

# The Central Line

*A NorthStar Publication*

## Rangeley Road Redesign Poses Rescue Risks

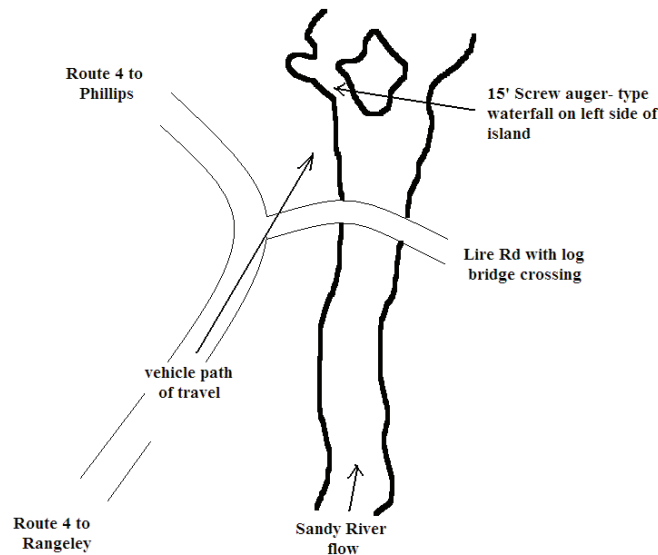
*By Dennis Kerrigan*

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**Disclaimer:** No article on technical rescue can replace ‘real world’ training and hands-on practice, particularly in the realm of swiftwater rescue. Considering that water rescue calls make up less than 1% of incident responses, while emergency responders are 5 times more likely to die in a line – of –duty death on a water rescue call, this article could certainly give the reader ‘enough information to kill yourself’ at a swiftwater scene. And given that any technical rescue information has an effective ‘half – life’ of perhaps 6 months without on-going practice and review, we’ll be back at Small’s Falls in the Spring offering another round of rope and water rescue training to better prepare for these new off – road rescue hazards.

Small’s Falls has historically been a popular scenic stop - over for tourists and recreationists traveling the Rangeley Road. Much of this area has been inaccessible for the less adventurous, but with the new road redirected, this series of waterfalls is now much more readily visible and accessible from both Route 4 and the Lire road that intersects it just above Small’s Falls, which will only increase the potential for visitors to congregate there and potentially get into trouble. These series of waterfalls are now being routinely run by kayakers of varying skill levels, and it is just a matter of time before we are dispatched there to a kayaking related incident. Numerous You Tube video clips highlight testosterone - charged swimmers doing back flips and cliff jumping into the pool sections. These all potentially result in the wrong type of ‘job security’ for us as emergency responders.



Anyone who routinely drives the Rangeley Road this time of the year is also well aware of the unique weather micro-climate that exists on the Route 4 corridor, where typically it may be raining in Farmington and snowing in Rangeley, with the transition area of sleet and freezing rain commonly occurring somewhere between the Small’s Falls Rest Area and the Appalachian Trail cross-

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## Notes from the Director

*By Dave Robie*

### Time for the Next Season

Where have the days gone? First it rained this summer, then family stuff happened (almost all good), then time for some playing. Then winter arrived. I never did get the last of the “Barn” sided. As I write this, there is snow on the ground. At the Star Barn home-  
stead, the dock, the ducks and the boat on the pond have all been pulled in. The wood is split and a great deal on the porch, the screens are down, the windows washed, the garden turned over, the generator battery charged. We’re well prepared for the next season. We think we’re ready for whatever the next months will bring.

It is amazing how the time has moved so swiftly when one looks back. Ever more so as one measures it by how much the kids and grandkids have grown. It is good to look back once in awhile and learn from what has gone on be-

fore and appreciate how far we have come.

It was five years ago this January when we formed the powerful regional ambulance service known as NorthStar from the five services of CES, LifeStar, AMPS, Rangeley Regional and Sugarloaf Rescue. Some non-EMT guy was brought in to run it after several others’ tenures had been short. Now, looking back over the past five years, it is hard to believe that that many years have come and gone. Some new folks have come and some have left for a quieter life. Seems only yesterday we were radically asking towns to accept a single contract and a new subsidy formula; only yesterday that we started modernizing our fleet and standardizing our equipment; only yesterday that we began the electronic revolution leading us to the (mostly) paperless process of today; only yesterday that we came together as a service

rededicated to a mission of excellent and respectful patient care, to community activities, to good stewardship of our resources and to our professionalism.

The years have slipped by. Some faster, some slower. Another five years have indeed gone into the history books. But, proudly, we are not simply five years older. The progress in each of the five areas of our Mission has been steady and remarkable. We’ve now spent some time preparing for whatever the next months (and years) will bring. We’re strong, we’re prepared, and we’re trained. We’re ready.

Be safe throughout the year.

