

Textbook Rescue by Austin EMS

On July 10, 1999 Austin EMS Special Operations got a unique opportunity. They were faced with a common Low-to-High Angle training scenario, except this was happening in real life. The team was able to use their rope skills to rescue two workers trapped in a water tank that was under construction.


The situation began when two employees were working on scaffolding inside the nearly completed water tank. They were using specialized x-ray machinery to check the tank's seams. In order to allow the workers access to the entire tank, the scaffolding was being lowered and raised by a crane on the outside of the tank. The crane's main cable ran through one of a series of access ports on the top of the tank, and this cable then connected to a gathering plate that was connected directly to the scaffolding.

Due to improper rigging and overloading, one end of the scaffolding suddenly collapsed. It fell to a 45-degree angle, dropping one man off the side. Fortunately he was attached to the scaffold by a safety belt, which kept him from falling 90 feet to the floor of the tank. The other man was more fortunate and somehow managed to remain on the scaffold.

On arrival the rescue team was advised of a possible radiological problem. The x-ray equipment was not meant to withstand a 90-foot drop. If it happened to fall from that height, there would be the chance of a radiation leak. A significant radiation hazard could occur within a 20-foot radius from the equipment's point of impact.

The team decided to send someone down to help the men and secure the x-ray machine. They anchored to the railings around the access port, and John Wittner rappelled down to the worker hanging by his safety strap. Wittner took a raising and belay line for the victim and hooked the lines to the man's harness. Both Wittner and the man then ascended together.

The anchors were then moved to the next access port. Wittner was lowered down to the man and hooked him to two lines. After securing the x-ray equipment, the team chose to lower the worker the 90 feet to the ground.

The substantial commitment that Austin EMS has made to training once again paid off. They were able to complete the rescue successfully, and all involved were able to return home safely. 



Casey Ping, Austin EMS

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Instructor Needs Input

Assistant Chief Les Crews, from the St. Louis, MO. area, is seeking input from the swiftwater rescue community...

Here's Les's message:

I have been asked to sit on a panel regarding road closure and designing automated gates or closure devices to prevent motorists from driving through such areas.

If you know of any agencies or areas using modern technology to monitor water levels, rain fall levels or if a system is in place currently doing what we're trying to accomplish, please let me know.

There is a good possibility if we can put all these things together we will get funding to field test a system for future development and installation.

Please feel free to give my name to people with similar interest about this concept.

Look forward to hearing from you soon.

Assistant Chief Les Crews
 Chesterfield Fire Protection District
 13725 Olive Street
 Chesterfield, MO 63017
 Phone: (314) 514-0696 extn 317
 Fax: (314) 514-0696
 E-mail: cfpdmo@aol.com

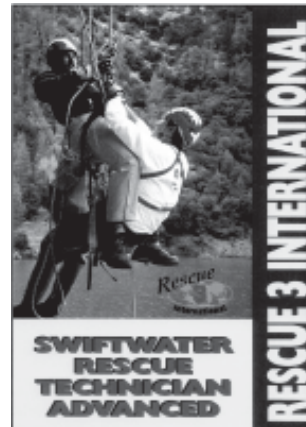


Rescue 3 Hosts First SRTA Instructor Course

by Brett Haring

Seven SRT-1 Instructors have now completed the first SRTA Instructor course at Knights Ferry, CA. The class was conducted July 19-22 by Kim Little of Rescue 3 New Zealand. Kim brought years of in-water and high angle rescue experience to the course.

The class was attended by a number of experienced instructors. Attending from California were Alan Hartford (Contra Costa FPD), Tom Anderson (San Ramon Valley Fire), Brett Haring (Woodbridge Fire),



Bob VanTassel (Fresno Fire), Charlie Miller (Ukiah Fire) and Jim Mathias (CDF-Grass Valley); from Oregon was Dale White (Lebanon Fire). Tooti Holland, a new SRT1 instructor audited the class as well! The large variety of people added greatly to the rope management portion of the class and

many variations of anchors, pre-rigs and braking systems were demonstrated.

Kim also brought a complete new language to the class. Here are some examples of New Zealand terminology along with their translations. (You won't find *these* in the SRTA text!)

