

## Mountaineering Report – 2009

---

### Highlights

Lots of change within the ranger division of the park set a fresh tone for the season. Ranger Stefan Lofgren transferred (once again) into the climbing ranger program, this time, as the Mountaineering District Ranger. Ranger Margaret Anderson was hired as the new EMS director for the park, and Deputy Superintendent Randy King was transferred to acting superintendent of the park, just to name a few of the changes.

Above average snowpack and nice weather kept the mountain in great overall climbing shape this season. Long, drawn out, wintery storms were present in April and May, but June held unseasonably nice weather. Compared to last year, where the sun didn't appear on a single weekend day in June, every weekend had sunshine this June. Day for day, the number of climbers was approximately 3-5% above the 7-year average.

July and August held decent weather as well. A stronger high-pressure system during this time burned off all the extra snowpack at an exponential rate. Both of the standard routes, the Disappointment Cleaver and the Emmons/Winthrop, stayed in much better shape than the previous couple of seasons.

The new guiding concession plan has worked out many of its oddities and all three major guiding companies were working well this summer. A variety of special use permit climbs were on the mountain this summer. Meeting and seeing other guiding companies on the mountain was a great way to check out their programs.

A small increase in volume of minor rescues occurred this season. There were no fatalities on the upper mountain. One of the more serious rescues involved our own climbing ranger accidentally skiing into a crevasse. The incident brought home the importance of 'practicing safety in everyday climbing ranger duties. Operational procedures for upper-mountain patrols will change following a board of review's recommendations based off the incident.

The climbing ranger program received two major awards this season. The first award was given to Chris Olson. He received a Valor Award for his participation in a rescue on Liberty Ridge in 2002. He flew to Washington DC to receive the award. The second award received was the Andrew Clark Hecht Memorial Public Safety Achievement Award. It was presented to the entire climbing ranger program for an outstanding reduction in accidents on the upper-mountain over the last three years.

Focus on the flood damage from November 2006 took away progress from the Camp Muir Development Concept Plan (DCP) the last two years. This year saw the renewal of the DCP effort, especially from the administration. Improvements include better facilities for the public, enhanced accommodations for the new guiding concession plan, and a possible switch from solar-dehydrating toilets to a newer style.

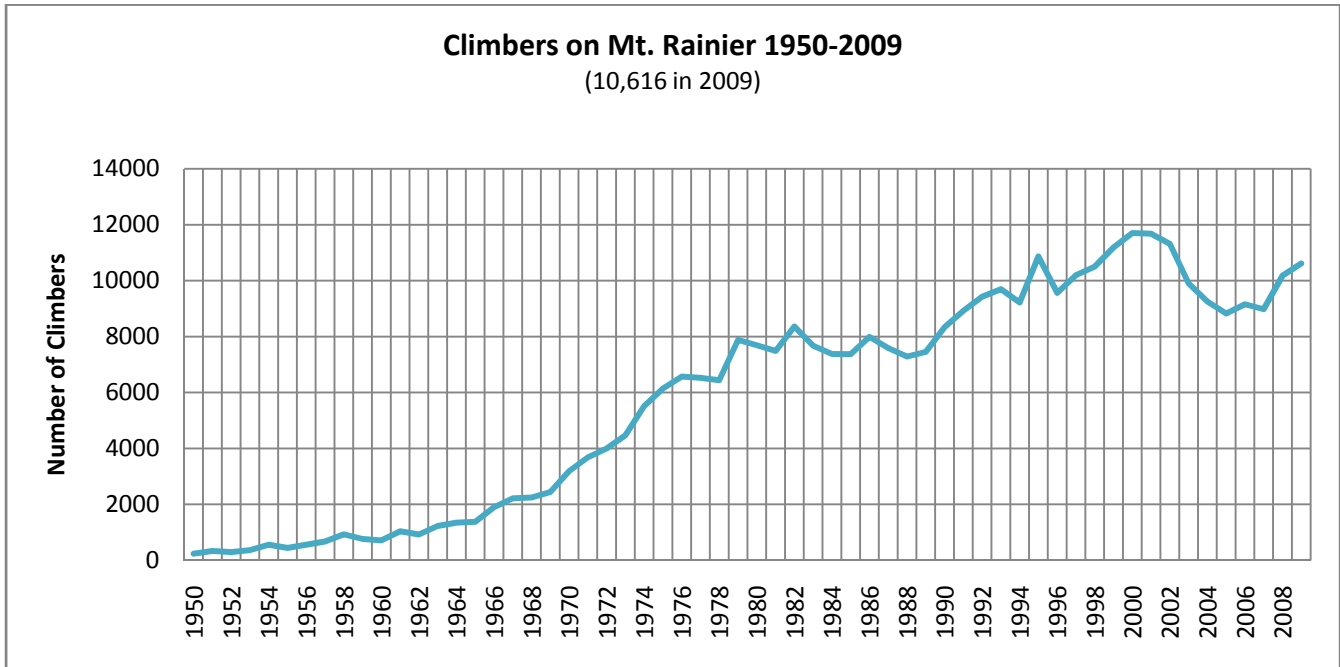
The Park Service sent up a large multi-disciplinary crew to repair and improve the Camp Schurman infrastructure. The major additions included a new roof for the ranger hut.