Mike swimming at the Wilderness Roundup training at Rapid River, August 2009. (Mittman photo)

Did you know that Northstar has nearly all of its staff trained as Wilderness EMT’s? Hopefully we’ll see those that haven’t taken this training this September/October at Claybrook Mountain Lodge!



# NorthStar Acquires Human Patient Simulator

*By David Robie*

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NorthStar EMS, the regional ambulance service of Franklin Memorial Hospital, recently purchased a “MetiMan” Human Patient Simulator. This state-of-the-art full size simulator is designed to help train NorthStar and FMH staff in areas of cardiovascular, respiratory, neurological, trauma, critical care and general illness scenarios.

The lifelike, adult-sized manikin can replicate realistic breathing movement and breath sounds, heart sounds and rhythms as well as actual pulses in several different areas of the body. The eyes blink and are reactive to light, there are verbal responses to stimuli, IVs can be placed, access to airways can be secured through intubation, and blood pressure taken. A major innovative feature of the MetiMan is that it reacts to medications in the same way that a real person would. With its built in computer, hundreds of scenarios can be programmed into the simulator to improve clinical response. Completely wireless, the simulator can sit up, lay down, be moved by stretcher, from bed to bed or from car to stretcher just like a real person.

According to David Robie, NorthStar’s Executive Director, “MetiMan, with its vast array of clinical scenarios and lifelike responsiveness, will be a key element in improving the skills of our already excellent NorthStar staff. Repetitive approaches to real-life medical situations will give us a standard of training never before achieved. Additionally, when the “patient” is a simulator, innovative or alternate care treatments can safely be tried knowing that there will be no harm done to the patient. With its ability to record interventions, we can measure how well we respond to any situation and, if necessary, take steps to improve our response well before we are faced with the situation in a real patient.”

MetiMan is a product of Medical Education Technologies. Versions of this simulator are also used by LifeFlight of Maine and the US Government to train its corpsmen. As a part of the FMH family, NorthStar’s simulator will also be available to FMH’s nursing and other clinical staff.

Added Mike Senecal, Regional Operations Manager with NorthStar, “With the support of FMH’s Education Department and NorthStar’s own training team, this state of the art human simulator will add one more significant tool to improve the knowledge base of the healthcare professionals throughout Franklin Community Health Network.”



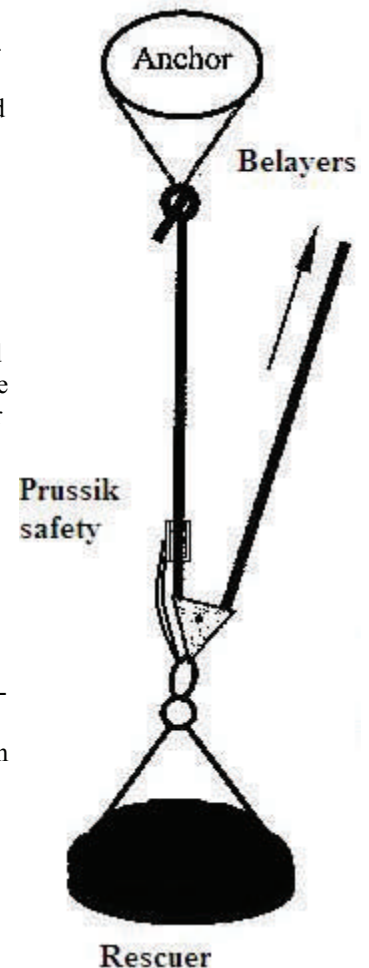
## North of NorthStar (cont)

ing. Combine this weather phenomenon with the new road redesign, which has replaced the series of switchback curves with a straight mile long 5% downhill grade ending with a sharp unprotected curve just above the major series of slot waterfalls and rapids that make up Small's Falls proper, and you have the significant 'luge run' potential for any runaway vehicle or black ice road situation. At the bottom of the sharp curve the Lire Rd intersects Route 4 from the West, which necessitates a break in the protected guard rail section, with the straight line path of travel of an out of control vehicle leading directly into a 15' vertical screw auger type falls, with 3 more waterfalls totaling 60' of vertical drop just below. This is arguably the most potentially difficult and dangerous over – bank rescue site to risk mitigate that I have seen in my 25 years of swift water rescue training.

Added to the risk equation was the DOT's decision to cut all the bank side trees at the ground level, taking away any potential to stop a vehicle from going into the river (and also significantly limiting bank side anchor tie off locations). If I had my choice of striking a tree at 50 mph and hoping my airbag and seatbelt do their protective jobs, or being pinned in my vehicle in a 15' vertical waterfall slot, I'd go 'mano – a – mano' with a tree trunk any day. That said, this site obviously presents significant scene size – up and rescue access / egress risks for MVC victims and rescue crews alike.

