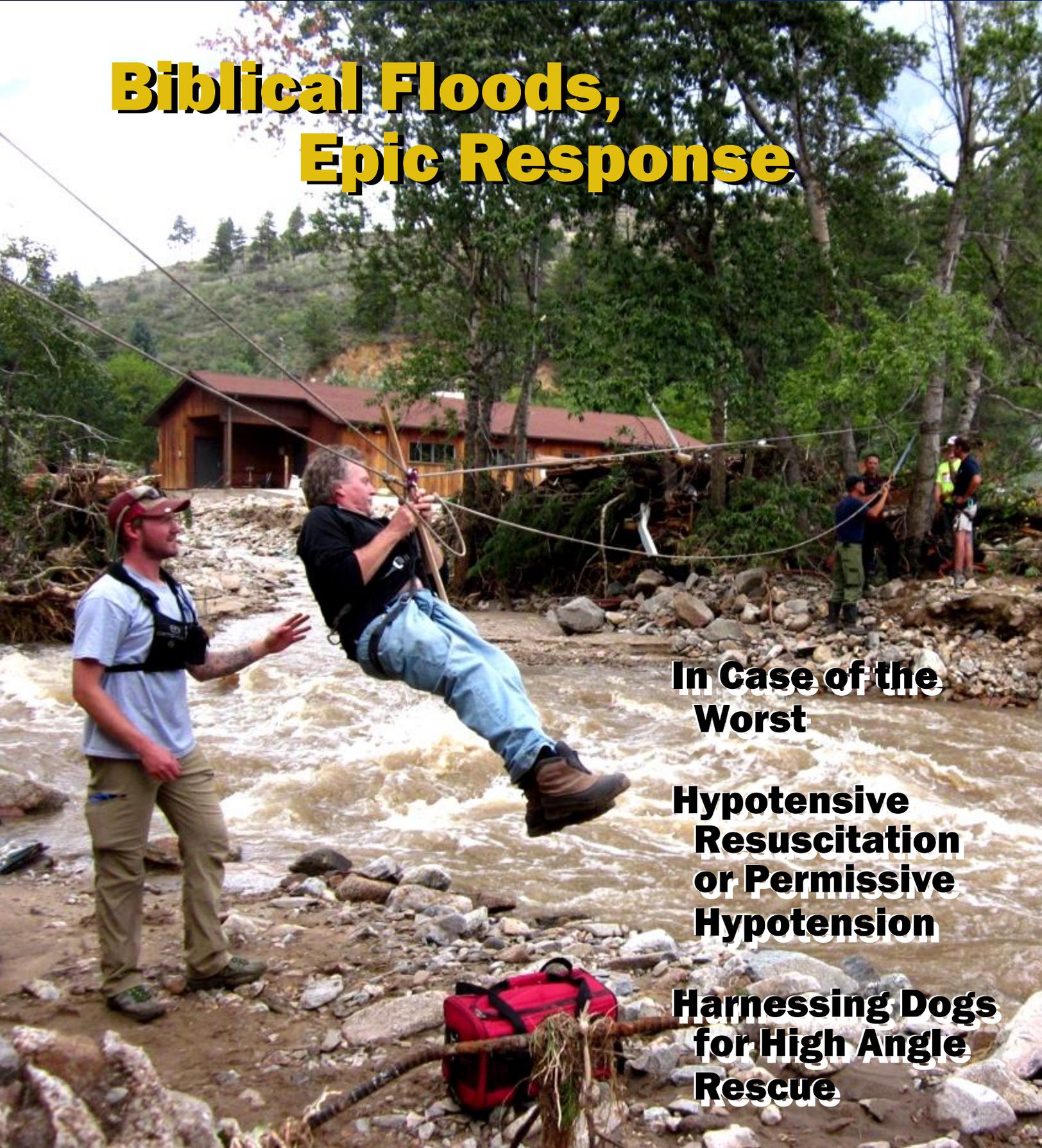


Biblical Floods, Epic Response



**In Case of the
Worst**

**Hypotensive
Resuscitation
or Permissive
Hypotension**

**Harnessing Dogs
for High Angle
Rescue**



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Fall 2013

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Cover Photo by, Andrew Hildner. A resident of Jamestown, CO is ferried across Lefthand Creek during the Boulder Floods.

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Biblical Floods, Epic Response

MRA Teams Respond to the Historic Colorado Front Range Floods

By Dan Lack (Rocky Mountain Rescue Group), Russell Giesey (Larimer County Search and Rescue) and Tom Wood (Alpine Rescue Team)

This year, while many Americans on September 11 reflected on the sacrifices made by rescuers on 9-11-01, many MRA Rocky Mountain Region rescuers initiated a multi-day effort to organize and perform the rescue of hundreds of Colorado citizens affected by an historic deluge.

This massive effort would test the skills of the rescuers in navigating the treacherous waters that cut off or destroyed mountain communities, as well as their skills in navigating the less treacherous—but more complex—waters of the ICS system while operating within a federal Type II incident.

One by one, the cities of Estes Park, Lyons, Jamestown, Boulder, Longmont and many others nervously eyed small creeks that swelled, went out of banks and then eventually began destroying trees, bridges, roads, homes and anything else in their path. While weather pundits spoke first of a Hundred Year Rain, then a Thousand Year Flood, lives were being lost and entire communities were almost completely obliterated by the raging torrents that swept through the narrow mountain canyons and then out into the cities of the Front Range. Over the course of 8 days, 17.5 inches of rain fell over Boulder and Larimer counties, with rainfall amounts of 10 to 12 inches widespread elsewhere across the region. Motorists were being swept away from their stranded cars, basements were flooding, and emergency services were virtually paralyzed. Nine-one-one calls were answered with the dire warning, “Unless you are in imminent danger, we will not be sending help. Shelter in place.”

Wednesday September 11

It had already been an unusually wet few weeks for the Colorado Front Range. But when the rains began to intensify early on the week of September 8, many rescuers joked that maybe they should have included an ark in their 2013 budget request.

