        3.6.2. Park City, Utah..... 16

        3.6.3. Vail, Colorado..... 17

        3.6.4. Eagle County, Colorado..... 18

        3.6.5. Denver, Colorado..... 18

        3.6.6. Madison, Wisconsin..... 18

        3.6.7. Davis, California..... 19

4. Recommendations..... 20

    4.1. Recommended TRPA Actions..... 20

    4.2. Recommended Granting Agency Actions ..... 21

    4.3. Recommended Local Agency Actions..... 21

5. Appendix A: Agency Staff Interview Notes..... 23

6. Appendix B: Bibliography..... 37

**Table of Tables**

Table 1: Agency Staff Contacted Regarding Sidewalk and Multi-Use Trail Maintenance ..... 5

Table 2: Entities that are Responsible for Sidewalk and Path Maintenance in the Tahoe Basin.... 7

Table 3: Basic Sidewalk and Path Maintenance Activities Procedures in the Lake Tahoe Region. 8

Table 4: Costs of Maintaining Paths and Sidewalks in the Tahoe Region (2008 dollars) ..... 11

Table 5: People Contacted Regarding Bicycle and Pedestrian Infrastructure Maintenance..... 23

## 1. Introduction

Local agencies in the Tahoe basin have invested in construction of multi-use pathways and sidewalks, both of which provide valuable recreational and transportation benefits to local residents and visitors. However, ongoing maintenance of these facilities, and in particular, funding sources to support maintenance, is lacking. The Tahoe Regional Planning Agency has found through field observation and public and agency input that Tahoe area multi-use pathways and sidewalks are not maintained at high enough standard.

This memo summarizes existing maintenance activities in the Tahoe region, based on interviews with staff of local agencies, and identifies challenges to maintaining Tahoe-area sidewalks and multi-use paths to a high standard. The memo includes a summary of successful maintenance programs both in the Tahoe region and in comparable communities elsewhere. The memo concludes with recommendations for improving the maintenance of multi-use pathways and sidewalks in the Tahoe basin.

This memo falls under Task 3.4 of Alta's contract with the Tahoe Regional Planning Agency, and will be used support the development of TRPA's Regional Bicycle and Pedestrian Master Plan.

### 1.1. Importance of Proper Maintenance

Maintaining sidewalks and multi-use paths to a high standard is important for a variety of reasons.

**Safety:** Public agencies have a duty to protect the public welfare by maintaining facilities to a level that reduces potential safety hazards. This includes repairing damage on paths and sidewalks that may pose a tripping hazard, clearing snow in a timely manner, and preventing ice from forming on paths and sidewalks.

**Universal Access:** Public agencies are required by federal law to maintain public facilities so that they are accessible to people with disabilities. Small but abrupt vertical changes in level along a path or sidewalk may not pose a safety hazard to able-bodied pedestrians, but may present an obstacle to people who are using wheelchairs or other mobility-assistive devices.

**Attracting Use:** Well-maintained facilities, with smooth surfaces, well-kept vegetation, and up-to-date signage will attract and sustain use.

**Liability:** Allowing hazardous conditions to exist along a path or sidewalk exposes a local agency to potential lawsuits.

**Protecting the Public Investment:** Regular preventative maintenance on a path or sidewalk (e.g. periodic overlays on multi-use paths) can extend the lifetime of the existing facility and delay the need for more expensive repairs.

### 1.2. Primary Maintenance Functions

Primary functions of maintaining sidewalks and multi-use paths include:

- Maintaining pavement quality through spot repairs, regular overlays and longer-term repaving
- Maintaining trail up to ADA standards

- Sweeping and removal of garbage on a daily or weekly basis
- Vegetation trimming to provide clear access on a monthly basis
- Snow removal after storms
- Restriping paths as needed, usually annually
- Landscaping maintenance on a weekly or monthly basis, including irrigation costs
- Lighting feature maintenance, including electricity costs
- Repair of damage due to storms, floods, collisions and other unforeseen events
- Repair and replacement of wayfinding or other signage

### **1.3. Obstacles to Proper Maintenance**

There are three main obstacles to successful multi-use pathway and sidewalk maintenance programs. The first, and most common issue in the Tahoe basin, is a lack of dedicated funding. Grants are typically not available for maintenance activities, but are available for construction of new facilities. Second, proper equipment or appropriately trained personnel may not be available. For example, multi-use paths require narrow snow-blowers for snow removal, but these machines may not be owned by the jurisdiction. Third, there may be confusion or conflicts between different parties regarding whose responsibility it is to maintain sidewalks and multi-use paths, and the exact duties that are required of the responsible party. For example, while property owners are often required to maintain the section of sidewalk in front of their property, this requirement can be unreasonable and unfair if major damage was caused by an unknown party.

## **2. Research Methodology**

TRPA and its consultants used the following strategies to research this topic, identify local successes and needs, and to identify practical solutions:

- Interviews with local agency staff within TRPA jurisdiction
- National research on maintenance issues

Staff from local agencies, the counties, and the regional utility districts within the Tahoe region, as well as agency staff from outside the region were contacted and asked to share information about maintenance activities in their agency. Staff contacts are listed in Table 1.

**Table 1: Agency Staff Contacted Regarding Sidewalk and Multi-Use Trail Maintenance**

Name	Agency	Most Recent Communication
Ron Treabess	North Lake Tahoe Resort Association	Spoke on 7/23
Stan Hill	City of South Lake Tahoe	Spoke on 7/23
Gary Moore	City of South Lake Tahoe	Spoke on 7/27
Cindy Gustafson	Tahoe City Public Utility District	Spoke on 7/23

## 2010 Lake Tahoe Region Bicycle and Pedestrian Plan

Name	Agency	Most Recent Communication
Eva Krause	Washoe County, Community Development Department	Spoke on 7/21
Dick Minto	Washoe County, Incline Roads	Spoke on 8/25
Scott Morgan	Douglas County Parks, Recreation and Community Services	VM on 8/18
Brendan Ferry	El Dorado County	VM on 8/8
Kathy Long	North Tahoe Public Utility District	Spoke on 8/18
Peter Kraatz	Placer County, Department of Public Works	Email on 7/23
Garrett Villanueva	US Forest Service	VM on 8/18
<i>Outside of Lake Tahoe Region</i>		
Dan Wilkins	Public Works Department, City of Truckee	Spoke on 9/9
Pace Ericson	Park City, Utah	Spoke on 8/18
Craig Barry	Public Works Department, Vail, Colorado	Spoke on 9/2
Brenda Stanley	Sidewalk Program, Madison, Wisconsin	Spoke on 9/3
Mary Larsen	Public Works Director, Sitka, Alaska	Email on 9/3
Ellie Caryl	Trails Program, Eagle County, Colorado	VM on 9/3
Emily Kresia	Denver Public Works, Denver, CO	Email on 9/22
Dick Gannon	Denver, CO	VM on 9/23
Tim Bustos	Former Bicycle and Pedestrian Coordinator, Davis, CA	Email on 9/14

### 3. Research Findings

Of the six Lake Tahoe agencies who responded, four have responsibility for maintaining sidewalks and trails. In general, the public works departments are responsible for design and construction of the facilities and the parks and recreation departments were responsible for the maintenance of the facilities.

Table 2 lists the agencies that are responsible for maintenance of sidewalks and paths in the Tahoe Basin.

**Table 2: Entities that are Responsible for Sidewalk and Path Maintenance in the Tahoe Basin**

Agency	Responsible For	Notes
Washoe County	Paths in county	Not responsible for paths built by other agencies, private individuals or homeowner associations (HOAs).
Incline Roads (Washoe County)	Roads in Incline Village	May clear sidewalks after road plowing if there is time in the maintenance budget.
City of South Lake Tahoe Parks and Recreation Department	7.4 miles of paths	3.03 miles receive Measure S funding while 4.17 miles do not
Ski Run Business Improvement District (South Lake Tahoe)	Sidewalk and path maintenance in Ski Run BID	
Placer County	No path or sidewalk maintenance responsibilities	Utility districts maintain all the paths and sidewalks in the Tahoe portion of Placer County.
Tahoe City Public Utility District	Trails and sidewalks, enforcement of maintenance in Tahoe City BID	
Tahoe City Business Improvement District	Sidewalks in Tahoe City	
Douglas County	no information available at this time	
El Dorado County	no information available at this time	
North Lake Tahoe Public Utility District	Natural trails in North Tahoe Regional Park  1 mi shared use path	
U.S. Forest Service	no information available at this time	

### **3.1. Maintenance Activities**

The level of maintenance and schedule that is met by each agency varies, and is related to the amount of available funding and the types of facilities that are being maintained. Maintenance activities can be divided into basic maintenance and long-term maintenance.

#### **3.1.1. Basic Maintenance**

All of the agencies responsible for maintaining sidewalks and trails perform activities that, at a minimum, include:

2010 Lake Tahoe Region Bicycle and Pedestrian Plan

- Repairing pavement conditions on sidewalks or paths that pose a possible safety issue or that are not ADA compliant.
- Sweeping
- Regular clearing and trimming of vegetation on paths.

Snow removal activities vary significantly between agencies. In general, sidewalks are cleared after every snowstorm throughout the winter, and paths are either cleared for the first part of the winter—until snow accumulation makes the paths too difficult to clear— or not cleared at all. None of the agencies plow all the paths in their jurisdiction throughout the winter. Every agency we spoke with relayed the sentiment that path use is so low in the winter, it is not worthwhile to plow once the snowfall becomes too heavy for equipment to handle or the snowpack becomes too deep. Some communities plow a subset of their path network throughout the winter. Where this is the case, it is either due to safety considerations (City of South Lake Tahoe) or because there is dedicated funding (Measure S funded paths in City of South Lake Tahoe, Tahoe City BID, Ski Run BID).