In New Zealand means

- Tape Webbing
- Punter A loser, a river moron
- Knackered Exhausted
- Pissed fisherman Drunken fisherman
- Billy A pot for heating water
- Woolly fish A drowned sheep

Benton Hembree of Sonora Fire Department contributed to the search lecture portion from his background with NASAR and was a great help on the hands-on portion of the class. All instructors attending the class received provisional status to teach SRTA. Congratulations! 🎉

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Helicopter Shorts

UH-1 Failures

The crash of a Los Angeles City helicopter last year and a recent crash of a UH-1 helicopter on a medivac at Fort Rucker, have again raised suspicions about the airworthiness of these Vietnam-era aircraft.



Recent crashes have all featured some degree of tail rotor or boom failure and metal fatigue.

The U.S. Army previously had restricted operations of UH-1s system-wide during bad weather and over water. They now have completely suspended their use, pending a full investigation of the recent crashes.

Many of these aircraft are part of the Federal program to supply state agencies. Some of these helicopters are currently being flown by state and local fire departments and police departments. In California, the UH-1s being flown by the California Department of Forestry are the exact models that the Army has ceased operating.

Lucky Save

In Atlanta, Georgia on April 12, a crane operator found himself 200 feet in the air, clinging to the crane's counterweight, as the Fulton Bag and Cotton Mill erupted in flames below him. In fifteen minutes, the flames were weakening the base of the crane as the nation watched via a mini-cam overhead in a TV helicopter.

Evidently having no pre-plan for such events, the Atlanta Fire Department put out a request for helicopters. Fortune and circumstances lined up perfectly for the agencies at the scene. A Georgia Department of Natural Resources helicopter was flown by a former Vietnam rescue helicopter pilot familiar with long line work; there was a trained crew chief on board, and the fire department personnel were familiar with the basic rigging system for short-

hauling. The aircrew, pilot Boyd Clines and observer Larry Rogers, took a recon pass with firefighter Matt Mosely clipped to the rope, then settled the firefighter close to the 59 year old construction worker. Mosely put the man in a harness, signalled to Rogers and Clines lifted both men off the crane. They were set down in a nearby field.

Reflectively, it should be noted that the chances of everything lining up that fortuitously are fairly remote. Agencies, once they decide they are going to be in the helicopter rescue business, need to train, equip, and do training on a regular basis. ■



Yet Another Lucky Save

By Jim Segerstrom

Firefighter Kevin Morris was attending an SRT1 course taught by Kent Monohan and shared this story with me. It illustrates graphically why agencies need professional training, and why the lack of training leads rescuers to desperate measures to save a life – sometimes successfully, but often tragically.

June 28th, 1999 is a day one family in Highview, Kentucky won't soon forget. This Louisville suburb was experiencing its annual rains, and many of the drainage ditches had become swollen. A 7-year-old boy was playing in one such ditch just outside of his home. He had often done this during the warm humid summer rains, but this time something went terribly wrong. He got too close to the drainage pipe running under the driveway. Like a bathtub drain, there was no perceptible suction until immediately before the pipe, so the boy had no idea how strong the force was. The boy's leg was pulled knee first into the pipe, with just enough spare room to maintain the suction on his trapped leg. Immediately the water started to rise.

The boy's friends found his mother. After they had explained to her the situation she called the fire department, and then immediately ran to the scene. She arrived to see the suction was slowly bending the boy backwards. One of the other boys knelt on the

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driveway to try to help by grabbing the victim's shoulders and pulling him forward. This was enough to temporarily protect the victim's airway. Someone soon located a short piece of plastic pipe. This was placed in the victim's mouth, allowing him to breathe. Shortly after this, his face became completely submersed.

Firefighter Morris reports that when he arrived all he was able to see was the second boy kneeling on the pavement with his hands in the water. He assumed that this boy was the victim and had his hand trapped. Upon closer inspection he saw the face of the trapped boy just below the surface and the pipe sticking above the water.

