Summary:

Four volunteers performed 244 hours of volunteer work repairing and maintaining the Refugio Grey area of the “W” section of the Paine Circuit trail in Torres del Paine National Park in the Patagonia region of Chile between December 6, 2011 and December 16, 2011.

Specifically, the volunteers constructed a culvert and drain over the existing trail to prevent erosion and water on existing trails, repaired rock stairs, camouflaged closed trails, removed trail blazes from closed trails, cut brush and vegetation from trail corridors, and assessed prior trail work performed by Conservation Volunteers International Program (Conservation VIP) in 2007 and 2008. The volunteers worked in conjunction with two Conservation Volunteers International Program leaders (the CEO of Conservation VIP and a volunteer bridge engineer), who were already present in the park, coordinating the construction of a suspension footbridge over a 140 ft. (43 m.) wide ravine (quebrada). At the bridge site, the volunteers constructed a large rock and gravel platform on the northern side of the ravine where hikers will ascend a ladder to gain access to the bridge. Additionally, the volunteers assisted in the erection of one of the wooden towers which will be used to suspend the cabling that will support the bridge across the ravine.

Volunteers also provided technical advice to the management of the concessionaire of the new Refugio Grey Lodge, “Vertice Patagonia,” concerning the location of a trail leading from the new pier on Lago Grey to the new Lodge and campground.

One week following the completion of the volunteers' work in the area, a devastating forest fire burned a substantial portion of the western and southern portions of Torres del Paine. It is believed that work performed by the volunteers in the burnt area, particularly, the construction of a large culvert approximately 1 km. South of the Rio Olguin Bridge, will be effective in keeping water from eroding the trail when anticipated heavy runoff from the burnt hillsides begins running downslope.

Specific Projects:

Tree and Shrub Cutting and Brush Clearance:

Volunteers cut back trees and shrubbery along approximately 10 km of trail in the work area. The volunteers were tasked to bring the trail corridor in line with internationally accepted trail standards of maintaining approximately 2.5 meters of clearance from the trail tread. This
substantially improved the safety of the trail by removing snags and tree branches which could cause injury to hikers.

**Repair Rock Stairs and Install Rock Stairs:**

A hazardous, steep, and narrow section of “The Circuit” trail approximately 4 km. north of Refugio Grey which traverses a cliff, and has been constructed with wooden retaining wall was repaired. The trail between the cliff and the retaining wall was steep and filled originally with loose gravel. Three large stone steps were placed in the trail to provide footing, and prevent the trail from eroding as loose gravel was being kicked out as hikers attempted to negotiate the sloping gravel trail.

**Rock Culvert and Water Diversion:**

A 300 meter section of trail approximately 1 km. to the south of the Rio Olguin Bridge was observed to have significant water running downslope on the “W” trail. The cause of this water was from a small creek that flowed down a small drainage that flowed into the trail tread, and did not have any culvert to enable it to cross the trail and flow naturally down the drainage. This lack of culvert was causing the water to flow down the trail 300 meters, creating a large muddy area of approximately 100 sq. meters, which hikers had to cross. Substantial erosion was occurring on the trail, creating wet and slippery conditions for hikers.

Volunteers dug a 2.5 meter drainage ditch across the trail and lined the ditch with large and small boulders to channel the water through the ditch and across the trail. Two large boulders were placed across the culvert as stepping stones to assist hikers crossing the culvert. Within hours after the drainage was completed, water ceased to flow down the trail and the trail was drying up. It was expected that the previously muddy area would dry and revert to normal forest conditions.

**Bridge Rampart:**

The Grey Glacier Quebrada Suspension Bridge is a major project being coordinated by Conservation Volunteers International Program and CONAF. Funding for the bridge is being provided through generous individual donations and a grant from Tourism Cares. CONAF is providing additional funding, material, and personnel.

Volunteers build a large rock platform approximately 20 sq. meters in size and graveled the platform to provide a rampart on the north side of the ravine to provide a durable staging area for hikers to stand and await their turn to cross the suspension bridge. The platform joins the existing trail to where the short ladder will be located that hikers will climb to reach the bridge deck.

**Bridge Tower:**

Volunteers assisted the Conservation VIP bridge engineer and the CEO with erecting one of the 4 meter tall towers on the southern side of the Grey Glacier Quebrada. This was accomplished with block and tackle rigging, and 6 individuals all contributing brute strength to the endeavor. As this was the first tower to be erected on the south side, the task provided importance lessons for erecting the second tower, which was accomplished after the volunteers left the area.
Removal of Trail Blazes and Camouflaging Closed Trail:

Volunteers closed a section of trail located 3 km. north of Refugio Grey on “The Circuit” trail. Previous attempts to close off and camouflage this section of trail had been unsuccessful. Volunteers added substantial brush and dead tree branches to hide the closed trail. Rocks were placed along the new trail section to encourage hikers to use the new trail and to define the new trail. Approximately 6 different tree blazes painted in fluorescent orange were removed from trees so that hikers would not be confused and use the old route by following the blazes.

Trail Survey for Vertice Patagonia:

At the request of CONAF, and the concessionaire, Vertice Patagonia, the volunteers examined the area where both CONAF and Vertice Patagonia requested Conservation VIP assess possible routes for a trail from the new pier on Lago Grey that services the new Refugio Grey lodge, up a steep slope to the new Refugio Grey campground, a distance of about 1.5 km. Volunteers determined that the previously proposed route for a trail from the pier to the new campground next to the new Refugio was not suitable for a trail, and that no safe trail could be constructed along that route which would meet international trail standards. In fact, the proposed trail route was deemed entirely too dangerous in the opinion of the Conservation VIP trip leader. It was recommended that an existing rough trail leading from the pier to the back side of the new Refugio Grey would be the best route for a trail, although the trail would lead past and through the maintenance area of the new Refugio. It was suggested that fencing could be used to segregate hikers from the maintenance area.

Assessment of Prior Trail Work from 2007 and 2008:

The volunteers assessed the work of Conservation VIP in the Refugio Grey area that was performed in March 2007 along the “W” trail going south from the old Refugio Grey approximately .5 km. beyond the Rio Olguin Bridge (A total of approximately 8 km.) It was determined that most of the work performed in 2007 had been successful and that some minor repairs were needed. Specifically, more gravel needed to be placed on the trail along the “beach” area of the trail immediately south of the Rio Olguin Bridge. Some of the footbridge decking has been lost and/or came loose from several muddy areas on the slope above the Olguin beach area. This area was apparently heavily damaged by the Dec 27, 2011 fire, and it is unknown what conditions will be found upon reassessment.

The volunteers also reviewed the trail work performed by Conservation VIP on the trail between Paine Grande Lodge and Campamiento Italiano. Several of the large culverts that were constructed in March 2008 have deteriorated, probably due to heavy snow and erosion. These will need to repaired and strengthened to meet the conditions of their environment. However, this area too was severely burned, and it is unknown if post-fire erosion will further erode the culverts, and damage the culverts which were seen as intact during the assessment.