Agencies or districts with dedicated funding for maintenance generally provide more maintenance activities. These include the Ski Run Business Improvement District in City of South Lake Tahoe, trails funded under Measure S in City of South Lake Tahoe, and the Tahoe City Business Improvement District.

Table 3 summarizes basic maintenance activities for the contacted agencies.

**Table 3: Basic Sidewalk and Path Maintenance Activities Procedures in the Lake Tahoe Region**

Agency	Basic Maintenance Activities	Notes
Washoe County	Repair and maintenance of sidewalks are done on an as-needed basis.	
Incline Roads (Washoe County)	Seasonally: Plowing sidewalks as time and budget allows.	
City of South Lake Tahoe Parks and Recreation Department	Ongoing: Sweeping, clearing and trimming vegetation, repairing sections of path that may pose safety issue or are not compliant with ADA standards, call-in requests.  Annually: Restriping paths  Seasonally: Blowing snow	Snow blowing is only provided on 3 miles of pre-2000 trails. The trails that provide pedestrian access along a highway are blown.
Ski Run Business Improvement District (City of South Lake Tahoe)	Ongoing: maintaining 48 pedestrian lighting heads, electricity bills, water bills, mowing and fertilizing landscaping, maintenance of 2-mile trail (see above for details)	
Placer County	No maintenance activities	
Tahoe City Public Utility District	Weekly during the summer: sweeping	Snow is only removed once a year, in the

	On-going: repairs Seasonally: striping, re-signing and snow removal	spring.
Tahoe City Business Improvement District	Ongoing: Repairs, garbage collection. Seasonally: snow removal	TCPUD is responsible for landscaping, irrigation, power bills, water bills and enforcing the maintenance of the BID sidewalks.
Douglas County	No information available	
El Dorado County	No information available	
North Lake Tahoe Public Utility District	Ongoing: vegetation trimming on soft surface trails, sweeping and basic repairs on paved path Annually: soft surface trails are chipped Seasonally: snow blowing paved path	
U.S. Forest Service	No information available	

### 3.1.2. Long-Term Maintenance

While most agencies are able to meet basic ongoing path maintenance needs, longer-term maintenance, like major repairs, bridge replacement, slurry seals, overlays and re-paving paths are not being met. Of the agencies contacted, only City of South Lake Tahoe and Tahoe City have regularly scheduled long-term maintenance.

A summary of long-term maintenance efforts in the region follows:

- Trails built after 2000 in City of South Lake Tahoe are slurry-sealed after 10 years and receive an overlay after 15 years. Long-term maintenance of these trails is funded through Measure S.
- City of South Lake Tahoe applied for a Caltrans grant in 2008 to overlay all trails built before 2000, but it was not approved.
- Tahoe City Public Utility District seals, overlays and makes large repairs on its trails every several years.

### 3.2. Maintenance Challenges

A variety of challenges prevent agencies from maintaining sidewalks and paths to a high level. The primary challenge is a lack of funding, though there are some technical challenges related to clearing snow and coordination challenges related to working with local property owners to maintain sidewalks.

A summary of maintenance challenges is provided below:

- All agencies expressed a desire to see more funding dedicated to path and sidewalk maintenance.
- Most agencies pay for sidewalk and path maintenance out of their maintenance and operations budget. This funding is generally enough to provide seasonal maintenance, but is not enough to fund long-term preventative maintenance, such as overlays.
- Grant funding is not generally available for maintenance activities.
- When property owners are required to maintain sidewalks, they often do not maintain to the required standards. Enforcing the standards and educating property owners takes a lot of staff time. (See discussion of City of South Lake Tahoe Business Improvement District below.)
- Most agencies did not feel that path use was high enough in winter to warrant clearing snow.
- If snow is removed from paths, snow must be removed far enough back from the pavement so that it does not melt, refreeze and create black ice. Sand is not permitted on many trails because they are adjacent to the lake. This increases the costs of snow removal.
- Small plows, which have been purchased by some agencies, are not strong enough to clear heavy snows or densely packed snows.
- When clearing roads, Caltrans and NDOT both plow snow and sand onto sidewalks and paths adjacent to roads. Agencies in California receive money from Caltrans to clear the sidewalks and paths after Caltrans plows the snow onto them, but the snow that is plowed onto sidewalks is often packed so hard that it is impossible to clear with snow blowers.

### **3.3. Summary of Local Cost Experience**

Costs for maintaining paths vary widely, based on the level of maintenance provided by an agency, and how the agency calculates costs. Per-mile costs of path maintenance range from a low of \$1,050 for basic maintenance of a path in City of South Lake Tahoe to a high of \$14,000 per mile for landscaping and path maintenance in Ski Run Business Improvement District.

Table 4 summarizes the costs for maintaining facilities in the Tahoe Region, based on conversations with members of each agency.

**Table 4: Costs of Maintaining Paths and Sidewalks in the Tahoe Region (2008 dollars)**

Agency	Costs	Notes
City of South Lake Tahoe	\$1,050 per mile per year for basic maintenance of Class I paths	
Ski Run BID (City of South Lake Tahoe)	\$14,000 per mile per year to maintain landscaping and Class I path  \$4,500 per mile for slurry seal	
Tahoe City Public Utilities District	\$11,000 per mile per year to maintain, repair, restripe and plow (once) paths	Annually, \$5,000 to \$6,000 is spent for snow removal and \$25,000 to \$30,000 for repairing cracks on the entire path system
North Tahoe Public Utility District	\$8,000 per mile per year to maintain trail and blow snow	

### **3.4. Tahoe Region Funding Mechanisms**

A variety of funding mechanisms have been used to different levels of success in the Tahoe region. This section describes the funding mechanisms in use in the Tahoe Region including successes and challenges associated with each.

#### **3.4.1. Inclusion within Maintenance and Operations Budgets**

Many agencies in the region fund maintenance activities out of their existing maintenance and operations budget. Contacts from City of South Lake Tahoe and North Tahoe Public Utilities District noted that the majority of their maintenance funding is allocated to storm drain and sewer maintenance to meet environmental regulations, as required by law. Correspondingly, there is less money available to meet other maintenance needs, including sidewalk and path maintenance. While it is possible to structure a maintenance fund to increase with increasing facility mileage, none of the interviewed agencies have done so. The City of Truckee is considering establishing a maintenance fund that receives a percentage of long term maintenance costs based on facility miles.<sup>1</sup>

---

<sup>1</sup> See 3.6.1 Truckee, California for a description.

### 3.4.2. Voter-Supported Bond Measures

The City of South Lake Tahoe has used this financial tool to generate funding for the construction and maintenance of recreational facilities, including bicycle paths. Bond measures require two-thirds voter approval.

#### **Measure S**

In 2000, El Dorado County, the City of South Lake Tahoe and Paradise Valley Association formed a Community Facilities District Recreation Joint Powers Authority and in a special election asked district voters to approve Measure S, authorizing the District to issue bonds that could be used to pay for a variety of maintenance activities, including maintenance of bike trails. Bonded indebtedness will not exceed \$6.5 million and bonds have a 30-year term. To repay the bonds, all taxable property within the District is assessed at a rate determined by the use of that property. Residential uses are assessed at between \$14 and \$18 annually, and the special tax is higher for commercial, industrial, and recreational facilities. (4)

Measure S maintenance funding applies to trails constructed after 2000, specifically the 26 miles of paths planned for construction through the City's Master Plan. Measure S funding is allocated to a trail based on mileage, and in increments of 2/10 of a mile. The \$5000 per mile more than covers all daily maintenance (sweeping, vegetation trimming, emptying garbage cans, snow blowing). The excess funding is held in an account and used for more expensive maintenance such as slurry seal or overlay.

### 3.4.3. Business Improvement Districts

Business improvement districts (BIDs) are public/private partnerships used to promote individual business districts through a variety of means. A city, county or joint powers authority can establish a BID and levy annual assessments on businesses within its boundaries. (1) To establish a BID, a public hearing must be held, and a majority of businesses must agree to the BID. In forming a BID, the boundaries and the improvements and activities to be financed are established. These cannot be changed once the BID is formed.

In the Tahoe Region, the Ski Run businesses formed a BID to fund path and sidewalk maintenance.

#### **Ski Run BID Improvement District**

The Ski Run business area formed a Business Improvement District to fund the construction and maintenance of landscaping and a 2-mile paved path. Approximately 70 businesses or property owners are assessed a fee that is collected with business tax payments. (5)

The BID maintains 48 pedestrian lighting heads, electric bills for the lighting, water bills, mowing and fertilizing landscaping, and maintaining the 2-mile multi-use trail. The money collected through the BID does not cover all maintenance costs. It costs \$28,000 to \$29,000 annually to maintain the landscaping and trail. The BID contributes \$11,000 annually, it receives \$10,000 in Measure S funding for trail maintenance and the remaining \$7,000 to \$8,000 is contributed by the City of South Lake Tahoe. (9)

### 3.4.4. Assessment Districts

Local government entities can form an assessment district to fund the construction and maintenance of public facilities, including sidewalks and paths. The process begins with property owners who want an improvement signing a petition. The proposed district will include all property owners who will benefit from the proposed improvement. A public hearing

is then held, and if a majority of property owners approve, the assessment district is established. Once the assessment district is approved, property owners within the assessment district are levied a special assessment in proportion to the share of the benefit they receive from the improvement. (2)

Tahoe City Public Utility District, with support from the local businesses, established an assessment district to fund the construction and maintenance of sidewalks, landscaping and pedestrian amenities in the downtown business core. It is described below.

