

Canadian Coast Guard's Hero Class vessels **CCGS Corporal Teather C.V.**

Volume 8 * Issue 101

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**FOUND ON THE WEB
NEWS & EVENTS
CONTINUING ED.**

**The Alameda
Incident
"Perspectives"**

**Exercise,
Diving,
and the
Heart**



PSDiver Monthly 101

Greetings

This month we present to you a challenge. This is not a challenge to train or accomplish a specific task. The challenge issued to you is much more than that.

The questions have no right answer. No action you take will be the right one. Nothing you do, including nothing at all, will prevent someone from dying.

But, doing nothing could save a life.

Perhaps challenge is too specific. Perhaps dilemma is more appropriate.

How do we protect ourselves from harm or death while doing everything possible to prevent someone else from being harmed or dying?

Consider this: A 911 call comes in and you and your team are dispatched to a car in the water. The location is 3 minutes away. You arrive and the crew that is with you are members of your water response team. You grab a mask, snorkel and fins and jump into the water heading for the vehicle that is underwater. Your crew begins setting up dive gear.

You take a quick breath and dive down to the car and find **you are on the driver's side. A quick feel** around tells you **that all the driver's side windows are down. You reach in** and feel the driver. It is a woman and she is not moving. You quickly cut her seatbelt and have to make a quick assent for another gulp of air. Quick breath and you go back down and extract the woman. Once on the surface you swim her to shore and your crew drags her out of the water.

Breathing heavily and with adrenalin pumping through your veins, you take a moment to see that they have the situation under control and swim back out to the car. Another breath and you dive back down to the car.

You reach the car and realize that you did not get a good breath and have to make a quick assent. You take a moment to regroup, get your breathing under some control, take a gulp of air and go back down.

This time you feel inside the rear window and feel a child seat and it is occupied. Before you can react, something brushes against your hand and you realize it is the hair of someone else.

Do you take time to save the baby? Do you take time to search the other side of the car to see if there are more passengers? Your time frame for a realistic and viable rescue is slipping away. Who do you save? Taking time to search takes away potential life from the infant but could give you information that you can share on the surface that would get someone else in the water to assist with a possible rescue of someone else.

Either decision, either action is likely to result in a fatality. If you take the time and everything works out perfectly, you will be a hero for the rest of your life and may save a family.

You choose the take the chance and search. Back to the surface for another breath and a quick shout to the team letting them know there are two more victims. Deep breath and back down.

How long can you hold your breath? In the moment, will you be able to control your breathing? Maybe. Maybe not.

Each ascent without a victim is another nail in their coffin.

You make it to the passenger side of the car and determine that both windows are down and discover a child in the front passenger seat and another in the back seat. Now you have three victims. Who can you save? Who do you try to save?

Save one and two die. Save none and rush to the surface to report and scream for help. Maybe all of them die because of the delay. Maybe the additional help is there and together you save one of the three or two or all of them.

Which is the better choice? How can you possibly know? How do you make that decision?

As a water response team we strive for rescue. We want more than just a victim out of the water and breathing on their own; we want them to fully recover and resume their normal lives.

One of the sad realities is that we cannot save everyone and by the time the divers are needed, the chances of rescue have diminished to close to zero. We know this. We understand this. But knowing and understanding that there is virtually no chance of a rescue, we still try.

We like to say we **have a "Golden Hour" rule that allows us work in a rescue mode for an hour before transitioning to recovery mode.** We even fudged this 60 minute time

frame past the intent. The "Golden Hour" was an hour from the point of submersion but we skewed that to be an hour from the time WE start. Some team even extended the time frame to 90 minutes.

Our GOAL, our training, planning and purpose is to save lives. So we sometimes fudge a number that we already consider to be overly generous. Miracles do happen and we should help one along when we can.

However.

We also train, plan and prepare for the risk we assume and the known hazards we will face in and under the water: depth, current, zero visibility, debris, sharp metal and broken glass, rising gasoline columns and more. We do this because our other goal is to ensure our own people live through the incident. We typically use and refer to an **analysis done on site called "Risk / Benefit."**

Is the RISK to our people worth the BENEFIT of saving **someone else's life? We want to be heroes and say yes,** absolutely –you bet! But the reality is that we are not going to purposefully place one of our own in a situation that we know has a high possibility to kill them for the CHANCE we MIGHT save someone else.

In the previous scenario, we did not quantify the depth and can assume it was a shallow body of water. Now use



that same scenario and make the depth just 30 feet. How much more risk does that create? How does that affect the survival possibility of the victims? Can you **PERFORM** a breath hold dive to 30 feet and still have time to do any searching or work? How do you know? Is there even a marginal possibility that the attempt would even be made? What **IS** your limit? How do you know? If you do not know your limits or those of your team, who has to die during the onsite / on scene discovery of those limits? You? One of your team members? One or more victims?

We live in a lawsuit happy society. There are public expectations of us regarding our skills, talents and abilities as Emergency First Responders. When we show up to a scene, regardless of what it is, we are expected to overcome the obstacle and save life and property.

We are **EXPECTED** to put our lives at risk. That may not be a realistic expectation. We train and equip ourselves very purposefully to reduce our risk. **WE** know what we do but the public watching does not know all we had to do to prepare ourselves or our teams to do the jobs we do.

Most of the time we do our job well and without any major incident. If it is not a contract year, they call us heroes and praise our hard work and dedication. Unless we do something wrong and someone gets hurt or killed. Then the gloves come off and everyone waits and watches whose head will roll.

What if someone was hurt or died and we did nothing wrong? The public expectation of us is high. If someone gets hurt or dies, it **MUST** be our fault and everyone waits and watches whose head will roll.

Is it fair? Of course not but it is how we are perceived and if we do not recognize that we are deceiving ourselves.

You respond to a “not breathing” call from a frantic elderly woman who found her husband on the couch sleeping when she woke up this morning. When you arrive you immediately recognize lividity and a quick touch confirms rigor mortis. Before you can speak, the wife tells you that she saw him breathing just a few minutes before she called 911. In a heart wrenching sobbing voice she can barely whisper, “*please* save him.”

We know the outcome already. There is nothing we can do that will bring him back to life.

Nothing.

“Why won’t you help him?”

“PLEASE, PLEASE HELP HIM.”

Do you say, “Sorry for your loss” and pack your gear and leave? Do you wait for EMS or a Justice of the Peace to show up before you leave? While you are waiting are you talking and joking around? Does your crew step outside to have a smoke? Do you get on your cell phone and have an unrelated and public conversation?

Hopefully your response to all the above was **NO**.

If you have been on the job for even a little while you have seen death. You have seen the grief of the survivors. You have seen the mechanism of fatality on more than one occasion.

You already know that if there are family or even friends present. **Your patient is dead. Don't** you have a responsibility to the survivors? If it is nothing more than showing a little human compassion and respect, we do it. On some occasions, we take time to discuss what our procedures are and what they can expect to occur over the next hour or two. We give them information that includes the truth.

But what do we do when our victim is still alive but under the influence of drugs or alcohol and has decided to commit suicide?

What do we do if our victim is perfectly sober and is trying to commit suicide? What if they are successful and we are present when it occurs?

A gunshot through the head is usually pretty final. A drug overdose, while daunting, can sometimes be mitigated. A bridge jumper, depending on the height of the bridge and/or the depth of the water might be able to be saved.

What do we do if someone is determined to commit suicide by drowning? What if they are successful and you witness the event?

If they are in water and are trying to kill themselves, your ability to assess risk is limited to what you can see and what you can determine from witnesses. What you cannot see is the possible weapon in their pocket, their mental state of mind – other than the obvious, or their capacity for violence if approached or interfered with. Do you train for this? Do you have an Operational Guideline for this kind of emergency?

What if they are successful? What is the public perception now?

There are no right answers. There are no right procedures to follow. It is a dilemma that will result in one of three outcomes:

- The victim is prevented from being successful.
- The victim is successful and you perform a possible rescue or a body recovery.
- The victim is or is not successful and takes one of the potential rescuers.

Our focus this issue is on an event that occurred at the end of May 2011. The incident was one where a man was successful in his attempt to commit suicide by drowning.

This was a very highly debated event and well-argued by a number of people. I found four people who I believe have the knowledge, the experience or the background to present a perspective of this event that is unique to each.

In my opinion, the authors who have contributed to this issue have unique perspectives. Each of them have a rational and valid argument despite the fact that they do not all agree.

Our goal is to present to you these perspectives so that your team, your department, can be prepared if a similar incident was to occur within your jurisdiction.

It is cold out. Stay warm and DIVE SAFE!

Mark Phillips
Editor / Publisher
PSDiver Monthly

**If you would like to
discuss this topic or
any other, join our
discussion group:
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Special to PSDiver

The Alameda Incident Perspectives

On Memorial Day, May 30, 2011, Raymond Zack drowned.

Author: Tony Hargett

On this day at 11:30am Raymond Zack went for a walk with a female from the same apartment complex, Dolores Barry who considered herself **Zack's foster mother**. Zack decided he needed to go into the water and Delores was unable to stop him. She eventually was able to ask a bystander to call 911 fearing Zack might attempt suicide as he had done in the past.

Zack was 52 years old and a **large man. Zack stood 6' 3" tall** and weighed in around 300lbs. Police had reason to believe that he could be violent at times. He had a history of attempting suicide and both the Alameda Fire (AFD) and Police (APD) had responded to his attempts prior to this date. According to his family, Zack suffered from depression and had been hospitalized at a mental illness facility in 2010.

Alameda is an island in San Francisco Bay. In 2009 the AFD lost budget money for boats or to maintain their rescue swimmer program and in fact, relied on outside agencies to provide water rescue assistance for their needs.

So in May of 2011, when a call came in to respond to an attempted suicide in the bay, the AFD had nothing to provide when they arrived to find APD already on scene watching a large male out in the waters of the bay attempting to commit suicide by drowning.



Crown Beach

Knowing this was the same person they had been on before and knowing he had attempted suicide by drowning in the past, both the APD and the AFD did not provide rescue as he inched farther out in the water in an attempt to drown himself. After about 50 minutes the male had drowned and a female bystander went into the water, against the orders of the APD, to swim Zack back into shore. His step-mother, Delores Berry said she knew he was still alive

because she saw him shivering. Once on shore the AFD started a full CPR work up of Zack in hopes to revive him. He was pronounced dead at the hospital a short time later.

Needless to say, lawsuits were filed. A lawsuit filed against the Emergency Medical Services Authority was found to have no merit on each charge. And later, a suit brought against the City and County of Alameda was thrown out.

On February 11, 2013 Judge George Hernandez issued his judgment that dismissed the AFP and the APD of the responsibility to **save Zack's life.**

I had the fortune of presenting a RWC class in Alameda last year about a year after the death of this victim. We presented the class in the same location as the suicide drowning. I had discussions with members of the police department, fire department and lifeguards in the class. In these conversations, the opinions were split and were both with and against the actions of the APD, the AFD and the victim.

Tactics and strategies are always questioned and of course someone different would have done something different. This is the culture that we live in. Everyone has a process to develop an action plan and almost every action plan will be different.



Visitors to Crown Beach make use of the low tide on a hot day. November 23, 2012 in Alameda, Calif. [Photo: Rashad Sisemore, The Chronicle](#)

When an emergency call comes into the fire service, I know I did not cause the problem that I am responding to. My goal is to get to **another person's** problem as quickly and safely as time and travel allows me to get there. On arrival we are trained to perform a size-up of the situation. Our action plan is to first do no further harm or something that will make the situation worse. The action plan includes knowing

available resources and training and not exceeding the limits of either. In the Alameda event, both police and fire arrived and found a man that they had both responded to in the past and was known to them to be mentally disturbed. Worse yet, he was 150 yards offshore wading in chest high 55 degree water threatening to kill himself.

