TEN-S-16

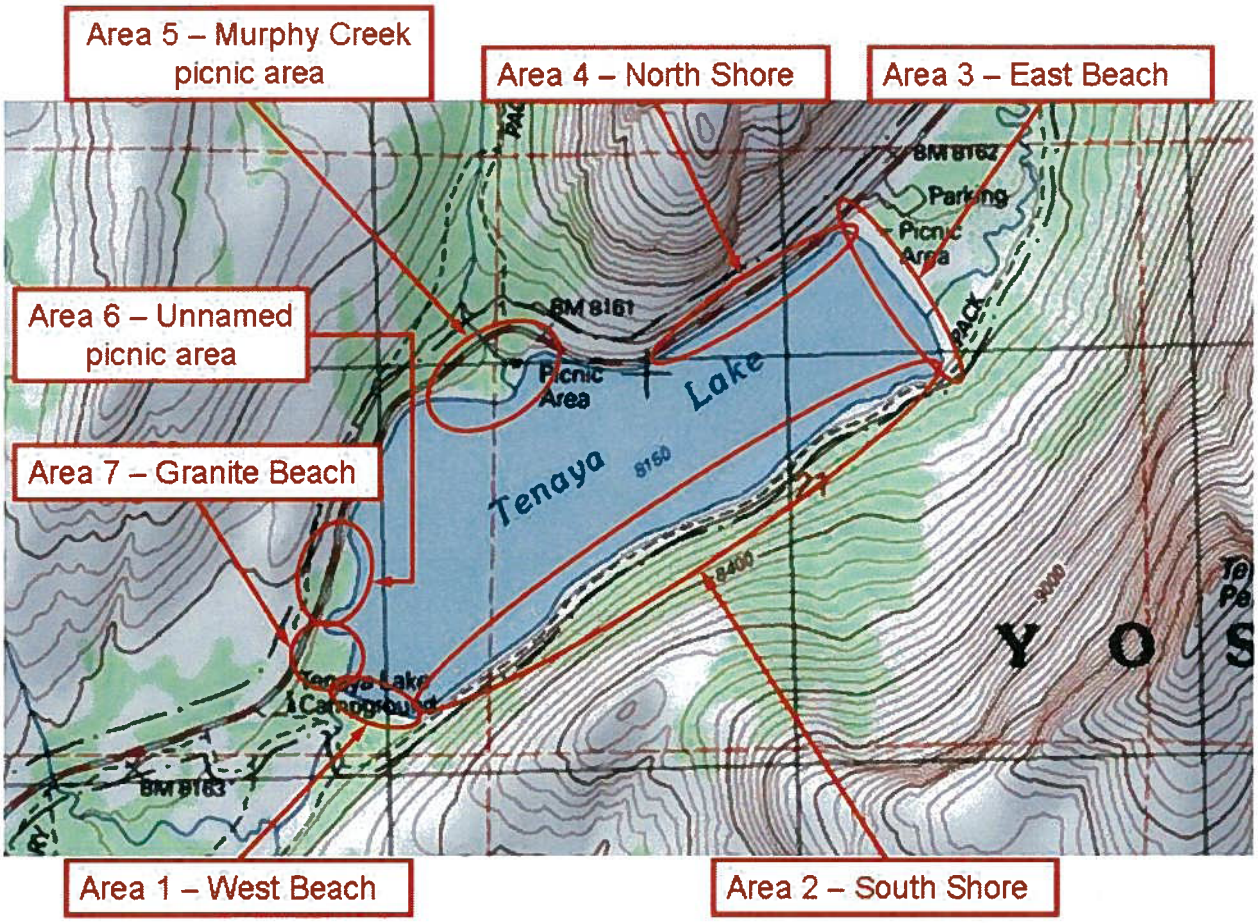
Comments on Conditions in the Lake Tenaya Area and Management Recommendations

[redacted]
El Segundo, CA

These comments result from a personal survey of the Tenaya Lake area conducted on foot on 4 Oct 2008 by myself and my wife [redacted]

Tenaya Lake specific areas and state of natural conditions in each:

Area:	Grade:
1. West beach	B – Good
2. South shore	A – Very Good
3. East beach & picnic area	F – Very Bad
4. North shore	D – Bad
5. Murphy Creek picnic area	F – Very Bad
6. Unnamed picnic area	F – Very Bad
7. "Granite Beach" social use area	D – Bad



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Observed damage mechanisms:

1. Damage due to uncontrolled foot traffic is causing destruction of forest and meadow areas.
2. Uncontrolled casual parking along the CA Hwy 120 roadside aggravates (1).