#### **Tahoe City Assessment District**

In the late 1990's sidewalks, landscaping, lighting and other pedestrian amenities were constructed in Tahoe City. At that time, the local property owners requested an assessment district to pay for the construction and limited maintenance of these facilities. The assessment is levied on commercial property owners and collects about \$18,000 each year, with a 2 percent annual increase. Tahoe City Public Utility District (TCPUD) developed an ordinance to 1) establish the assessment district, 2) describe the responsibilities of the property owners and TCPUD, and 3) to provide a method for the TCPUD to enforce the ordinance. (8)

Under the ordinance, property owners are responsible for maintaining the sidewalk in front of their business, including repairs, snow removal and garbage removal. TCPUD is responsible for maintenance of the landscaping, irrigation, power bills, water bills, and enforcing the ordinance. (7)

There have been some problems with the assessment district. TCPUD has found that the costs of enforcing the ordinance are higher than the \$18,000 paid to the agency by the assessment district. The timeliness and quality of the maintenance does not always meet standards outlined in the ordinance. Snow removal is especially problematic, with snow sometimes not being removed in a timely manner, or sometimes too narrow a path is cleared. (7)

### **3.4.5. Community Facilities Maintenance Districts**

In California, community facilities maintenance districts (CFDs) can be established by local governments to fund maintenance of sidewalks and paths. CFD's are commonly used to fund certain types of public services, such as fire, library, recreational, parks and street maintenance and flood control. With a CFD, a special tax is apportioned based on land uses.

CFD's differ from other assessment districts in several ways, the most pertinent to the topic of sidewalk and path maintenance is that 1) All property owners within a CFD are assessed a special tax, not just property owners who receive a special benefit from the improvements and 2) a CFD boundaries can be expanded through annexation, unlike the boundaries of an assessment district, which are limited to the boundaries established when the assessment district is formed. Since a two-thirds vote is required to approve a CFD, it may be more difficult to establish than other assessment districts, which only require a majority vote. (6)

Locally, North Tahoe Public Utility District funds its maintenance activities through a CFD.

#### **North Tahoe Public Utility District CFD**

Maintenance activities for North Tahoe Public Utility District (NTPUD) are funded through a Community Facilities Maintenance District (CFD) tax which is assessed as an additional amount on the property tax. The tax was established at \$60 per parcel, and has an annual 2 percent increase. NTPUD receives approximately \$575,000 to \$550,000 annually through the CFD. The majority of this fund goes to sewer maintenance, and a small portion is taken out for trail maintenance.

The CFD tax was restructured several years ago. The available maintenance budget was reduced, and now the CFD does not meet all the funding needs of the NTPUD. The district supplements the funding received through the CFD with parking fees, and facility rental fees. It has also been using its reserve funding to conduct day-to-day activities, and has received funding from the North Lake Tahoe Resort Association.

### 3.4.6. Caltrans Funding

California agencies often receive money from Caltrans for maintenance of facilities that are within Caltrans right-of-way. When Caltrans plows state routes, snow is pushed onto the sidewalks and paths located adjacent to those roads. Caltrans usually pays agencies a fee to remove snow that Caltrans has plowed onto the sidewalk. Several agency contacts noted that the Caltrans snowplows pack the snow so hard that it is impossible to clear the snow with available equipment after it has been plowed onto the sidewalks.

### 3.4.7. Grant Funding

The majority of funding for bicycle and infrastructure projects is limited to capital improvement projects, and cannot be used for maintenance funding. The main sources of this funding are the California State Proposition 84 and Proposition 40 Bonds, Nevada Question 1 Bonds, and Southern Nevada Public Land Management Act. Smaller funding sources include TRPA Air Quality Mitigation Funds and Lake Tahoe License Plate Funds. Proposition 84 funds have not been tapped into yet, primarily due to the California state budget crisis.

### 3.4.8. Maintenance Requirements as Part of Trail Construction Grants

Several regional grant sources for constructing shared-use paths require a maintenance schedule and funding source to be established before construction money will be awarded.

North Lake Tahoe Resort Association requires the constructing agency to submit a three-year maintenance plan to receive construction funds, but the maintenance plans are not generally enforced after the fact.

California Tahoe Conservancy provides grant funding, paid for through California State Bonds, for construction of bike paths. A requirement of the CTC's Site Improvement Grant Agreements is that the grantee accepts a minimum of 20-year maintenance responsibility. As part of the application, the grantee needs to provide a resolution from their board that says they will maintain the facility for 20 years. However, there are no specifics and this requirement is not always enforced.

Southern Nevada Public Land Management Act provides funding for the construction of parks, trails and natural areas. Applicants must submit a description of the operations and maintenance over the course of the useful life of the proposed project. The description must include responsible parties, expected costs, and formalization of maintenance budget by local government agency.

In addition to grant agreement requirements, the TRPA, as a condition of permit approval, also requires that project proponents demonstrate how the project will be maintained over a 20-year period. As with some of the grant sources above, there is no requirement of documentation of availability of funding, or any enforcement action taken if trails are not maintained.

### **3.5. Potential Funding Mechanisms**

In addition to the existing funding mechanisms described above, there are several potential funding mechanisms that could be instituted in the Tahoe Region. An ideal funding mechanism provides enough funding to meet both basic maintenance needs and long-term needs, and increases as the number of facilities to maintain increases.

#### **3.5.1. Transient Occupancy Tax**

The Transient Occupancy Tax is a sales tax on lodging rates that ranges from 6.5% to 7.5% around the Basin. In the north shore, two percent of this tax funds the efforts of the North Lake Tahoe Resort Association (NLTRA). This funding source provides much of the money for construction of shared use paths. The Transient Occupancy Tax can legally be used to provide regular maintenance activities, but this is not done due to policy and political considerations. NLTRA is considering dedicating some of the TOT grant funds to maintenance activities.

#### **3.5.2. Parcel-Based Improvement Districts**

Locally, Tahoe City is considering a parcel and business improvement district to fund maintenance of sidewalks, landscaping and other amenities in the downtown core. This PBID would either supplement the current assessment district, or would replace it. While not part of the TRPA jurisdiction, the City of Truckee is considering a PBID to fund maintenance of proposed sidewalks in the historic downtown.

#### **3.5.3. Iron Rangers**

TCPUD has used “iron rangers,” kiosks for collecting donations, on some trails, and that has brought in a small amount of money. Cindy Gustafson at TCPUD noted that they may be more effective if they were placed at a trailhead, but the trail network doesn’t have established trailheads.

#### **3.5.4. Adopt-A-Trail**

TCPUD explored the idea of developing an adopt-a-trail program to pay for maintenance, but came to the conclusion that the effort and cost of administering the program may not justify the limited income it would generate. Cindy Gustafson noted that one might be able to charge businesses \$500 annually for installation and maintenance of a sign on a trail, but that would most likely just cover the costs of administering the program.

### **3.6. Experiences from Other Areas**

In addition to interviewing Tahoe basin agency staff, the authors contacted staff from cities that are comparable to the Tahoe region, in order to understand how other agencies have succeeded in maintaining high quality pathway/sidewalk environment.

#### **3.6.1. Truckee, California**

Truckee, California, located just to the west of TRPA’s boundary, has the same climate and recreation patterns.

##### **Sidewalks**

Sidewalks are provided in some areas of Truckee, and adjacent property owners are responsible for sidewalk maintenance. In general, sidewalks located between on-street parking and businesses are cleared by property owners regularly throughout the winter, while sidewalks in

other areas are cleared less frequently. The City does not have ordinances that define maintenance standards for sidewalks.

### **Exploration of a Property-Based Improvement District**

Truckee is planning on expanding sidewalks in the historic downtown and has begun conversations with the community regarding the possibility of establishing a property-based improvement district to fund sidewalk maintenance. The City is considering the PBID as a requirement of funding sidewalk construction.

### **Class I Paths**

There are approximately 12 miles of paved Class I bicycle paths in Truckee. Four miles of these paths were constructed by the City, and are maintained by the City. The remaining 8 miles of trails have been constructed in conjunction with subdivision developments and maintenance is typically assigned to a homeowners association or a business owner association.

The City works with a local nonprofit, the Truckee Trails Foundation, to maintain the four miles of Class I paths under City maintenance. Snow is not removed from paths, except for once during the spring.

### **Maintenance Standards and Funding**

The City is currently developing maintenance standards for the City-maintained paths and for privately maintained paths. The City, with assistance from the Truckee Trails Foundation, is working with the community to develop maintenance standards that meet reasonable expectations.

The City is considering establishing maintenance standards that include applying asphalt sealant every 3 to 5 years and developing a sinking maintenance fund to pay for long-term trail maintenance. The fund would be tied to the cost of long-term trail maintenance and the mileage of trails in the city. For example, trails in Truckee have an average lifespan of 20 years before resurfacing is required. Each year the City would set aside one twentieth the cost of resurfacing all existing trails, based on the current mileage of all trails.

### **Truckee Trails Foundation**

The City works closely with the Truckee Trails Foundation, a 501c3 nonprofit formed seven years ago to promote trails in Truckee. In addition to assisting the City with physical trail maintenance, and informing the City's development of maintenance standards, the nonprofit funds capital improvement projects, researches trail policies, and advocates for trails within the community. The organization recently began holding fundraisers for specific construction projects and researched adopt a trail programs.

## **3.6.2. Park City, Utah**

### **Maintenance Activities and Costs**

Park City, Utah is similar in climate and recreation to the Tahoe region. Park City maintains five miles of sidewalks and five miles of paved paths. Annually, it costs about \$20,000 to \$22,000 per mile to maintain the five miles of paths. Three-quarters of the paths are located in residential areas and are adjacent to homes. The remaining quarter is in unimproved areas. Maintenance includes pruning, mowing three feet outside the path in unimproved areas, overlays, replacement of concrete, slurry sealing and fog sealing as needed. The city plows two thirds of its facilities in winter, at a cost of \$300,000.