After spending a November Saturday reconing this site with 30 area fire, SAR and EMS service representatives, it was agreed after a lengthy risk / benefit assessment discussion that extricating patients from a vehicle while it was still in the water posed unreasonable risks to both rescue crews and accident victims, and that the best risk assessment decision would be to secure at least 1 wrecker cable to the vehicle to pull it back out of the river in order to more safely access the entrapped victims. So any call involving a vehicle over the bank in this area should automatically have 2 heavy duty wreckers simultaneously dispatched. Two wrecker cable connections to the vehicle help reduce the cable strain during the extraction. We're working on an FSO dispatch protocol to make this an automatic dispatch request. Fortunately, there is a good flat area immediately alongside the river bank, reasonably protected by the guardrail section, to then safely access and extricate patients. We have all experienced the challenges of extricating ever-larger sized patients out of ever-smaller sized vehicles that are designed to significantly deform in order to better absorb impact forces. Imagine the above noted situation of a vehicle pinned in this slot waterfall, probably at night, perhaps partially or completely submerged at flood stage in the river, and one can appreciate 'whose emergency this could become'. Where ideally our extrication goal is to bring 'rescue to the patient', at this site the 'ideal to real' risk benefit analysis needs to be swayed instead towards bringing the patient to rescuers, where they can then more safely extricate victims while minimizing further patient and rescuer risks.

In the November training session we practiced a reasonably quick and simple rope rescue lowering / raising system using the contents of the first – in rope rescue bags located on all front line NorthStar rigs (soon to become the standard rope rescue system carried on the Rangeley and Phillips Fire apparatus as well). It involves a variation of a 'slingshot' belay where 1 rescuer is attached to the rescue rope, which is anchored directly to the guardrail (assuming that guardrail section was not damaged in the wreck) using one of the 2 triangular screw links located in the rope kit. The rescuer is connected to the system via a pulley attached to their rescue harness, which is then belayed by several shore side rope tenders. This provides a 2:1 mechanical raising and lowering advantage for the shoreline belayers (see the attached illustrations), and allows the 'dope on the rope' to have one hand free to take down the wrecker tow hook and chain cable to attach to the vehicle, with the rescuers other hand providing a 'conditional' back up belay via a 3 wrap prussik safety (which is pre-tied on the rope in the rope bag system). This person is at significant risk, and would need to be the most experienced rope and water rescue savvy person at the scene, using all PPE precautions, to include a rescue harness, rescue PFD, a helmet, rescue knife, and wetsuit or dry suit thermal protection. We have a number of area rope technician level fire and SAR responders, as well as several NorthStar staffers, who meet these criteria.



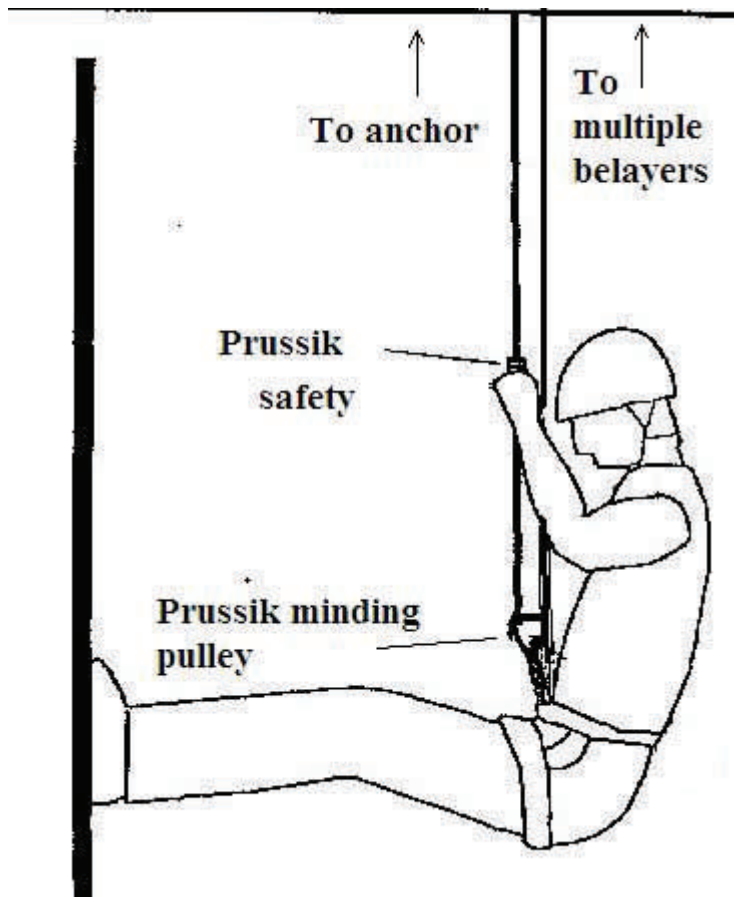
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## Road (cont.)