Let me see if I can paint the scene, in this section of Alameda, to be in chest high water you must walk out the length of a football field or more from the initial point of **contact with water. It's a very shallow beach and is really** only influenced by the tides coming in and out of the San Francisco Bay. When the tide is out, before you get to the water you are stepping in bootie grabbing mud. When police arrived they were not equipped to do anything for any person out in chest high water. Historically, on this island in the bay, their management had simply ignored any need for their officers to enter the water to perform their duties, so they could not simply apprehend this victim threatening to kill himself and take him into custody. I would say in the state of California, this is business as normal for any law enforcement agency for water rescue.

So Fire comes along and sees that there is a victim struggling in the water. First they did no harm. It was not the fire department that held people back and it was not the fire department that pushed volunteer rescuers away from the scene, it was the police who, which I have failed to mention to this point, have jurisdiction authority over this entire event.

Upon request of firefighters to perform some type of rescue, the reply was that their surface rescue training was not current, they did not have proper thermal protection or reach or throw or tow devices.

In fact, standing orders of Fire Chief on March 16, 2009 said, ***"Previously qualified rescue swimmers shall not enter the water", but to request mutual aid from neighboring Oakland, the Coast Guard or East Bay Regional Parks.***

According to the Review of Crown Beach Incident by FireChiefs.com, on March 9, 2009, Division Chief Dale Vogelsang wrote a memo that included ***"We have been approved funding to recertify instructors and train new swimmers."***

"However, until this training is completed, per OSHA requirements, no members may be used as rescue swimmers."

The police stated that the victim was 100 to 150 yards out into the bay with 50 to 55 degree water and the only foreseeable way to perform this act would be with a watercraft. In response, the police dept. requested



Crown Memorial State Beach in Alameda, Ca., on Saturday June 11, 2011, where 52-year-old Raymond Zack drowned last week, as rescue personnel were unable to enter the water due to lack of water rescue training. [Photo: Michael Macor, The Chronicle](#)

assistance from the local Coast Guard station with a 40 minute ETA. They sent a boat but when they arrived the area was too shallow for their craft and the victim had succumbed to water. The Coast Guard helicopter, with their rescue swimmer was out on a call, and miss-communication with the Oakland Police Department, the closest agency with a shallow water rescue boat, for a boat brought no assistance. After the fact they would find out that Oakland fire had a boat available and only 10 minutes away, East Bay Regional Parks had zodiacs and lifeguards and they were 15 minutes away, no call was made to these agencies.

The police and the fire dept. stood by as a known mentally disturbed bobbed up and down in the water until he either succumbed to hyperthermia or aspirated enough water and simply fell forward in the chest high water to complete the drowning process. This is the story I was told by local department members with firsthand knowledge of the event.

In truth, how can you blame any of the agencies? Which agency should have had the training and equipment to go out and perform the rescue of this particular victim? One would think the Coast Guard would have all the proper **tools, but they are not lifeguards, and they don't work in** as shallow of waters as these. The light is on the fire department because historically they are the rescue guys. But their command said NO and blamed the funding cuts to the department which could not maintain their water rescue program.

But there was so much more involved.

Emergency Services respond to successful suicides as part of their job.. Was it the fault of the police or the fire

department that we didn't show up in time or counsel or arrange psychiatric intervention for this person before he **performed this suicide? As much as it's going away, this is** still a free country. If a person wants to become a millionaire they can, if a person wishes to be a lonely hermit they can, and if a person really wants to kill themselves by suicide they are usually successful.

But that still does not acknowledge the fact that the fire department who are trained, or in this case, **were trained** at one time to go out and pull a drowning victim into safety and did not do it that day. Why? The reason why is simple, they were ordered not to and removed of all the equipment to perform such a rescue.

So why didn't they go against orders and do what you think is right and go and get Zack? The answer to this may seem petty, but would you perform the act knowing what the consequences of your actions could or would be? If a firefighter ignored the order of his Incident Commander and went into the water and successfully rescued Zack, he could face termination. Or if he ignored orders and drowned during the attempt? Remember, **Zack was 6'3" and 300 pounds and to the police, was known to** be dangerous. How well can you handle yourself in chest deep water if you have to struggle with a man who may easily overpower you? How would you know unless you took the risk to find out? How much training do you have in potential hand – to – hand combat in deep water **against someone of Zacks' size?**

Remember the first rule when arriving on the scene of **someone else's problem, first do no harm. In addition to** an on duty death, now the AFD could be heavily fined by OSHA for a firefighter fatality caused by entering the water on an island community with no thermal protection,

training or equipment and an order from their administration stating not to go into the water.

Our society has to stop looking at firefighters as expendable humans with their only career function is to give up their life for another life, **if they don't they are not hero's and unworthy of the title.**

Raymond Zack died because he wanted to, but his action was not in vain. The result of his death has caused the AFD to obtain monies to re-establish their rescue swimmer program. They have two shallow water capable watercrafts, and they have the proper PPE. They also have a more coordinated relationship with the APD for these types of incidents. Finally they have addressed the mutual aid response problem and in fact set up unified departmental training.

I support what the firefighters did that day. I know it was extremely painful and gut wrenching for them to stand there. They did just what they were supposed to do, what they were trained and equipped to do. They all had families that count on them and they all went home after the shift.

If you think these guys are superhero's simply because they have a title of firefighter, I would like to welcome you to reality. They receive a paycheck doing a job that offers assistance to you and I in our daily lives. They are governed by rules and policies that they must respect or lose their jobs, just like you and I. These are just men and women, better trained than most, more physically fit than most, but they are needed by others, loved by many and have a responsibility to show up to work the next day.



Author: Tony Hargett

Tony processes a deep desire to promote water rescue and safety through all Public agencies, rather it be for surf, dynamic or pool water. Water training and safety is lacking across the world and we should all be involved in promoting it. Tony was a two year surf life guard and currently has over 30 years as a fire fighter. He has been involved in water rescue since the late 1970's. Currently a water rescue team member for his department since 1993, he developed the departments personal watercraft program and has maintained the departments training program keeping it up to date. He is a California State Fire Training Certified Instructor of NFPA 1006 Awareness, Operational and Technical Level and Rescue Swimmer courses. He developed the curriculum for State Fire Training in the use of Personal Watercraft Rescue Operations and Rescue Boat Operations. Off-duty he is the Senior Instructor and course developer of water rescue courses for Aqua 7 Rescue based out of Sacramento, CA, and has instructed water rescue courses both nationally and internationally.

Tony has assisted numerous agencies with setting up their water rescue program to meet the needs of the individual agency with both shore base, water craft operations and in water rescue swimming abilities. Tony holds an AA degree in Fire Technology; he is a State Fire Training Certified Fire Officer.



Author: Casey Ping

As a public safety employee it never ceases to amaze me the new ways that people find to challenge us. No matter how long you have been in public safety, the citizens we serve find new and innovative ways to put **themselves in harm's way. This usually results in a call to 911** with an expectation that public safety personnel are

going to arrive and solve the problem. Advancements in technology, equipment, and an increasing number of adventure-seeking individuals, have allowed citizens access to environments and locations that were not within their reach 5 or 10 years ago. In most cases people **simply put or find themselves in situations they didn't** anticipate or had limited control over. Occasionally, they make bad choices - **haven't we all? Or, in some rare cases**, a person may intentionally put themselves in bad positions because of the thrill or with intent to harm themselves, other citizens, or responding public safety personnel or terrorists may have found new ways to disrupt our way of life.

At times this presents incident management personnel with conflicting priorities - providing service to the citizens that we have sworn to serve and protect, while fulfilling our responsibility to our personnel to operate as safely as possible. While we continue to have advancements in public safety equipment, training and preparedness, we still find ourselves reacting to new or unusual situations. We rarely prepare for events that we **haven't been exposed to or considered**.

The majority of public safety responses are reactive. We respond when something happens. As a result we have almost no control over the incident factors. The responding personnel do not get to choose the location or time of the incident, the age or physical abilities of the victims, their numbers, or weather conditions. The list of uncontrolled variables is endless. Management personnel realize these limits and generally focus on preparing personnel with the best equipment and training they can.

One of the tools that we have available to us is the use of **Standard Operating Guidelines (SOG's)**. **SOG's are very**

good for providing guidance to personnel in how we "intended" to perform a task or manage an incident.

Incident management and response personnel need to remember that these are initial guiding principles that may require modification in the first few minutes of any incident. Incident personnel need to remain flexible and **adaptable. There are also limits to SOG's. They cannot** possibly cover every type of incident that a responder or entity might encounter. Even if an agency could develop SOGs for every scenario, how many personnel would be able to remember them all? EMS treatment protocols are very similar. They provide a set of approved treatments or actions for the majority of patient presentations. When the condition is unclear, complex or evolving, we can **always fall back on the basics. Even doctors' use the ABC's when they aren't sure what is happening with the patient. SOG's should be very similar. When they don't fit, or you don't have a specific SOG for an unusual incident**, basic guiding principles should still assist incident personnel in their decisions.

Emergency response, by its very definition, entails risk. I believe that most public safety personnel enjoy the challenges that come from managing that risk. These are the challenges we enjoy, responding to and managing unknown and uncontrolled situations. It is what separates us from the rest of the population that may struggle to make stress-filled, time-sensitive decisions. This frequently places our public safety personnel in risky situations. We must continue to evaluate our response plans - **SOG's** - for the best collective outcomes. Law enforcement has done this with active shooter situations.

In the past, first responding police officers did their best to secure the perimeter, assist the wounded, and call for

the SWAT team. It was the safest thing for the officers who were first on scene, but the death count continued to climb. Law enforcement agencies across the country have now started training their officers to react differently.

Is there more risk? Yes, but if we intend to alter the outcome, we must be willing to assume some risk. Rescue personnel should be doing the same thing - analyzing incidents of less than desirable outcomes for actions that may provide the opportunity for better outcomes.

Will there be additional risk?

Certainly.

Can that be reduced to acceptable level?

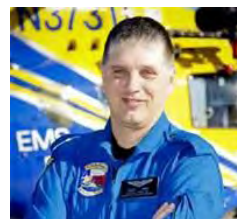
Hopefully.

There will always be situations where the risk is unacceptable and we need to be prepared to make and support that decision. What we should not do is take a position that any level of risk to public safety personnel is unacceptable and becomes the basis for inaction. The citizens that we serve (paid or volunteer) expect us to assume some risk. At times, that determination of risk may create conflict between citizens and responders. In this situation it is imperative that we are able to articulate the risk in a manner that hopefully the public can appreciate and understand. Citizens in our communities need to trust that their public safety personnel are going to take acceptable risk to try and affect positive outcomes.

I am not prepared to speak directly about the incident as most of what I know is second hand. My comments are based on a discussion about what was acceptable level of risk and a perceived perspective that public safety **employees' safety must be insured. I am not advocating** that we should take unnecessary risk or trade lives for lives. We should understand that at times incident management decisions will put the very employees we are responsible for in harm's way.

Unfortunately, we have some administrators and managers that are uncomfortable with the heavy burden that comes with these decisions. They constantly find unacceptable risk in fairly routine situations. It was present at Hurricane Katrina and one of the reasons that SAR functions were delayed in some areas. It gives some incident management personnel an out, a reason to say **no. Then they don't have to wrestle with the burden of** the decision. After all, it is more difficult to question a decision to not act if risk is the rationale.

It is a trend that is going to have consequences for public safety in some communities. Our citizens approve funding because we make it better. When we stop making it better (in appropriate circumstances) we can expect questions when we ask for funding.