### **Maintenance Funding**

Maintenance is funded through the general fund; no special taxing district is required. Park City relies heavily on sales tax to fund City services. Of the 7.45 percent sales tax, the City levies a 1 percent local option sales tax, a 1.10 percent resort community tax and a 0.30 percent transit tax. Sales tax revenue has expanded steadily since the 2002 Olympics, with an expanding ski industry, steady increases in off-season activity and an increase in development. Additionally, in 2007, Park City voters approved a \$15 million bond for bicycle and pedestrian improvements. City Council will be considering using a portion of that bond for annual operations and maintenance budget for the new planned projects.

### **Political Support for Paths and Trails**

The City Council actively supports paths and trails. At a 2009 budget visioning meeting, the City Council established nine goals, two of which are related to path and trail maintenance: World Class Multi-Seasonal Resort Community and Recreation, Open Space and Trails. Park City's budget has received the Distinguished Budget Award from the Government Finance Officers of the United States every award cycle since 1991.

### **3.6.3. Vail, Colorado**

As a community with a resort-based economy, Vail understands that it must provide high-quality recreational facilities for visitors.

The Vail Public Works Department is responsible for maintaining streets, sidewalks, parks and trails within the City. The City has 16 miles of separated paths. Vail's pedestrian facilities are contained within pedestrian villages, rather than provided as sidewalks along all roadways.

#### **Maintenance Activities**

Routine maintenance on paths includes sweeping, repairing asphalt, trimming vegetation, and striping and signage. Unlike other agencies interviewed for this memo that perform most maintenance in-house, Vail hires contractors for approximately two-thirds of the work. Routine maintenance on paths costs between \$6,250 and \$9,375 annually.

In the winter, 4 of the 16 miles of paths are plowed, and 2 miles are groomed to allow Nordic skiing. Costs for plowing were not provided, as they vary depending on the weather.

Long-term maintenance includes overlays and larger repairs.

#### **Funding**

Vail has established a real estate transfer tax (RET), which applies a 1 percent fee on every real estate transaction. This funding is used for recreational funding, a portion of which is allocated to trail maintenance. This funding source has not been significantly affected by the economic downturn. Each year between \$100,000 and \$150,000 of the RET funding is allocated to the Recreational Path Maintenance Fund, which funds routine maintenance of paths. This more than covers routine maintenance; some years all the funding is used, some years it is not.

More expensive long-term maintenance and upgrading are funded in part through public benefits associated with redevelopment. Public benefit has included building, repairing or rebuilding a sidewalk or path adjacent or within proximity of a redevelopment project. In the past five years, the City has used this mechanism to rebuild 1.5 miles of separated recreational paths that run through private properties. In some cases, existing facilities are significantly upgraded—for example, on-street facilities may be rebuilt as separated paths.

Vail's Recreation District is a taxing entity that was developed to construct and maintain recreational facilities including the golf course and ice skating facilities. The Recreation District is not responsible for trails, with the exception of grooming the two miles of trail in the winter.

### 3.6.4. Eagle County, Colorado

The transit agency for Eagle County, Colorado, EcoTransit, is responsible for constructing the regional trails system. Each municipality in the county pays a portion of its sales tax to Eagle County (usually about 0.5%) and a portion of that trickles down to fund regional trails.

The County is responsible for constructing and maintaining paths within its jurisdiction and the incorporated communities of Avon, Vail, Eagle, and the unincorporated communities of South Edwards and Eagle Vail are responsible for trails within their jurisdictions.

### 3.6.5. Denver, Colorado

#### **Sidewalks**

In Denver, per Public Works Rules and Regulations, the adjacent property owner has the responsibility to maintain the sidewalks "in a clean condition and to remove snow and ice from adjoining sidewalks after every snowfall". Adjacent property owners must also "provide for the continuing care, maintenance, repair and replacement of all improvements" located between their property line and the gutter

There is no separate line item in Denver's General Fund budget for specific sidewalk maintenance. Public Works Department will provide curb and gutter and most often curb ramps when reconstructing a street.

Denver relies on private property owners and redevelopment to construct sidewalks, so there are missing links in the sidewalk system.

### 3.6.6. Madison, Wisconsin

#### **Sidewalk Maintenance**

Madison's sidewalk maintenance consists of regularly scheduled repairs, sawcutting tripping hazards and working with property owners and city departments to reconstruct damaged sidewalks. The Sidewalk Program employs three full-time staff and three seasonal staff. For the 2008/2009 fiscal year, the program spent \$1 million on regularly scheduled sidewalk repairs, \$400,000 on citywide repairs outside of the regularly scheduled repairs, and \$252,000 on sawcutting. The City reimburses property owners for repairs at \$2.50 per square foot for sidewalk repairs, and \$8 per square foot for curb and gutters.

Unlike most other jurisdictions, Madison does not require the property owner to pay the full cost of sidewalk repair. After sidewalk repair needs are identified by City inspectors, property owners are given the choice of repairing the sidewalk themselves for 100% of the cost, or having the City do it and charge them 50% of the costs. Although the State of Wisconsin allows jurisdictions to charge 100% of sidewalk repair to property owners, Madison has an ordinance that directs the City to charge only 50% of sidewalk repair to property owners. Ninety-eight percent of property owners elect to have the City repair the sidewalk.

#### **Snow Removal**

Madison's snow removal policy for sidewalks requires that property owners clear the sidewalk to provide reasonably safe conditions by noon the day after a snowstorm. City inspectors check for violations, and fine property owners if they do not comply. Fines start at \$109. The City

provides a mixture of sand and salt for public use at several locations throughout the City. Several community agencies coordinate snow removal efforts for the disabled or elderly who cannot afford to hire snow removers. (City of Madison)

Madison has significant year-round bicycle commuting, and the paths and on-street trails receive the same level of plowing maintenance as streets. The Engineering and Parks Department is responsible for plowing Madison's shared use paths. During the weekday, paths are cleared by 7 am for commuters and are maintained throughout the day. Streets crews plow, sand and salt on-street bicycle facilities at the same time the roads are plowed: as soon as the snow starts falling, throughout the storm, and after the storm until the lanes are clear.

Three types of equipment are utilized for snow removal on bike paths: jeeps, articulating tractors and one ton dump trucks. Five ton dump trucks with V-box spreaders are utilized on the streets that have bike facilities included. When the snow accumulation narrows the roadway enough to eliminate the bike lane, the City uses snow blowers or endloaders and blows the snow or hauls it away.

### 3.6.7. Davis, California

Davis, California is well-known for its extensive bicycle facilities. The description of maintenance activities in this section are based on an email from Tim Bustos, former Bicycle and Pedestrian Coordinator for the City (1994 – 2006). Activities may have changed since he was working at Davis.

While Davis does not need to remove snow from its facilities, it provides a good example of regular and routine sidewalk and bicycle facility maintenance. The City understands that because these facilities are used so frequently, and because the City is responsible for routine accommodation for all users of the transportation network, it is important to keep sidewalks and bicycle facilities well maintained.

#### **Maintenance Responsibilities**

Sidewalk infrastructure, bicycle lanes and bike paths in Davis are designed, built, and maintained by the Public Works Department. However, all vegetation appurtenant to these facilities (e.g. greenbelts and vegetation along sidewalks) is maintained by the Parks Department.

#### **Maintenance Costs and Activities**

Davis has about 55 miles of separated bicycle paths, and as of 2006, programmed about \$100,000 a year for routine bike path maintenance (\$1,818 per mile, annually). In addition to using an integrated Pavement Management System, the city's bike coordinator and the pavement engineer would ride targeted paths on bike at least once a year to determine priority projects to undertake.

Tim noted that while the state of California Class I path designs only require a minimal base, that base may deteriorate rapidly in an extreme climate like that of the Lake Tahoe Region. Davis switched to constructing concrete bike paths many years ago, and has found that while they are more expensive to construct, it saves significantly on maintenance costs.

#### **Maintenance Funding**

Most maintenance expenses for bike lanes and sidewalks are programmed as part of regular road maintenance activities.

Funding sources for maintenance activities comes from a variety of sources, but a large part of the funding comes from the City's general fund. Many of the facilities, including 28 grade separated facilities, have been constructed using developer impact fees.

## 4. Recommendations

As noted at the beginning of this document, maintenance challenges for sidewalks and multi-use paths stem from three main issues: (1) a lack of dedicated funding, (2) a lack of proper equipment or appropriately trained personnel, and (3) confusion or conflicts between different parties regarding whose responsibility it is to maintain sidewalks and multi-use paths. To address these challenges, successful maintenance programs for sidewalks and paths require: (1) an understanding of the costs of maintenance and adequate funding, (2) clear maintenance standards and schedules and (3) clearly outlined responsible parties. The recommendations provided below are intended to provide guidance to TRPA and local jurisdictions on how to meet these needs.

### 4.1. *Recommended TRPA Actions*

As a regional agency, TRPA has a few ways in which it can affect the maintenance of pathways and sidewalks.

Require bicycle trail projects to decisively demonstrate adequate maintenance funding as a condition of project approval, and find ways to incentivize on-going maintenance of existing trails.

Discussion: While requiring projects to demonstrate adequate maintenance funding could be politically difficult, as it could prevent the construction of paths for which construction funding is available, a policy like this would begin to treat maintenance funding as an integral part of the overall funding for a project, and require both funders and implementers to plan for maintenance early in the life of the project. TRPA could also consider incentivizing maintenance of trails by tying trail maintenance to its annual allocation distribution system.

Develop recommended maintenance standards for sidewalks and pathways.

Discussion: Recommended maintenance standards for sidewalks and pathways, and associated cost estimates for meeting those standards can assist agencies in planning and budgeting their maintenance activities, and can provide best practices for meeting environmental, ADA, and safety requirements.

Develop recommended design guidelines for all bicycle and pedestrian facilities that support ease of maintenance.