Firefighters frantically began attempts at saving the boy. A piece of plywood was placed on the drain upstream, temporarily diminishing the flow. Garbage cans were then commandeered so that rescuers could bail water, moving it to the downstream side of the driveway. Eventually the boy's face was above the water. The on scene EMS supervisor was finally able to reach the boy's trapped leg. As he pulled up on the ankle another firefighter lifted at the shoulders. Finally the boy was pulled free.

Stories of such rescues make terrific reading. They also tend to be embellished over the years as they are retold in day rooms and crew's quarters. Unfortunately, the reality is that departments such as this are just plain lucky. Most of the time they, somehow, manage to "overcome, adapt, and improvise," leaving the public with the impression that they will do so at all such incidents. In fact, Highview Fire Department hierarchy had announced that they didn't see the need for water rescue, much less swiftwater rescue, training, because "we don't do water rescues." This incident was the second water call in a week!

This field expedient rescue worked because responders had enough practical experience "on the job" to figure out how to solve the problem in the few minutes they had before the victim drowned. Like

most body entrapments, the rescue could probably been effected quicker by simply putting a support line across his chest from both banks, and then using a second line farther down his body, pulling up stream on both sides, to pull him out. To think of the plywood upstream demonstrates tremendous presence of mind! Here, rescuers endangered themselves by getting into the water, in one instance actually going underwater, in order to free the victim, in a situation where yet another person could have become stuck.

As a "hot button" water rescue has given way recently to concerns about urban terrorism. However, global warming is here to stay, and the terrors of weather will be with us, more severely and more often, in the coming years. It will pay to prepare. 🗡️



Flood Routing Model Available

by Steve Harris

Agencies dealing with dam safety issues should be aware of an "advanced flood routing model" that can predict the extent of inundation based on various water storage/flood discharge scenarios. The model, known as "FLO2D", was designed by FLO Engineering's Jimmy O'Brien, who recently certified as SRT 1 in one of my Rio Grande courses in New Mexico.

The software depends upon the existence of channel cross-section data, which may be available in your area through Army Corps of Engineers' or other studies. If the data (or adequate budgets to obtain the data) exist, and you would like to add state of the art flood prediction to your regional or local pre-plan, contact FLO Engineering at 719-453-6394.

Steve Harris
 Rio Grande Restoration
 P.O. Box 1612
 El Prado, NM 87529
 phone/fax: 505-751-1269
 E-mail: unclergr@laplaza.org

1999 Higgins-Langley Awards



*(L-R) Nancy Rigg ,
Marshall Parks, Karen
Langley*

Orlando, Florida was this year's site for the 1999 Higgins-Langley Awards. The awards are a part of the annual conference of the National Association for Search and Rescue. Each year the awards have become more significant and prestigious, as the committee has become increasingly selective in


the recognition of significant contributions in the field of swiftwater and flood rescue. Nancy Rigg and Karen Langley once again expertly hosted the ceremony attended by a room full of recipients, families, and interested guests.

Awards for outstanding achievement went to Guy Smith (a Rescue 3 instructor) as well as selected members of the Houston (TX) Fire Department. Also honored were the

Clackamas (OR) Fire Department and its Boat 25 for series of significant rescues during the year.

Another group which was recognized were the Rangers of the Rescue 3-trained Lower Colorado River Authority, from Austin, Texas. Sergeant Mike Kane, himself a Rescue 3 instructor, reported that the unit made numerous rescues over a an eight day period during the major Texas flooding in October, 1998.

Marshall Parks received the Lifetime Achievement Award. He is a Lieutenant and the founder of the San Diego Lifeguards River Rescue Unit. After over 20 years of service, Marshall is retiring this year but it is planning to stay actively involved in swiftwater rescue education. He is both an SRT 1 and 2 instructor for Rescue 3.

The Program Development Award went to the Los Angeles County Inter-Agency Swiftwater Rescue Committee. This committee represents city and county police and fire units throughout Los Angeles County, from over two dozen jurisdictions. 



Ghilarducci Receives New Appointment

Rescue 3 instructors will be pleased to hear of the recent of appointment of former instructor Mark Ghilarducci to a position in the Federal Emergency Management Agency.