Author: Casey Ping

Casey Ping presently works as the Program Director for Travis County **STAR Flight**. **STAR Flight**, is a public-safety EMS rescue helicopter serving Central Texas. He has worked in emergency services for over 30 years in a variety of roles within EMS in numerous (EMT, Paramedic, Flight Paramedic, Training Captain, EMS Supervisor and Division Commander). In those capacities he has served on

numerous EMS/Rescue committees that include Texas Task Force One Water Rescue Steering Committee, State of Texas Governors EMS and Trauma Advisory Council Air Medical Committee and FEMA Search and Rescue Credentialing Committee. He has presented in numerous local, state, national and international EMS/Rescue conferences. He is currently a water and helicopter rescue manager with Texas Task Force One. He has been involved in multiple hurricane and tropical storm responses including Hurricane Katrina and Rita.

total insensitivity. I watched them, outfitted in heavy bunker gear, wondering where the fire was. It took a while for the truth to get sorted out in my mind, but even then, I could not understand how they hoped to do a water rescue dressed for firefighting.

I am guessing that witnesses in Alameda County found themselves faced with a similar scene, as emergency responders were not allowed to take action, and evidently prevented civilians from being Good Samaritans. It must have been a bewildering and frustrating moment for all involved.



Author: Nancy J. Rigg

The death of my fiancé, Earl Higgins, in 1980 was not all that different from the Memorial Day 2011 drowning death of Raymond Zack off the shore of Robert W. Crown State Beach in Alameda County. As in Los Angeles County thirty-three years earlier, with its maze of open, inland waterways, Alameda had no active water rescue program when Zack needed to be rescued. One difference was that Alameda had had a viable swiftwater rescue program earlier, which was evidently cut, due to budget restrictions. Other than ocean and lake lifeguards, who expertly guarded beaches, in 1980, emergency responders in Los Angeles had no plans, or training to manage rescue operations in flood control channels.

When 9-1-1 was called on February 17, 1980, numerous police and fire units were dispatched to the flood-swollen Los Angeles River, where, after having rescued a 10-year old boy, Earl Higgins had been pulled into the torrent by the force of the current and was now barreling downstream. As I overlooked the river, waiting for word about Earl, firefighters stood around drinking coffee and telling jokes. I will never forget this image, or forgive the

As with Raymond Zack, Earl Higgins's death was initially written off by officials as, "Oh, too bad, what a tragedy," with no discussion about change, the need to be able to rescue people who ended up in the nearly 500-mile maze of open and very deadly flood control channels, or anything else. Because I was not Earl's legal widow, I was unable to sue for change, and faced continual difficulties navigating the bureaucracy. I was unwilling to accept the announcement to the media that local **emergency responders had done "everything possible,"** to rescue Earl. At the time, I sensed that something was very wrong. At least thirty-six lives had been lost in flood control channels, rivers, streams, and debris flows during the storm, and all of these deaths had been written off as, "*Oh, too bad, what a tragedy.*"

All of them.

Several people, like Earl, were still missing, with no protocols for body recovery.

Even in the throes of overwhelming grief and trauma, I craved for information and wanted to discuss ways to prevent future tragedy. But local officials refused to meet

with me and rejected every idea I proposed. I had escorted three deaf students a few years earlier on a whitewater river trip down the Yampa and Green Rivers, and the first thing Outward Bound did was give us basic "swiftwater rescue" training. My father and uncles were part of the vibrant history of river running in the Grand Canyon. I wanted to share this and discuss ideas. Local elected officials had also rejected many excellent ideas proposed by Los Angeles County Lifeguards, who had been working on "swiftwater rescue" techniques for several years with Jim Segerstrom and others from the whitewater rafting world. Ideas were plenty, just not the will to listen to any of us, or implement change.

For twelve long and frustrating years, my voice was cut off by political leaders, fire chiefs, the police, and anyone else I contacted. It will haunt me always to wonder if only I

Meeting James Ventrillo, the Boy Earl Higgins Rescued in the Los Angeles River

By Nancy J. Rigg

In July, 2010, I had an inspiring, yet slightly bittersweet reunion with James Ventrillo, who was a 10-year old boy when my fiancé, Earl Higgins, rescued him in the Los Angeles River on February 17, 1980.

We allowed National Public Radio (NPR) to capture the moment we met at the river. Show host Madeleine Brand and the producers produced an excellent segment, called, "The River."

The Madeleine Brand Show for September 20, 2010 THE RIVER

"30 years ago the paths of James Ventrillo and Nancy Rigg literally crossed at the Los Angeles River. Neither would be the same again. It was 1980. Nancy and her fiancé, Earl Higgins, were taking a walk across a footbridge that spanned the river. It had been the first clear day after a series of violent rain storms. The river was high and moving fast – a rare sight in L.A. They stopped to look at the water and saw – to their horror – a young boy had just fallen in. Earl ran to the water's edge and tried to save him. He did, but was pulled in, too. Earl wasn't able to save himself. No one else could, either.



**James Ventrillo, Nancy Rigg,
meeting for the first
time in 30 years
at the Los Angeles River**

"For the next 30 years, Nancy dedicated herself to creating a Swift Water Rescue Program for L.A. and for all of California, a program that trains first responders in river rescue. "She never knew what happened to the boy, James. In this story, Nancy and James meet for the first time since that fateful day 30 years ago."

The website includes the complete audio file,
as well as several photos.

had pressed harder or been more persistent or been famous – in a Hollywood sense – then in 1992, when 15-year old Adam Bischoff slipped and fell into yet another floodwater-swollen flood control channel, could he have been saved? Like many before him, Adam was swept downstream past rescuers who still lacked the training and equipment needed to rescue him.

Sadly, Adam's death – and the completely inadequate emergency response – played out "Live!" on TV news.

Adam's family sued for change, not money, not to benefit financially from their son's death. They sued to create change in rescue protocols and flood safety education. I supported them, and together we worked with the City and County of Los Angeles – including partnering with dedicated emergency responders, who had also been fighting for change from the inside. Together,

we gave birth to one of the most exciting, pioneering technical rescue programs in the USA – urban swiftwater and flood rescue. It was as momentous as the birth of urban search and rescue (US&R), which was also struggling at the time to secure a foothold in emergency response.

What is the lesson? Families need to be listened to. By rebuffing us, dismissing our concerns, refusing to meet with us, you leave us no choice but to go through the lawsuit-happy legal system in order for our voices to be heard.

The legal system has rebuffed Raymond Zack's family, and I feel for them. I don't care if Raymond Zack was suicidal, rather than a Good Samaritan, like Earl. Zach was a human being. He was loved and cared about by his family, and he deserved a better emergency response. So did the witnesses who were forced to stand by and watch him drown. And, quite honestly, so did the emergency responders themselves, many of whom are **likely haunted by this incident. At least Zach's death has reinvigorated Alameda's water rescue program.**

In 1980, when new squall lines moved in and the rain began to pour again, after the fire captain poured out the last of his coffee, he looked at me and said, "Sorry, there's nothing more we can do. Let us know if your fiancé calls..." I will never forget watching the fire truck pull away, as they abandoned me on the riverbank, more than two miles downstream from where Earl got pulled into the water. I had run after Earl, dragging our sweet dog behind me. I was new to Los Angeles. We had moved less than a month earlier into the new apartment. I had no idea where I was along the river and had no friends to call, no family. The keys to our apartment were in Earl's pocket, and this was well before cell phones. Firefighters left me there, soaking wet, standing

in a downpour of rain, with no way to get back to the boxes Earl and I had been unpacking in our new apartment, before we decided to take a casual Sunday walk over to the park, across a high footbridge spanning the LA River...

It was fortunate that I had been raised in Colorado. In the wilderness I had the wits and good sense to sort out a way to get back to our new home, despite not knowing a soul in this vast new city.

But in looking back, if just one person in a position of authority had been willing to listen to me, I can't help but think how many other lives could have been saved over the years, including Adam Bischoff's.

"Sorry, we did the best we could," is never an adequate response, especially when it is untrue.



Author: Nancy J. Rigg

Nancy J. Rigg is a powerful advocate of swiftwater and flood rescue training and awareness. As a writer and documentary filmmaker, she has increased public awareness of the risks posed by recreational rivers and streams, flash floods, debris flows, flood-swollen rivers, and hurricane-spawned inland and tidal surge floods.

Through the Drowning Support Network, she has provided peer support and guidance to families touched by drowning deaths and injuries, including those with loved ones who are missing in water. The Higgins & Langley Memorial Awards in Swiftwater Rescue - named in honor of Rigg's fiancé, Earl Higgins, and FF/PM Jeffrey Langley, and the Los Angeles County Fire Department - are presented annually during the National Association for Search and Rescue conference.



Author: Ben Waller

Throwing Stones in Glass Houses

A sad situation that resulted in a drowning death in Alameda, California has become even more unfortunate **due to people that weren't there taking the firefighters** and police officers who were on scene to task for not saving the victim. I respectfully disagree with those who think the local responders had to do more. I firmly believe that Alameda Fire Department (AFD) and (APD) did the best they could under the circumstances and that the criticism to which they have been subjected is unwarranted.

This article is based on information that is available to the public from a variety of sources.

My perspective is one of taking reasonable risks for situations when there is a savable life, when the people on scene have the ability, training, equipment, team, and leadership to give the responders the best chance of a successful rescue while preventing unnecessary rescuer deaths. My perspective includes attending a host of line-of-duty death funerals for friends and acquaintances that died unnecessarily in high-risk situations precisely due to a lack of training, equipment, team support, or knowledgeable Incident Commander qualified to assess technical rescue risks. My perspective is also one of sadness that anyone would be so depressed as to take his own life, that a family had to endure this ordeal, and sympathy for people who have suffered similar losses and who have that wound re-opened every time they hear of a drowning death.

The background to the Alameda incident was that the local government's budget had been reduced due to a combination of the national economic downturn, reduced city revenues, and anti-tax sentiment among the local **taxpayers. The result was that AFD's budget had some** major cuts. As logic dictates, AFD directed their remaining budget dollars to their core missions. Those core missions include emergency medical and fire suppression responses, and as with most fire departments, those missions are the majority of what AFD does. That led to AFD being forced to cut at least one program. Their water-rescue program was cut, due to it being a relatively expensive program that required lots of money for equipment, training, and equipment maintenance for a minimal number of annual responses.

AFD also knew that other nearby agencies had water rescue capability including mutual aid fire departments and the U.S. Coast Guard. Both the cost-benefit and risk-benefit portions of the budget and operational analysis told AFD that the water rescue program was where they could save the most money with the least risk to both their citizens and their personnel. In other words, cutting the water rescue program was the least of a range of bad choices forced on AFD due to no fault of their own.

This led to removing their rescue boat from service and stopping its maintenance program, removing their rescue swimmer gear from service, and not renewing the rescue swimmer certifications for the firefighters who formerly held those qualifications.

The water around Alameda is cold, due to the prevailing currents originating off the coast of Alaska and its glaciers and snowmelt. At the beach where the situation unfolded, the offshore area was reported as fairly shallow for up to 200 to 300 feet from the shoreline, depending

upon the tide state. The sea bottom can take on the consistency of a quagmire, at least in some places. This makes it possible to wade out a long distance from shore under some circumstances, but it also makes wading there risky. The water is fairly turbid, and it may be impossible to see the bottom only a few feet from shore.

To the best of my understanding, the situation unfolded as follows: The victim was well-known to the responders. He had reportedly previously attempted suicide and had several previous interactions with the AFD and APD that led them to consider him to be mentally ill.

During the incident, the victim reportedly waded at least 200 feet from shore and engaged in bizarre behavior including repeatedly dunking his head in the water in an apparent suicide attempt. During the incident, a recreational kite surfer asked the victim if he could help and was rebuffed with only a request that the kite surfer pray for the victim. The incident continued for quite some time – by some reports, for over an hour. During this time, several of the bystanders insisted that AFD and APD either attempt an entry rescue or let the bystanders attempt a rescue. AFD and APD refused to let civilians **attempt the rescue based on the victims' suicidal mental state and the civilians' inability to document any** qualifications to attempt a water rescue of any kind.