Discussion: Facilities should be designed so that they are easy to maintain. Of particular importance, is including an area for snow storage adjacent to sidewalks, on-street facilities and pathways. Currently, Caltrans and NDOT use sidewalks and paths adjacent to roadways as temporary snow storage areas.

Encourage local agencies to pursue innovative funding strategies to support maintenance.

Discussion: TRPA can provide local agencies with information about potential funding strategies, support inter-regional communication, and establish panels to discuss funding mechanisms. Funding mechanisms already exist to provide for maintenance of paths and sidewalks, they are just politically controversial. Regional support and education from TRPA

may affect the political landscape and shift people toward supporting funding mechanisms. Also, in collaboration with the Tahoe Transportation District, the TRPA can explore regional funding mechanisms that could help support bicycle trail and sidewalk maintenance.

Support NLTRA's shift to provide funding for ongoing maintenance funding and look for other nonprofit partnership opportunities.

Discussion: The most likely source of maintenance funding may be from allocating a portion of TOT funds to maintenance of facilities. TRPA should work with NLTRA to understand and support, if appropriate, such a change. Given the success of NLTRA's program, the TRPA should solicit ways in which other local nonprofit organizations can help support maintenance funding or maintenance activities and encourage local jurisdictions to do the same.

Tie distribution of residential, tourist, and commercial floor area allocations to successful maintenance of sidewalks and paths.

Discussion: The TRPA currently ties allocation distribution to transit performance criteria (as well as other areas). TRPA could add bicycle and pedestrian facility construction and maintenance to these performance criteria.

#### **4.2. Recommended Granting Agency Actions**

Granting agencies can primarily influence maintenance by requiring that local agencies match capital funds with adequate maintenance funding.

Require bicycle trail projects to decisively demonstrate adequate maintenance funding as a condition of grant approval, and tie future bike trail grant approvals to successful maintenance of existing trails.

Discussion: As with the TRPA project approval recommendation, a policy like this would begin to treat maintenance funding as an integral part of the overall funding for a project, and require both funders and implementers to plan for maintenance early in the life of the project.

#### **4.3. Recommended Local Agency Actions**

Based on discussions with local agencies and review of literature, there are several items that local agencies can do to ensure high maintenance standards for sidewalks and paths are met.

Keep the responsibility for maintaining sidewalks and paths with the public agency.

Discussion: While property owners may want to keep the costs low by maintaining facilities without the help from the public agency, experience has shown that this does not always work well. Advantages to having public agencies maintain facilities include preexisting relationships with vendors, dedicated staff with maintenance experience and technical skills, and appropriate equipment.

Pursue innovative funding that covers costs of ongoing and long-term maintenance and that is linked to the mileage of the facilities to be maintained.

Discussion: When establishing a funding mechanism to provide for sidewalk and path maintenance, it should be structured to reflect the average lifetime of sidewalks and paths, and should increase with inflation and increase with the mileage of the facilities to be maintained. For example, the City of Truckee is considering establishing a sinking fund for maintaining trails could be supported through an annual contribution based on one-twentieth the cost of resurfacing all existing trails.

Reduce maintenance costs

Discussion: Maintenance costs can be reduced through hiring seasonal workers or interns to perform maintenance, and by contracting out regular staff so that they can be employed full-time and the city does not have to pay overhead for multiple part-time employees. The City of Truckee works with the nonprofit Truckee Trails Foundation to maintain trails. Folsom, California has used prison labor to maintain its paths. Volunteer groups can be used to maintain vegetation and pick up litter along paths and sidewalks.

Keep an up-to-date inventory of the condition of sidewalk and path facilities.

Discussion: An up-to-date inventory of the condition of facilities will allow a community to budget for future repair work and to prioritize improvements.

## 5. Appendix A: Agency Staff Interview Notes

### 5.1. Summary

As part of the fulfillment of Task 3.4 Sidewalk Maintenance Memo, Lauren Ledbetter of Alta spoke to several local agency staff during July, August and September 2009 to understand the existing maintenance programs for bicycle and pedestrian infrastructure in the Tahoe Region. Conversations focused on funding mechanisms, cost of maintenance, maintenance tasks, and challenges to providing maintenance.

The primary challenge to maintaining bicycle and pedestrian facilities is lack of funding. A variety of funding mechanisms have been implemented or are being considered in the different jurisdictions, including a voter approved bond (Measure S) and a Business Improvement District in City of South Lake Tahoe, parcel-based improvement districts in Placer County, and assessment districts in Tahoe City. The North Lake Tahoe Resort Association is beginning to move in the direction of providing more maintenance funding.

Table 5 lists the people who were contacted in the course of this research. Descriptions of conversations with the contacts are below.

**Table 5: People Contacted Regarding Bicycle and Pedestrian Infrastructure Maintenance**

Name	Agency	Most Recent Communication
Ron Treabess	North Lake Tahoe Resort Association	Spoke on 7/23
Stan Hill	City of South Lake Tahoe	Spoke on 7/23
Gary Moore	City of South Lake Tahoe	Spoke on 7/27
Cindy Gustafson	Tahoe City Public Utility District	Spoke on 7/23
Eva Krause	Washoe County, Community Development Department	Spoke on 7/21
Dick Minto	Washoe County, Incline Roads	Spoke on 8/25
Scott Morgan	Douglas County Parks, Recreation and Community Services	VM on 8/18
Brendan Ferry	El Dorado County	VM on 8/8
Kathy Long	North Tahoe Public Utility District	Spoke on 8/18
Peter Kraatz	Placer County, Department of Public Works	Email on 7/23
Garrett Villanueva	US Forest Service	VM on 8/18
<i>Outside of Lake Tahoe Region</i>		
Dan Wilkins	Public Works Department, City of Truckee	Spoke on 9/9

Name	Agency	Most Recent Communication
Pace Ericson	Park City, Utah	Spoke on 8/18
Craig Barry	Public Works Department, Vail, Colorado	Spoke on 9/2
Brenda Stanley	Sidewalk Program, Madison, Wisconsin	Spoke on 9/3
Mary Larsen	Public Works Director, Sitka, Alaska	Email on 9/3
Ellie Caryl	Trails Program, Eagle County, Colorado	VM on 9/3
Emily Kresia	Denver Public Works, Denver, CO	Email on 9/22
Dick Gannon	Denver, CO	VM on 9/23
Tim Bustos	Former Bicycle and Pedestrian Coordinator, Davis, CA	Email on 9/14

## **5.2. Stan Hill, Public Works Department, City of South Lake Tahoe**

Phone conversation on July 23, 2009.

The Public Works Department does not maintain facilities, but Stan was able to provide information about the City’s maintenance programs. He referred Alta to Gary Moore, Director of The Parks and Recreation Department for more specific maintenance information.

### Maintenance Activities

Maintenance activities for trails include plowing snow, repainting striping, clearing and trimming vegetation and repairing sections of the trail that may present a safety issue or are not compliant with ADA requirements.

The city has very few sidewalks. Stan did not talk about maintenance activities for sidewalks.

The Public Works department is responsible for developing the trails, while the Parks and Recreation Department maintains the facilities.

### Measure S

Funds for maintaining multi-use trails are provided through Measure S.

El Dorado County, City of South Lake Tahoe and Paradise Valley Association formed a Community Facilities District Recreation Joint Powers Authority. In a special election held in September 2000, District voters passed Measure S, authorizing the District to issue bonds that could be used to pay for a variety of maintenance activities, including maintenance of bike trails. Bonded indebtedness would not exceed \$6.5 million and bonds would have a 30-year term. Single family property owners would be assessed \$18 annually.

Trails must be approved to receive Measure S maintenance funding, and funding is only permitted for trails constructed after 2003. Funding is allocated to facilities at \$5,000 per-mile, annually. Experience from the Ski Run Business District, described below, suggests that this funding level is too little to maintain trails year-round.

### Ski Run Business Improvement District

Ski Run businesses formed a business improvement district to construct and maintain landscaping and a trail. The BID uses Measure S funding to maintain the landscaping and path. The BID found that the cost of maintaining the path, particularly plowing the path, was about \$6,000 per mile annually, or \$1,000 more than Measure S allotted.

#### Existing Infrastructure

Stan also generally described City of South Lake Tahoe's infrastructure. Many of the early subdivisions in the City were developed as summer cabin communities, and as a result, they do not meet the development standards of a year-round community. For example, there are very few sidewalks in the City; bicycle and pedestrian infrastructure consists of shared use paths that have been built within the last twenty to thirty years.

Many multi-use trails are in need of maintenance. Stan pointed out the example of transverse cracks along trails that have not been fixed.

#### Funding Mechanisms

Funding for sidewalk and trail maintenance is limited. Funds that the City receives to construct Environmental Improvement Projects (EIP) cannot be used for non-EIP projects such as construction or maintenance of sidewalks and bicycle trails. The main sources of EIP funding are the California Tahoe Conservancy State Bonds and South Nevada Public Land Management Act. The California Tahoe Conservancy has a Recreational Access program that contributes funding toward the construction of bicycle trails and other recreational projects that have a regional attraction, but this money is not generally used for maintenance of trails. Two smaller funding sources include TRPA Air Quality Mitigation Funds and State Proposition 84 Funds. Proposition 84 funds have not been tapped into yet, primarily due to the California state budget crisis.

The city provides maintenance funding from its general fund, but the majority of this funding is used to maintain storm drains, as required by the city's municipal (National Polluting Discharge Elimination System (NPDES) permit. Occasionally, the city will allocate some general funds to maintenance of a particular trail, but this is on an ad hoc basis, and primarily for situations that may present safety concerns.

The city occasionally applies for and received air quality mitigation money for maintaining sidewalks and bikeways. However, Stan noted that air quality and mitigation funding is tied to development, and development in City of South Lake Tahoe is limited, due to regional caps, and the fact that most of the developable area in the city has already been developed. There is a structural problem with the funding mechanism, which relies on tourism and development.