Another addition to the staff was made in the Climbing Information Center at Paradise. The climbing program hired a teacher-ranger-teacher, Jeff Houck, to spearhead the office operations. Jeff helped interface between the climbing ranger program and the other programs/divisions in the park. He was a reliable and consistent point of contact for the climbing ranger program.

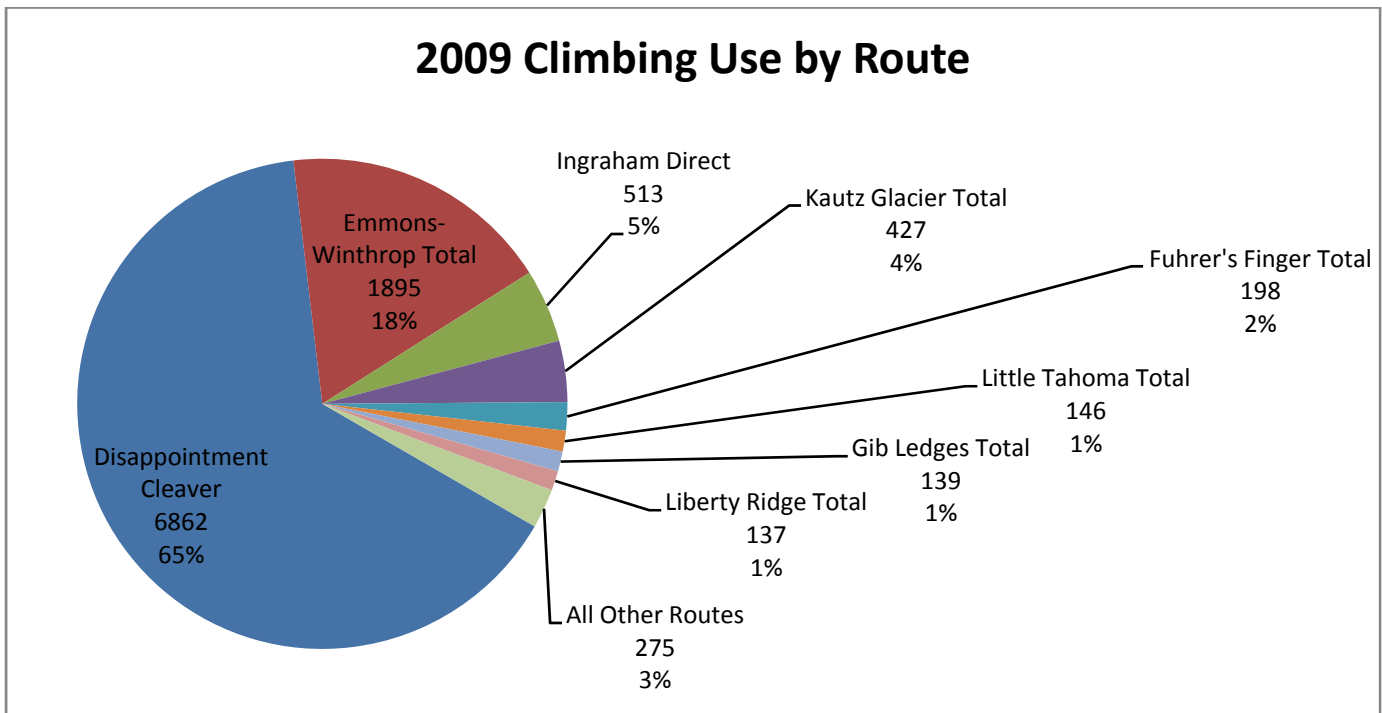
Lastly, the climbing ranger program had the great opportunity to host Phu Nuru Sherpa for two patrols. A highly skilled Nepalese climber, Phu Nuru was great to have on staff. He spent one shift at Camp Muir and one shift at Camp Schurman. This is the second year we've hosted Nepalese climbers – last year both Mingma Tsheri Sherpa and Chewang Nima Sherpa came for a patrol at Camp Muir. The climbing ranger program's relationship within the international climbing community continued to build and become one of the more rewarding and valuable aspects of our work.