But they also understood it wasn't simply a lot of water that was to blame for the worsening situation. Several wildfires had swept through many of Colorado's steeply wooded foothills in previous years, leaving behind a scorched earth that would not absorb the falling rain. In Boulder, Larimer and El Paso counties, their sheriff, local fire departments and rescue teams preplanned for flash flooding in burned areas, as did most other nearby counties. These pre-flood exercises helped responders prepare for such events in the immediate vicinities surrounding the isolated burn areas. But as the creeks continued to rise, it became evident that this would be a different kind of emergency, since entire cities, not just the burned areas, were becoming threatened.

The Rocky Mountain Rescue Group (RMR) in Boulder was called to action earliest, since the heaviest rainfall amounts were centered in Boulder. But by 3:30 am, all Boulder County EMS was recalled to safety as the flash flooding ripped out mountain roads, trapped fire personnel and apparatus between mud slides and isolated neighborhoods for days.

Thursday, September 12

When dawn arrived, the sun was barely visible behind the sheets of pouring rain, and emergency managers across the Front Range watched the weather forecast with feelings of uncertainty and unease. Reports of fatalities were coming in. “We all thought, this is going to be really bad!” said RMR member Dan Lack.

Boulder and surrounding communities received their entire average annual precipitation in a matter of a few days.

Many areas in Larimer and Boulder County were cut off, with no phone or utilities, so the extent of damage to some areas was impossible to determine until the skies cleared and recon flights could be conducted.



Photo by Jim Schoettler.



Members of the Rocky Mountain Rescue Group prepare to send a patient across a flood stage river in Salina, CO. Photo by Becca Stubbs.



Photo by Jim Schoettler.



Members of the Rocky Mountain Rescue Group board a Chinook helicopter for deployment into the flood zone during the 2013 Boulder floods. Photo by Laura Seraydarian.

"NATIONAL WEATHER SERVICE DENVER/BOULDER CO ... UPDATE/MAJOR FLOODING/FLASH FLOODING EVENT UNDERWAY AT THIS TIME WITH BIBLICAL RAINFALL AMOUNTS REPORTED IN MANY AREAS IN/NEAR THE FOOTHILLS -- THINGS ARE NOT LOOKING GOOD." National Weather Service forecast for Thursday, September 12 at 9:41 am

That morning, aspects of the flooding pre-plan were enabled, emergency operations centers were activated, and federal help was officially requested. Reports for help were slowly trickling in. That day RMR and Larimer County Search and Rescue (LCSAR) were tasked with assessing viable routes to mountain areas while sending small teams to calls for help in the areas that could still be accessed. The first call for RMR that day was a search for a firefighter who reportedly spent the previous night clinging to a tree in the middle of a flooded canyon. The stuck firefighter was found and rescued a day later using swift water rescue techniques, heavy machinery and a highline. He had eventually let go of the tree and was swept a half-mile down river while being pummeled by rocks and trees until he managed to grab a tree as he was swept by it. After THAT tree collapsed he was able to find a floating log that took him to the side of the river. From there he crawled to a house, where he was found unconscious. Several people were known dead, with hundreds unaccounted for at that time.

Also that morning, LCSAR sent a team of six members to the Big Thompson Canyon on US Hwy 34 to assist Loveland Fire and Rescue, who were working on an extraction of six people stuck on the other side of the river. However, the LCSAR team never made it to the call. The highway had just collapsed a few miles upstream, trapping the Loveland Fire/Rescue team.

"It was at that point we all realized this was going to be bigger than anyone had expected. All SAR operations were suspended for the day as the management team prepared for further missions," said LCSAR member Russell Giesey.

And still the rain continued to fall. By mid-afternoon, thousands more people were isolated in the mountains, with no roads to reach them. Complicating matters, many rescuers were unable to respond to all the calls coming in because their own homes and families were being jeopardized by the floods. The RMR team members who had responded were running on fumes after nearly 24 hours of field assignment; they needed relief. Late afternoon planning led to the only possible conclusion: More help was needed, and lots of it.

Meanwhile elsewhere in the Front Range, many regional MRA teams were being impacted by the floods.

Rocky Mountain Rescue, Alpine Rescue Team, Crested Butte Search and Rescue, Douglas County Search and Rescue, Summit County Rescue Group, Mountain Rescue Aspen, Vail Mountain Rescue and the Western State College Mountain Rescue Team performed both in-county and mutual aid flood missions.

In addition, Grand County Search and Rescue to the west of Boulder and El Paso County Search and Rescue to the south were involved in their own flood responses or were called to assist other MRA teams. The Colorado Search and Rescue Board (CSRB) put all remaining regional teams on standby to backfill for their sister teams as needed.

Friday, September 13

In the early hours of Friday morning, the incident was officially declared a federal disaster that would receive a Type II Incident Management Team (IMT).

But as mountain rescuers in Boulder and Larimer prepared for the arrival of USAR Teams, National Guard helicopters, buses of food and water and an IMT to take over the reins, stranded and injured mountain residents still needed immediate help. Many had awoken in the middle of the night with only seconds of warning before they were buried up to their necks in mud, water and flood debris. Propane tanks were seen zipping through the flood waters like torpedoes, rupturing on the rocks they slammed into and adding the danger of spontaneous explosions to the growing list of hazards faced by residents and rescuers.

Through a CSRB request for mutual aid, the Alpine Rescue Team (ART) was dispatched for three days of assistance to the Boulder County airport, which was serving as the Incident Command Post. By noon they were dispatched to the small town of Salina in Four Mile Canyon, which was completely cut off and had reportedly seen cataclysmic damage. The team of ten ART members, guided and aided by a firefighter from the Four Mile Canyon Volunteer Fire Department, was able to hike high wooded ridges to access the devastated town and began the highline evacuation of several elderly residents and their pets.