Mark was Deputy Chief for Special Operations for the California Office of Emergency Services during the pivotal flood years 1992 to 1997. His farsightedness lead first to the equipping of the eight state OES swiftwater/flood rescue teams, and then to the planning and implementation of a statewide flood response and typing system that is being copied nationwide. These efforts led to the Fire Rescue Branch of OES receiving the 1997 Higgins and Langley Award for Program Development.

Mark has been in search and rescue virtually all of his life, starting as a teenage Explorer Scout on missions in the



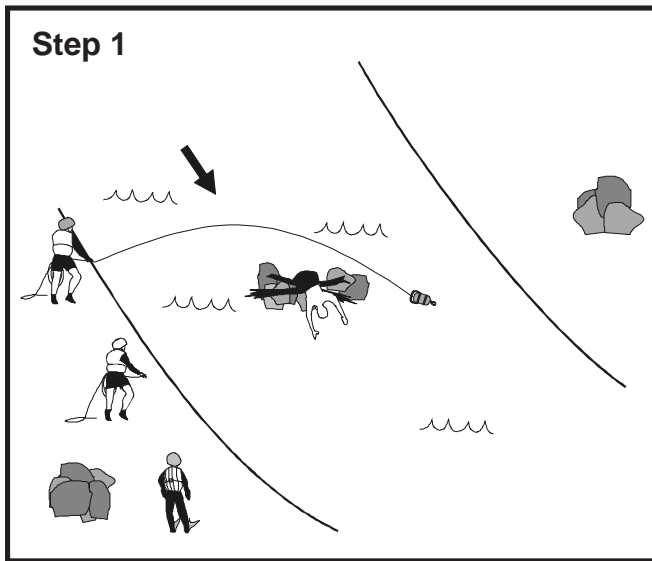
Sierras. This is where he first met Jim Segerstrom. He later worked as a boating safety officer, paramedic, and program coordinator for rescue and outdoors activities at UC Davis, before being hired by OES in the late 1980s. Mark was a swiftwater and low to high instructor-trainer for Rescue 3 for a number of years as well.

Mark's job will see him headquartered in San Francisco, but he has no immediate plans to move

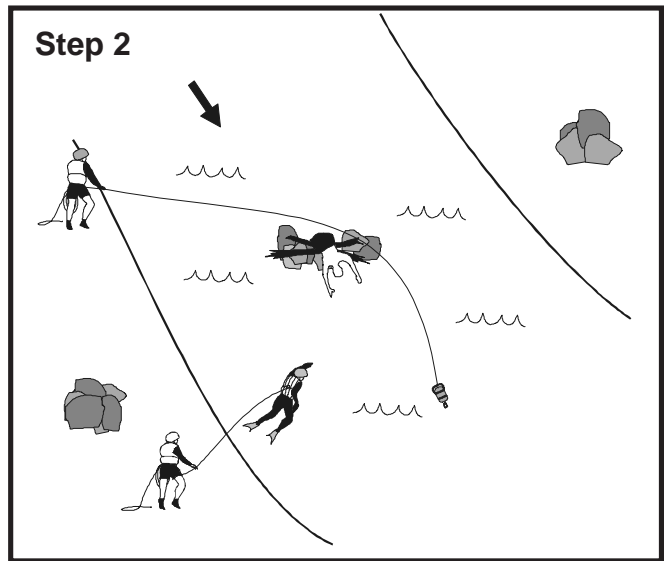
his family from the Sacramento area. His friends and supporters in California are pleased that Mark's job will be to coordinate disaster response in the western US, so that the citizens of California will once again benefit from his expertise. California's loss is FEMA's gain, and we are glad the Federal government has the services of this very talented and dedicated man. 