### Climbing Statistics

General visitation at Mt. Rainier increased about 5% over last season. Climbing usage showed similar increases. In 2007-2008 (Oct 01 to Sept 30), there were 10116 climbers. During the same period in 2008-2009, there were 10,616 climbers.



Who would've thought that the "worst economic times since the great depression" would have seen an increase in recreation to National Parks. Many people have speculated that the increase was due to people taking "stay-cations". Indeed, many people did report that instead of taking longer and vacations out of the country, people preferred to recreate nearer to home.



Climbing use by route was historically consistent with recent years' statistics. Almost 80% of climbing use on Mt. Rainier begins at Paradise.

## **Mountaineering Patrols, High Camp Duty, and Ranger Station Shifts**

### *Patrols*

Climbing rangers patrolled on 10 different routes totaling 166 ranger-summits continuing a strong overall presence on the mountain. Duties while patrolling included acquiring up to date route information, snow conditions, new hazard locations, taking photos for the blog, monitoring commercial services, and resource protection. Climbing rangers patrolled mostly on the standard routes with the heaviest traffic, but also found time to climb two north-side routes.

Routes patrolled included Disappointment Cleaver, Ingraham Direct, Emmons/Winthrop Glacier, Fuhrer Finger, Liberty Ridge, Ptarmigan Ridge, Gibraltar Ledges and Chute, Kautz Glacier, and Little Tahoma.

Patrolling routes put climbing rangers in better positions to assist on SARs than had they been staged at Paradise. The Boot-Top SAR, Steam Vent SAR, Wick SAR, and George Assist SAR all were responded to by climbing rangers who were on patrol, on the upper mountain.

### *High Camp Duty*

Every climbing ranger spent time at high camps this season. There were fewer crossovers in duty stations this summer – Eastside climbing rangers stayed mostly at Schurman and Westside climbing rangers toured mostly through Camp Muir. There were two climbing rangers on staff at the high camps for most of the season. Double staff at high camp allowed rangers to safely climb more often and have a better presence on the mountain. Evening rounds were conducted around 17:30 each night at high camps. Climbing rangers contacted all of the public climbers staying at the high camps and communicated with them the necessary information to keep people safe. Climbing rangers spent a recorded 535 hours contacting climbers at both high camps all summer. That averages out to spending two hours every night, talking with the climbers at both high camps, throughout our whole season (Memorial Day weekend to Labor Day weekend).

High camp leads Jeremy Shank and Tex Cox headed up various projects at high camps this season. These included repainting the toilets with all-weather brown paint, rock stabilization and stair construction, and high camp cleanups. A total of 195 hours of maintenance was recorded along with 146 hours of rock and soil stabilization projects.

### *Ranger Stations*

Paradise office operations moved out of the old Jackson Visitor Center and back into the Guide House at Paradise. The Climbing Information Center in Paradise was staffed seven days a week, 6:00 to 18:45, and the White River Ranger Station was staffed by climbing rangers two days a week, Friday 11:00 to 19:00 and Saturday 7:00 to 12:00.

