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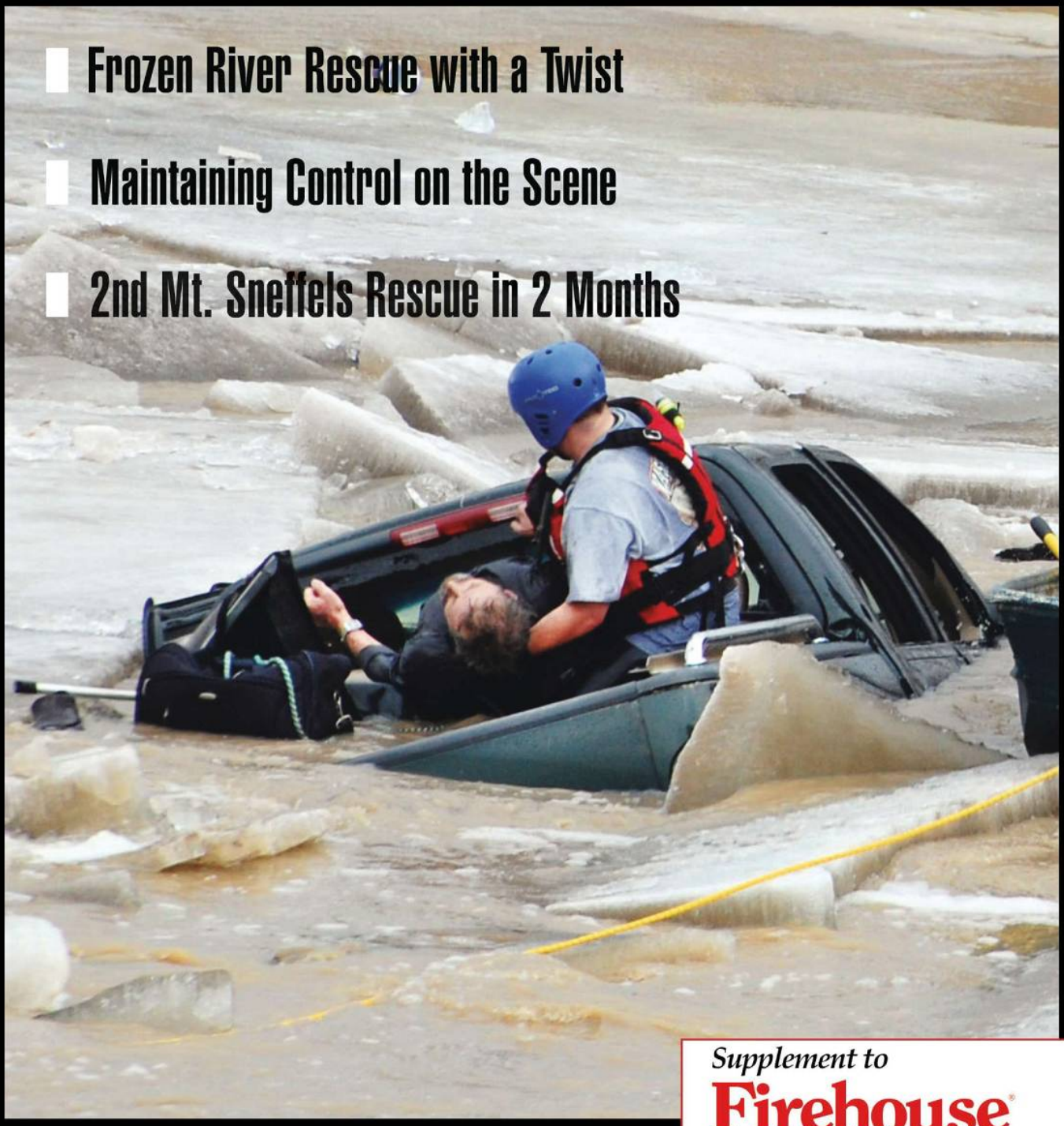
Advanced RESCUE TECHNOLOGY

- Frozen River Rescue with a Twist
- Maintaining Control on the Scene
- 2nd Mt. Sneffels Rescue in 2 Months



Supplement to Firehouse®

RESCUE OPERATIONS

By JOHN AMTMANN

A RESCUE OPERATION ON THE TONGUE RIVER

Tim McGlothlin (red helmet) re-enters the jon boat after searching in the nearly submerged cab for the other victims. McGlothlin had freed the victim's leg that was pinned under the dashboard and released the seatbelt. Branden Stevens (blue helmet) pulls the now only semi-conscious victim out the rear window.