The AFD/APD had a reasonable expectation that the USCG boat and helicopter would have a response time of **under an hour. The boat did, but couldn't get close enough. The boat crew wasn't allowed to attempt a** water-entry rescue, either. The helicopter arrived after its other mission was complete, but too late to affect the outcome. Why the double standard here? Why the attacks on local rescuers while not a word has been said **about the Coast Guard's inability to provide meaningful**

help? Could it be that the Coast Guard has limitations, too?

Calls to 911 were made and both AFD and APD responded. They followed their existing protocols including establishing Incident Command, isolating the scene, and denying entry to the area to civilians. They realized that the victim was too far from shore to use swim-based techniques. AFD informed APD that their rescue boat was not in service. AFD called the USCG for assistance and requested a boat and a helicopter. The USCG sent a boat to the scene, but the boat was unable to approach the victim due to having a draft deeper than the water at the scene. USCG boats with shallower draft were not available. No USCG helicopter was locally available due to being previously assigned to another mission. Mutual aid boats from other area fire departments were requested, but did not immediately respond. The reasons for that delay are reportedly due to some sort of communications confusion, but specific information on that failure has not been released to the public as far as I know.

Despite pressure from bystanders to "do something" for the victim, AFD and APD chose to not attempt a wade-based rescue. They cited their complete lack of appropriate PPE and the lack of current water-entry training and certification as reasons to not enter the water to attempt rescue.

The victim eventually became unconscious. As the mutual aid resources had not been able to affect a rescue, one of the civilians on scene was able to convince the Incident Commander to allow that her to attempt rescue. She brought the victim to shore, where Raymond Zack was pronounced dead.

The fallout was immediate and serious. The local citizens were outraged and many letters to the editor of the local newspaper ensured, most attacking APD and AFD. **The victim's family filed a wrongful death lawsuit. The results** were that AFD cut funding from other programs and partially restored funding for the water rescue program.

This forced AFD into a "Rob Peter to pay Paul" situation.

The lawsuit was eventually dismissed by the judge in the case. The reasons for the dismissal were that the plaintiffs could not show evidence that AFD and APD had any duty to act in the situation, that a wrongful death had occurred, or that APD and AFD contributed to that death.

The judge went on to say that APD and AFD "had no moral duty" to rescue the victim under the circumstances.

It was obvious from the dismissal that the lawsuit was **simply misplaced blame for a death that wasn't the responder's fault.**

The dismissal of the case resulted in a new round of public verbal attacks on AFD and APD for not making this rescue. There is a mix of civilians and water rescuers who again insisted that AFD and APD should have attempted a water-entry rescue regardless of their lack of **training and PPE, that AFD's SOGs preventing water-entry** rescue by untrained/unequipped personnel was somehow wrong, that taking high levels of risk is inherent in public safety jobs, and that the budget cuts and dismantling of **the AFD water rescue program didn't matter.**

Lengthy debates ensued. The debates included some dubious analogies and a few frankly silly hypothetical comparisons by those attacking the Alameda responders, and a wide range of straw man and false dilemma logical fallacies.

These included completely inaccurate accusations that the **rescuers "did nothing", comparisons to a helicopter rescue** program whose personnel are trained and equipped for swiftwater rescue and helo-aquatic operations, comparisons to kayakers assisting each other while recreationally running Class V whitewater, and comments about a person who drowned in a pond in England where the first engine company waited seven minutes for a rescue company rather than attempting entry rescue in water that was cold, murky, of unknown depth, and **probably contaminated. I defended the engine company's** actions in that case as well. Some of those same folks also attacked our legal system, safety standards for **responders, and local agency's SOGs as doing the wrong** thing, making rescuers afraid to take risks, or as trying to over-script rescue responses.

I absolutely believe that AFD and APD did the best they could under very difficult circumstances, and I respectfully but firmly disagree with those who insist that they should have attempted an entry rescue. I disagree **with those who attacked the legal system. It's here, it's** not going to change, and it exists as a way to correct perceived wrongs that cannot be corrected in any other venue.

I disagree that national responder safety standards and SOGs that provide guidance on how to handle situations, which could reasonably be expected to occur are a bad thing. They are not; they are very, very GOOD things.

In the swiftwater rescue world, we have spent the last 30 years trying to improve our rescue techniques and capability while ensuring that rescuers do not engage in well-intentioned suicide missions by entering high-risk environments for which they do not have the proper training, equipment, manpower, and support.

Now, suddenly, we are supposed to ignore rescuer safety and take risks that some claim are minimal based on what THEY supposedly would have done if they had been there??? That makes no sense to me. That approach demands that good leadership and on-scene risk-benefit assessments are abandoned and that the pressure and risk devolve to tactical and task-level rescuers simply because they are dedicated to helping others and because they are there.

The people on the other side of this debate include some well-respected water rescue instructors and team leaders. I respect their abilities, their contributions, and their agencies capabilities, but they have two huge blind spots in this debate. The first is assuming that everyone else knows what they know, has the equipment, training, and team that they have, and that their dismissive attitude of the risks in the Alameda situation are appropriate. Those are neither safe nor accurate assumptions.

The second blind spot is that those same instructors and team leaders are among the best qualified water rescuers in the USA. They operate at the highest level of water rescue capability on a daily basis. Some of them have capabilities so advanced that those capabilities are not even discussed in the national classification system for fire department rescuers and rescue teams – the NFPA 1006 Standard on Professional Qualifications for Technical Search and Rescue, and the NFPA 1670 Standard on Technical Search and Rescue.

These standards, respectively, are the individual qualifications and team operations and training standards for a wide variety of high-risk rescue disciplines, including water surface rescue. Both of these standards specify the capabilities and the limitations for rescuers and teams.

These standards define what rescue methods are and are not appropriate rescue techniques at each level of capability.

Using the NFPA standards as the measuring stick, in **Alameda's case**, their capabilities were clearly limited to shore-based rescue attempts. That means that their real capability was limited to the reach of a 75-foot throw rope...**IF they had a cooperative victim that could or would** grasp a thrown rope and cooperate in the rescue. Neither was the case – **the victim's distance from shore far** exceeded the reach of throw ropes and the victim was clearly not going to cooperate with the rescuers.

This debate goes to a deeper issue. The Alameda citizens and elected officials made a clear statement that they were not going to fund their fire and police departments at previous levels and that budget cuts were mandatory.

Budget cuts have direct, tangible results; they reduce agency capability. When that capability is reduced, there are only three options for the agency – to try to maintain the same level of services by shifting increased risks onto their personnel, to recognize that it is unconscionable to demand that their personnel be forced to engage in well-intentioned suicide mission or to realize that it is impossible to maintain the same level of service with **reduced funding, resources, and training. In Alameda's case**, they clearly did the right thing. They dismissed the first option and embraced the other two.

When water rescue industry leaders claim that the **Alameda responders "did nothing"** simply because they chose to avoid a water entry rescue, it does not build credibility. Alameda did the most important thing – they ensured the body count did not increase and that it did

not include any rescuers or bystanders. We don't even know if the Alameda responders on scene could swim or not, so insisting that they should have done a water entry rescue isn't a reasonable demand.

In an effort to see what was being done to handle similar incidents in other places, I asked – repeatedly – for anyone **to give examples of their agency's SOG for** suicidal persons in the water. I was unsurprised at the glaring silence that followed. One individual responded to the question and made the statement that his agency **wasn't going to write a SOG for a suicidal patient "in three feet of water"**.

That response was misdirection at best, since it appears that this agency has no SOG for handling an incident for a suicidal patient in ANY water depth. It is apparent that SOGs for attempted suicide by drowning are not common or perhaps non-existent.

Suicides in water can and do happen. Suicidal persons, by definition, are not thinking rationally. Sometimes they have weapons and attempt to harm those who try to interrupt their suicide attempt.

It is unreasonable to demand that ill equipped and untrained rescuers make a water entry rescue for a cooperative victim much less the type of rescue attempt for a determined and potentially violent suicidal person. **If your agency doesn't have a plan for handling this** incident type, you have no business criticizing how Alameda chose to handle their incident.

One responder wrote **that his agency doesn't have a** specific SOG for suicidal persons in the water, but they have a general SOG for potentially violent scenes that includes having law enforcement handle the person. If

the person is in the water, the FD in question will provide a boat and an operator to take the PD officers to the person. That circumstance is much different from the **Alameda case, since the AFD personnel didn't have a boat** available, but the reply was definitely from an agency that is objectively trying to provide guidance for its personnel in difficult circumstances.

We **can't save** everyone. We have a duty to ensure that we prevent high-risk rescue attempts for which our people are not trained or equipped, and the public needs to understand that there are direct and sometimes lethal consequences to public safety budget cuts.

It is unreasonable to expect that every single local public safety agency can be all things to all people. It is unconscionable to demand that rescuers attempt high-risk rescues without the proper equipment or pre-incident guidance.

The judge in the civil case clearly thought he had the proper information, and he made a clear statement that **AFD and APD weren't responsible for the victim's death** and that they **had "no moral duty" to do anything** other than exactly what they did under the circumstances.

The citizens of demanded that AFD restore their water rescue program after this incident. AFD is doing just that; the boat has been returned to service, equipment purchased and distributed, and water rescue training has **resumed. However, Alameda's citizens haven't come up** with the funds to restore FD funding to its previous levels, meaning something else has to suffer.

Those who want public safety cuts need to realize that as Alameda did, you get EXACTLY what you pay for.

Public safety leaders have the moral, ethical, and legal responsibility to provide their personnel with a reasonable way to handle risk and to ensure that their people are restricted from doing things for which they are not capable, equipped, or trained. Public safety personnel have an equal duty to avoid killing themselves on well-intentioned but high risk suicide missions.

Fire/EMS, law enforcement, and other public safety personnel are critical community resources. Their numbers have been cut and cut again in much of the U.S. Demanding that fewer and fewer responders take more and more risk to make up for budget cuts is neither morally defensible nor sustainable. Budget cuts have consequences. You get what you pay for. The citizens of Alameda got exactly what they paid for, whether they like it or not.

The bottom line, we can't save everyone, especially those that don't want to be saved.

Author: Ben Waller



- 38 years as a Firefighter/Paramedic
- USAR Rescue Specialist
- Hazmat Technician
- Swiftwater Rescue Instructor
- 1996 Olympic Games Swiftwater Rescue Team Member
- 2000 U.S. Olympic Team Trials Swiftwater Rescue Team
- Chief Battalion Chief with a career fire-rescue department
- Rope Rescue and Water Rescue Technical Developer and Adjunct Instructor, South Carolina Fire Academy
- Voting Member, NFPA 1670 Committee on Technical Search and Rescue

- Master of Public Administration, Clemson University
- Undergraduate degrees in Fire Administration and Paramedic/Allied Health
- Higgins and Langley Incident Award Recipient, T.S. Hanna, 2002
- Former EMS Chief, McMinn County, TN
- Former Technical Rescue Coordinator, Greenville County, SC
- Former commercial raft guide



Editor's Note:

These four perspectives are offered to you here so that you can make adjustments to your own processes. I do not expect any of them to be looked upon as right or wrong. That is for you to decide and I suspect you will pull elements from each that you agree with and discount the rest. However, each author has valid points and arguments and I think it important to keep an open mind when considering what you have read.

In my editorial, I told you we were presenting you with a challenge. Here it is:

Take time to consider the events that occurred in Alameda on May 30, 2011. Put your team in the position those rescuers faced and decide what your HONEST and MOST TRUE AND REALISTIC decision would have been. If you were the Incident Command for the scene and faced the same conditions and circumstances, what would YOU have done?

I require no answer - rather I encourage you to analyze your team capabilities with respect towards rescuing a violent person who is attempting suicide by drowning. Perhaps even develop a reasonable response guideline.