The main duty while working in the ranger stations was accident prevention. Every climber and guide had to talk to a ranger before receiving their climbing permit. This gave climbing rangers an opportunity to communicate the hazards and current route conditions. Climbing rangers also maintained a blog (<http://www.mountrainierclimbing.blogspot.com>) with which photos and route descriptions from our upper mountain patrols were shared with the public.

Duties accomplished while working the ranger stations included responding to nearby incidents, taking weather observations, training, organizing EMS supplies, assembling blue bags, and completing end of shift paperwork.

## **Searches and Rescues**

Paradise continues to attract the lion's share of the incidents in the park. Most of the climbing rangers are quartered at Paradise for that reason. Climbing rangers responded to scores of major and minor medicals in the park contributing the parks emergency response and EMS programs. Many of the general medical incidents included heart attacks, open femur fractures, acute allergic responses, and other life-threatening injuries to general visitors in the park.

Climbing rangers responded to twenty-six search and rescue incidents, eighteen of which were mountaineering related. Most of the SARs were due to various leg injuries and a surprising number of breathing complications. The majority of the SARs occurred on the Westside of the park. A short description of each mountaineering incident follows:

*Pederson SAR 5/21/2009 12:00:00 PM*

An RMI client tripped and fell awkwardly on his knee near Cathedral Gap. Ranger Buckingham assisted multiple RMI guides in littering the patient back to Camp Muir. The patient was then sledged down to Paradise via RMI guides only. He left via POV.

*Steam Vent SAR 5/24/2009 8:30:00 AM*

An RMI guide fell into a steam vent on the summit and had multiple injuries, including difficulty breathing. They contacted the Park Service on the radio and asked for assistance. Rangers Wheelock and Mueller were already at 13,100 in route to the summit and asked to continue. Rangers Gottlieb, Shank, and Olson were all stationed at high camps and prepared for a technical lower of the patient from the summit. Ranger Edmonds prepared his flight gear and responded to Kautz Helibase where he rendezvoused with the helicopter. The helicopter flew with Edmonds to the summit and landed. Edmonds loaded the patient and both flew back to Kautz Helibase where the patient was transferred to our park ambulance. The park ambulance met an AMR ambulance shortly after, outside the park, and the patient was transferred.

*Boot Top SAR 5/24/2009 5:30:00 PM*

Park Dispatch received a 911 call from the Nisqually Glacier from a party of two who reported one of them had broken their ankle. After receiving GPS coordinates rangers determined they were about 8,100 feet up on the Nisqually Glacier. Rangers Wheelock and Mueller were on patrol camping at 9,400 feet on the Kautz Glacier and asked to respond. Ranger Lofgren assembled a litter team in Longmire and had them start snow shoeing toward Glacier Vista to set up a raise. Rangers Payne and Edmonds were called at the Ski Dorm to respond to the patient's location with a litter. Rangers Wheelock, Edmonds, Mueller, and Payne skied the patient and his gear from the injury site to just below Glacier Vista where the litter team from Longmire was waiting with a raise system. The patient was raised 200 vertical feet to Glacier Vista and then skied out to Paradise where an AMR ambulance was waiting.

*Landreth SAR 5/31/2009 8:39:00 PM*

A report of an overdue climber prompted a short search involving ranger Nick Giguere descending from Camp Muir to locate the missing party. He was found at Panorama Point and the ranger accompanied him the rest of the way to Paradise.

*Cross SAR 6/5/2009 12:00:00 PM*

Rangers Mueller and Wheelock contacted a party of three on the summit who asked for an extension on their climbing permit. Wheelock called in an extension over the radio and warned the party of three of poor incoming weather. Wheelock and Mueller then descended to Camp Muir. Dispatch received a 911 call the next morning from the party of three on the summit. They were calling to report poor conditions and that they were going to stay an extra night on the summit. A second 911 call was received by park dispatch the next morning. The party of three called to say they were descending and needed help navigating. Dispatch contacted Wheelock and Mueller who were still at Camp Muir. They climbed up to the party's location at about 13,000 feet just above the Disappointment Cleaver and assisted them down.

*Kowalczyk SAR 6/5/2009 10:30:00 PM*

An overdue solo climber on Success Cleaver hunkers down and stays an extra night out lower down on the cleaver disoriented in the fog. The climber was fine, but his overdue status prompted a response by climbing, law enforcement, and backcountry rangers. He was located safely hiking his way out.