### **5.3. Gary Moore, Director, Parks and Recreation Department, City of South Lake Tahoe**

Phone conversation on July 27, 2009.

Gary clarified some information about Measure S and the Ski Run BID and provided detailed information about trail maintenance.

#### **Trail Inventory**

City of South Lake Tahoe has 7.20 miles/38,000 linear feet of multi-use trails. Of these, 3.03 miles/16,000 linear feet receive Measure S maintenance funding and 4.17 miles/22,000 linear feet do not. The department has classified trail condition as "poor," "fair," "good," and "new."

Many of the trails constructed before 2000 are in very poor condition, particularly since the city has not had the budget to do higher-cost maintenance activities such as slurry sealing or overlays.

### **Measure S**

Measure S maintenance funding applies to trails constructed after 2000, specifically the 26 miles of paths planned for construction through the City's master plan. The measure was drafted to have "something for everyone" to ensure it would pass. The measure was instrumental in allowing the city to move forward in constructing the 26 miles of trails, as it provides a funding mechanism for maintaining the trails over 20 years, as required by the California Tahoe Conservancy Fund grant. Though not certain, Gary surmised that maintenance of existing trails were not included the bond measure because it would be more difficult to pass the measure.

Measure S funding is allocated to a trail based on mileage, and in increments of 2/10 of a mile. The \$5000 per mile more than covers all daily maintenance (sweeping, vegetation trimming, emptying garbage cans, snow blowing). The excess funding is held in an account and used for more expensive maintenance such as slurry seal (\$4,500 per mile in 2008 dollars) or overlay. Slurry seal is generally applied after 10 years, and maintains the trail for another 5 years before an overlay is necessary.

Gary described Measure S as a "cutting edge" maintenance funding mechanism.

### **Maintenance of Pre-2000 Paths**

Paths constructed prior to Measure S (2000) are maintained out of the Parks and Recreation Maintenance and Operations Budget. It costs \$1,015 per mile per year to maintain the Class I paths. This cost only includes daily maintenance: sweeping, vegetation trimming, emptying garbage cans, repair of minor cracks and response to any call-in requests. The cost of more expensive maintenance (e.g. slurry seal and overlay) is not provided for in the M&O budget. As a result, many of the pre-2000 paths are in poor condition.

Snow blowing is only provided on approximately 3 miles of pre-2000 trails. It is not cost-effective to blow all trails, as bicycle use is low in the winter. Instead, the choice to snow blow a trail is based on safety issues; trails that provide pedestrian access along highways are blown. The city uses front blower machines that are 8 feet wide.

The city applied for a Caltrans grant for \$500,000 to overlay all pre-2000 trails but it was not approved..

### **Ski Run BID**

The Ski Run BID is responsible for funding the maintenance of the landscaping improvements in Ski Run. Maintenance includes maintaining 48 pedestrian lighting heads, electric bills for the lighting, water bills, mowing and fertilizing landscaping, and maintaining the 2-mile multi-use trail. It costs \$28,000 to \$29,000 annually to maintain the landscaping and trail. The BID is entitled to \$10,000 in Measure S funding to maintain the trail. The BID contributes \$11,000 and City of South Lake Tahoe contributes the remainder. In 2008, the 2-mile long, 8-foot wide trail was slurry-sealed for \$9,000.

## **5.4. Ron Treabess, North Lake Tahoe Resort Association**

Phone conversation on July 23, 2009.

### **Role of NLTRA**

North Lake Tahoe Resort Association has three objectives:

1. Market North Lake Tahoe to the region and worldwide
2. Manage and allocate funds for infrastructure improvements (including trails)
3. Manage and allocate funds for Transportation Enhancements projects

### **Funding**

NLTRA does not maintain bicycle and pedestrian facilities, but does provide funds for local jurisdictions to construct, and rarely, to maintain facilities. NLTRA funds are generally used to leverage larger funding sources. The California Tahoe Conservancy is the major funder for bicycle facilities, and does not provide funding to maintain paths. All trails on the North Shore have been funded in part by NLTRA funds.

Funding allocated by the NLTRA is primarily geared toward planning and construction activities. When applying for NLTRA grants to construct trails, applicants are asked to describe the plan for maintaining the facility, but those plans are not enforced after the fact. The agency that builds the trail or the landowner is required to maintain the facility.

Every year, some funds are put in the NLTRA budget for specific maintenance-related activities. However, this is done on an ad hoc basis. Recently, NLTRA installed wayfinding signage, and is recommending including maintenance of the signage as a regular part of the annual budget. Last year, NLTRA allocated \$100,000 to enhance snowplowing in resort areas.

NLTRA funds are provided by the Transient Occupancy Tax (TOT). Ron noted that the Transient Occupancy Tax can legally be used to provide regular maintenance activities, but this is not done due to policy and political considerations.

Placer County has an 8% sales tax, and NLTRA applies an additional 2% to this tax.

### **Construction and Maintenance Activities**

The Tahoe City Public Utilities District (TCPUD) and the North Tahoe Public Utilities District (NTPUD) are the main agencies that construct trails in the basin. NTPUD is just starting to construct trails. TCPUD has built the majority of bicycle facilities in the basin. The agency receives some maintenance funding from Placer County and maintenance funding from Caltrans for maintaining facilities that lie within Caltrans right-of-way. TCPUD has also allocated a portion of property taxes to recreation facilities.

Ron noted that the PUD's would like more funding for maintaining trails.

## **5.5. *Eva Krause, Planner, Washoe County Community Development Department***

Phone conversation on July 23, 2009.

### **Maintenance Responsibilities**

The Community Development Department is responsible for master plan preparation and implementation, development review and enforcing codes. The Parks and Recreation Department maintains the trails in Washoe County. Eva noted that some of the trails are deteriorating.

The County does not have an ordinance requiring local property owners to maintain sidewalks.

### **Maintenance Activities**

Washoe County does not maintain private streets.

The County has established a roads department for Incline Village (Incline Roads) which is responsible for maintaining the roads within Incline Village. The County has used air quality funding to purchase a small plow for clearing sidewalks and trails in the Village. They have found that the plow works when the snow is not heavy, but if the snow is heavy or if snow is plowed onto the sidewalks by Nevada Department of Transportation, then the small plow does not work. The Public Works Department will clear sidewalks after road plowing is complete and if there is extra time in the maintenance budget.

For the rest of the county, only roads are plowed.

The County does not have a maintenance schedule for sidewalks. Repair and construction are done on an as-needed basis.

#### Funding

Grants are not available to cover maintenance, and property owners do not want to maintain the sidewalks and paths, so it falls to the County to maintain the facilities.

Sidewalk and path construction, but not maintenance is supported through development. When developing vacant sites in Community Plan areas, or when redeveloping existing sites to a new use, developers are required to install sidewalks if they don't currently exist. To prevent building a non-contiguous sidewalk, the County offers the developer the option to pay an in-lieu fee for construction of sidewalks or paths. The in-lieu fee is based on 120% of the estimated cost of construction. The developer submits three quotes for construction of the sidewalk adjacent to the newly developed site for County approval. The in-lieu fees are put into an account for the community plan area and used to construct facilities within the Community Plan area.

#### Regional Recommendations for TRPA

Eva suggested that if NDOT could avoid plowing snow onto sidewalks, then the County could better clear the sidewalks in the winter.

The County does not have a set standard for path design (e.g. width) but Eva felt this would be useful.

### **5.6. Peter Kraatz, Deputy Director, Placer County Public Works Department**

Email correspondence July 27, 2009.

“Placer County's vision for maintaining future ped. infrastructure improvements will likely be through property-based improvement districts (PBIDs). We would likely rely on a consultant to assist on the outreach and nuts and bolts of forming them, etc. That's all I really have at this point. Once we get into the design of our Kings Beach improvements, the PBID issue will come forward pretty quickly and I'll be happy to keep you and TRPA informed.”

### **5.7. Cindy Gustafson, General Manager, Tahoe City Public Utilities District**

Phone conversation on July 28, 2009.

The Tahoe City Public Utilities District is responsible for maintenance of trails and sidewalks within the districts jurisdiction, and responsible for enforcement of maintenance of sidewalks within the Tahoe City Business Improvement District.

#### **Trail Maintenance**

Trail maintenance includes weekly sweeping, striping, resigning and snow removal in the spring, and sealing, overlays and other repairs every several years. Snow is removed only once a year, in the spring. Many of the trails are along Caltrans roads, and large quantities of snow and sand are pushed onto the trails as Caltrans plows the roads. The cost of these maintenance activities, plus staff time and insurance averages out to \$11,000 per mile per year.

Annually, TCPUD spends an average of \$25,000 to \$30,000 for repairing cracks in trails, sealing and overlays on the entire path network. This cost is included in the \$11,000 per mile per year maintenance cost. TCPUD spends about \$5,000 to \$6,000 each spring for snow removal. The agency successfully solicited local snow removal companies to donate time for clearing the trails in the spring. TCPUD does not have special equipment for snow removal, and instead uses backhoes.

The agency does not remove snow on trails in the winter, though it has received requests to do so. Snow removal is not done because the difficulties outweigh the benefits. Specific difficulties include 1) Snow melting on trails would then freeze and create black ice, and 2) trails are located adjacent to the lake and sand cannot be used.

### **Sidewalk Maintenance – Tahoe City Assessment District**

Sidewalks are mostly located in the Tahoe City commercial core area. Most of the sidewalks are maintained through an assessment district, while the remainder is maintained by TPUD directly. Maintenance activities include snow removal, repairs, garbage collection.