Seventy-six year old Douglas Burger and his wife were two of the evacuees ferried across the torrent in a litter on a single track highline set up by ART. He said he felt lucky to be alive after he climbed out of the litter on the opposite shore. Hours later, at the Incident Command Post in Boulder, he embraced the returning rescuers as he was led off a



Photo by Jim Schoettler.

National Guard helicopter.

“In Salina, we also rescued three dogs and performed Alpine’s first-ever canary rescue” said ART member Tom Wood.

Denver Post reporters and photographers were dispatched to Salina via private helicopter, and captured some images of the carnage in a way that words could scarcely hope to achieve (<http://photos.denverpost.com/2013/09/14/photos-flooding-salina-colorado-rescue/#1>).

Further south, ART had their hands full with flood-related calls in their own backyard. As ART members dispatched to Boulder worked throughout the day on Friday, Alpine responded to a 911 call for two hikers whose tent had been engulfed in a mudslide at 11,000 near the base of Mt Evans. The two campers escaped with only the clothes on their back, and didn’t have time to even find all of their shoes before their tent was engulfed then buried. Ironically, the two had originally planned on camping in Boulder County but instead opted for the supposedly drier mountains of Clear Creek County. But as ART completed that rescue and began the drive down the mountain, a rockslide closed the road in front of them, stranding them and delaying their response to other calls that were coming in.

The most pressing of these calls was the evacuation of more than 140 students from the Mt Evans Outdoor Lab. The experiential education facility near Mt Evans had been suddenly isolated when the only road accessing the school had been washed out. ART responded with ATVs and POV’s until the members who had been stranded on HWY 103 by the rockslide were able to get a snowplow to clear a path through the rockslide from the previous call.

The state coordinator of the Colorado Search and Rescue Board worked tirelessly to get more resources allocated from regional MRA teams in the short term until the Type II team was up and running. RMR asked the CSRB for 25 from MRA teams, and by Saturday morning, there were more than 45 on their way to augment the efforts of the 70 RMR members still responding in Boulder. Many of these rescuers stayed on for several operational periods.

Saturday September 14 and Beyond

Saturday saw the first insertions into the flood zones by helicopter in Larimer County. Working with the Colorado National Guard, the Larimer County Sheriff’s office, personnel from the F E Warren Air Force Base, and members from the local Federal Emergency Management Agency (FEMA) Urban Search and Rescue (USAR) team, multiple teams were inserted into various locations around the county via helicopter. Each team consisted of one law enforcement officer, one or two USAR members for structure analysis, and two LCSAR members for GPS location information and rescue/search operational planning.



Dan Horne, of the Rocky Mountain Rescue Group organizes his team before deployment into the flood zone during the 2013 Boulder floods. Photo by Dave Christenson.



Members of the Rocky Mountain Rescue Group arrive back at staging after extraction by Blackhawk during the 2013 Boulder floods. Photo by Sal Silvester.

It became obvious early on that the flood preplanning over the last few years had paid off, since many local fire departments already had an ICS system in place and were just waiting for the arrival of SAR resources. High priority citizens that needed to be evacuated were ready to go. Throughout the day on Saturday, LCSAR helped evacuate more than 200 local residents by helicopter and had identified the majority of areas that needed further searching. There were also several extraction missions that took place for the residents that were cut off by flood waters. Some extractions required improvised road and bridge building, while others required tricky helicopter hoist operations.

Interagency cooperation in Larimer County went smoothly, especially considering the chaotic nature of the situation.

Friday and Saturday saw MRA teams rescue over 50 people in various states of need in Boulder County alone. Being deployed by military Blackhawk and Chinook helicopters in torn up canyons, teams set up highline after highline, escorted people down to safe terrain from their houses, evacuated the elderly, delivered medical supplies, and evacuated some by litter.

As the FEMA overhead team settled in, MRA Rocky Mountain Region teams provided a standby resource of 65 – 80 mountain rescuers in addition to critical mapping and GIS functions. It quickly became apparent that in such a large scale incident, their primary goal was SAR readiness. For many hours rescuers sat at the Boulder airport waiting for assignments, and on most days were deployed. When teams were not being deployed in the field, they were building FEMA search packets, responding to non-flood related rescues for RMR and LCSAR and even helping carry luggage and pets from the back of Chinooks as the dazed and displaced were dropped off at the airport.

Sunday was the last official operational day under local management in Larimer County, since the Type II IMT arrived that day and the transition of control was scheduled for Monday. Since the cloud deck didn’t lift until late in the day Sunday, this cost several hours of valuable air search and rescue operations because flight ops typically ended by 17:00. Several teams that were inserted for SAR sheltered in place overnight within the local communities.

“All members stated that the locals were very happy to see us and welcomed us into their own homes for the night. How often does that ever happen on a Search and Rescue mission?” said LCSAR member Russell Giesey. “It was our honor and privilege to help serve our community and to work with all the various agencies that assisted in this event. Our communities and SAR members are truly ‘Mountain Strong,’” Giesey added.

Dan Lack from RMR shared a similar story. “When RMR went to Jamestown to search a part of the canyon on Monday, it was the first day that the USAR teams had been able to get there. One well-loved Jamestown resident was known to be dead and USAR was there to do the recovery, since the victim was located in an unstable collapsed home. The people of Jamestown opened their destroyed town to all of us... gave us food and a place to get geared up out of the rain. All they asked for in return was that once we recovered the body, the townspeople be given a chance to spend a last 5 minutes with him—to say goodbye. The USAR team did that without hesitation the next day when they recovered the body,” said Lack.

By Monday afternoon, in Boulder County, eight MRA teams conducted nine operational periods, contributed 293 rescuer days, 3800 rescuer hours and conducted three search operations (of which more than 2,500 were from RMR alone). They had performed one body recovery, six trauma or medical evacuations by highline, more than 20 evacuations by highline due to inaccessibility, and guided over 30 to safe extraction points.