*Wick SAR 7/1/2009 12:00:00 PM*

Ranger Wick skied into a crevasse just north of Emmons Flats during his descent from the upper mountain to Camp Schurman. He radioed Ranger Self that he needed assistance. Self skied down to Wick's location and found Wick inside the crevasse. After gaining verbal contact with Wick, Self initiated the extraction via litter with multiple guides from Camp Schurman. Wick had fallen 30 feet onto a false floor and had fractured some ribs and pelvis. Ranger Lofgren ordered a helicopter which flew Wick to Harborview Medical Center as soon as he was extracted from the crevasse.

*Rockface SAR 7/4/2009 5:30:00 AM*

Ranger Payne was at Camp Muir when an injured climber limped into camp bleeding from his face. After doing a patient assessment Payne discovered the patient had been hit in the face with a rock and lost consciousness. The patient had a full thickness lip laceration and swelling and bleeding around the airway. Because of these and a possible internal head injuries, the decision to fly the patient was made. Ranger Wheelock ordered a helicopter to fly the patient off the mountain. Payne also called medical control for a transportation recommendation to definitive care. Medical control advised a medical helicopter from Kautz to Harborview Medical Center in Seattle was the most appropriate method. Wheelock flew with the helicopter, helped load the patient, and flew the patient down to Kautz where the patient was transferred to Airlift Northwest.

*HAPE SAR 7/5/2009 5:45:00 PM*

Rangers Payne and Wheelock were at Camp Muir when a climbing party was spotted moving extraordinarily slowly across the Cowlitz Glacier back into Camp Muir. The party arrived and one member was having severe breathing problems. Payne assisted the climber into the Park Service Hut where Wheelock was getting the oxygen kit ready. On the first set of vitals, the patient presented with very poor oxygen saturation and signs of HAPE. After keeping the patient on high flow oxygen for 10 minutes his oxygen saturation had gone up, but was still poor. The decision to transport immediately was made. Weather conditions prohibited flying the patient from Camp Muir so Payne and two AAI guides assisted the patient down the snowfield where a group of eight other Park Service personnel took over patient transport and care. The patient was ambulatory for the entire extraction. He was transferred to an AMR ambulance at Paradise.

*Wilkinson SAR 7/5/2009 11:00:00 AM*

AAI guides at Moon Rocks called into dispatch via radio that they had a client with a knee injury who couldn't walk down. Ranger Ellis was first on scene and requested a litter team to meet him and the guides with the patient at Pebble Creek. An eight-person litter team including Ranger Mueller hauled the patient back to Paradise where he went with AAI guides via POV to definitive care.

*Dobell SAR 7/24/2009 3:00:00 AM*

Ranger Leary responded at Camp Muir to a climber with severe AMS. He assists the patient down from Camp Muir to Paradise where the patient left via POV.

*Cousins SAR 8/3/2009 4:15:00 PM*

A distressed climber on Pinnacle Peak called dispatch via cell phone to say her partner had climbed up out of sight and was stuck. Ranger Mueller and Mammel responded to the scene and found the climber 'frozen' on route; unable to climb or descend, the climber stayed put. Mueller set up a belay anchor and rappelled with the climber from the location. There were no injuries and both climbers left the trailhead via POV.

*Geehan SAR 8/16/2009 5:45:00 PM*

Ranger Mueller and Houck received a report of a missing hiker between Paradise and Camp Muir. They hiked through paradise and contacted the missing hiker near Panorama Point. The missing hiker was uninjured and they hiked together back down to Paradise where the hiker left via POV.

*Rothged SAR 8/16/2009 5:30:00 PM*

Dispatch received a phone call that there was an injured hiker above Panorama Point. The reporting party disclosed the patient had been glissading and rolled into a rocky section. The patient was complaining of severe pain and not ambulatory. Ranger Wheelock was headed down from Camp Muir when he received a call to respond. He assessed the patient and found multiple lacerations and possible leg and pelvis fractures. He notified dispatch that this patient should be transported via ALS helicopter. Rangers Mammel and Houck arrived on scene shortly after and helped the patient move to a safer location. A litter team of six rangers arrived some time later and packaged the patient to move toward the landing zone. Airlift Northwest plucked the patient of the mountain and all rescuers hiked down.