The Tahoe City Urban Improvement Project developed an assessment district to provide improved sidewalks and landscaping in the Tahoe City downtown core. The assessment is levied on commercial property owners. The assessment includes capital costs of the improvements as well as maintenance costs. The TCPUD developed an ordinance to establish the assessment district, describe the responsibilities of the property owners and TCPUD, and to provide a method for the TCPUD to enforce the ordinance.

Under the ordinance, property owners are responsible for maintaining the sidewalk in front of their business. The ordinance clearly describes the maintenance responsibilities, frequency of maintenance, and level of maintenance that is required by the property owners. This includes repairs, snow removal and garbage removal. TCPUD is responsible for maintenance of the landscaping, irrigation, power bills, water bills, and enforcing the ordinance. The assessment district pays \$18,000 annually to TCPUD for these services, with a 2% annual increase.

TCPUD strives to work with the property owners to encourage compliance. The agency holds annual trainings to teach property owners their maintenance requirements. TCPUD can fine property owners if they fail to comply with the maintenance requirements, but has not done so yet. On occasion TCPUD has hired contractors to maintain facilities and charged the property owners for the expense plus administrative fees, as allowed in the ordinance.

When the assessment district was being established, business owners insisted on maintaining the property themselves so that they could cut down on the cost of maintenance. Business owners did not want to pay the administrative costs of having TCPUD oversee the maintenance and hire contractors. Unlike TCPUD, property owners do not need to pay prevailing wages or provide benefits. TCPUD would have preferred to work with property owners to manage the maintenance efforts, as opposed to being the enforcing agency.

There have been some problems with the assessment district. TCPUD has found that the costs of enforcing the ordinance are higher than the \$18,000 paid to the agency by the assessment district. The timeliness and quality of the maintenance does not always meet standards outlined

in the ordinance. Snow removal is especially problematic. Property owners do not always hire professionals to remove snow, relying on their employees (e.g. bus boys, dishwashers) to shovel the sidewalks. Sometimes only a small path is cleared, or it is not cleared down to the cement, or snowmelt is not used. Other times, the sidewalks are not cleared because the employees were busy, or couldn't make it to work because they were stuck in the snowstorm.

Cindy felt that if structured differently, an assessment district could work very well. She recommends a system where maintenance is managed by the public agency, but property owners oversee the maintenance budget to ensure that administrative costs and costs of contractors are kept down. She felt this system would be more efficient and effective in providing high-quality maintenance. She suggested sharing the costs of larger repair items (for example, replacement of a light pole damaged by a hit and run driver) among all the property owners, rather than just the fronting property owner. She also felt that if the Tahoe City commercial area business owners had not been assessed the capital costs of the sidewalks and landscaping, they may have been more willing to pay higher maintenance costs.

### **Other Sources of Funding**

TCPUD explored the idea of developing an adopt-a-trail program to pay for maintenance, but came to the conclusion that the effort and cost of administering the program may not justify the limited income it would generate. She noted that one might be able to charge businesses \$500 annually for installation and maintenance of a sign on a trail, but that would not bring in a lot of money to pay for maintenance.

They have used "iron rangers," kiosks for collecting donations, on some trails, and that has brought in a small amount of money. Cindy noted that they may be more effective if they were placed at a trailhead, but the trail network doesn't have established trailheads.

Cindy mentioned that the North Lake Tahoe Resort Association was considering allocating some of the Transient Occupancy Tax toward operations and maintenance budgets for beaches and trails, echoing Ron Treabess's comments.

The Tahoe City Business Association is considering a property-based improvement district to pay for maintenance, as well as other items such as holiday lighting, etc... The TCBA is discussing whether the new PBID would replace the existing assessment district or supplement it. It has been difficult to get property owners to agree upon what they will pay for.

## **5.8. Craig Barry, Vail Colorado**

Phone conversation on September 2, 2009.

As a community with a resort-based economy, Vail understands that it must provide high-quality recreational facilities for visitors. The Vail Public Works Department is responsible for maintaining streets, sidewalks parks and trails within the City.

### **Facilities**

Vail's pedestrian facilities are contained within pedestrian villages, rather than provided as sidewalks along all roadways. If sidewalks are located along streets, they are maintained by the general maintenance fund.

Vail has 16 miles of separated paths.

### **Maintenance Activities**

Routine maintenance on paths includes sweeping, repairing asphalt, trimming vegetation, and striping and signage. Contractors are hired for approximately two-thirds of the work.

In the winter, 4 of the 16 miles of paths are plowed, and 2 miles are groomed for Nordic skiing. Long-term maintenance includes overlays and larger repairs. These are funded out of the RET budget, but are separate from the Recreational Path Maintenance Fund.

### **Funding**

Vail has established a real estate transfer tax (RET), which applies a 1 percent fee on every real estate transaction. This funding is used for recreational funding, a portion of which is allocated to sidewalk and trail maintenance. This funding source has not been significantly affected by the economic downturn. Each year between \$100,000 and \$150,000 of the RET funding is allocated to the Recreational Path Maintenance Fund, which funds routine maintenance of paths. This more than covers routine maintenance; some years all the funding is used, some years it is not.

Public benefits are typically required as part of redevelopment project approval. Public benefit has included building, repairing or rebuilding a sidewalk or path adjacent or within proximity of a redevelopment project. In the past five years, the City has used this mechanism to rebuild 1.5 miles of separated recreational paths that run through private properties. In some cases, existing facilities are significantly upgraded—for example, on—street facilities may be rebuilt as separated paths.

Vail's Recreation District is a taxing entity that was developed to construct and maintain recreational facilities including the golf course and ice skating facilities. The Recreation District is not responsible for trails, with the exception of grooming the two miles of trail for Nordic skiing in the winter.

### **Eagle County**

Vail is located in Eagle County. EcoTransit, the transit agency, is responsible for constructing the regional trails system. Each municipality in the county pays a portion of its sales tax to Eagle County (usually about 0.5%) and a portion of that trickles down to fund regional trails.

## **5.9. Al Schumacher, Street Superintendent, Madison, Wisconsin**

Email correspondence forwarded August 21, 2009.

TRPA provided the following email correspondence that they had with Al Schumacher.

“Madison has both off road paved bike paths as well as "complete streets" (those streets that incorporate bike paths in either the curb lane or adjacent to the curb lane). During winter, a combination of agencies converge on streets and bike paths. Engineering and Parks has the major responsibility for snow removal from off road bike paths. Crews start working on bike paths at 4:00 am in order to try to get them plowed prior to 7:00 am and then work on them throughout the day. Streets crews are responsible for the bike lanes on the City streets. These are plowed and salted just like a main thoroughfare is maintained, which is as soon as the snow starts falling, throughout the storm and after the storm until the streets and bike paths are clear again.

'We utilize 3 types of equipment on the bike paths. Jeeps, articulating tractors and one ton dump trucks. We utilize 5 ton dump trucks with V-box spreaders on the streets that have bike paths included. When we lose a bike path due to snow accumulation, we utilize snow blowers and/or endloaders and either blow the snow or haul the snow away to widen the areas. This doesn't need to be done much on the bike paths but more often on the streets with adjacent bike paths.

The issues we have are when crossing over from a bike path onto a City street and then back onto the bike path. The window of snow at the ends of the bike paths cause bikers problems trying to maneuver over the windrow. Most of our main arterials do have turn lanes in them and we often have to remove snow from the turn lanes as the turn lanes become narrow during the winter season.

Let me know if you have more questions.

Al Schumacher  
Street Superintendent”

### **5.10. Pace Ericson, Operations Manager, Park City, Utah**

Park City has five miles of sidewalks and five miles of paved paths that it maintains. Annually, it costs about \$20,000 to \$22,000 per mile to maintain the five miles of paths. Three-quarters of the paths are located in residential areas, and have adjacent homes. The remaining quarter are in unimproved areas. Maintenance includes pruning, mowing three feet outside the path in unimproved areas, overlays, replacement of concrete, slurry sealing and fog sealing as needed. The city plows two thirds of its facilities in winter, at a cost of approximately \$300,000.

Maintenance is funded through the general fund; no special taxing district is required.

### **5.11. Brenda Stanley, Sidewalk Program Supervisor, Madison, Wisconsin**

Madison’s Sidewalk Program is divided into three contracts: ordered in repairs, saw cutting, and citywide contract. These are described below.

**Ordered in repairs:** City districts are organized into groups and scheduled for repair over the course of 10 years. The repair process takes two years. The first year, City inspectors walk every mile of sidewalk and record the repair needs. The second year maintenance bills are sent to property owners. Property owners are then given the choice of repairing the sidewalk themselves for 100% of the cost, or having the City do it and charge them 50% of the costs. Although the State of Wisconsin allows jurisdictions to charge 100% of sidewalk repair to property owners, Madison has an ordinance that directs the City to charge only 50% of sidewalk repair to property owners. Ninety-eight percent of property owners elect to have the City repair the sidewalk.

Once the city has identified repairs, they bid the repair work out to the lowest bidder.

**Horizontal Saw Cutting Contract:** To extend the life of a sidewalk, the city identifies tripping hazards and uses a horizontal saw cuts to bevel vertical tripping hazards to an acceptable vertical shift.

**Citywide Contract:** Repairs to sidewalks outside of the scheduled districts are handled by the citywide contract. The Sidewalk Program will repair damaged sidewalks, curbs and gutters, and at the end of the year bills the cost of the repairs back to the appropriate City department. (For example, if a water main break damages the pavement, the Sidewalks Program will bill it back to the Water Department.)

The Sidewalk Program employs three full-time staff and three seasonal staff. For the 2008/2009 fiscal year, the program spent \$1 million on ordered sidewalks, \$400,000 on citywide contract, and \$252,000 on sawcutting. The City reimburses property owners for repairs at \$2.50 per square foot for sidewalk repairs, and \$8 per square foot for curb and gutters.