Summary findings

The above grades for preservation of natural conditions are directly correlated with unlimited accessibility by uncontrolled foot traffic. The chain of causality is as follows:

1. Uncontrolled access to an area by large numbers of pedestrians results in damage to grass and meadow areas, willows, and tree roots.
2. This damage results in turn in the loss of the soil over-layer of detritus and subsequent conversion of ground cover to bare decomposed granite gravel and coarse sand.
3. Increased uncontrolled foot traffic through these now obviously bare "use paths" (social paths) expands their size laterally and causes further ground cover & detritus destruction.
4. When expanding paths encounter trees, root exposure, root damage, and soil loss results in eventual tree destruction.
5. Tree destruction opens still more new walkable areas, which are converted in turn to bare decomposed granite "use paths".
6. Overall result: The entirety of areas 3 through 7 is more-or-less rapidly being converted to bare decomposed granite sand.

The solution is very simple:

1. Control where visitors can park.
2. Control where visitors can walk.

These measures are simple to implement, and in fact have already been implemented in many other areas of Yosemite National Park. Good examples are the meadows of the Yosemite Valley floor, the CA Highway 140 access to the Valley along the Merced River east of Arch Rock, and even (a small but salient example) the parking area at Pothole Dome at the west end of Tuolumne Meadows. Excellent examples outside YNP are the Muir Woods, Henry Cowell Redwoods, and Armstrong Redwoods California State Parks, and the Salt Creek and Badwater areas of Death Valley National Park, which are very fragile. It turns out, most visitors to natural areas respect clearly defined no-park and no-walk boundaries, and damaged areas recover *without any limit to the number of visitors allowed*, other than those imposed by available parking. I have witnessed this personally in all of the above-mentioned public Parks.