*Page SAR 8/21/2009 2:30:00 PM*

Ranger Giguere took an initial report of a climber who hyper-extended his knee on the Muir Snowfield. The patient turned out to be part of a large military unit up from Fort Lewis. They had brought their own SKED and Rangers Lofgren and Giguere who were at Camp Muir helped package the patient and issued crampons to the other members of the patient's party. They lowered the patient down to Pebble Creek where Ranger Houck met up them. The patient was transferred to the Cascade litter, stashed at Panorama Point, and wheeled down to Paradise. Rangers transferred care to the military medics on call at Paradise.

*Stubbs SAR 8/21/2009 4:00:00 PM*

Ranger Houck responded via Ranger Lofgren's request to a dehydrated climber who Lofgren contacted on the snowfield. Houck assisted the climber down the snowfield to Paradise where he left via POV.

*Larson SAR 8/26/2009 3:30:00 PM*

Ranger Payne received a request for assistance with an injured RMI client. An RMI guide reported via radio that their client had tripped and had a possible boot top fracture. The patient was not ambulatory. The RMI guide slid the patient down the snowfield to Pebble Creek. Ranger Payne and a team of four guides assisted the three guides already on scene with packaging the patient into the Cascade litter and wheeling him down to Paradise. The patient went to the hospital with family via POV.

*HAPE Two SAR 9/1/2009 1:30:00 PM*

Ranger Wheelock received a report from an AAI guide that one of their clients was having breathing difficulty on Cathedral Gap. No assistance was requested upon the first report, but the AAI guides wanted to inform the Park Service. About 20 minutes later AAI requested an oxygen tank for the patient. Another AAI guide at Camp Muir brought the bottle up to the patient. Once the oxygen bottle got to the patient, AAI requested another oxygen bottle and assistance with lowering the patient back to Camp Muir. Further patient evaluation revealed difficulty breathing plus possible swelling of the airway and substernal chest pain of 8/10. Wheelock informed dispatch and requested ALS helicopter evacuation. A helicopter doing project work already inside the park was redirected to the SAR. The pilot flew to Camp Muir, but because of weight restrictions couldn't fly both Wheelock and the patient at the same time. The patient was flown to Kautz Helibase by himself and was transferred to Airlift North

*Emmons Shoulder SAR 9/16/2009 11:30:00 AM*

RMI guides reported via radio that a client tripped and fell at 12,800 on the Emmons Glacier while they were descending the Disappointment Cleaver route. They reported the patient was in severe pain and not ambulatory. Ranger Lofgren, Hall, Payne, and Wheelock all received the call and initiated a response. Lofgren ordered a helicopter that could fly to 13,000 feet with an internal load capable of lifting the patient. Hall, Payne, and Wheelock all prepared to fly to the upper mountain and staged at Kautz Helibase. After doing a load calculation, it was determined only one passenger at a time could fly and be inserted to the patient's location. RMI guides had dug a skid pad and marked the landing zone at a flatter spot, about 12,500 on the Emmons Glacier. The pilot inserted Payne to the location first. Payne loaded the patient who flew back to Kautz and was transferred to AMR ambulance. Payne and the RMI guides climbed down from their location.

## **Resource Protection and Monitoring**

### *Public Shelter Maintenance / Food Storage*

Climbing rangers emphasized proper food storage and preventing the habituation of animals on the upper mountain this season. The hardest food source for the rangers to control was the food left in the public shelter, mostly from day hikers. Climbing rangers had to swing into the shelter multiple times a day to try and keep the 'donated' food under control. A successful job has been done so far; by August the reports of foxes stealing food at the high camps had stopped. Rangers reported a total of 82.5 hours spent on keeping the public shelter clean. Other resource protection projects we focused on were:

- Properly disposing of human waste
- Camping on snow or durable surfaces – especially along the Muir corridor
- Monitoring and getting GPS way points of existing tent rings and bivy sites
- Trash removal inside the Kautz Glacier Corridor
- Keeping the public shelter clean
- Leave No Trace Ethics

### *Human Waste*

During the season, climbing rangers spent a recorded 195 hours servicing the toilets at Camp Muir and Schurman. Service included cleaning any gross negligence, pushing down and emptying the toilet paper baskets, and rotating the baskets in the solar dehydrating toilets. There were four toilets in service at Camp Muir this summer – three solar dehydrating toilets and one pit toilet. There was only one toilet still at Camp Schurman – a solar dehydrating one.

