

Special Rescue Teams

Flood/River Rescue

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Facts about flooding in America:

- ? ? 70% of major disasters declared by the President are caused by floods.
- ? ? More Americans die in floods than in fires.
- ? ? Floods kill more Americans and cause greater property loss each year than all other natural catastrophes combined.
- ? ? On average, three rescuers (generally untrained) die in moving water each year.

INTRODUCTION

Water rescue is a broad field encompassing numerous disciplines, including swiftwater, surf and offshore rescue, ice rescue, underwater rescue, and many more. Aquatic rescuers often assume that their expertise in one water rescue field makes them an expert in all. As we have learned in San Diego, river and flood rescue is unique. It requires specialized training, preparation, equipment, and a strong team approach. Nevertheless, persons with a strong background in open water rescue are likely to have great success when they properly prepare for flood rescue.

THE SAN DIEGO LIFEGUARD RIVER RESCUE TEAM – A HISTORY

San Diego has a semi-arid climate. Average annual rainfall is 10 inches, but wide swings occur from year to year. In many years, there is no measurable rainfall at all in summer months and little the rest of the year. When it does rain however, usually in winter, the rainfall can be concentrated in torrential downpours that cause very serious flooding.

The popular 1956 Hollywood movie, *The Rainmaker*, which starred Burt Lancaster and Katharine Hepburn, was based on an actual event in San Diego in 1915. Amidst a crushing drought that was seriously impacting the town, city leaders called upon a man who proclaimed himself a “Moisture Accelerator.” Following his incantations and other efforts, there was a deluge of 38 inches of rain in one month, which drowned 20 people.

Many years later, in 1978, a man and woman drowned after their car was trapped in floodwaters when they tried to cross a flooded road. With more flooding imminent, the City of San Diego turned to its professional lifeguards, as experts in water rescue, to organize and prepare for flood rescues.

The San Diego Lifeguard River Rescue Team was initially comprised of six senior lifeguards who had experience in cliff and SCUBA rescues. At first, none of the lifeguards were trained in swiftwater rescue, presuming that the river environment would be easily tackled with their ocean rescue techniques. When two lifeguards were injured and nearly killed however, they quickly learned that the swiftwater environment required additional skills. Even so, these intrepid lifeguards made 23 river rescues in the floods of 1978, without formal river rescue training, repeatedly placing themselves in grave danger.

Their first specialized training came from a private citizen who had whitewater rafting experience. He accompanied them to the Colorado River, where they attempted to adapt their ocean rescue equipment and skills to river rescue. They learned many things, including how little they really knew; but they also formed a plan to further develop their team.

While some communities have chosen to train a large number of safety personnel at a basic level of flood rescue skills, San Diego elected to train a small cadre of rescuers at the highest possible level. While this limited the number of trained providers available to respond, it ensured that upon arrival at-scene, they were able to quickly and safely accomplish the rescue.

During the 1980s the team grew to include 11 highly trained members. Each year, the team traveled to a swiftwater river somewhere in the United States to hone their skills in this specialized environment. During this period, flood rescue teams were also being developed in other parts of the United States. Members of the San Diego team, including the current team leader, Lt. Marshall Parks, attended special courses throughout the nation. Equipment improved and innovations were made.

In some years, there were no rescues whatsoever, due to lack of rainfall. In other years though, the rescues came one after another during the winter rainy season. In heavy rains, the River Rescue Team began to be called throughout the County of San Diego to multiple rescues up to 50 miles apart. The team never declined a request for help from a neighboring city.

The success of the team drew interest from other emergency workers, some of whom felt that perhaps lifeguards should not handle this responsibility. Occasionally conflicts arose at rescue scenes over who would take command of the incident. To resolve this question, in 1984 the San Diego City Manager issued a policy that defined a river rescue as, "... any rescue of persons or property threatened, surrounded or entrapped by stationary or moving water" and declared that, "To safely perform [river] rescues re-

quires specialized training and equipment ... it is important that where possible all river rescues be performed by the Lifeguard Service's River Rescue Team." Thereafter, authority of the team was rarely questioned.

Effective communications has been a hallmark of the team. They equipped themselves with two-way radios that could be used to directly communicate with police, firefighters, California Highway Patrol, and US Border Patrol Agents throughout San Diego County. As a result, they became able to monitor and immediately respond to reports of persons in distress, broadcast by other public safety units in the field. During periods of flooding, one regularly hears police units stating, "We need the River Rescue Team," and members of the team immediately responding on the police frequency.