Giesey said Monday’s transition from county-managed and staffed emergency operations to the Type II team in Larimer County was a smooth one. In fact, the Type II Operations Chief decided to keep the same style of searching and evacuation operations that were already had in place. The only difference was that there was now an entire USAR team inserted with each two person SAR team and local law enforcement agent. This process continued for the next 5 days while every address and community was checked within the flood zone.

During the event LCSAR provided over 1100 hours of volunteer service using 55 members working through 10 operational periods.

Follow Up

Colorado's Office of Emergency Management estimates that 1,882 homes were destroyed and another 968 business were damaged or destroyed. Approximately two-hundred miles of state highways and roads and around 50 bridges were damaged in the floods.

Eqecat, a catastrophe modeling firm, later noted that an additional 17,500 homes were damaged in 17 counties, and predicted that most of the damages would be borne by residents since most of the losses were uninsured by flood insurance.

They predicted over \$2 billion in losses.

Nine Coloradans lost their lives to the floods.

But as most mountain rescuers know all too well, all the numbers, figures and damage estimates in the world do little to sum up the lasting, cumulative effects of such tragedies on the psyche of the survivors. It will remain etched in the minds of many Coloradans long after all the roads are rebuilt and homes repaired.

“The determination, professionalism and *heart* of the rescuers that were deployed to the Colorado Floods of 2013 was an inspiration to those who lost so much, and crucial to the success of the overhead team’s management of such a large-scale incident,” said Alpine Rescue Team member Tom Wood.

Dan Lack, the Rocky Mountain Region chair, added, “The Rocky Mountain MRA Region stepped up to an incident of national significance and monumental size, and excelled. The entire Rocky Mountain Region of the MRA displayed the very essence of the MRA philosophies: Courage, Commitment, Compassion.”



Members of the Rocky Mountain Rescue Group stand by for a Chinook takeoff during the 2013 Boulder floods. Photo by Kristen Alvarez.

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In Case of the Worst

A Federal Safety Net Extended to Rescuers

By Howard M. Paul, Alpine Rescue Team, Colorado

The federal Public Safety Officers Benefit (PSOB) program was recently amended and it now includes SAR personnel, as well as certain EMS responders.

The PSOB is a program created by Congress in 1976 to support publically employed (federal, state or local government) peace officers, EMS personnel and firefighters killed or disabled in the line of duty. The program, administered by the Bureau of Justice Assistance within the U.S. Department of Justice, provides a large death benefit—currently \$328,612.73—to the family of those killed or catastrophically injured in the line of duty. It also provides educational benefits to dependents of those killed or disabled in the line of duty.

The act has been amended several times since 1976, and was changed at the very end of the last Congress, in December 2012 by the Dale Long Public Safety Officers' Benefits Act of 2012. It was ultimately included as part of the National Defense Authorization Act for fiscal year 2013. Passage was a three-year effort by Vermont Senator Patrick Leahy, supported predominantly by national and state EMS organizations. It was named for a Bennington, Vermont EMT killed in an ambulance crash.

The Mountain Rescue Association and the National Association for Search and Rescue both signed on as supporters and monitored the process, to ensure that SAR personnel were included.

SAR and EMS added

Volunteer members or employees of non-profit rescue squads or ambulance crews “engaging in rescue activity or the provision of EMS” were added to the categories of those now covered. Rescue squad or ambulance crew means a squad or crew whose members are rescue workers, paramedics, emergency medical technicians, health-care responders or other similar “workers.” This includes air-ambulance crews. They must be “trained in rescue activity or the provision of emergency medical services.” They also must:

- have legal authority and responsibility,
- engage in rescue activity,
- or provide emergency medical services.

Fortunately, “rescue activity” means search or rescue assistance in locating or extracting from danger persons lost, missing, or in imminent danger of serious bodily harm.” So, what we would call a traditional land SAR team’s members fall within the definition. And the non-profit entity serving the public must be “officially authorized or licensed to engage in rescue activity or to provide emergency medical services.”

Only non-profit rescue and EMS organizations were added. For-profit organizations, such as an air-ambulance crew from a for-profit hospital or staff of a for-profit ambulance service, were specifically left out of the bill in order to avoid opposition from some segments of the emergency service community.

The federal law (42 USC Ch. 46 Subchapter XII) also now covers training, by stating (in 3796b Sec. 1204) line-of-duty action includes “taking part (as a trainer or trainee) in an official training program of his public agency for such activity, and such agency (or the relevant government) legally recognizes it to have been such at the time performed (or, at a minimum, does not deny (or has not denied) it to have been such).”

Claims must be filed within three years of the incident.

This is but a general overview of changes that affect SAR. Detailed information is available from several sources:

- https://www.psob.gov/files/PSOB-Final_Rule.pdf
- https://www.bja.gov/Programs/PSOB/PSOB_Act_and_Regulations_2011.htm#DefinitionsSecStat
- <https://www.psob.gov/index.html>

Howard M. Paul is a 27-year member of Alpine Rescue Team, in Evergreen, Colorado. He is the public affairs manager for both the National Association for Search and Rescue and the Colorado SAR Board, as well as a PIO for his team. Paul is a member of the board of directors of NASAR and a past president of the CSRB. He has been involved in state legislation affecting SAR and EMS for many years.

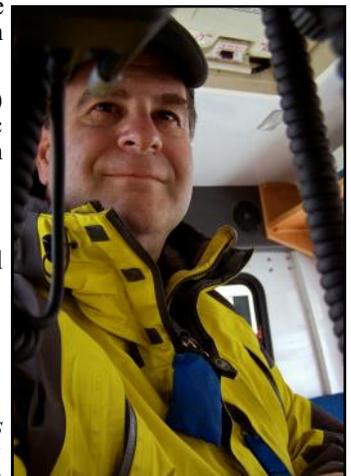


Photo by Paul Howard.