Human Waste Collected from Mountaineering Operations		
Location	Number of Barrels	Pounds
<b>Camp Muir</b>		
Raw Human Waste	9	4000
Blue Bags	9	2000
<b>Camp Schurman</b>		
Raw Human Waste	3	1200
Blue Bags	2.5	700
<b>Paradise</b>		
Blue Bags	3	750
<b>White River</b>		
Blue Bags	0.5	100
<b>West Side Road</b>		
Blue Bags	0.1	20
<b>Total</b>	<b>27.1</b>	<b>8770</b>

### *Climbing Impacts*

Snow melted down to an extremely low level late in September and the social trails and non-regulated camp sites on the Muir Snowfield began to show more clearly. Rangers rehabilitated many of the impacts along the Snowfield and documented many of the chronic problem areas. The Muir Snowfield continues to be one of the hardest hit areas on the upper mountain. Most of the guided trips and independent climbers still choose to climb through this area, and the area seems to be the most popular all year unlike the Inter Glacier which doesn't see much if any traffic all winter. Rangers recorded dismantling 62 camp/bivy sites and dispersing 97 cairns.

The Kautz Glacier Corridor has gained a lot of visitation due to the new concession plan. All three guiding companies now lead trips through this corridor and reports from both guides and public came back this summer of people not practicing Leave No Trace Ethics. Climbing rangers went on multiple patrols to the corridor just to bring down gear from climbers who abandoned it. Fixed lines and climbing gear left on the ice pitches also were reported. Rangers also documented non-regulated campsites within the corridor (taking photos and GPS waypoints) to continue monitoring them. This was also done on Ptarmigan Ridge.

Leave No Trace Ethics is the standard the rangers worked within and taught to other climbers this season. Keeping the mountain clean, beautiful, and accessible to future climbers is still at the heart of the climbing ranger program. Clean lines, fresh powder, and pure water are all maintained and protected within this set of ethics; and continue to be at the core of the climbing ranger program.

### *General Resource Monitoring*

Climbing rangers also took part in the glacier monitoring program, which is a scientific project that makes mass-balance calculation by taking field observation of ablation stakes placed on the glacier during maximum accumulation in the spring. This year, almost 2 meters of perennial ice melted on the Muir snowfield and almost 5 meters of ice melted on the Nisqually Glacier just below Glacier Vista.

Climbing rangers also took GPS observations of the extent of glacier ice on the Muir snowfield and Nisqually Glacier. By using GIS, climbing rangers were able to estimate that the Muir snowfield has lost approximately 45 acres of perennial glacier ice and that the Nisqually Glacier has retreated 700 feet in the last 7 years.

## Climbing Concessionaires

There are three guide services who have concessions contracts with Mt. Rainier for guiding clients to the summit. Each guide service is limited to the number of user-nights they can provide on the hill. About 41% of climbing use was guided by one of the three climbing concessionaires.

Guide Service	Clients	Guides	Total
RMI	1845	671	2516
AAI	644	338	982
IMG	583	313	896
Total	3072	1322	4394

One of the duties of climbing rangers is to monitor the operation of the climbing concessionaire's based on set criteria that is derived from their concessions contract and operating plan. In 2009, RMI was monitored 39 times, AAI 31 times, and IMG 27 times totaling 97 monitoring incidents.

In general, climbing concession operations were very successful this year. There was open communication and cooperation between all the guide services and the park service. The climbing concessionaires teamed up to share gear at the climbing high camps and also share helicopter time to save money in support of their operations.

There were also sixteen commercial use authorizations for single-use guided climbs.

The guide services were successful and fulfilled their mandatory volunteer time, resource stewardship requirements, and other obligations laid out in their operating plans.