In January and February of 1993, San Diego was hit by a series of storms which produced floods of great proportions. During a three week period the team, augmented by other lifeguards with basic swiftwater skills, effected 195 swiftwater rescues, assisted in the evacuation of several hundred citizens trapped by flood waters, and helped save numerous livestock. They worked day and night for several weeks, often bivouacked in hotels near the Mexican border where many of the rescues took place. Later, they received several awards and commendations for their actions.

One of the original dreams of the San Diego Lifeguard Service was to arrange a national flood rescue mutual aid system that would allow the team to be deployed wherever it might be needed. A number of contacts were made over the years in an effort to accomplish this, but little progress was made until a separate, but similar system was developed for other types of disasters.

Primarily at the urging of firefighters, the United States Government's Federal Emergency Management Administration began to develop a national mutual aid system for major national disasters, like earthquakes. This system, which came to be known as Urban Search and Rescue (USAR), relies on local rescue teams throughout the United States. In a disaster, teams from unaffected areas are sent via military transport and other means to assist emergency workers in the disaster area. The system has capitalized on the idea that it is less expensive and more efficient to harness the resources of local rescue crews than to maintain large federal forces in anticipation of infrequent, major disasters. It has been very successfully employed in a number of disasters, including the Oklahoma City bombing case.

In 1996, at the urging of a number of swiftwater rescue teams, including San Diego's, California was given the go-ahead to develop a swiftwater rescue component of its USAR teams. One of these was in San Diego and came to include lifeguards from the River Rescue Team, along with firefighters with swiftwater rescue training.

Minimum certifications for this team include Swiftwater Rescue Technician I & II, heavy rescue techniques, Emergency Medical Technician, Vertical/Cliff Rescue, SCUBA, Op-

erator of Personal Watercraft and Inflatable Rescue Vessels, Advanced Incident Command Operations, Helicopter Rescue, and a minimum swim requirement.

Shortly after its creation, in February 1997, the team was deployed to a major flood disaster in Northern California. They were flown to the disaster site in military transport planes with lifeguard vehicles, personal watercraft, inflatable rescue boats, and other equipment aboard the aircraft. They spent five days evacuating and rescuing people and livestock. Later, rescuers involved in this deployment, including the River Rescue Team, received the Higgins and Langley Memorial Award for outstanding achievement in the field of swiftwater rescue by the National Association for Search and Rescue.

When the San Diego Lifeguard Service replaced a special cliff rescue vehicle in 1993, it was specially designed to be used for swiftwater rescue as well. This required each lifeguard on the team to acquire special driver licenses due to the weight and complexity of the vehicle.

River rescue is one of the most dangerous emergencies to which lifeguards respond. It is the only discipline in which a San Diego lifeguard has died. All team members now receive hazardous duty compensation.

RIVER RESCUES IN SAN DIEGO

In the San Diego urban environment a number of the roads that cross rivers were designed to allow the river to overflow them so that property would not be damaged during excessive rainfall. Many of the rescues made are of individuals who attempt to drive their vehicles through flooded roads and become trapped in their vehicles or swept downstream.

The Tijuana River, which separates Mexico from the United States and San Diego, is another common rescue site. During periods of heavy rain many people attempt to cross the border unlawfully to gain access to the U.S., while trying to elude United States Border Patrol agents. They feel that these agents will not enter the water, making their entry into the U.S easier. This creates a special rescue situation.

In attempting to slip into the United States while eluding the Border Patrol, some become stranded on small islands or washed downstream. Others drown and are found many days later in a heavily decomposed state. Ironically, many of the calls to assist people in this distress come from Border Patrol agents themselves, who are concerned for the safety of persons they would otherwise pursue. While river rescue team members are attempting to rescue these individuals, they sometimes move or attempt to flee. Once rescued, lifeguards turn them over to the Border Patrol and they are deported.

Within San Diego's urban environment, there are also a number of drainage culverts. When filled with rainwater some flow at speeds up to 40 m.p.h. The River Rescue

Team has responded to numerous calls of children being swept away while playing in or near these culverts.

One especially challenging rescue was of a young boy who was playing in a drainage culvert with a Boogie Board. He was swept downstream into a series of culverts that ran underground. He found a culvert that led up and out to the street above, but became trapped in a narrow passageway under the street. Citizens heard his cries for help coming from a storm drain. The River Rescue Team responded and located the child. Water flowing into the storm drain from heavy rain had to be stopped with sandbags before it drowned the child. Once stopped the child had to be removed from the storm drain using heavy rescue equipment to open up the sidewalk above him.