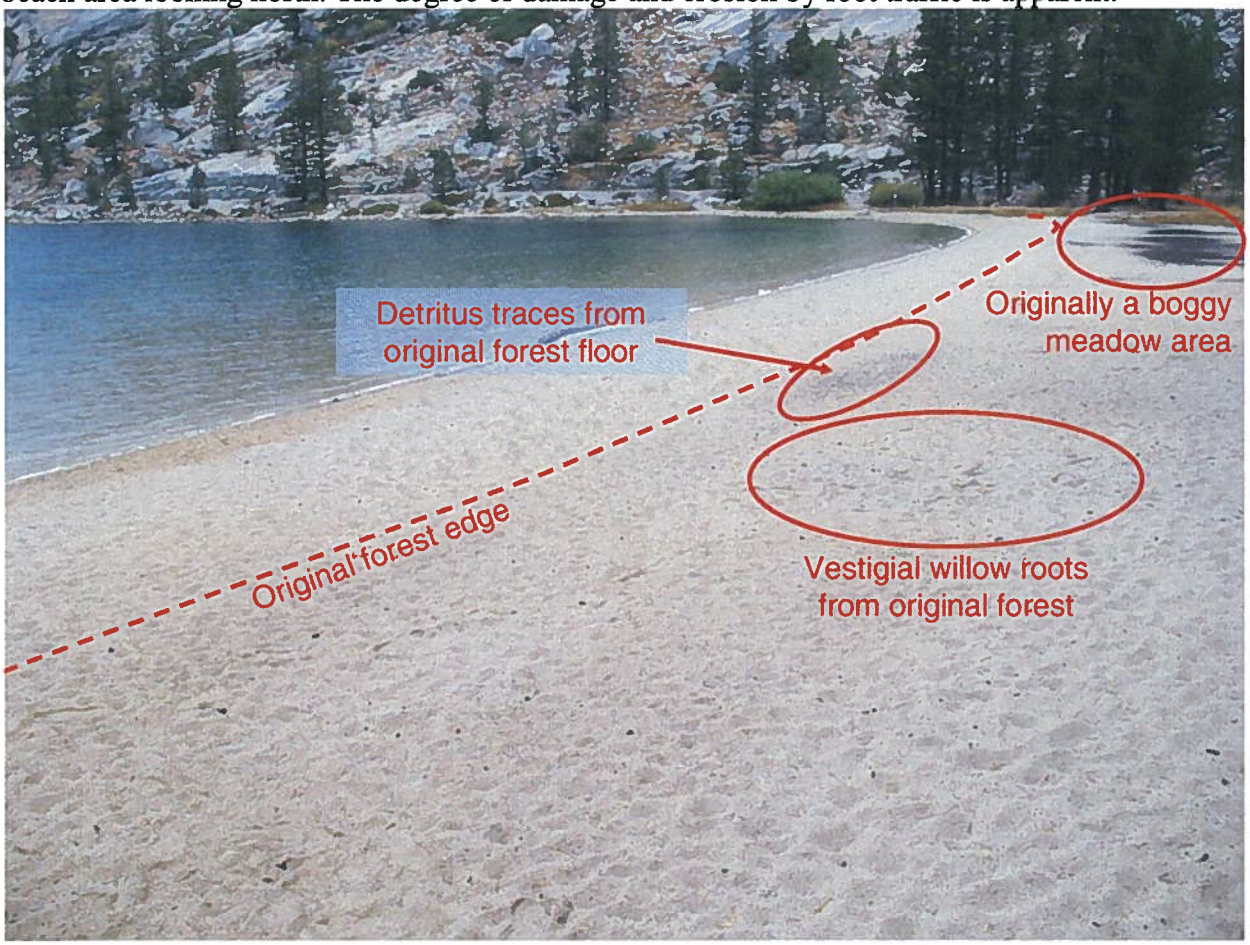
My comments on specific areas of the Lake Tenaya region follow on subsequent pages.

Area 1: The Tenaya Lake west shore is in **Good condition** due primarily to its *inaccessibility by car* and the *attractions of nearer vistas* that divert less energetic visitors. However, its proximity to, and visibility from, Murphy Creek picnic area and the "Granite Beach" scenic area draws the attention of some visitors, with the result that some erosion and destruction of flora and habitat is apparent. Here are two photos of the west shore area, viewed from an adjacent portion of the Granite Beach area:

Area 2: The Tenaya Lake south shore is in **Very Good condition** due primarily to its *inaccessibility by car* and its *distance from parking*, which discourages casual exploration. Only the most energetic visitors take this hike, even though it is quite easy and short (3 mile loop, flat). Numerous boulders are available to sit on, and the area is used mostly for fishing and day-hiking along the circumferential trail, when it is used at all. The photos below indicate that no use trails or eroded areas are visible along this stretch of the south shore, which is the most open and accessible stretch. This is a very lightly used area.

Area 3: The Tenaya Lake East Beach picnic area is in **Very Bad condition**. It has been severely impacted by uncontrolled and indiscriminate foot traffic. The decomposed granite coarse sand "beach" area, which is natural and has been caused by wind waves from the strong prevailing westerly afternoon winds that originate at the Golden Gate, has been extended over 100 feet away from the lake through the actions of uncontrolled, indiscriminate foot traffic. In the process, a number of trees have become isolated by sand, and large areas of meadow which, among other attributes, protected these tree roots, have been annihilated and the trees severely threatened or killed. Some trees have been sawed off close to ground, presumably by YNP personnel, as they presented a safety hazard of falling among sunbathing picnickers. Others have died and fallen. The original forest-beach interface has been wiped out everywhere in this area, and is discernible only by a few vestigial roots sticking out of a low berm in the sand. The sand itself extends, in the form of use paths, all the way to the picnic area parking lot ¼ mile away to the east, displacing what was once meadow and rich forest floor detritus ground cover.