Hypotensive Resuscitation or Permissive Hypotension

By Skeet Glatterer, MD, FAWM, Alpine Rescue Team, Evergreen, Colorado

Trauma remains a leading cause of death worldwide and can be dire in the SAR setting due to long transport time over difficult terrain. Rescuers should recognize signs of ongoing blood loss in an injured patient such as cool pale extremities, and agitation or confusion in a patient without a head injury. Weak peripheral pulses and delayed capillary refill (>2sec) can also be signs of shock however these may be difficult to evaluate in the field. Large volumes of blood loss can occur in patients with external hemorrhage from scalp wounds and extremity injuries or occult blood loss into the abdomen, thorax, or pelvis. Direct pressure remains the most important method used to control hemorrhage. Tourniquet application to extremity injuries not controlled with direct pressure alone can be lifesaving. When these measures don't control the bleeding, limited fluid resuscitation or permissive hypotension may be appropriate.

Resuscitation fluid type and rate of administration in trauma patients is controversial. Aggressive fluid resuscitation can dislodge already formed clots, dilute clotting factors and potentiate hypothermia. Limiting fluid replacement to a degree that provides satisfactory end-organ perfusion until definitive surgical control of the bleeding has been obtained is the goal. This end point generally correlates with a systolic blood pressure of 80 mmHg, which is suggested if a pulse can be felt at the wrist or the patient has a normal mental status.

An absolute contraindication to permissive hypotension is a concomitant head injury. Other limitations include excessive transport times, the rescuer's experience with this management approach and their experience recognizing signs of poor perfusion. As always, rescuers should discuss the use of this technique with their medical director and follow local protocols. An excellent review of fluid management in traumatic shock for SAR is available in the references.

References and additional reading

1. Sumann G, et al. Fluid Management in Traumatic Shock: A Practical Approach for Mountain Rescue. *High Altitude Medicine and Biology*. 2009;10:71-75.
2. Tactical Combat Casualty Care, Accessed at http://www.health.mil/Education_And_Training/TCCC.aspx

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All medical articles for the Meridian are reviewed and endorsed by the MRA Medical Committee; however, this article is for general information only. The MedCom makes no representation regarding the medical or legal information provided, and the views expressed do not necessarily reflect those of the MRA.

As always, your suggestions and comments are encouraged – either directly to the author, to me, or via the ListServ to the MedCom.

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More to come at mra.org/training/ikar

Harnessing Dogs for High Angle Rescue

By Marty Ramirez, Portland Mountain Rescue, Oregon

Have you ever had one of those missions where you set out to rescue a hiker or climber only to find out their 70lb labrador retriever is stuck at the bottom of the ravine or canyon with them? Portland Mountain Rescue (PMR) encounters this scenario every year or so and our historical efforts to extract the dogs have been successful, albeit awkward and sometimes extremely comical.

However, after a wonderful training session from the Oregon Humane Society's Technical Animal Rescue Team (OHSTAR) this past year we are now able to perform high angle dog rescues with as much technical skill as we do when we rescue people. Even more important is that we can perform these rescues with the materials we already carry on missions.

Before I get into how to rescue a dog I do want to spend a moment addressing dog behavior. If you are not careful you could end up getting hurt or hurting the dog.

How to approach a scared / injured dog

1. Any dog can and will bite given the right circumstances. This is especially true when a dog is scared or injured. A dog that is normally super friendly may be a completely different animal under adverse conditions. A stranger who approaches in full gear and a helmet can be very intimidating and scary, and can cause a dog to react in a variety of ways. If safety permits then removing your helmet is often helpful.
2. Dogs read our body language. Avoid prolonged, direct eye contact and facing the dog directly. This can be seen as a challenge, aggression, or dominant behavior. It is best to avoid direct eye contact by looking away while having your body turned perpendicular to the dog. Do not stand over the dog (looming). This is a threatening behavior and some dogs may have a strong, negative reaction to this. Crouching down can help make the dog less fearful of you. Keeping your hand out, low to the ground and towards the dog, will give the dog something to sniff (or a treat to take) and can build trust.
3. Allow the dog to come to you if possible. Use the techniques listed above. Use a calm, soothing voice and keep talking. Dogs may react positively to their name (if known), common phrases "good boy/girl" or some other form of sweet talk. Do not make sudden movements or make loud noises. Use treats. Anything works, including the protein bar brought as your snack. Treats work great at building trust and can turn a shy or scared dog into your friend. **Building trust can take time, be patient.**
4. If you must approach the dog then go slow, use the techniques listed above, and approach from the side if possible. Approach the dog in small increments. Be aware of the dog's body language. If the dog freezes be aware and back away, giving the dog space.
5. Once you have gotten close enough to the dog to pet it, allow the dog to sniff you while observing the above precautions. Avoid petting the dog's head. Pet the sides or back of the dog but not until you have made sure the dog is comfortable being touched. If the dog has a collar do not grab it from above, grab the collar from the sides as you are petting it, and then only to attach a leash.

How to muzzle a scared / injured dog

Once you gain the confidence of the dog you will need to muzzle it. Don't be tempted to skip this step. Even the happiest dog on the planet can completely flip out once you lift it off the ground and bring it up a rope. I once watched a video where a rescuer was dropped by helicopter to the roof of a vehicle submerged in a river. The dog was dancing around on top of the car and easily let the rescuer clip it in. However, once the helicopter took off the dog panicked and nearly bit the rescuers arm off during the ride. I can only imagine that was the longest few minutes of that person's life.

It is quite easy to muzzle a dog using webbing. Simply take the end of the webbing in one hand and with the other come up from behind the dogs ears petting the dog with the webbing in your hand. Next, quickly wrap the webbing two to three times around the dog's muzzle. Then tie the two ends of the webbing at the top, and behind the ears, of the dog's head. Don't leave it too loose or it could come off at a very bad time.

Now you are ready to harness the dog. OHSTAR focuses' solely on animal rescue so they have many different sized harnesses designed specifically for dogs. Unless you are with a unit with an unlimited budget you will not have these types of harnesses in your rescue kit. What you will have is webbing and two 15-20 foot pieces is all you will need to create your dog harness.