If it happens in your response area, will that call be your challenge or your own dilemma?

Be Safe. ~ Mark Phillips

NEWS

Man dies after falling through ice in retention pond while running from police

<http://www.news-gazette.com/news/courts-police-and-fire/2013-01-02/man-dies-after-falling-through-ice-retention-pond-while-runni>

01/02/2013 Mary Schenk

CHAMPAIGN — An autopsy is scheduled Thursday for a Champaign man who died after being in the frigid waters of a retention pond more than an hour Tuesday before rescuers could safely get him out.

The Champaign County coroner's office said Kenneth Brown Jr., 20, who listed an address in the 2000 block of Moreland Boulevard, Champaign, was pronounced dead at 1:08 a.m. Wednesday at Carle Foundation Hospital in Urbana.

He had been taken there shortly after 5 p.m. Tuesday after being rescued from a pond on the north side of **Town Center Boulevard in front of Menard's** — the third time on Tuesday that police had been called about him.

The Illinois State Water Survey reported the 4 p.m. air temperature Tuesday was around 20 degrees.

Champaign police Lt. Bob Rea said officers were called to **McAlister's Deli, 421 W. Town Center Blvd., just before 4 p.m.** to remove a disorderly person. He was gone when police arrived.

Deputy Chief Joe Gallo said the earlier call came at 12:34 p.m. when Mr. Brown was apparently inside the business,

where his girlfriend works, being "loud and disruptive." He was gone when police arrived then too.

And about a half-hour before that, an officer stood by while Market Place Mall officials issued a ban notice to Mr. Brown after he was displaying "erratic behavior" in the center of the mall.

"He wasn't a threat to anyone. We had no crime. He wasn't arrested," said Gallo of the 11:56 a.m. call to Market Place.

After leaving McAlister's just before 4 p.m., Mr. Brown headed across Town Center Boulevard to the north.

Gallo said there were several officers in the area because of an unrelated domestic dispute call in the parking lot of Menards.

As Officers Tim Atteberry and Doug Kimme got out to walk toward Mr. Brown, he began jogging in the Menards parking lot then ran directly on to the frozen pond south of the store. The sergeant responding to the domestic dispute "sees Brown on the pond and can see it's partially frozen and can hear it cracking so he's calling for the Champaign Fire Department before he even falls in. Within seconds, he



fell in,” Gallo said.

Champaign Deputy Fire Chief Eric Mitchell said his department got the call seconds before 3:53 p.m. that there was a man in the water.

The first firefighters arrived at 3:58 p.m. A total of 22 fire personnel and six vehicles turned out, he said.

“The way we’re trained, you have several different positions that have to be filled to do water rescue safely,” said Mitchell. “You have a leader and a victim observer (whose) job is to make contact visually with the victim and try to talk to him.”

Gallo said before firefighters arrived, the officers were talking to him, trying to get him to get his body on the ice. An officer went in Menards to get rope and by the time he emerged, firefighters were there.

Mitchell said Mr. Brown was still conscious.

“They could hear him yelling but couldn’t understand much what he was saying,” he said.



In addition to the team leader and the victim observer, there are others who provide shore support.

“They help

the rescuers into dry suits. Everybody is tethered to a rope on the **shore,” Mitchell said,** adding there is at least one shore support person for each person in the water.

And for every two rescuers sent out, there are two more suited up standing by in case something happens to the first one out, Mitchell explained.

Because Mr. Brown had gone on to the ice as he was avoiding contact with police, Atteberry also donned a dry suit.

“We had a police officer also suit up and go out there with our officers. The police wanted to be there. They were there on the call. We gave him a crash course and got him out on the ice,” Mitchell explained, adding that the first firefighter was in a dry suit at 3:59 p.m.

As the firefighters were suiting up and getting tethered, other team members threw out a rescue disc — **“a frisbee with a rope on it”** — in hopes that Mr. Brown would grab on. He did not. As that was being tried, the rescue raft **was being inflated, something that can’t be done too fast** or the raft will pop like a balloon.



As the firefighters were sliding the raft out to where Mr. Brown was, he went under the water at 4:11 p.m., Mitchell said.

"As our guys got out there, they took poles and were trying to feel for him. The water was a lot deeper than they'd been told. Originally, they were told it was waist deep and that he had been standing up. It was over 15 to 18 feet deep," said Mitchell.

"When he went under, that's when they dispatched Cornbelt (Fire Protection District) which is the county dive team. Their chief was there at 4:21 p.m.," Mitchell said.

Lloyd Galey is a retired Champaign fire **lieutenant** who's now the chief for Cornbelt. Mitchell said Galey, who carries his equipment in his personal vehicle, used to conduct ice rescue training sessions for Champaign firefighters.

"They ended up having to dive. (Mr. Brown) was out of the water and in the ambulance at 5:09 p.m.," Mitchell said.



Mitchell said one police officer and six different firefighters were in the water before the mission was complete.

Mitchell said after

reviewing the reports and seeing a You Tube video of about 10 minutes of the rescue that was posted Wednesday, he feels like his colleagues did what they were supposed to do.

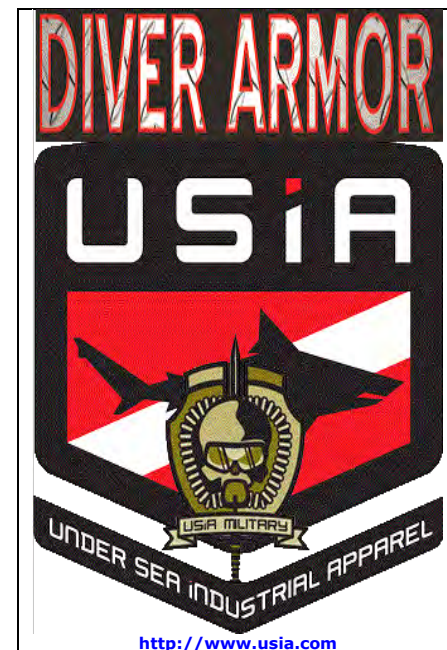
"They followed our ice rescue guidelines pretty much to a T. It's a very low frequency (event) but a very high risk rescue. They did exactly what they were supposed to do. They established command ... they made visual contact and attempted to talk to him, threw rescue devices, and went on the water. Going on the water is the last thing you want to do. They did all the other things first," Mitchell said.

Gallo said the police officers were frustrated standing out there without the proper equipment to perform a rescue.

Both Gallo and Mitchell said the officers and firefighters could hear bystanders urging them to rush in to the water to get Mr. Brown.

"There's certain things we can control and certain things beyond our control," said Gallo. **"We commonly run toward the sound of gunfire.**

But when there is thin ice and we're not able to do things safely, we call firefighters. I'm very proud of our officers.





I think they performed well under challenging circumstances," he said.

Mitchell echoed that charging into the water was not the

correct response.

"That's not safe for anybody. One of the reasons we have procedures is because something has happened somewhere, sometime that you have learned from, and that's why we have the procedures we do have," Mitchell said.

"It might look like fiddling," Mitchell said of the preparations, "but it's making sure the person is safe to do his job because you don't want to lose a rescuer."

Mitchell said the dry suits used by the rescuers are designed to keep their bodies dry but there are openings, such as around the neck, where water can seep in.

Mitchell said from his training, he can say that once out of the water, the person in the suit feels okay for about 15 minutes before the cold starts to set in. Arrow Ambulance had a "rehabilitation unit" for the firefighters to warm in Tuesday night.

The last firefighters left the pond at 5:44 p.m.

Diving supervisor from Dover fined for risking fellow diver's life at Ramsgate harbour

<http://www.thisiskent.co.uk/Diving-supervisor-Dover-fined-risking-fellow/story-18059630-detail/story.html#axzz2KQ5X6l1J>
02/05/2013

THE supervisor of a diving project at Ramsgate Royal Harbour has been fined for failing to ensure a standby diver was ready to enter the water in the event of an emergency.

Duncan Gill, from Dover, was working for a diving company contracted to undertake an underwater inspection of the marina on September 26, 2011 when concerns were raised about the standard of his operation by a fellow diving supervisor on a neighbouring quayside.

The Health and Safety Executive (HSE) investigated and found that the standby diver was not in a state of immediate readiness to provide assistance to the diver in the water.

The standby diver should have been fully dressed and kitted up to enter the water with his diving helmet in hand or close by. However, he was only in his dry suit,



which put the diver in the water at serious risk had he required urgent assistance.

Canterbury Magistrates' Court heard on Tuesday that Mr Gill had previously been served with a Prohibition Notice by HSE in October 2010 for a similar failing as a diving supervisor. His employer, who does not want to be named, had spent time retraining and mentoring him before allowing him to continue in his role, but Mr Gill ignored the guidance given.

Duncan Gill, of London Road, Dover, was fined £5,000 and ordered to pay £2,000 in costs after admitting a breach of the Diving at Work Regulations 1997.

After the hearing, HSE Inspector Bill Chilton said: "The diving supervisor has a critical role to play in ensuring that a dive is conducted in such a way that the safety of the divers in the water is protected at all times.

"It is reasonably foreseeable that a diver may require urgent assistance from a standby diver should an emergency unfold, and therefore, the standby diver should be ready and able to enter the water in seconds.

"Yet that did not happen on Mr Gill's watch, and this clearly compromised safety. He should have known better having previously been warned about his conduct as a supervisor, but he ignored the trust, training and guidance of his employer to repeat the same failings."

Further information on diving safety can be found online at www.hse.gov.uk/diving

Stolen truck pulled from Tuscarawas River

<http://www.timesreporter.com/news/x930800915/Stolen-truck-pulled-from-Tuscarawas-River>

Feb 15, 2013 **By Joe Mizer TimesReporter.com**

DOVER —

A second Sonar search proved successful, and a pickup truck reported stolen last week from a Dover business was pulled from the Tuscarawas River on Thursday afternoon.

This search was conducted by Ohio Bureau of Criminal Identification and Investigation personnel at the request of Dover police.



TIMES-REPORTER JIM CUMMINGS
Jeff Rosenberry watches as his tow truck
pulls a chevy 4X4 pickup from the
Tuscarawas River Thursday afternoon.

Recovery of the truck confirmed a Dover woman's call to 911 early Feb. 4 that she saw a vehicle in the river.

Dover firefighters, who assisted in Thursday's search, had called off the initial search of the same area after a Sonar search conducted by the Summit County dive team over several hours revealed nothing unusual.

Photo Galleries

[Photo Gallery: Tuscarawas River Search for Stolen Truck](#)

In a call to Tuscarawas County 911 dispatchers at 2:54 a.m. Feb. 4, the Dover woman said she had stopped on W. Front Street at Wooster Avenue and saw two taillights and the tailgate of a pickup truck sticking out of the water.

Fire Capt. Brooks Ross said that day that firefighters initially were unable to see anything in the river, but noted that they and police officers found a set of tire tracks on an access road under the bridge. Those tracks went into the water.

Police Chief Joseph Ball said after Thursday's recovery **that the search was a result of Capt. Paul Bantum's persistence and belief that a vehicle was in the river. Ball said that was based upon Bantum's interview with the witness – and a Dennison man's report last week that his 2000 Chevrolet extended cab pickup truck was stolen from a W. Third Street business.**



Ball agreed with Bantum's request to contact the **Ohio Attorney General's Office of BCI&I** for its dive team to assist in conducting a secondary search. The dive team received its authorization and the search began about 10:30 a.m. Thursday.

The Ohio Department of Natural Resources, Division of Watercraft, and Dover Fire Department supplied boats, and the

Ohio Environmental Protection Agency also assisted at the scene.