At the beginning and end of this season, the climbing concessionaires came together as a group to talk about issues and how we can work together to make operations for all entities run smoother, more efficiently, and minimize the impact of our operations on the natural and cultural resources at the park.

Next season, the guides and rangers are planning more joint technical, administrative, and operations trainings!

## Cooperators

The climbing program manager also served as the SAR Coordinator and the Aviation Manager for the whole park. This coupled with law enforcement duties and his first season managing the program, took up most of his time.

A failure of the program this season was its neglect of reaching out to public climbing and rescue entities such as, The Mountaineers, the military, The American Alpine Club, and the Mountain Rescue Association, to name a few. These organizations are integral to the climbing community and Mt. Rainier must be actively associating and coordinating with them.

A major goal of the climbing program manager for 2010 will be to re-establish regular communication with these outside cooperators.



## **Looking Ahead**

The mountaineering ranger program at Mt. Rainier has been in a constant state of professionalization for years. There are a number of operational changes planned for the climbing rangers in the coming year.

The board of inquiry into the employee injury at Camp Schurman recommended a greater degree of field level supervision. One of our primary objectives is to implement standard park ranger (climbing) GS-09 level supervision. The climbing ranger skill set is one of the most complex and difficult-to-maintain proficiencies in the National Park Service. In an effort to improve employee retention and the efficiency of developing qualified, full performance climbing rangers, seasons will be lengthened for the field rangers. This will come at a cost of having fewer climbing rangers.

Climbing rangers maintain intermediate level EMS, Aviation, Climbing, Avalanche, and Technical Rope Rescue skills and perform those skills in a hazardous environment. Coupled with all the administrative functions of working in a federal beaurocracy complete with a complex fee collection system, permitting operation, human waste management system, and public contact ranger stations to manage, climbing ranger receive a tremendous amount training. Moreover, they should get good training. In 2010, climbing rangers are planned to enter-on-duty a full month and a half sooner than normal to accommodate this training at a time before the summer climbing operation is in full swing.

Testing the rangers for competencies in each one of these skill areas will round out the training period.

An employee field manual with cheat sheets, gear lists, procedures, and policies has been developed and will be a reference during normal operations and in emergencies. The NPS has recently adopted the US Coast Guard's Operation Risk Management and this pocket guide will incorporate some of these ideas.

Finally, the enormous quantity of skills, facilities, and programs to operate creates an administration and management nightmare. This substantially detracts from the time field supervisors get to be in the field training and supervising their employees. The climbing rangers have demonstrated the functionality of beaming NPS intranet connectivity to the high camps. This will improve communications and expand the time supervisors can spend up at high camps. This will also improve the blog in that climbing rangers can immediately post updates when they arrive back at high camps.

The teacher-ranger-teacher, Jeff Houck, who staffed the Climbing Information Center at Paradise this summer was a fabulous success. If climbing rangers are indeed fewer next year, having experienced mountaineers who can intelligently answer mountaineer's questions, issue permits, and represent the climbing program staffing the ranger station will be extremely important. We're currently looking into qualified people who can fit into the teacher-ranger-teacher program.

Finally, the NPS has not forgotten about the tremendous number of day-users who go up toward the high camps. Although most are well equipped and up to the challenge, many are not. We are looking into ways of contacting these visitors by staffing some interns who camp on the Muir snowfield during the summer months. Their primary role would be to educate and inform these folks who find themselves in this environment without the needed gear or experience. We have applied for a grant for (2) SCA positions who would perform Preventative Search and Rescue duties on the Muir Snowfield and along the route up to Camp Muir.

## **209 Climbing Staff**

Mountaineering District Ranger: Stefan Lofgren

Rangers: Brian Scheele, Chris Olson, Cooper Self, Dave Weber, David Gottlieb, Jeff Houck, Kevin Hammonds, Nick Giguere, Nick Hall, Philippe Wheelock, Philip Edmonds, Sam Wick, Thomas Payne

High Camp Facilities: Jeremy Shank (Camp Schurman), Ted Cox (Camp Muir)

Volunteers: Arlington Ashby, Brittany Buckingham, Ken Davies, Lynn Finnel, Rachel Mueller, Ryan Leary, Scott Hotaling