An alternative access technique would be to use an extension ladder off a fire apparatus, secured with the upper end on the bank and the other end placed into a broken window of the vehicle, not unlike the system that was used at the Alder Stream rescue several years back (the site of our most challenging ‘all – hazards’ rescue to date). The rescuer should still be belayed with the above outlined system in case the vehicle became unstable and began to move in the current – always a possibility that needs to be assumed with a high index of suspicion.

Any swiftwater rescue incident involves significant rescuer and patient risks, with this area presenting potential site risks in-extremis, where we don’t get to choose our rescue environment. We can choose how we prepare for them, however, remembering first and for most that, *it is the patient’s emergency*. At the end of the day, it is the ultimate objective of any technical rescue for rescuers to go home safely – to live ‘to rescue another day’. If we can reduce morbidity or mortality for patients as well, then that is ‘value added’ – but patients unfortunately pick crappy places to drown or get killed in an MVC – with the only worse scenario being a rescuer or multiple rescuers that joins them in ‘paying the ultimate sacrifice’. Hopefully a heightened ‘all – hazards’ risk awareness and on-going interagency training can reasonably mitigate these considerable site risks.

In the Spring newsletter article we’ll discuss how to stabilize an upright vehicle in a swiftly moving but reasonably shallow section of a stream, and how to use a ‘tensioned diagonal’ line system to safely access and egress MVC victims from a partially submerged vehicle. If anyone is interested in taking part in a 3 day Swiftwater Rescue Technician certification class next summer, which covers all of these water rescue topics, contact me via W2W or e-mail and I can start to put some dates and particulars together.



## Smalls Falls Training: Perspective from a Perpetual Probie

By Ben Guild

With the recent construction on route 4, we as rescue personal now have a new set of challenges that present to us at the Smalls Falls recreational area, a vehicle in the water. With the removal of the legendary “Rangeley S-Curves”, the steep slope that now towers over the beautiful and legendary falls presents now with a large downward slope, giving the unsuspecting motorist the positional to gather speed, and given the right winter weather, a slip roadway that may make for a ramp it you will, that can lead them over the guard rail into the top of the falls. With the climate changes that seem to take place in this area, especially on the top of the hill, a driver who was driving in the rain or snow could come upon a black ice situation. At the bottom of the slope, there is a small opening that invites a speeding car or an 18 wheeler to bypass the beginning of the guard rail and put them at the top of the falls. During an early spring defrost, or large rain dump the waters could overflow the bank and make for an even more dangerous situation for patient and rescue personal.

Recently members of FSAR, Rangeley Fire and Rescue, Phillips Fire Department, Strong Fire Department, and NorthStar Emergency Medical Services spent the day under the skilled and watchful eye of Dennis Kerrigan (DK) who instructed us on how to be prepared and reminded us of the old saying, “go slow to go fast”, and “go home to rescue another day”. At the beginning of the day, the group of 25 personal or so, talked about how the new terrain can complicate a rescue scenario, and how when the road was created, the workers removed the trees that once protected the top of the falls from any traffic. Now with them removed, there is no fail safe for the guard rail, making a rescue more possible. Recently, there was a collision between a State truck and a POV. This accident was discussed and how similar accidents are bound to happen in the near future.

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## Training (cont)

After a short briefing and discussion of backgrounds, the group moved to the island at the top of the falls. Here, the group discussed how a vehicle may become lodged in the rocks, and how a high water shed could easily move a smaller vehicle over the falls. A question was posed at this point, "what would be the safest way to get someone out", and "how would I do that?" DK pointed out with a high water shed, and the fact that the falls are close to the rescue site, the safest way to remove a patient who is in a vehicle is to call out two local wreckers, and to attach a rescuer to a lower/hall system and to put them down over the embankment and attach the two toe hooks to the vehicle. Then they would be able to pull the car back over the embankment keeping rescue personal safe. The question was posed later in the day by Jeremy O'Neil, "with all the ambulance chasing lawyers out there today, how could we protect ourselves from law suit later on after the rescue. The point was brought up that it would be unsafe to immobilize a patient in the water, and that in all EMS education books they state that our own personal safety is paramount, and that the best way to extract a patient would be to do an emergency evacuation and that it would be safer for both crew and patient to be moved out of the dangerous situation.

The use of different types of vehicle stabilization devices was also discussed by the crews and how to best use our resources to successfully rescue a patient. Z lines and 3 to 1 systems were practiced, and many other rescue techniques were practiced. Special thanks goes out to Chappy for his scene safety at the training and slowing down traffic during our exercise.

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## The All Encompassing, The One and Only, The Not too Tart, Not too Sweet

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\* *The Back Page* \*  
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