The following pictures only begin to portray the damage. This photo is from the middle of the beach area looking north. The degree of damage and erosion by foot traffic is apparent.



Looking south, the damage extends the entire length of Tenaya east beach. The exposed root masses of the next line of threatened trees are apparent. At least one line is already gone.

Where the footpath from the East Beach Picnic Area parking lot emerges from what remains of the forest, a large eroded area marks where many use paths have fanned out to the beach.

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Why is this happening? The reason this erosion keeps pushing east is clear from these photos: As foot traffic erosion kills the trees nearest the beach, ***visitors move the picnic tables east to find new shade***. Visitors then erode the intervening ground, and the process repeats. The berm in the foreground is the continually eroding edge of the vestigial meadow/willow root mass which is being chopped back by hundreds of human feet every day. Left unchecked, this "beach" will continue to grow eastward until it is stopped eventually by Pywiack Dome.

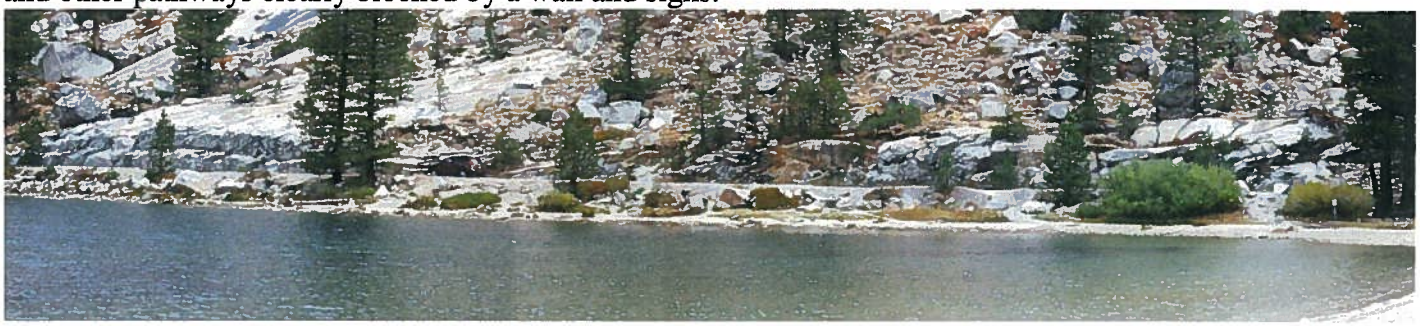
Stump of a tree that succumbed long ago. Note picnic tables in shade 100-150 feet away.

This tree is marked for death. Most of its soil has been blown east by the westerly wind because no plants remain to anchor it. The dwindling sand can't provide the nutrients it needs to survive.

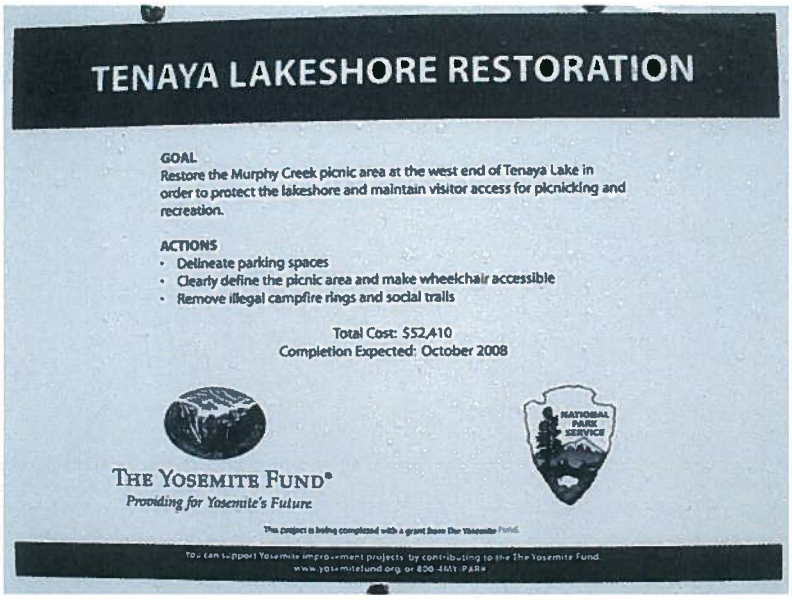
These trees are similarly threatened; the "beach" has surrounded them. When they die, visitors will move picnic tables further east for shade, and the "beach" will expand another 50-100 feet.

