

**Tahoe Rim Trail Group Project**  
Tahoe-Baikal Institute  
Summer Environmental Exchange Program  
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Participants: Amorita Bustos, Egor Bykov, Krista Goff, Megan Kelly,  
Carrie Seltzer, Stanislav Suprunenko, Tatiana Trufanova.

Under the supervision and guidance of Mark Kimbrough, Executive  
Director of the Tahoe Rim Trail Association.

## *Abstract*

As part of the Tahoe-Baikal Institute's Summer Environmental Exchange program, seven participants worked with the Tahoe Rim Trail Association (TRTA) to develop skills in trail planning and construction. Over a ten-day period participants flagged potential trail sites near Mt. Rose and Kingsbury Grade, and worked on trail construction at Mt. Rose and Spooner Lake. In trail construction, participants learned which types of obstacles trail builders can manipulate to their advantage. Areas of proposed construction were broadly surveyed to find control points, which are locations where the trail must go in order to avoid sensitive areas, or areas that have special scenic properties. Wetlands and sensitive zones were noted so that participants could determine the best method to preserve them, a practice that encourages environmental ethics and allows for easier and safer trail use and maintenance. Participants used clinometers to maintain a manageable grade on the proposed trail. At Mt. Rose two potential trails were flagged and plotted with GPS units, but in the end the original trail seemed like the best option. At Kingsbury Grade two trails were also flagged, but the project participants recommend one route over the other. Through this project, TBI participants learned about the finer points of trail planning and gained an appreciation for the need to properly construct and maintain trails in a delicate environment.

## *Introduction*

Trail construction and promotion is one way in which Lake Tahoe organizations encourage eco-friendly recreational options. The most ambitious trail project, the 165-mile Tahoe Rim Trail (TRT), was completed in 2001—after twenty years, 5 million dollars, 200,000 volunteer hours and the efforts of 10,000 volunteers. The Trail runs through two states, six counties, three national forests, three wilderness areas, and state park lands. The Tahoe Rim Trail Association (TRTA), founded in 1981, is the organization primarily responsible for the construction, maintenance, and promotion of the TRT. Their mission is to “enhance, expand, and promote the Tahoe Rim Trail system, practice and encourage stewardship and provide access to the beauty of the Lake Tahoe Region.”<sup>1</sup> Tahoe Baikal Institute (TBI) 2004 Summer Environmental Exchange participants worked on four projects during a two-week internship with the TRTA, including construction at the Mt. Rose Highway summit and at Spooner Lake, and trail design at Mt. Rose and between the Henry Van Sickle Bi-State Park (California/Nevada) and the TRT on Kingsbury Grade in Nevada.

We worked on two problem sites in the Mt. Rose region. On the west side of the highway summit, we helped build new trail to bypass a route currently located on a dirt road. The new trail will be more attractive for hikers, bikers and equestrians. On the east side of the highway, we surveyed a new route between Mt. Rose Summit and Tahoe Meadows. The preexisting trail is intended for hiking and wheelchair access only, but is compromised by bike and horse usage. We surveyed and mapped the preexisting trail and three alternative trails for bikers and equestrians. Before trail construction can begin, the Forest Service must evaluate the TBI proposal.

The other two TBI projects were located at Spooner Lake and Kingsbury Grade. Working alongside Nevada Conservation Corps members, we built trail for one day in the Spooner Lake Wilderness Area. At Kingsbury Grade, we mapped and flagged the first section of a connector

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<sup>1</sup>Tahoe Rim Trail Association, *Trail Blazer: The Official Journal of the Tahoe Rim Trail Association*, Spring 2004, 1.

trail between the TRT on the Grade and Van Sickle Park. This report will focus on Kingsbury and Mt. Rose trail design.

### *Methods*

In order to plan new trail routes, we walked along possible paths numerous times to establish control points. Control points are areas that the trail must go through because of particularly striking vistas or in order to avoid difficult terrain. Walking the trail before actually laying the flags is crucial to avoid problem areas during more detailed route planning. Once control points were established, we used clinometers to measure the percent slope, or grade, of the potential path. The optimal slope was between 0 and 10 percent. Very large trees, extremely rocky areas, very steep slopes, and difficult crossings were all avoided during trail planning. We marked the proposed routes with flags placed in the ground at intervals of approximately 50 feet. Each flag was also plotted with a GPS unit.