How to make a webbing “hasty” harness for canines

1. Take a length of webbing, minimum 12ft in length, and tie a water knot in it.
2. Bring the doubled webbing under the dog’s chest right behind his front legs. Each hand should be able to hold a loop when the webbing is pulled taut.



Photo by Bruce Wyse, Oregon Humane Society.

3. Reach through his front legs and take ONE of the sections of webbing, pulling it back through his front legs.

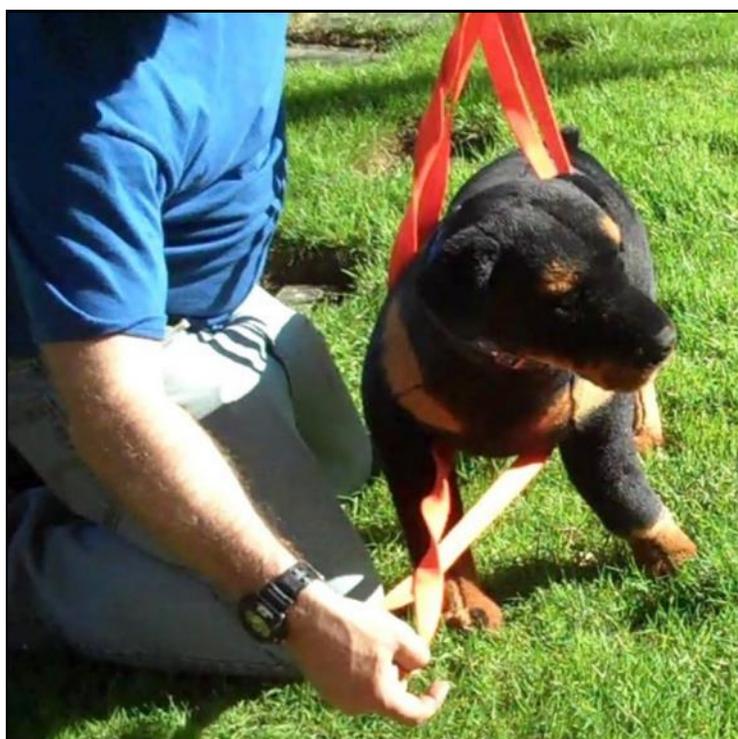


Photo by Bruce Wyse, Oregon Humane Society.

4. Cross the webbing with one twist “cross your heart” and pull the loop over his head.

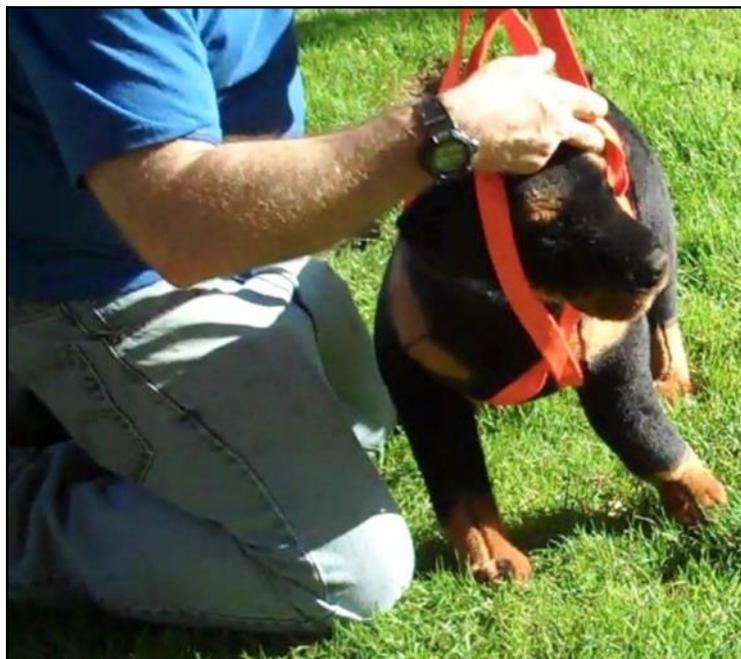


Photo by Bruce Wyse, Oregon Humane Society.

5. Even out all three loops, pulling all the webbing taut under his body.

6. Take one of the side loops and pull it through both of the other loops, then pull all the webbing taut around his body. Make sure that the webbing under the dog is around the chest, not in the soft tissue below the ribcage.



Photo by Bruce Wyse, Oregon Humane Society.

7. Secure with a knot around the loops that are taut against his back. This is done to prevent the webbing harness from tightening when the dog is raised.



Photo by Bruce Wyse, Oregon Humane Society.

8. An optional second webbing harness can be done over the rear quarters so the dog has two points of attachment.
9. If there is extra slack that needs to be taken up tie an overhand knot at the point you want to place your carabineer.

When you are done the dog should look like this photo from the training OHSTAR presented to PMR this past year.



Photo by Keith Lagenwalter.

Rigging the dog into the raise system

You can rig the dog into your raise system according to your protocols but, I will share my personal preference. I clip the dog into the end of the main and belay. I then tie an in line figure eight in both the main and belay a couple of feet above the dog. I have the haul team take up the slack in both the main and belay. Keep the dog on the ground and not weighted in the harness. I clip myself into the in line figure eights with an Aztek Kit. I then have the haul team raise until the dog is at the middle of my chest (managing my position with the Aztek Kit) and I can cradle the dog's head in the crook of my arm.

I use the Aztek Kit for two reasons. First, I like to have the ability to get away from the dog should it panic and get the muzzle off. Second, it helps for a smooth transition at the edge. I've found that without the Aztek Kit the dog always ends of getting sucked into the edge or it drops too low on my body and gets battered making the edge transition. So, when I get to the edge I slowly drop below the dog as it goes over the edge. This allows the dog to clear the edge and also allows the edge team to clear the dog from the system with me out of the way.

I hope this information proves useful for you when faced with a dog rescue. I would like to thank the OHSTAR team for the material and photographs.