This continuing erosion and destruction of flora and habitat can be easily halted, and the damaged ground restored, through parking and traffic controls, but the trees that are gone are gone forever, and new-growth trees will take at least a human lifetime to take their place.

Area 4: The Tenaya Lake north shore is in **Bad** condition. It has been heavily impacted by uncontrolled and indiscriminate foot traffic. The situation is not Very Bad only because this area is inhospitable to picnickers, who only use this area as a foot corridor to nearby east beach. Either use would be eliminated if either a) no parking were allowed here, or b) a clear, controlled path to the beach – preferably a stairway/causeway right onto the beach itself – were provided, and other pathways clearly blocked by a wall and signs.



Area 5: The Tenaya Lake Murphy Creek picnic area is in **Very Bad condition.** It has been severely impacted by uncontrolled and indiscriminate foot traffic. Use of illegal campfire rings has also contributed to flora and habitat destruction. Since this area has already been recognized by YNP as requiring restoration, as evidenced by this sign, I will not provide photos of the damaged area to support my assessment that the damage is severe.



I will comment, however, that the "Actions" listed on the sign, while in the right spirit, sound inadequate to the task, and their completion date is unlikely to be met as there was no sign of the specified restoration activity on 10/4/2008.

This area requires stringent parking and foot traffic control – not so much in *amount* of foot traffic as in where it is allowed to occur. Such control requires a clearly defined, paved, fenced parking lot with demarked parking spaces and no parking allowed other than in designated spaces. It also requires elimination of casual parking outside the lot(s), which causes the emergence of use trails ("social trails"). The Tuolumne Shuttle, which stops here, needs a designated, paved turnout for its sole use, with no visitor parking allowed there.

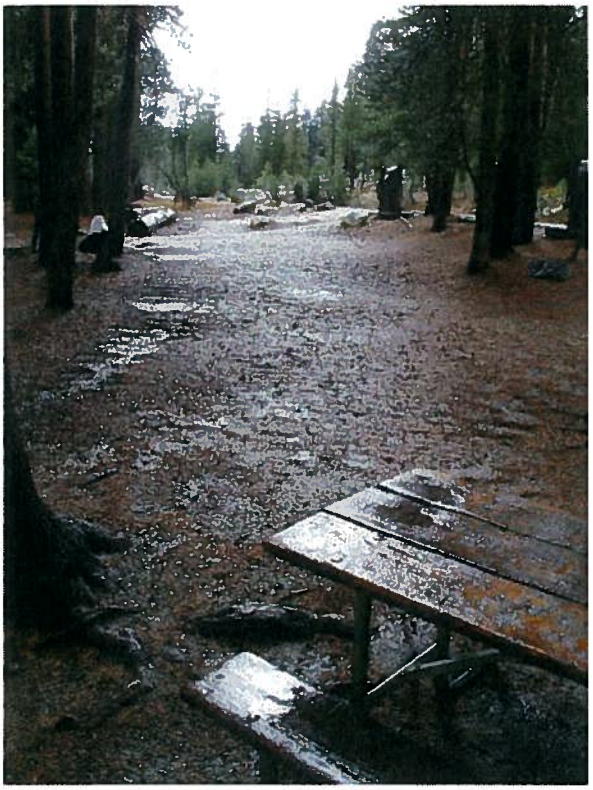
By the way, the Shuttle also needs an acceleration lane, because this Shuttle stop is on a blind curve for eastbound vehicles, most of which are traveling too fast. This scares me every time I pick up an eastbound Shuttle there, fearing we'll be rear-ended as we *slowly* accelerate.