## **5.12. Dan Wilkins, Director, Department of Public Works, Truckee, CA**

We spoke on September 9, 2009

### **Sidewalks**

Sidewalks exist in various locations around the City, and adjacent property owners are responsible for maintaining the sidewalks. The City does not have a specific ordinance placing sidewalk maintenance responsibility on property owners, but instead relies on the California Streets and Highways Code to define maintenance responsibility. In general, sidewalks located between on-street parking and businesses are cleared by property owners regularly throughout the winter, while sidewalks in other areas, particularly sidewalks at street edge adjacent to a parking lot and shopping center, are cleared less frequently. The City does not have ordinances that define maintenance standards for sidewalks.

### **Exploration of a Property-Based Improvement District**

Truckee is planning on expanding sidewalks in the historic downtown. The first major sidewalk project for the historic downtown is in initial design phase, and the City has begun conversations with the community regarding the possibility of establishing a property-based improvement district to fund maintenance of the sidewalks. The City identified the following steps in establishing a PBID: 1. Determine maintenance standards 2. Calculate estimated annual maintenance costs 3. Write an engineering report to assign costs equitably 4. Form an improvement district 5. Hold a proposition 218 vote. If the PBID does not pass, public funds will not be used to construct the sidewalk.

### **Class I Paths**

There are approximately 12 miles of Class I paths in Truckee. The City has constructed four miles of Class I trails, and is responsible for maintaining these facilities. For these facilities, the City works with a local nonprofit, the Truckee Trails Foundation, to maintain the Class I trails. Currently, the City does not remove snow from the trails during the winter, except for once during the spring cleanup. Since most trails are located away from roads, they receive little sand from roads, and sweeping is less frequently required.

In addition to the City-constructed trails, approximately 8 miles of trails have been constructed in conjunction with subdivision developments. Maintenance for these trails is typically assigned to a homeowners association or a business owner association. Expected maintenance standards for these facilities are vague, and the City is working with the Truckee Trails Foundation to develop clearer maintenance expectations.

The City has only recently started constructing trails, and is still working with the Truckee Trails Foundation and the community to develop maintenance standards that meet reasonable expectations. The City is considering establishing maintenance standards that include applying asphalt sealant every 3 to 5 years and developing a sinking maintenance fund to pay for long-term trail maintenance. The fund would be tied to the cost of long-term trail maintenance and the mileage of trails in the city. For example, trails in Truckee have an average lifespan of 20 years before resurfacing is required. Each year the City would set aside 1/20th the cost of resurfacing all existing trails, based on the current mileage of all trails.

### **Truckee Trails Foundation**

The Truckee Trails Foundation is a 501c3 nonprofit formed seven years ago to promote trails in Truckee. In addition to assisting the City with physical trail maintenance, and informing the

City's development of maintenance standards, the nonprofit funds capital improvement projects, researches trail policies, and advocates for trails within the community. The organization recently began holding fundraisers for specific construction projects and researched adopt a trail programs.

### **5.13. Tim Bustos, Former Bicycle and Pedestrian Coordinator, Davis, CA**

Email correspondence September 14, 2009.

**Which department has maintenance responsibilities for sidewalks and trails.** The physical aspect of sidewalks and all bicycle facilities (bike lanes and bike paths in Davis are designed, built, and maintained by the Public Works Dept. However, all vegetation appurtenant to these facilities (e.g. greenbelts and vegetation along sidewalks) is maintained by the Parks Dept.

**What are the routine and long-term maintenance activities and policies, including snow removal and repair policies?** Of course snow removal is not an issue in Davis, but other than that, Davis takes a good approach to maintenance - it's both regular and routine. Because these facilities are used so frequently, it's important to keep them well maintained - particularly the bike paths. As a reference, Davis has about 55 miles of separated bicycle paths, and we tried to program about \$100,000 a year for routine bike path maintenance (it may be lower now with the recession). In addition to an integrated Pavement Management System, the city's bike coordinator and the pavement engineer would ride targeted paths on bike at least once a year to determine priority projects to undertake. For sidewalks and bike lanes, these were all maintained as well, but maintenance expenses were programmed on a routine basis along with all other roadways. In summation, the important thing to remember is that it's all part of routine accommodation for all users of the transportation network in Davis, so it's not considered to be something "extra" for non-motorized users.

**Cost of maintenance activities.** ...It's actually kind of hard to isolate the expenses in Davis. As discussed above, most of the expenses are programmed as part of regular road maintenance activities (e.g. bike lanes and sidewalks), while we did try to set aside specific amounts for bike path maintenance, in this case, \$100,000.

**Funding sources for maintenance activities.** Many and varied, but a large part of maintenance costs were programmed from the city's general fund, while many of the facilities - including 28 grade separation - by developer impact fees.

**Challenges to maintaining trails and sidewalks to a high standard.** Challenges include building facilities at or above what the standards dictate. For example, for Class I bike paths, the state of California only requires a minimal base, but that may not be enough for an extreme climate like Lake Tahoe has. As a contrast, the State of Florida requires bike paths be built to the same standards as roadways - with a hefty sub-base. While this may be more expensive at the outset, it does save a lot of money in the long run in maintenance. For example, Davis switched to concrete for bike paths as the city standard a number of years ago. While a little more expensive, there are paths in Davis that haven't required any maintenance in over 15 years!"

### **5.14. Emily Kresia, Denver Public Works, Denver, Colorado**

Email correspondence on September 22, 2009.

“With regards to your questions below, I can do my best to answer the ones related to sidewalks, but Dick Gannon will have to answer those related to our off-street trails. Below is our current policies and practices; however, I will say that sidewalks are an ever present discussion item.

**\*Which department has maintenance responsibilities for sidewalks and trails.**

Currently per Public Works Rules and Regulations, the adjacent property owner has the responsibility to maintain the sidewalks. I have copied some of the applicable text below.

"The owner, occupant or agent of the owner of any building, property, or vacant lot in the city is required to maintain the sidewalks, the parking and the curbs, i.e., the area from the property line to the gutter, adjoining the building, property or vacant lot in a clean condition and to remove snow and ice from adjoining sidewalks immediately after every snowfall."

"It shall be the duty of the owner, occupant or lessee of any real property abutting a constructed right-of-way to provide for the continuing care, maintenance, repair and replacement of all improvements installed in any right-of-way area between their property line and the curb line adjoining their property."

**\* What are the routine and long-term maintenance activities and policies, including snow removal and repair policies.** (See above)

**\* Cost of maintenance activities.**

We do not have a separate line item in our General Fund budget for specific sidewalk maintenance activities. Public Works Street Maintenance is responsible for the the right-of-way, flowline to flowline, and provides street sweeping, pothole repair, paving, and full reconstruction. When there is full reconstruction of the street, Public Works as practice does provide curb and gutter and most often curb ramps.

**\* Challenges to maintaining trails and sidewalks to a high standard.**

The challenge is twofold: 1) there are missing links in our system because we rely on private property owners and redevelopment to construct sidewalks 2) we rely on the private property owner to maintain. So, if there is snow, clearing of the sidewalk happens at different times, if at all.

More info on the sidewalks piece is available in our Municipal Code Text of Section 49, Article XV. And here is a link to the Public Works Sidewalks and Curb Ramps rules and regulations. <http://denvergov.org/PublicWorksDepartmentRulesRegulations/SidewalkandCurbRampConstruction/tabid/428151/Default.aspx>

Hope this helps. Feel free to contact me with any additional questions.

Emily Kresia, AICP

Denver Public Works”

## **5.15. Ron Sandsler, Town of Mammoth Public Works**

Karen Fink spoke with Ron Sandsler on April 27, 2010. The Town of Mammoth maintains most sidewalks themselves, including both snow removal and long-term maintenance and repair. There are not a lot of sidewalks in Mammoth, and those that do exist are primarily in the downtown area. In areas where there are condominiums, the condominium owner is

responsible for snow removal and repair. Private property owners have a 10-foot easement for snow storage. They cannot put snow in the town right-of-way. If they need to store their snow off-site, they need to get an annual permit for \$110.

## 6. Appendix B: Bibliography

1. California Tax Data. (n.d.). *What is a business improvement district?* Retrieved August 19, 2009, from <http://www.californiataxdata.com/pdf/BusinessImprovement.pdf>
2. California Tax Data. (n.d.). *What is an assessment district?* Retrieved from <http://www.californiataxdata.com/pdf/AssessmentDistrict.pdf>
3. City of Madison. (n.d.). *Snow Removal Policy- City of Madison*. Retrieved from <http://www.cityofmadison.com/BI/snowRem.html>
4. City Council of South Lake Tahoe. (n.d.). *Measure S - Notice of Special Tax*. Retrieved August 19, 2009, from <http://www.cityofslt.us/ordinances/measure-s.html>
5. City of South Lake Tahoe. (n.d.). *Business Improvement Districts, Ski Run BID*. Retrieved August 19, 2009, from [http://www.cityofslt.us/finance/PDF/2008-2009/25\\_Business%20Improvement%20Districts.pdf](http://www.cityofslt.us/finance/PDF/2008-2009/25_Business%20Improvement%20Districts.pdf)
6. Fieldman, Rollap and Associates. (n.d.). *Overview of Community Facilities Districts vs. Assessment Districts*. Retrieved August 19, 2009, from [http://www.fieldman.com/PDFs/Chart\\_2\\_ADvsCFDsnapshot.pdf](http://www.fieldman.com/PDFs/Chart_2_ADvsCFDsnapshot.pdf)
7. Gustafson, C. (2009, July 27). General Manager, Tahoe City Public Utilities District. (L. Ledbetter, Interviewer)
8. L.L. Consulting. (2007). *Downtown Tahoe City Property and Business Improvement District Management Plan*.
9. Moore, G. (2009, July 27). Director, Parks and Recreation Department, City of South Lake Tahoe. (L. Ledbetter, Interviewer)