Oregon Humane Society-Emergency Services:

http://www.oregonhumane.org/services/animal_rescue.asp#UIH2HFJDvzd

OHSTAR's FB page: <https://www.facebook.com/pages/OHSTAR-Oregon-Humane-Society-Technical-Animal-Rescue-Team/133714863306206>

OHSTAR MISSION STATEMENT

A non-profit, volunteer organization dedicated to rescuing animals and helping people through rescue and education. They operate under the authority of the Oregon Humane Society. Both are located in Portland, Oregon.

Our purpose:

- ◆ *Locate, treat, extricate and transport trapped or injured animals*
- ◆ *Effect rescues of animals in wilderness and urban environments*
- ◆ *Provide evacuation of animals in response to a disaster*
- ◆ *Provide temporary emergency animal sheltering for displaced animals*

Great Gear for Work and Play

By Christopher Van Tilburg, MD, MRA MedCom member, Editor-in-Chief, NewsShare, International Society of Travel Medicine, Editor Emeritus, Wilderness Medicine, Contributing Editor, Outside Online and Backcountry

I've been on my share of night search and rescue missions with Oregon's Hood River Crag Rats mountain rescue unit. A downed aircraft in Columbia Gorge National Scenic Area, missing climbers on Mount Hood (every season), and lost hikers in the Badger Lake Wilderness. Recently on Washington's Table Mountain we encountered howling rain and blasting wind. Despite our climbing headlamps, we could barely see through the storm: we were continuously pelted by spitting rain and Douglas fir needles being stripped like tiny Ninja barbs from the trees. My colleague dug out a better headlamp. It was a 1000 lumen lamp designed for mountain biking at night. The bike headlight was dynamite. It pierced the blackness with bright, white light. With battery and bulb technology so improved, this is now an essential component in my SAR pack.

So, here is what to look for in a high-powered light:

- Lights with multiple settings allow you to use a dimmer battery-saving setting for approach and a high-power for search or technical work. LED bulbs are bright and use less battery power.
- Rechargeable batteries are the most cost effective. But be warned: on high power these may not last through an all night search. If there's an AA or AAA battery backup option that's great—choose lithium over alkaline; the former work better in cold. And, like most rescuers, pack a backup headlamp.
- Most lights come with attachments to mount on a helmet or bike handlebar. With a long cord, you can stow the battery on a harness or stuff it in your backpack.
- Waterproof housing for foul weather is a good idea too.

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The Search & Rescue Operations Field Guide, authored by the National Association for Search and Rescue (NASAR), is a perfect companion reference for both field search personnel and search managers. The Field Guide is organized into useful sections such as Initial Actions, Search & Rescue Command, Operations, Planning, Investigation, and Logistics. The guide also contains a comprehensive appendix covering topics such as Developing an Incident Action Plan, Map Symbols, G-M Angle, and Search Planning Formulas. This field guide is a MUST to assist SAR personnel in taking the most appropriate actions during SAR operations.

Click here to link to the app in iTunes: [NASAR FOG app](#)



<https://www.facebook.com/>



<http://twitter.com/>



<http://mtrescueassoc.blogspot.com>

Chicken Tracker

By Jeff Jaqua, Vice-President, Portland Mountain Rescue, Oregon

I'd like to share with you a story of an encounter I had at the Gresham Farmer's Market this summer. In addition to sheep, we raise chickens in our pastures using a chicken tractor that provides security while at the same time giving the chickens access to fresh air and sunlight. I'm not clear on how it acquired the name "tractor" but that relates to the story I'm about to tell. One of the definitions of "tractor" is an apparatus without a motor to be moved by human power. Our chicken tractor is fully enclosed but without a floor. It has a partial cover to protect the chickens, and while some tractors are built on skids, ours has wheels that allow us to move it onto fresh grass every morning.

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As *Farm Director*, my wife's most important responsibility is to keep me out of trouble. Sometimes she does not succeed.

A young man came to our booth at the Gresham Farmer's Market and introduced himself as a feature writer for a newspaper. I'm sure he probably told me the name of the paper, but either I didn't hear him or it just didn't register. His assignment was to find an interesting story related to the small family farms that are represented at the market.

"My editor wants me to come up with a new angle that our readers would find interesting. Maybe an activity or a piece of equipment that would be unique to your farm."

I had just done some repairs to our chicken tractor and I think its design is pretty clever so I responded, "I have a chicken tractor."

Each week at the market there is a different band or group that entertains the crowd. The stage is close to our booth and this last Saturday was a tuba group with about 15 tubas. Just as we began our conversation the tuba band was getting cranked up and the reporter was having a hard time hearing me. But he had his notepad out and seemed intent on getting a story. "Did you say 'chicken tracker'?"

"No, chicken tractor" I stressed just as the lead tuba blatted out a rather interesting rendition of 'Smoke Gets in Your Eyes'.

By this time he was excitedly scratching in his notepad. "Do you spell that t-r-a-c-k-e-r?"

I hesitated for a moment but could not help myself. "Yep, you got it."

"So what can you tell me about tracking chickens?"

This was just too easy to pass up. Farm Director Jan had stepped away from the booth so she wasn't going to stop me. It was early in the day so there weren't too many customers. "Well, what do you want to know?"

"Let's start with why you would need to track chickens?"

I suddenly realized that I had to focus and be on top of my game or this could turn really bad. I had better be quick with good answers because he sure was quick with the questions. "Because they get lost."

"What do you need to know to track lost chickens?"

"Well, I guess you first need to know chickens."

He seemed to be getting a little frustrated with how the interview was progressing so I jumped in with more; “You need to know what breed of chicken you’re tracking; and, the color of the feathers. Any chicken tracker needs that info but if you want to be a really good chicken tracker you should know the weight and age of the chicken. It would also help to know what the chicken’s diet was. There’s a whole science on reading chicken scat.”

“It sounds like you consider yourself a ‘better than most’ chicken tracker. What makes you an expert?”