OPERATING PROCEDURES

The primary river rescue season in San Diego lasts from November through March, but rescue activity varies greatly from year to year depending on the amount of rainfall. The River Rescue Team operates under guidelines of the San Diego Lifeguard Service's Manual of Policies and Procedures. This policy specifies the selection, training, deployment, and supervision of the team. It also specifies levels of alert for the team.

Most San Diego lifeguards work eight hour shifts, five days a week. To ensure around the clock response to emergencies on San Diego beaches, there are always at least two lifeguards assigned to 24-hour shifts, similar to those of firefighters. During the river rescue season, River Rescue Team members are often assigned to this shift, but team members who are not on duty must also be prepared to respond to river rescues from home. The Lifeguard Service has established an alert system involving three levels. When predicted rainfall heightens the possibility of an emergency response, members of the team are placed on alert.

In determining the level of alert, a hydrologic criteria has been created. Using predicted 24 hour precipitation amounts as measured in inches related to the coast, foothills, and mountains, various alert status levels are created. Existing conditions are also taken into consideration. The precipitation forecast is provided by the National Weather Service. The team leader is responsible for determining the various alert level status levels and ensuring that all appropriate measures are taken.

Team Alert Status Levels:

Alert I

During any alert, team members are required to carry pagers and personal river rescue equipment at all times, as well as refrain from consuming alcohol. At Alert I or II, while off-duty, they must stay within 20 miles of Lifeguard Headquarters. Designated vehicles are equipped with river rescue gear. Weather is constantly

monitored, and the team leader is notified of any changes in weather predictions.

Alert II

Same as Alert I, however all off-duty team members are placed on paid stand-by. Designated equipped vehicles are taken home by various members of the team. Lifeguard Communications, which is always staffed 24-hours a day, is given details of team operation plans. Appropriate public safety agencies throughout San Diego County are advised of the team's status.

Alert III

The team is fully activated as a unit and all members strategically deployed throughout San Diego in historically known past river rescue locations with an action plan in place. During this status the team is broken up into three to four member squads with a Sergeant as squad leader. The Lieutenant is the overall leader.

Emergency Response:

When Lifeguard Communications receives a report of a river rescue emergency, they advise the ranking River Rescue Team member (generally a Lifeguard Lieutenant or Sergeant). The duty supervisor evaluates the call and determines the appropriate level of response.

Often, this response will include other emergency agencies, such as firefighters, paramedics, and police. A police helicopter is commonly summoned, since aerial evacuation may be the best alternative and the helicopter can be valuable for spotting victims, communicating with them, and lighting at night. Once on scene the ranking team member assumes command of the incident and makes use of all appropriate resources to effect the rescue.

Environmental Safeguards:

Many rivers in the urban environment have been found to contain contaminants which may be harmful to humans. For example, sewage is often present in floodwaters. In an effort to reduce exposure, all team members are issued dry suits and are required to wear them while actively involved in swiftwater incidents. After each swiftwater incident, team members are decontaminated and receive appropriate inoculations.

TEAM TRAINING

All team members are required to attend 40 hours of swiftwater training annually. This training takes place in the fall prior to the river rescue season. Since San Diego lacks

swiftwater training sites in the dry fall season, the team must travel to various parts of the nation for a suitable swiftwater environment. Most recently, they have utilized the Potomac River, just outside Washington, D.C.

Generally, the team will meet with a local agency that provides swiftwater rescue for the training site. This also allows them to share various rescue techniques. Many times the San Diego team has provided enhanced training to these agencies. Team members are assigned training topics and are required to instruct their fellow team members.

During this training the team will cover everything from the basic rescue to highly technical rescue scenarios, including night rescue operations. All team members are encouraged to provide research and development of any new ideas or techniques to their fellow team members.

CONCLUSION

Today the San Diego River Rescue Team is recognized as one of the nation's elite teams and has received national acclaim. This team and the way it operates has been used as a model by other teams throughout the nation. Team members have received commendations from the San Diego City Council, San Diego Board of Supervisors, and the Governor of California. They have twice been awarded the Higgins and Langley Memorial Award for Outstanding Achievement in the Field of Swiftwater Rescue. In fact, they are the only two time recipients of this award.

Experts in the field of aquatic rescue consider swiftwater rescue one of the most dangerous water emergencies. Even with their strong aquatic background, San Diego lifeguards learned that significant specialized training and equipment were needed to safely and effectively perform these rescues. Nonetheless, their extensive aquatic skills as a basis helped greatly in developing what has become a nationally recognized team that has been regularly lauded for its successes. In our view, when considering the development of a specialty team to respond to these types of emergencies, lifeguards are the natural choice.