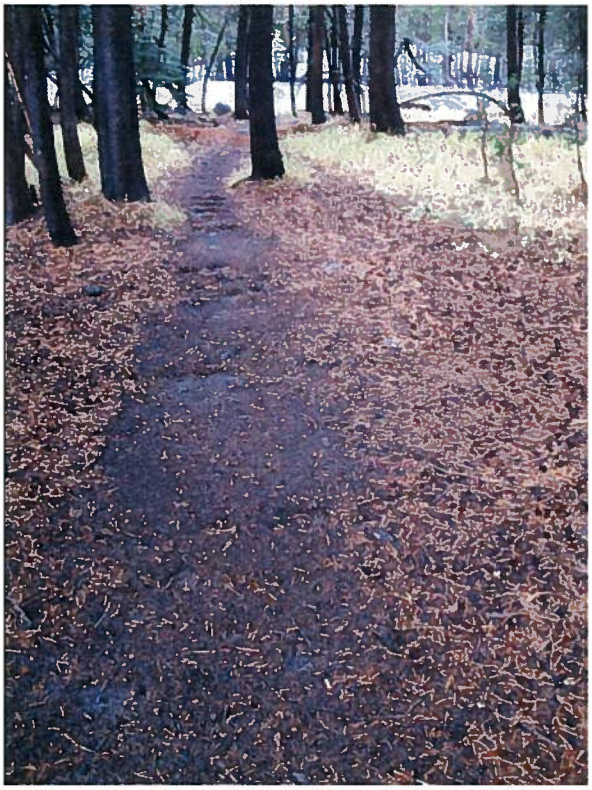
In addition, access to the shoreline needs to be limited to the east-facing and south-facing shorelines only – shores east of Murphy Creek. There are already NPS signs "sort of" to this effect, indicating YNP recognizes the problem, but these are too small and too few, and there is no physical barrier to deter visitors who don't stop to read. When I was there on 10/4/08 I was actually looking for these signs and still had a hard time distinguishing what area was off-limits.

Area 6: The Tenaya Lake unnamed picnic area is in **Very Bad condition**. It has been severely impacted by uncontrolled and indiscriminate foot traffic. This erosion process has been aggravated 1) by the long, thin dimensions of the area, and 2) by the fact that the area is served by official roadside parking for most of the length of the area, resulting in uncontrolled use path creation. So much erosion by foot traffic exists here that these paths have grown together to form one huge eroded "use area" that is uniformly denuded of all growing plants.

The area backs onto a small, shallow, fragile cove and foreshore separating this area from Granite Beach (Area 7), and unofficial parking and associated use paths to the shore have severely impacted this sensitive zone.

This area is in a very sad state. The following pictures speak with eloquence.





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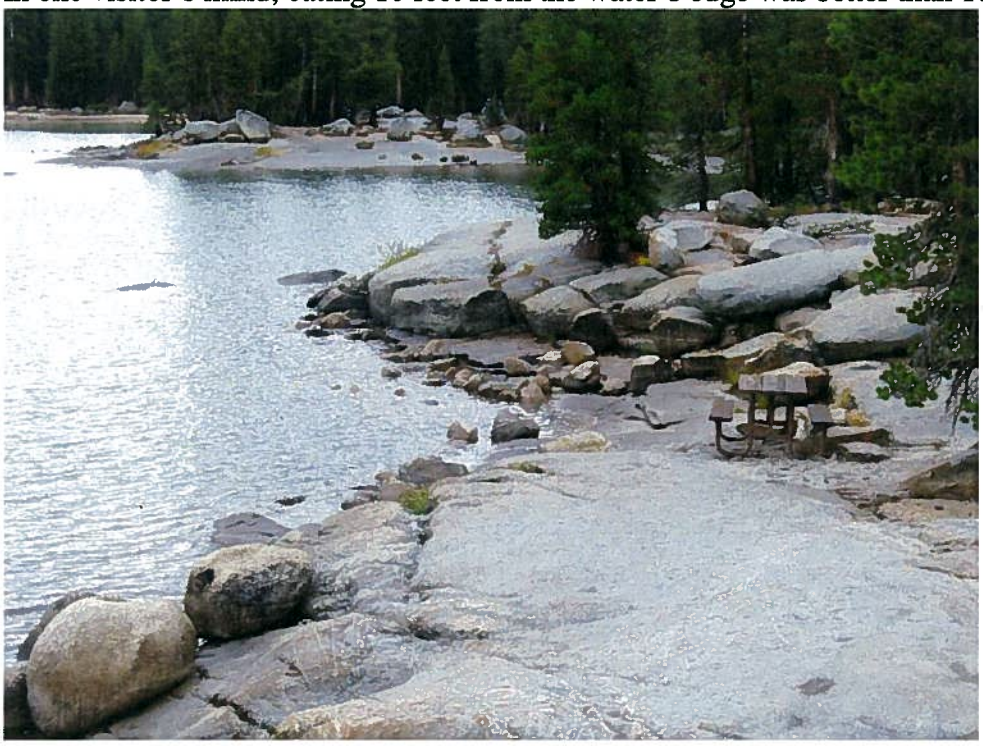
Why is this picnic table here? Because it was not chained down in one spot.
In one visitor's mind, eating 10 feet from the water's edge was better than 100 feet.