I knew he was just complimenting me to keep me talking but by now I was rolling and didn’t need any encouragement. “I try to take the time to get into the lost subject’s head, her state of mind. Is she scared? Will she run or hide? Did she have a quarrel with another hen and is she near-by sulking? Maybe she’s the adventurous type and just flew the coop.” He seemed to like that quote.

“How many lost chickens have you tracked?”

“Too many to count. I don’t think the average person has any idea what a problem this is.”

“Do you have any suggestions, based on your experiences, for your fellow chicken farmers that are dealing with lost chickens?”

“Well, I found one thing pretty helpful. I take a plaster cast of the feet of all my chickens and keep them on file. Just in case.”

“In case of what?”

What a rube! “In case they get lost.”

“Are you saying you can track a chicken by following its footprints?”

“Absolutely. That’s why I’m considered in the field as being an expert.”

“But I still do not understand why you would need plaster casts for every chicken you own.”

“Well, I wouldn’t want to be wasting my time tracking the wrong chicken. I have better things to be doing with my time. And Lord only knows how many lost chickens are wandering around out there.”

About that time I spotted **Farm Director Jan** returning to the booth so I thanked the reporter for his interest and began to look busy. Like I said, I don’t know what paper he was with, but if any of you see a feature article in your local paper about a chicken tracker, send me a copy.

P.S. A word of caution. Every story has at least a kernel of truth and most good stories are embellished or exaggerated a bit. It’s good for the human soul to have a sense of wonder. I leave it to the reader to decide what is true and what might be a product of my imagination. I wouldn’t want to ruin your enjoyment.



A Message From the President

Quarterly update: committees making progress

By Doug Wessen, MRA president

ON-LINE EDUCATION: The first online *Helicopter Safety* program is up and running. You can find it on the MRA website at <http://training.mra.org/login/index.php>. Our next step will be to complete the second online training program, *Backcountry Safety*. This program is for the general public. Plans are also being developed for a third program, *Avalanche Safety*.

IKAR/MRA 2014: The MRA is helping to coordinate the International Commission on Alpine Rescue (IKAR) conference in October of 2014 in Lake Tahoe. This will be the first time the IKAR conference will be held in the United States. More information can be found at mra.org/training/ikar.

CORPORATE SPONSORS: We are continuing efforts to build corporate sponsorships. There are several companies that are current MRA sponsors including Arc'teryx, CMC Rescue, Deuter/Ortovox, High Mountain Technical and Rescue Equipment, Patagonia, and Sterling Rope. There are other potential sponsors in the works.

ITRS 2014: The MRA is a co-sponsor with the International Technical Rescue Symposium (ITRS) that will be held this year, November 6-9, 2014, in Golden CO.

SPOTLIGHT ON: We are reviewing an offer from a Public Television production company for *Spotlight On*. (The *Spotlight On* segments are four to five minute filler programs, airing for over 24 years on PBS affiliates.) They are interested in producing a show that will air daily, for a year or more, highlighting the Mountain Rescue Association, informing viewers about training, certification, and increasing public safety awareness.

BY-LAWS REVIEW: The By-Laws and Policy Committee is formulating plans to review our current by-laws and policies to correct inconsistencies and to make sure we are in compliance with non-profit statutes.

ORAL HISTORY PROJECT: Members from the Washington and Oregon regions, and the Special Collections staff at the University of Washington, are nearing completion on the *Oral History of the MRA*. It will be archived at the University of Washington.

To find MRA documents in the UW collections listed below, search for "Mountain Rescue Association."

[Special Collections](#)

[Special Digital Collections](#)

[Univ. of Washington Catalog of Special Collections](#)

[MRA Collections Guide](#)

STATISTICS: Last of all, the Statistics Committee is continuing to look at ways to improve the reporting of statistics of MRA teams

These topics will be presented in greater detail during our MRA Winter Business Meeting Jan 31-Feb 2, 2014, in Salt Lake City, Utah. I hope to see you there.



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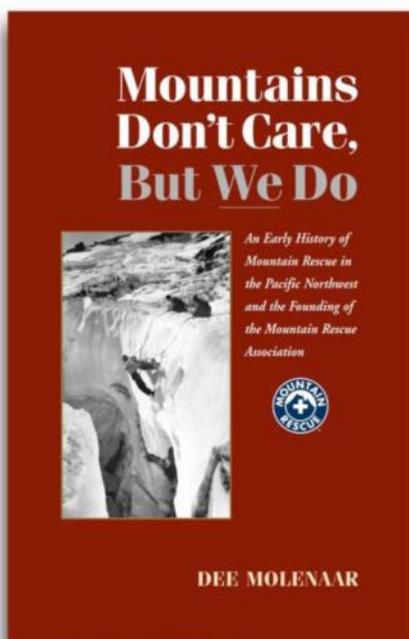
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Mountains Don't Care, But We Do

An Early History of Mountain Rescue in the Pacific Northwest and the Founding of the Mountain Rescue Association

By Dee Molenaar



Dee Molenaar, author of *The Challenge of Rainier*, has written fascinating accounts of the legendary mountain rescues and recoveries in the Pacific Northwest. In telling these tales of triumph and tragedy, he has also traced the formation and evolution of the mountain rescue groups that carried out these missions.

"The old master has done it again, pulling from personal experience and scholarly research, a vital and vibrant history of mountain rescue in the Pacific Northwest to celebrate the Mountain Rescue Association's 50th anniversary."

Tom Hornbein

"Mountains Don't Care, But We Do, by Dee Molenaar, is a must read for those who enjoy high adventure and want to know the history of the Mountain Rescue Association."

Jim Whittaker

**50th
Anniversary
Tribute**

"Mountains Don't Care, But We Do, is a modest way of saying 'thank you' to the hundreds of mountain rescue volunteers who have come before us. We hope that they would be as proud of today's groups as we are of them."

Charley Shimanski, President
Mountain Rescue Association

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