Thursday's search also attracted many onlookers, including Max Blunt of Dover, who stayed throughout the day in a parking

lot off W. Front Street until the pickup truck was pulled from the water. Blunt said he was on his way home from **a gas station in the morning and saw "a lot of commotion going on down in the river."** He then decided to stay to watch the entire search.

Video



[Video / Search of Tuscarawas River for Stolen Truck](#)

Also watching for most of the day was Jeremy Sloan of Sugarcreek. Both men walked down an embankment to the access road to get a closer look as the truck was pulled ashore at 5:20 p.m. As they returned to their parked vehicles, both said it had been worth the wait.

Related Stories

- [Feb. 14: Divers searching Tuscarawas River](#)
- [Feb. 7: Dover police want another search of Tuscarawas River](#)
- [Feb. 4: Search for possible vehicle in river called off](#)
- [Feb. 4: Safety forces investigating report of vehicle in river](#)

"People will die," critics say after Vancouver's coast guard station closed

<http://www.vancouversun.com/news/Federal+government+closes+Vancouver+Kitsilano+coast+guard/7992494/story.html>

Vancouver Fire and Rescue Services and Vancouver fire chief John McKearney said Tuesday's closure of the station was also a complete surprise to them

FEBRUARY 20, 2013 **BY DARAH HANSEN AND BRIAN MORTON, VANCOUVER SUN**

VANCOUVER -- Critics of the federal government's abrupt closure Tuesday of the Kitsilano Coast Guard station say they will try to get the base reopened, but that it may take a fatal boating accident to accomplish that.

"Our message is that this station will reopen," said B.C. Federation of Labour president Jim Sinclair at a news conference and vigil at the station site Tuesday afternoon. "People will die if it doesn't."

Sinclair and several others at the site were livid over the closure of the station, saying it was timed to coincide with B.C.'s budget.

They also said there was no warning whatsoever.

"They wanted to bury (the decision)," said Vancouver city Coun. Kerry Jang. "It's budget day. It's disgusting. It was a total surprise to us, in one of the most dangerous times of the year (for boaters)."

"They're playing Russian roulette with lives," he added of the decision to close the station, which will save the coast guard about \$700,000 a year.

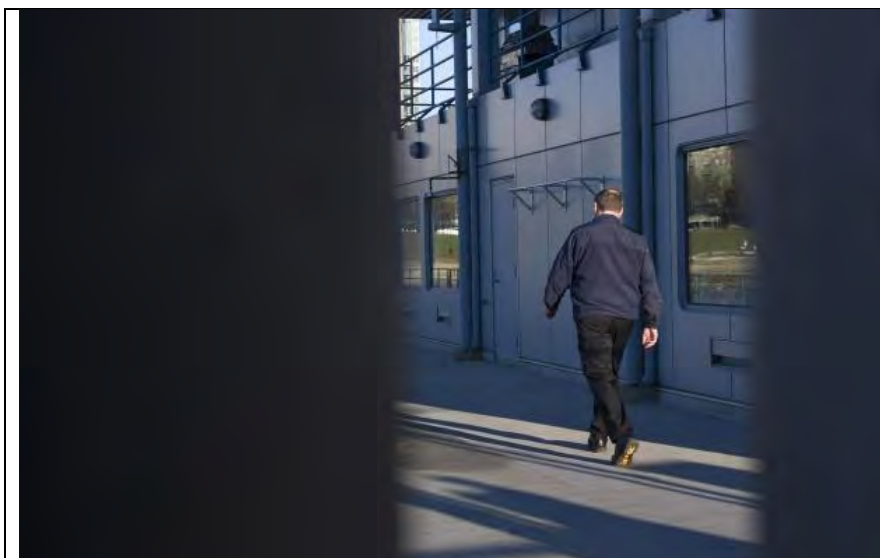
On Wednesday, Vancouver Fire and Rescue Services and Vancouver fire chief John McKearney said Tuesday's closure of the station was also a complete surprise to them, and that it will put lives at risk.

VFRS noted that on Monday, it participated in an inter-agency field exercise involving the Coast Guard, Port

Metro Vancouver and Vancouver police department, but that there was no mention of an imminent base closure.

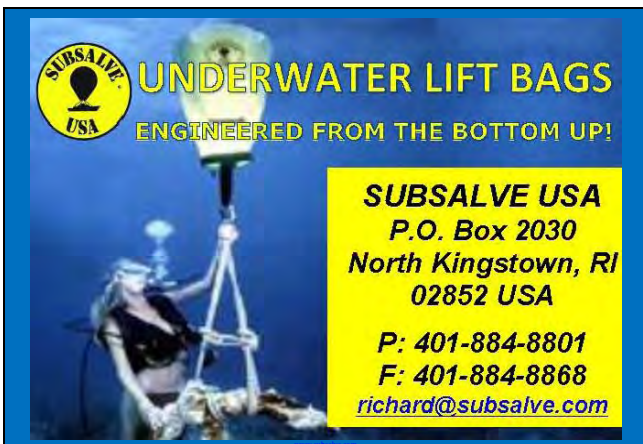
It said Monday's joint exercise was the most recent in many inter-agency training sessions over the past 20 years.

"Such operations are part of ongoing multi-agency tactical exercises, which demonstrate that the successful model must include a rapid response by the Coast Guard," said McKearney in a statement. "To suggest to



The officer in charge of the last shift at the Coast Guard station in Kitsilano walks back to the building after his crew has left, Vancouver, February 19 2013.

Photograph by: Gerry Kahrman , PNG



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our citizens that these exercises or any real emergency no longer requires a rapid response by the Coast Guard is simply incorrect.

McKearney added: "Moreover, the temporary seasonal services announced for the harbour are no comparison to the professionally trained and equipped officers of the Coast Guard. This closure has put the safety of our harbour and waterways at risk."

News of the closure was delivered by telephone to the national office of the Union of Canadian Transportation Employees — the union representing 12 full-time employees at the station — by Deputy Coast Guard Commissioner Jody Thomas.

"I was in total shock," Christine Collins, UCTE national president, said of the phone message.

"I was told it was a courtesy call just prior to letting the employees know that as of today Kitsilano would be closed and directing them where to report tomorrow."

Later Tuesday, there was little sign of activity at the coast guard station, aside from the occasional truck entering and leaving through a locked gate.

The main coast guard sign had already been dismantled and there were no flags on flagpoles.

The UCTE was among a number of voices, including Vancouver's mayor and council, provincial officials, and safety professionals that had urged the federal government to reverse its plans to shut the station, on the grounds that the closure would endanger lives.

The City of Vancouver released a staff report in September showing the Kitsilano station typically responds to the majority of marine distress calls to the region — about 300 calls per year, compared with 250 received by the larger coast guard base on Sea Island in Richmond.

One-third of the calls relate to a life-and-death situation, with most emergencies in the winter months.

Ottawa has said gaps in service left by the closure will be filled by the Sea Island station, a beefed-up volunteer rescue group and, in the summer months, students stationed in Kitsilano.

But many outside of government, including



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police and fire experts, say those plans are flawed and will result in tragedy. "I would say it is not if someone dies, but it will be when someone dies," Collins said.

Gary Sidock, the coast guard's acting assistant commissioner for the Western region, said he made the decision to shut the Kitsilano station after he was satisfied new plans to safely patrol Vancouver Harbour were in place.

Sidock said he made the decision after observing a major exercise in the harbour Monday that included participation by the marine branches of the Vancouver police department, Vancouver fire department, and Port Metro Vancouver. He said he recommended the closure "because we could do so with no increased risk to the public and the station was closed today."

The federal government announced in January it will move its coast guard auxiliary station in Indian Arm to a new location under the Second Narrows Bridge to assist in boating emergency calls in that area. It also said it would fund a new inshore rescue boat to be installed off Stanley Park. The boat will go into service in May and operate for six months. The crew will consist of one coast guard boat manager and two students paid \$14 to \$18 per hour.

But Sinclair called the decision to shut the Kitsilano station "a recipe for disaster for the largest and busiest harbour in Canada."

Mike Cotter, general manager of the Jericho Sailing Centre Association, said at the vigil that he believes the



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station was closed Tuesday "to fly under the radar on the day of the B.C. budget. (And) it will cost lives out in the water without a doubt."

Tom Heys, a Galiano Island resident and boater since he was a boy, said it's just a matter of time before someone dies. "I have five boats and things can happen real fast out there."

Mandip Sandhu, who was also at Tuesday's vigil, believes his brother might have been saved in 2001 when his vehicle crashed into the Fraser River, if

the coast guard rescue dive program hadn't been cancelled a few days before the accident. Sandhu said the closure of the coast guard station is a similar threat to safety on the water.

The employees affected by Tuesday's closure have all been reassigned to other coast guard duties elsewhere in the region, Sidock said. However, one staff member decided to retire.

Unique System FZE Completed the Successful Handover of Hyperbaric Treatment System for the Dubai Police

http://www.ocean-news.com/newsletter/2653-unique-system-fze-completed-the-successful-handover-of-hyperbaric-treatment-system-for-the-dubai-police?utm_source=E-news+February+13%2C+2013&utm_campaign=Ocean+E-news+11-14-12&utm_medium=email

Unique System FZE, a Unique Maritime Group company, which is one of the world's leading integrated turnkey subsea and offshore solution provider, completed the handover of a new hyperbaric treatment system to Captain Ismail Hassan Al Housani, Officer-In-Charge of Diving Chamber and Rescue Department.


The scope of this project was to design a system for installation in the Dubai Police Clinic, using an existing shell once owned by the Dubai Police. The principal role



of the system is to provide the Police Rescue Department with the capability to treat local sports and police divers that may suffer a diving related injury. It is believed to be the first hyperbaric treatment centre available to the police and general public in the region. The project has already attracted a great deal of interest amongst senior police officers and medical professionals.

Captain Ismail said "We are extremely pleased and delighted with the system. A number of senior police officers were amazed at the transformation of the original shell and new console. An official opening ceremony will be held at the facility shortly and Unique will be invited to attend".

Special commendations go to Arun Nair – Project Engineer for developing the panel design, chamber and to Alexander for building and installing the system. They have also been busy helping to familiarize Captain Ismail and his team with the operation and maintenance of the system.



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Ian Huggins, General Manager at Unique System FZE commented "We are very proud of the successful completion of this project and as a result there have been a number of discussions about future upgrades and a service management packages too. We will be happy to assist Dubai Police for such packages and look forward to work with them".

Woman rescued from Warriors Path waters by Sheriff's Office divers

http://www.tricities.com/news/local/article_cca63aa2-7d30-11e2-86bf-001a4bcf6878.html

February 22, 2013 **KEVIN CASTLE | BRISTOL HERALD COURIER**

KINGSPORT, Tenn. — A woman who jumped into Boone Lake near a boat dock at Warriors Path State Park Friday afternoon was rescued by members of the Sullivan County Sheriff's Office Underwater Investigation Team. Police received a call of a woman in the water around 2:17 p.m. and the divers, who had just completed training exercises at the pool facility at Sullivan Central High School in Blountville, took the call, according to SCSO Public Information Officer Leslie Earhart.

The female, who was uninjured and taken to a local hospital, refused directives from the officers to swim back to shore and was safely removed from the waters a short time later, according to the report.

Experienced diver dies in Hawke's Bay

<http://www.stuff.co.nz/dominion-post/news/hawkes-bay/8319323/Experienced-diver-dies-in-Hawkes-Bay>

18/02/2013 TRACEY CHATTERTON

An experienced diver has died while diving at a central Hawke's Bay beach.