Area 7: The Tenaya Lake "Granite Beach" area is in **Bad condition**. It has been heavily impacted by uncontrolled and indiscriminate foot traffic.

The photo below shows the "Granite Beach" focal point for this area.

The Granite Beach at the center of this photo is a well-known and popular site for photos of Tenaya Lake. Mountain photographers often wait days for the right scenic conditions here, revisiting the location once or twice daily during their visits. As you can tell from my personal example, that I took casually on 10/4/08 during my Tenaya area survey (see photo at the end of this report), even when conditions are imperfect this spot's pretty photogenic.

While a parking lot (formerly the lot for the old walk-in camping area, long since removed but still shown on topo maps) exists for this area (to the right, in the trees above), most visitors do not know what that lot is for, and do not slow their vehicles until they get their first glimpse of the lake through a thin line of trees. Then the following sequence of events happens: 1) They stop quickly at an unofficial parking area on the north side of the road . . . (see photo next page)

. . . then 2) they cross the road and walk down this obvious use path . . .

. . . and finally 3) end up at this spot right in the middle of the sensitive shallow cove area . . .
(see photo next page)

. . . from which point they cannot avoid trampling what little foliage remains on this fragile foreshore as they seek to gain the granite slab in the distance.

So from a conservation standpoint this area has four strikes against it: 1) visitors know it exists, but not exactly how to get there, 2) they don't know that the small, virtually unmarked parking lot just to the west is where they should park, 3) large numbers of them are only interested in tromping in, grabbing a few shots, and tromping out, so they follow the path of least resistance, pictured in the sequence above, and 4) even if they parked in the lot, no clearly designated path to Granite Beach exists there, so the use trails would get used and continue to expand.

Again, this can all be remedied through careful vehicular and foot traffic control, clear signage, elimination of unofficial parking areas, and installation of unmistakable barricades that discourage use trails and entry into sensitive areas. The sign at the parking area entrance should say something like "Granite Beach Scenic Viewpoint" in large, friendly letters, and no other parking for this area should be possible.

Further foot traffic control is needed west of this location, because that's where visitors go who do not head directly back to their car after taking their photos. This is a lovely little part of the Tenaya Lake area, and foot traffic west from here, though less than at East Beach or Murphy Creek, is still considerable, as the resulting maze of use trails west of Granite Beach bears witness. Some level of foot traffic confinement is in order in this area.

I hope these comments help clarify what my wife and I observed in the Tenaya area and provide some guidance as to what management actions would be appropriate to eliminate further damage and allow damaged areas to recover, while still providing undiminished access to and visitor enjoyment of these areas. The expedients I've suggested are used in many other national and state parks, including within Yosemite National Park, and their effectiveness has been thoroughly proved.

[redacted]
El Segundo, CA 90245
[redacted]

Clearing Storm over Lake Tenaya (taken from Granite Beach)