The Kiwi Entrapment Rescue Technique

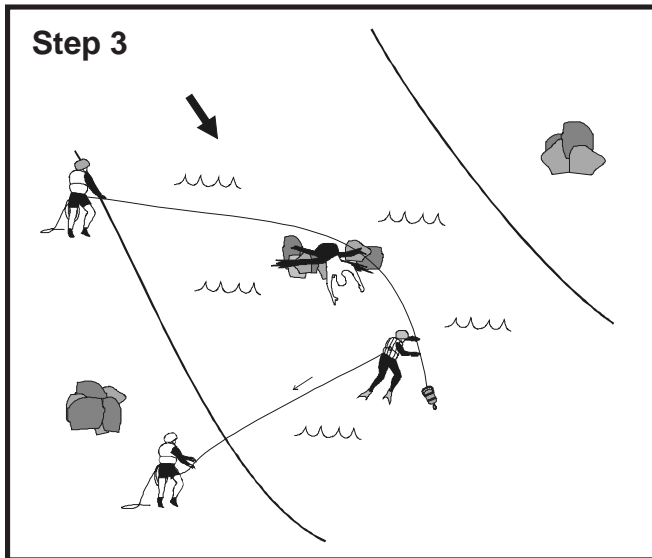
Our thanks to New Zealand agent and instructor Kim Little for sharing this technique with us. Kim and the other New Zealand instructors have discovered that they are frequently confronted with situations in which they must potentially extricate the victim from one side of the river only, and have developed a technique for that purpose.



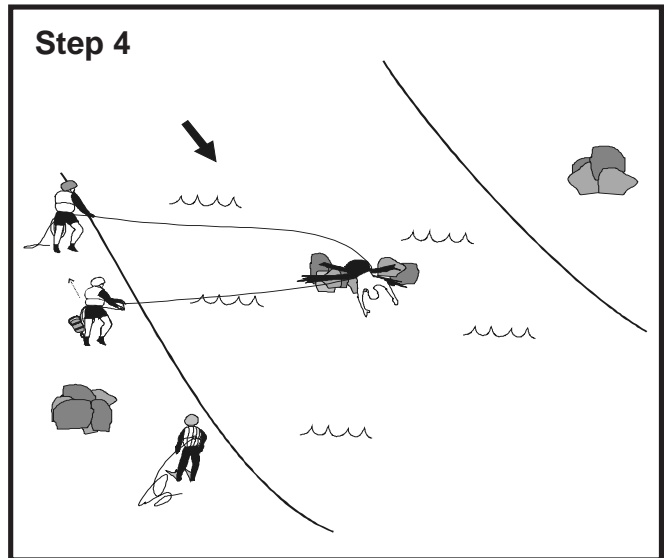
1. A throwbag is thrown on the upstream side of the entrapped victim, the rope drifting downstream on the far side of the victim.



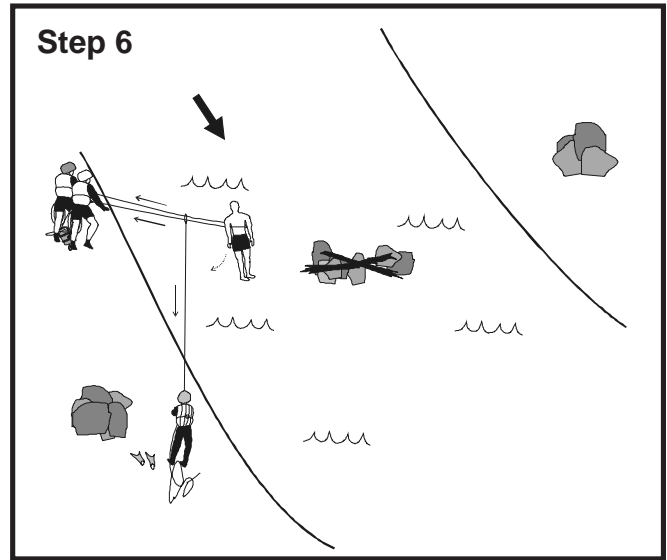
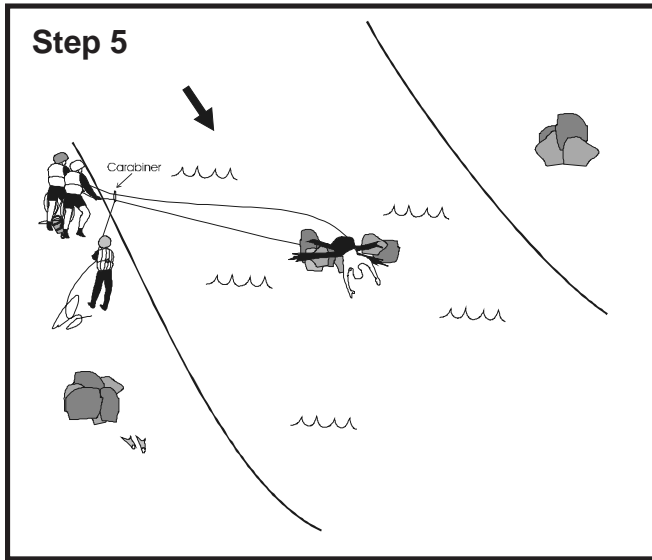
2. A “live bait” swimmer is deployed on the downstream side of the entrapment. His or her only job is to swim out and grab the first rope.