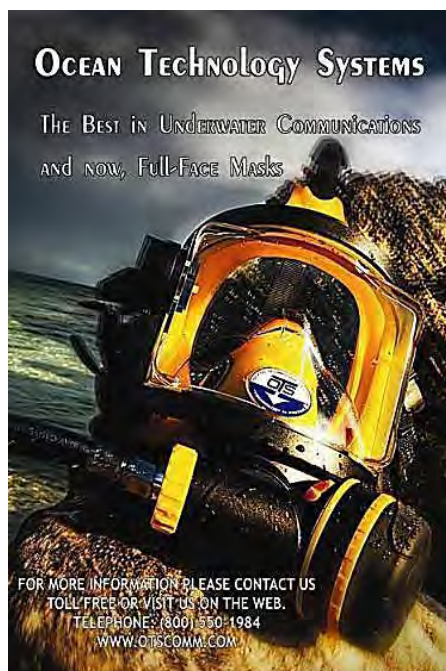
Barney Leon Akurangi, 34, was scuba diving with a friend at Pourerere Beach yesterday about 5pm.

Sergeant Ross Gilbert of Waipukurau Police said the pair were diving in shallow water when Mr Akurangi's friend noticed him floating on the water.

He and other people tried to revive Mr Akurangi by performing CPR but they were unsuccessful.

An ambulance from Waipukurau attended the beach, which is about a 40-minute drive east.

Police inquiries into the causes and the circumstances of the



death were continuing.

The sea conditions were moderate, Mr Gilbert said.

Mr Akurangi was an experienced diver, who was most likely out to catch paua or crayfish, Mr Gilbert said. His family and friends were "pretty shaken up" about the drowning.

Driver: I thought lake was road

<http://www.freep.com/article/20130219/NEWS05/302190029/New-policy-on-licenses>

February 19, 2013

A woman pulled from her partially submerged car told authorities she thought the frozen surface of a Washtenaw County lake was a roadway.

Rescuers found the woman Sunday afternoon about 400-500 feet from the Portage Lake shoreline in Dexter Township.

When the woman, who lives in the Dexter area, realized she no longer was on McGregor Lane, she tried to drive across the lake, said Lt. Tim Burke of the Dexter Area Fire Department.

"She said she got lost," he said. "She got out onto the ice and panicked."

Amy Conway O'Brien lives along the lake and said the woman drove the Monte Carlo off McGregor Lane, through a neighbor's backyard and onto Portage Lake toward an area frequented by swans.

"I saw the swans move out of the way as the car approached the hole," O'Brien said. "The swans went flying up; I see her drive into the hole. She was stuck." Rescuers and police divers arrived to find the rear of the woman's car submerged on

thin ice. A rope was used to pull her to shore. She was not injured. Her car later was towed to shore



Fire brigade doesn't have an expert diver

http://articles.timesofindia.indiatimes.com/2013-02-19/bangalore/37179285_1_fire-brigade-fire-incidents-diver

Feb 19, 2013

BANGALORE: It may be called the fire brigade. But the Karnataka State Fire and Emergency Services is the state's foremost disaster-management authority. The irony is, the department is ill-equipped to handle emergencies like drowning and disaster situations like earthquake, building crashes and floods.

The department doesn't have a single trained diver in its ranks. So every time someone drowns in a water body, the emergency services department ends up rushing to

expert local divers to fish out the body. Senior fire officials, however, seek to wash their hands of their unpreparedness by blaming the Lake Development Authority (LDA). As a body maintaining the lakes, it is the LDA's responsibility to have divers at hand at the lakes, they say.

If this is the situation with regard to stray incidents of drowning, its preparedness during flood like scenarios is suspect. The department has purchased inflatable dinghies to tackle floods but with its personnel's swimming credentials under a cloud, it is too much to expect the force to rise to the occasion.

Senior fire officers admitted many home guards personnel recruited from North Karnataka were expert swimmers but the department had not even thought of training any of their men for this particular task.

The fire brigade has well equipped rescue vans for deployment during building crashes or in earthquake situations. But sniffer dogs and thermal imaging to pick up signs of life from under the debris are not in the department's arsenal.

Persistent questions on the force's preparedness to a top fire brigade officer, who didn't want to be identified, elicited a terse reply. "Our major concern in the city has been fire-fighting. The maximum number of cases reported is of fire incidents. Yes, we are prepared for other calamities as well but we have to prioritize," he said.

Not fired up

No diver, but fire brigade bought inflatable dinghies to tackle floods. Is dependent on local swimmers during

rescue ops Passes buck on Lake Development Authority for lack of divers No sniffer dogs or thermal imaging equipment to pick up signs of life under debris

Times View

Swimming in troubled waters

When a disaster management authority like the Karnataka State Fire and Emergency Services doesn't have a single trained diver for rescue missions, it is surely swimming in troubled waters. If it has to depend on local swimmers for rescue operations during floods or drowning incidents, where is the disaster preparedness that is required of such a body? It's for the administration to set right this incongruity and ensure that the authority does not misconstrue itself to be just a fire-fighting body but encompasses other emergency services as well. Looking for solutions after a tragedy occurs defeats the very purpose of such authorities.

Another Canadian Coast Guard Station Closure

<http://www.maritimeprofessional.com/News/351839.aspx>

February 21, 2013

Canadian Coast Guard (CCG) advises union of immediate closure of Kitsilano Search & Rescue (SAR) Station in Vancouver, BC.

"I can't understand why the Conservative government is doing everything in its power to put Canadians at risk," said Christine Collins, National President of the Union of Canadian Transportation Employees in response to a phone call from the Canadian Coast Guard.

The closure comes as part of a long line of attacks on

CCG's ability to do effective search and rescue. To date, the CCG has closed the Marine search and rescue station in St. John's, NL which monitored Canada's longest coastline and now the Search and Rescue Station at Kitsilano, BC which is the busiest port in Canada. The marine search and rescue station in Quebec City, Quebec is 50% closed until qualified bilingual staff can be found and moved to Trenton, ON.



In all instances, public outcry has been tremendous in questioning the rationale for these Conservative government cuts. "Experts, search and rescue professionals, various levels of government officials, mariners from coast to coast to coast and regardless of political or social beliefs, everyone has come out saying these cuts are dangerous," said Collins. "I question it over and over again - what is the value of a life to this government? Canadians will have to pay a high price to find out."

The Union of Canadian Transportation Employees, a component of the Public Service Alliance of Canada, represents the ships' crew and search & rescue specialists with the Canadian Coast Guard.

Sink or swim for Cambodia's artillery recovery team

<http://www.abc.net.au/news/2013-02-22/an-divers-to-recover-cambodia-ordnance/4534276>

Feb 22, 2013

A team of Cambodian divers is being trained to recover thousands of tons of unexploded artillery at the bottom of the Mekong and Tonle Sap rivers.



Under the guidance of a former United States Navy ordnance expert, the month-long course began with swimming lessons for the divers.

Fourteen members of Cambodia's Mine Action Centre will battle pitch-black waters to recover decades-old United States ordnance.



VIDEO: [Cambodian divers recover unexploded artillery \(ABC News\)](#)

The munitions sank with the boats and barges ambushed by Khmer Rouge forces during the civil war in the 1970s.

Golden West Humanitarian Foundation's general manager, Allen Tan, said the training began with the very basics of swimming.

"We took them in the classroom, taught them basic theory, then they moved on to learn about diving," he said.

"It's a crawl, walk, run progression."

The divers will continue their training in the clear waters of the Gulf of Thailand, before beginning their work in the murkier, fast-flowing waters of the rivers.

Scuba Diver Dies After Failing to Remove Weights

<http://www.opposingviews.com/i/society/scuba-diver-dies-after-failing-remove-weights>

By Ashley Davis, Mon, February 25, 2013

A scuba diver was found dead off the coast of Miami Beach after fellow divers reported her missing.

She was a Chinese tourist in her 30s and drowned mysteriously after she kept a weight belt on and sank to the bottom of the ocean.

The woman went diving with a group of 40 people in an area near Key Biscayne in Florida.

Police are now investigating the incident as many are confused as to why she had kept the weight belt on.



A theory is that she did not understand safety procedures and took off the wrong equipment while she was underwater. She was found without any other equipment on, aside from the weight belt.

Ariane Dimitris, a member of the group, said all divers are taught to take off their belt in emergencies.

"I've never heard of anyone taking off even their fins. It's very strange," he said. "And normally if someone panics you're supposed to drop your weights and keep everything else on you because that was her survival."

Divers think the weight belt was what led to her death.

They said it was the equivalent to grabbing onto an anchor in the water instead of a life preserver.

She was reported missing after the group did a roll call and she was not there.

All divers use a buddy system, but she did not speak English and left her partner.

After learning of her missing status, the

US Coast Guard sent a boat to search for her and her body was found after two hours.

"We brought her back up, I did CPR, I'm an EMT," said Kevin Galloway, a fellow diver. "There were also two student doctors on the boat. We did what we could but she was gone."

She was participating in a scuba dive event organized by RJ Diving Ventures of Miami Beach.

Missouri City establishes fees to recoup emergency services costs

<http://www.chron.com/fortbend/news/article/Missouri-City-establishes-fees-to-recoup-4310092.php>

February 26, 2013 By Bryan Kirk

Fees to insurance companies would range from \$500 to \$2,000; Individuals would not be charged. City Council adopted the ordinance on Feb. 4.

Missouri City Fire Chief Russell Sander said the city began considering an ordinance to charge for emergency services in 2011, after an accident in front of City Hall involving a gasoline tanker resulted in a hazardous material spill, and subsequent clean up.

"It caught fire in front of City Hall," Sander said. "By statute, we can recoup those costs (from the trucking company), but we needed to have an ordinance in place." The city began researching ways to



More Information Emergency Services Cost Recovery Program

The city will charge a fee of \$500 for responding to: A motor vehicle collision with minor damage and without injuries; hazardous material spill that does not require the response of a hazardous materials team; Illegal burning; and motor vehicle fire. The city will charge a fee of \$650 for responding to: A motor vehicle collision with injuries; a collision involving a motor vehicle and a pedestrian; and a motor vehicle fire requiring the response of a fire investigator for investigation.

The city will charge a fee of \$1,000 for responding to: A motor vehicle collision with an extrication; and a collision involving a motor vehicle and a building

The city will charge a fee of \$2,000 for responding to: A motor vehicle collision with a fatality; an event requiring the deployment of a specialized team except for an event requiring the deployment of a hazardous materials response team; and, a submerged vehicle (dive team)

Starting March 1, Missouri City will charge for emergency services provided by firefighters responding to accidents, vehicle fires or similar incidents.

recover costs associated with emergencies, such as a hazardous materials cleanup or spill and presented initial findings to the council in November 2012.

The ordinance and the subsequent resolution allows the city to charge insurance companies of individuals and companies that require such services as Haz-Mat services, extrication from a wrecked vehicle with the use of the Jaws of Life, or **use of the dive team to retrieve a submerged vehicle from any body of water.**

The charge would be assessed where an insurance claim has been filed.

Two more divers killed at Aberdeen Proving Ground **Second and third deaths at 'super pond' in less than a month**

http://articles.baltimoresun.com/2013-02-26/news/bs-md-ha-aberdeen-diver-20130226_1_divers-aberdeen-test-center-army-base

February 26, 2013|By Carrie Wells, The Baltimore Sun

Two Navy divers died in the Super Pond at Aberdeen Proving Ground on Tuesday, less than a month after the death of another diver at the same location.

Officials at the Army base in Harford County released few details late Tuesday about the incident, which occurred about 2:30 p.m. at the Unexploded Ordnance Range pond. The man-made body of water is also known as the Super Pond.

A Navy spokesman said the families of the sailors had been notified, but officials were withholding their names for 24 hours in accordance with Navy policy. Lt. Nathan C. Potter, the spokesman said the victims were in the Mobile Diving and Salvage Unit.

Base rescue workers called to the Super Pond arrived to find one of the individuals dead, base spokesman Kelly Luster said. The other was taken to a local medical facility and pronounced dead.

A Harford County emergency response source said the divers were in cardiac arrest when they surfaced and had been working in the pond on air hoses, not self-contained breathing units, and were tethered to each other.