It was March 4th, 2009 when Miles City, MT, Firefighter/EMTs Branden Stevens and Justin Russell heard the call; they were not on duty, but happened to be at the station. A truck had driven off I-94 and into the Tongue River and the Miles City Fire Department had been dispatched to the scene. It was unknown if there were any occupants still in the truck. Stevens offered to help out because he had recently attended a swiftwater rescue certification course. When Miles City Ambulance 18, Rescue 60 and Engine 8 arrived on scene they found a mid-sized pick-up submerged to the bottom of the passenger-side window, about 50 feet from the West bank, facing downstream and wedged on an ice shelf. They could see that the vehicle's headlights were on and the driver turned on the windshield wipers as a signal that he was there and could see the rescuers.

Originally, Stevens and Russell thought they might be able to use an extension ladder to reach the vehicle, but not long after making the request to set up a ladder, Stevens cancelled the order. Instead, he requested two more trucks along with another ambulance and a Jon boat to reach the truck. Stevens and Russell then attempted to make contact with the driver.

Photos by Steve Allison

Tim McGlothlin attempts to keep the boat near the pick-up while Branden Stevens performs the difficult feat of lifting the patient into the boat.

John Amtmann, Ed.D., a professor of Applied Health Science at Montana Tech in Butte, MT, is an EMT for A-1 Ambulance in Butte. He is certified as a Swiftwater Rescue Technician through the Whitewater Rescue Institute.

"Hey! Can you hear me?" They yelled.

The driver responded and was understandably distressed, "There are three others in here! A 50-year-old man and an 80-year-old woman are in the seats behind me and I'm holding my 8-year-old son's head above the water and I'm the only one conscious! You have to hurry, I can't hold his head much longer, help!!"

The stress meter just went up about 40 points and the Jon boat had not yet arrived. Most Montana rivers in March, if they aren't iced up completely, are still ice cold with water temperatures in the high 30s and 40s throughout spring runoff. The FF/EMTs knew this would be a challenging rescue given the hazards: the unstable truck, water temperature, air temperature, ice chunks flowing at the truck, the ice shelf, and a lack of swiftwater rescue gear – a scenario common to most fire departments.

The Miles City FF/EMTs knew they were racing the clock; an average adult would not be able to last long in those temperatures and hypothermia progresses even more quickly in moving water. Still water removes body heat 25 times faster than still air and a modest 5 MPH current removes heat 250 times faster than still air (Ray, 1997).

"I can't hold his head up any longer!"

The plea for help tugged on the heart strings of the EMS professional standing on shore. Stevens, a dedicated father of four, was in a dilemma because the Jon boat had not yet arrived. And he knew that an in-water contact rescue (swimming out to the truck), which would've been nearly impossible even for Michael Phelps, should be a last resort. The citizen bystanders were frustrated that the rescuers were waiting for a boat and not going in after the victim.

USING YOUR KNOWLEDGE

Miles City is located east of Billings, MT, off of I-94 and the mighty Yellowstone River runs right through town. The lower-volume Tongue River flows Northward and into the Yellowstone just east of Miles City. Because of these rivers, Stevens had recently attended a swiftwater rescue clinic offered by the Whitewater Rescue Institute near Missoula, MT. During the swiftwater rescue courses, the instructors/owners Cody Harris and Mike Johnston regularly re-emphasize the rescue priorities that EMS professionals already know:

Personal safety
Partner/Crew safety
Rescue of the victim

"The students have a tendency to bypass simple and safer rescue approaches for more complicated ones that may place them in more danger," Johnston said at one clinic. Harris and Johnston use scenario-based education in their seminars; the students learn theory in conjunction with performing rescues in the river. This approach allows the students to learn what their personal limits are and helps them develop respect for

Tim McGlothlin steadies the boat and watches over the victim as Branden Stevens uses a pike pole to help him negotiate the ice while the three are z-dragged back to shore.

the power of the river and, as a result, the students develop better judgment by applying theory to real-life river-rescue situations.

After each scenario the instructors lead a debriefing, during which the students are able to analyze their approach. To reinforce the rescue priorities, the instructors always ask, "What was the probability that your approach to this rescue would have created another victim?" So, Stevens learned early on what was possible in swiftwater rescue because the scenarios he was exposed to represented the full-range of rescue situations from shore-based rescues to actual in-water contact rescues.

Harris and Johnston adhere to EMT/rescue basics, "The successful rescue is the one that does not create additional victims, is simple and effective." The instructors relate specific rescue techniques, whether simple or technical, to basic concepts. One of the basic concepts they stress is abbreviated and easily memorized using the acronym RETHROG and helps to prioritize the rescue approach:

REach the victim from shore if possible.

RESCUE OPERATIONS

Justin Russell (yellow helmet) and Tim McGlothlin (red helmet) return to the truck after the driver's rescue to search for more victims.

THrow a rope/buoy to the victim if possible.

ROw or paddle a boat to the victim to assist in the rescue if possible.

Go — only if you cannot reach, throw or row to the victim should you consider swimming to the victim for an in-water contact rescue.