3. He is then pulled back to the shore.



4. The rope is then walked upstream to the location from which it was first thrown, so that the rope is now doubled around the trapped victim.



5. A second rope is clipped to the doubled ropes using a carabiner. The carabiner is allowed to slide down the doubled lines so that the victim is caught inside a tightening cinch.
6. As the victim is pulled from the entrapment, the second rope is then used to pull the victim to the side of the river. ■

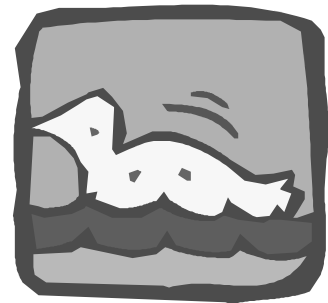
This Duck Doesn't Float

On May first, a World War I I-era DUKW, an amphibious truck, sank in Lake Hamilton, near the town of Hot Springs Arkansas. There were 21 people on board the converted tourist vehicle, including the operator. The company that operated the tour had built a canopy over the usually open craft.

Coast Guard accident investigators theorized that a leak around the drive shaft filled the rear of the truck with water causing it to sink by the stern in less than one minute. Most of the thirteen victims were unable to escape from under the canopy and were found in the vehicle on the bottom in about 50 feet of water. Divers from several nearby agencies attempted to resuscitate victims in the 70 degree water. One woman thus survived on life support for 24 hours before succumbing.

Note: It is important to push drowning prevention. While the idea of a “golden hour” has become strongly embedded in rescue mythology, statistically “saves” are a long shot. If

someone goes under the surface, their chances are remote, about 1 in 8,000 -- and then only if all factors line up correctly: youth, no predisposing medical problems, extremely cold and clean water, paramedics immediately on scene, and a tertiary facility chose by that is prepared to deal with the complex physiology of a drowning event. Since such circumstances virtually never occur, it is safe to say: “Go under water: die”. ■



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Surfin' the Web



- An in-depth study conducted by Colorado State University can be found at <http://www.cira.colostate.edu/ramm/jw/flood/flood0.htm>. This study looks at the Fort Collins, Colorado Flash Flood of July 28, 1997 in great detail. A chronology of events is presented with detailed maps and photographs. Also presented are the cities plans to limited future disasters of this kind.
- Nancy Rigg, a dedicated advocate for victims, knows from personal experience the value of Critical Incident Stress Management As she states in the Oct. 1996 issue of *The Rescuer*, "The time to develop an effective crisis management program is now, not after something big goes down." She invites us to visit 911 Magazine's site to view a short list of resources that she feels are of value to the professional rescuer. Visit it at <http://www.9-1-1magazine.com/info/resources/0799linksAndRes.html>

Calendar

- August 12-15, 1999. *EVFM '99* (Emergency Vehicle & Fleet Management Conference & Exposition) in Louisville, KY. Phone 1-800-266-5367.
- Sept. 17-19, 1999. *8th International Police Diver Symposium* in Hamilton, Ontario, Canada. Phone 905-574-6817.
- October 19-23, 1999. *First Due Fire and Rescue Conference* in Las Vegas, NV. Phone 800-266-5367
- November 4-7, 1999. *Fire Tech Reno* in Reno, NV. Phone 775-353-1622.
- March 23-26, 2000. *EMS Today* in Orlando, Florida. Phone Jems Communications at 800-266-5367.