Trail dimensions at both Mt. Rose and Spooner Lake were: two feet of tread (width of cleared ground on the trail), six feet of vegetation clearance at waist height to accommodate horses, and ten feet of vertical clearance. Macleods, shovels, pickmatics, rakes, and rock bars were all used in construction. At Mt. Rose, rocks were either moved out of the trail path or used in a supporting wall for the tread because the site was very rocky and sandy. Spooner Lake had more vegetation, so roots, stumps, and weeds were cleared from the tread.

## *Results*

Multiple trail routes were flagged and mapped at both Kingsbury Grade and Mount Rose.

### Kingsbury Grade:

Both of the trail routes we mapped between TRT on Kingsbury Grade and the newly acquired Van Sickle property begin below a Heavenly chairlift and end at a saddle across the valley. Each section is approximately a half-mile long. The first half of both routes follows the contour of the land to a suitable drainage crossing and maintains a slope of 0 – 5%. After the drainage, the trails diverge and cross three small drainages before the saddle. Path 1 is a higher route than Path 2. Path 1 maintains a gradual descent, with no sections steeper than –5%, and a few slightly above zero. Path 2 travels below a large rock pile that Path 1 crosses through. This necessitates a slightly steeper descent from the main drainage and some clinometer readings reached –10% on this route.

### Mt. Rose:

Proposals for new trails at Mt. Rose are more varied. Three new routes flagged in addition to the existing trail are referred to as the High, Low, and Divergent routes in this report. The High path begins at stairs off a gravel trail near the Tahoe Meadows parking lot and TRT kiosk. The elevation here is 8,734 feet (2,662 meters). The first section of this trail runs along the highway in an attempt to avoid a major wetland area, but a significant portion of the first 200 feet consequently passes through sitting water. Subsequently, the path is dry, but conspicuously near the highway. The High route also runs inside the fence designating the 50-foot buffer zone for the highway. An advantage to the High path is that it mainly adheres to the contours of the land when it approaches the designated saddle for this site. Most of the trail has a grade between 2 and 10%, but the saddle ascent itself is very steep and might require a switchback or stairs. The trail ends along the campground access road at 8,898 feet (2,712 meters). This exit is near the Mt. Rose Highway that bikers and horseback riders will cross to rejoin the TRT on the western side of the Highway.

The Low path begins from the Tahoe Meadows parking lot halfway between the existing trailhead and the High route. It takes a slightly drier route through the marsh than the High route, but it still crosses several streams. This route also keeps a grade between 0 and 10% until the end, where it becomes quite steep in the approach to the saddle.

After flagging these two routes it seemed as though the best alternate route would be a deviation from the Low route. This combined route uses the Low, drier path through the marsh, but deviates as it approaches the saddle. It approaches the saddle along the outer contour of the hill so that a less steep grade can be used and the valley view can be maximized.

### *Discussion*

Many challenges emerged during the trail planning and building process, but we have several recommendations concerning the flagged trails. At Kingsbury Grade, the lower trail has several obvious advantages. In comparison to the higher route, the low path offers a more mellow cross-slope and avoids a large boulder field, while staying on track with the major drainage and saddle crossings. These qualities combined make the lower trail a fairly obvious choice. Adjustments may have to be made after the Environmental Impact Assessment, however, if there are any archaeological, biological, or botanical findings of significant interest.

The trail options at Mt. Rose are less straightforward. The High route offers a scenic view near the end, but the majority of the trail goes through standing water, marsh land, and/or is extremely close to the highway. The Low trail has a drier route through the marsh, but it still crosses wetlands. This route also has a rather steep ascent at the end of the trail in order to meet up with the saddle and it is quite close to the existing trail in many places. The Divergent trail offers the best combination of these two, but still may not be a worthwhile endeavor because of its close proximity to the existing trail and the disruption it would cause to the wetlands.

In fact, after becoming rather familiar with the area, we felt that the best solution would be to add a few feet to the existing trail and open up a bike/equestrian lane. By modifying the existing trail, all types of trail users, including wheelchair users, would be able to use the trail as a connector. There would be no need to destroy further habitat in areas that are very close to either the highway or the existing trail. This would also require a smaller investment of labor, time and money because much of the infrastructure is already in place.