"I knew we had at least one alive out there," Stevens said, "and, as much as I wanted to, the probability was way too low for success to send a swimmer out to the truck before the Jon boat arrived. I'm afraid it would have created another victim."

EFFECTING THE RESCUE

Once the boat arrived, Stevens and FF/EMT Tim McGlothlin were lowered to the truck where they were able to access and search the truck for the victims. The driver was still buckled in, but Stevens and McGlothlin were unable to locate the other three victims. The driver was unable to move and McGlothlin climbed in through the passenger-side window to remove the seatbelt. It was difficult to remove the semi-conscious 250-pound victim through the rear window to the bed of the pick-up and into the Jon boat.

"I was getting hypothermic myself, I was so numb, and it was all we could do to get that man into the boat," Stevens said. "One problem we had was that we could not keep the boat steady in the current and work. Tim had to hold the boat against the truck while I lifted the victim into the boat; at one point, I almost lost him in the water." McGlothlin was wearing the department's only dry-suit, so Stevens only had a helmet, rescue PFD and gloves on.

Stevens, McGlothlin and the unconscious victim in the Jon boat were Z-dragged back to shore. Though the rescuers were happy to have safely removed this victim, he was not out of danger, and they were concerned about the other three victims. The driver was severely hypothermic with a temperature of 85 degrees Fahrenheit, and was eventually transported to St. Vincent hospital in Billings where he was surgically rewarmed.

According to the Miles City dispatch report, the victim was in the water for at least 67 minutes. "The trip back to shore with the victim was very quick, less than a minute," Stevens said. Approximately 15 minutes after the Jon boat was pulled to shore with the victim, the truck was washed under the ice shelf and was found later about 600 feet downstream.

Question: Would you consider this a successful rescue?

MORE TO THE STORY

The driver of the pick-up truck was hypothermic and one of the effects of hypothermia can be altered mental status. The Miles City Fire Department later learned that the three people the driver described *were safe at home* – they had not been in the truck with the man! In his altered mental state, the man was hallucinating and believed the others were in the truck with him. In an e-mail to Harris and Johnston of the Whitewater Rescue Institute, Stevens stated:

"I cannot tell you how hard it was to stay on the bank and do nothing but tell [the victim] to hold on. I knew the situation was extremely dangerous, I wanted to swim out and help the father with his son, but I knew that making a rash decision is never the way to start a water rescue. A father crying for help to save his son is very hard to hear. Please… when you teach your students about this phase of a rescue, explain how hard this really is! You have to stay focused on the rescue and do it the right way.

I just want to say thanks so much for the training that you

Box 1, Dispatch Report
Original call 13:54
Engine 8, Ambulance 18, Rescue 60 arrived on scene at 13:56
Made contact with victim at 13:59
Request for more man power and equipment at 14:12
Ambulance 16 and Pick up 350 with Jon boat enroute at 14:14
At 14:46 Life Flight did fly over of the scene to scan for victims
At 15:01 reported that victim out of the water and being transported to hospital
At 15:09 patient arrived at hospital

Picture of group carrying backboard (left to right): FF/EMT Eric Petroff, Miles City FD; Unknown citizen responder; Dan Davis, Montana DOT; Cal Shock, Montana State MHP; FF/EMT John Caylor, Miles City FD.

provided! We had no water rescue training prior to attending your course."

TAKE-HOME MESSAGE

The victim has made almost a full recovery – during a visit with the firefighters involved in the rescue after his release from the hospital, he said that he still suffers from symptoms of post-traumatic stress, but that his physical injuries (fractured ankle and pneumothorax along with the hypothermia) were almost completely healed. The desire to help others is what brought firefighter/EMTs into the EMS profession and it is especially difficult when children are involved but personal and crew safety must be the top priorities in rescue operations. Sending a rescue swimmer to the vehicle instead of waiting the extra time to rescue victims/hallucinations could have been a tragic mistake.

Author's Note: *I met Branden Stevens at a Swiftwater Rescue seminar in Gardiner, MT. Branden is a humble family man and a dedicated professional who credited his fellow FF/EMTs for executing a successful rescue. During the seminar, Mike Johnston, Branden and I ate around a campfire at Eagle Creek and agreed that this story is an important one to tell; other FF/EMTs can learn an important lesson from this event. I would like to thank Branden Stevens, Tim McGlothlin, Tod Miller, Erik Petroff, Tyson Wilcox, Justin Tyler Russell and the other good men from the Miles City Fire Department who were involved in the rescue, and who provided the details for this article. I would also like to thank Cody Harris and Mike Johnston for offering the various courses and seminars through the Whitewater Rescue Institute* (www.whitewater-rescue.com.) *Keep up the great work guys. Also, thanks to Steve Allison for the revealing photos. Good luck and be safe!*

References

Ray, Slim. 1997. *Swiftwater Rescue: A Manual for the Rescue Professional.* Asheville, NC: CFS Press.