**An aerial view supplied by the Army of Aberdeen Proving Ground's...
(U.S. Army Test and Evaluation...)**

The two divers were from Joint Base Little Creek-Fort Story in Virginia Beach, Va., the Associated Press reported.

The incident came less than a month after the death of a diver at the Super Pond.

George H. Lazzaro Jr., an engineering technician in the Firepower Directorate of the Aberdeen Test Center, died Jan. 30 while doing routine maintenance on the test infrastructure.

Lazzaro, 41, lived in Nottingham. Luster said Tuesday that his death remains under investigation. He said the death last month and the two deaths Tuesday were not related.

The Underwater Test Facility, better known as the Super Pond, is a 1,070-foot-long, 150-foot-deep pond carved out of the bank of the Bush River to allow the Army to conduct shock tests of ships, boats and submarines for the Defense Department, academic researchers and private businesses.

The facility has been used for testing since 1995.

After Lazzaro's death, Aberdeen Test Center commander Col. Gordon L. Graham ordered a "safety stand down" to allow test center personnel to review operating procedures and processes and discuss best practices. That was in addition to regular monthly reviews.

No area dive teams were called to the base on Tuesday to assist in any rescue or recovery operations, Harford emergency officials said. The volunteer Aberdeen Fire Department did, however, send a unit to the installation to provide backup for the proving ground fire department.

Explosive Ordnance Disposal Unit Two is investigating the incident Tuesday, Potter said.

The Aegis contributed to this article.

Two Navy Divers Die in Aberdeen Diving Op

<http://www.military.com/daily-news/2013/02/27/two-navy-divers-die-in-aberdeen-diving-op.html?col=7000023435630&comp=7000023435630&rank=6>
Feb 27, 2013 Associated Press

BALTIMORE -- The Navy is investigating the deaths of two sailors during a diving operation at Aberdeen Proving Ground in Maryland, the second deadly incident at a deep pond there in the past month.

Officials say the divers died Tuesday. While one diver was pronounced dead at the scene, the other was transported to a local medical facility, where he was pronounced dead. The unit is based at Joint Expeditionary Base, Little Creek-Fort Story in Virginia Beach.

The divers' names weren't immediately released.

The Navy says its Explosive Ordnance Disposal Group Two is conducting an investigation into the deaths.

Late last month, an engineering technician died while performing maintenance at an underwater test facility at the Army site.

Navy IDs Divers Who Died at Aberdeen

<http://www.military.com/daily-news/2013/03/01/navy-ids-divers-who-died-at-aberdeen.html?ESRC=topstories.RSS>

Mar 01, 2013 The Virginian-Pilot| by Dianna Cahn and Mike Hixenbaugh

The Navy has identified two Virginia Beach-based divers who died Tuesday during an underwater operation in Maryland.

Petty Officer 1st Class James Reyher, 28, and Petty Officer 2nd Class Ryan Harris, 23, died during a planned dive at an Army base in Aberdeen, about 40 miles north of Baltimore.

The divers belonged to Mobile Diving and Salvage Unit 2, part of Explosive Ordnance Disposal Group 2 at Joint Expeditionary Base Little Creek, said Lt. Nathan Potter, a spokesman for the command.

"Ryan and James epitomized the unsung hero persona of the Navy diver," said Cmdr. Michael Runkle, their unit commander. "We are fortunate to have had the opportunity to serve with them."

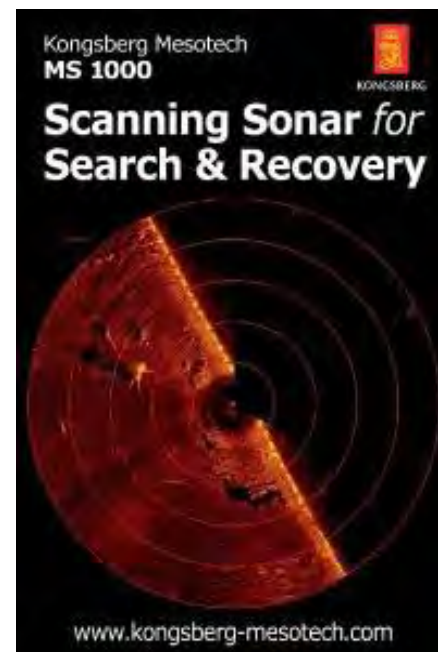
The Navy is investigating the incident but has released few details. Former Navy divers said it's obvious that something went very wrong at Aberdeen Proving Ground.

Austin Fall, a retired lieutenant commander and diver with 24 years' experience, said the Navy trains its divers to plan for every scenario.

Fatal accidents involving even one Navy diver are rare, Fall said. "I've never heard of two guys at the same time." Still, diving is inherently risky, he said.

"Typically, you are not diving in Caribbean waters where you can see clearly," Fall said. "Anything north of Florida this time of year is cold; it's dark. Everything you do is in the dark. If there is a malfunction, you have to try to correct it by feel, and because it's cold, it's like you're doing all of this while wearing thick mittens."

Reyher and Harris were diving at an underwater testing facility at Aberdeen Proving Ground. The spot is known as



the Super Pond -- a 1,070-foot-long, 150-foot-deep pond on the banks of the Bush River that's used to shock-test ships and submarines.

Emergency workers were called to the pond around 2:30 p.m. Tuesday, base spokesman Kelly Luster said. They found one of the divers dead; the other was taken to a hospital and pronounced dead.

The sailors' deaths mark the second fatal incident at the pond in as many months. In January, a civilian engineering technician died during a maintenance operation at the underwater test facility. Afterward, the facility commander ordered a "safety stand down" to allow personnel time to review operating procedures. Officials have not said what the purpose of Tuesday's dive was.

Rob Rice, a former Navy diver and owner of Dockside Diving in Virginia Beach, said that Navy divers often wear a "hard hat" or helmet when diving in an area where there is construction or ships.

The divers will breathe inside the helmet like in a space suit, with air pumped in either from a tank on the diver's back or, more often, an air source above the water's surface.

Rice was a submariner and certified diver who joined the reserves in 2002. He helped with minor salvage and diving operations while attached to Mobile Diving Salvage Unit 2.

He said the Navy has precautions in place to prevent accidents, including checks and double checks of air flow, air and gas mixtures and communications systems. The

protocol is to pull divers up immediately if communications fail, and backup divers should be on the scene in case of trouble.

"The Navy diving I was trained in is probably the safest diving in the world," Rice said. "We went through very stringent training."

Harris, a native of Gladstone, Mo., enlisted in the Navy in June 2007. Reyher, of Caldwell, Ohio, joined in May 2008. Both passed through the Navy's rigorous diving school and were designated as Navy divers within a year of enlisting.

In January 2012, another Little Creek-based diver died during a training exercise off the North Carolina coast. Petty Officer 2nd Class Taylor Gallant was assigned to Explosive Ordnance Disposal Mobile Unit 12.

In December 2011, a Chesapeake police officer, Timothy Schock, died during a dive training exercise in Oak Grove Lake Park. An investigation found that two pieces of his equipment failed, and no boat was on hand when he failed to surface.

Should climbers, hikers be charged for rescue? Searchers say no

<http://www.king5.com/news/Charge-for-search-and-rescue-186891122.html>

February 27, 2013

The search for two snowmobilers stranded in whiteout conditions near Blowout Mountain over the weekend has some people bringing up the issue of charging people who need to be rescued, or requiring an insurance policy of some kind to cover costs in the event of an accident.

Between 40 and 50 searchers participated in the search for the snowmobilers. One crew member was hurt in a fall as the searchers battled the elements and darkness to reach the couple, who were brought to safety on Tuesday morning. Nobody was seriously injured.

Last month, the search for a skydiver who disappeared Jan. 3 in the Cascade foothills wound up involving hundreds of volunteers who chalked up 3,500 hours of total search time. The King County Sheriff's Office also deployed its Guardian 2 helicopter helped search the rugged country near Mount Si.



Volunteers search for a skydiver missing near North Bend Credit: KCSAR

Washington's mountains, lakes, forests and ocean waters attract plenty of recreational users. But small groups of adventure seekers, some of whom engage in what some would call "extreme sports," also make use of these natural wonders, deliberately risking their lives.

In February of 2012, a group out skiing in the back country of Stevens Pass was **hit by a massive avalanche**. Three people died.

Last November, a **mountain rescue volunteer nearly died** on Mount Rainier when he fell off a cliff while searching for two snowboarders who had spent two nights stuck on the mountain.

Washington state law holds county law enforcement responsible for providing search and rescue operations, but several other states are considering legislation to bill adventurers who get into trouble and need help. In Wyoming, a **bill under consideration** would let local law enforcement charge for search-and-rescue missions in cases where they believe the victims put **themselves in harm's way**.

Grand County, Utah, has a list of fees on its **website** for search and rescue operations. A "small incident" (less than three hours with six or fewer responders) would cost \$250, while a "large incident" requiring

more than three hours with seven or more responders would cost \$750.

The only law in Washington remotely similar is one that imposes a \$1,000 fine on skiers who ignore clearly marked off-limits areas.

Search-and-rescue groups say charging for rescue puts the lives of victims and their rescuers at greater risk and actually increases the cost and man hours required. "There is the belief that if people had to pay they would behave differently; no they wouldn't," said Glenn Wallace, Public Information Officer **with King County Search and Rescue**, an all-volunteer organization that works under the direction of the King County Sheriff's Office.



"But it will make them delay calling 911, which increases the risk and urgency of the mission, both to the subject and rescuers," said Wallace.

Wallace points to an **incident last June** when a group of five hikers got lost on a day hike to Mailbox Peak near North Bend. Trouble began when dusk settled on the group from Oak Harbor.

They became lost and then separated during their descent. They delayed calling for help because they

were afraid they would be charged thousands of dollars.

"If they had called us at 6 p.m. we would have gotten them out by 7:30," said Wallace.

Instead, the group ended up spending a cold night on the mountain.

"For us it's all about the lead time," said Wallace. "The longer someone is out, the less endurance they have."

Wallace said the actual cost to the taxpayer is minimal versus services delivered. Most missions require one deputy as incident commander.

"They direct the efforts, we provide the manpower," said Wallace. "The services provided come from the

volunteers. The county doesn't have the money to staff a big search."

KCSAR, a 501(c)3 non-profit, has 600 trained volunteers. Last year the group conducted 117 missions, racking up 15,000 volunteer hours – excluding training. In addition to working on search and rescue, they help with crime scene searches and are called to help search for missing persons.

Sgt Cindi West with the King County Sheriff's Office said more than 200 KCSAR volunteers who assisted the search for the skydiver spent nearly 3,500 hours over the four-day period – for free.

"These individuals donate their time, energy and equipment for these missions. Our job is to provide oversight, command and control," she said.

"We would never charge for a search and rescue mission," said West. "There are a tremendous number of things government agencies do not charge for. It is part of the service we provide."

Wallace said the hot button is the cost of a helicopter search.

"The search helicopter uses fuel, but it saves time in the search phase, and reduces risk to volunteers during rescue or recovery phases," he said. "We think it's a net positive."

West said one helicopter was used in the search for the skydiver but it was not used much because the weather was bad.

Wallace said KCSAR has a half dozen of its own command vehicles and the organization receives grants and donations to support its work. The Puget Sound Energy

Foundation recently donated \$10,000 for a new communications van and \$20,000 for communications equipment.

"These tools are critical parts of our team's ability to respond to missions," said Wallace.

The missing skydiver, 29-year-old Kurt Ruppert, still has not been found. The ground search was officially called off, but on Jan. 13 KCSAR conducted a small-scale search and planned to continue analyzing information its volunteers gathered.

"We don't judge the people we rescue. Everyone makes mistakes, even the well prepared and experienced. And sometimes people have bad luck. Our focus is on helping people in need, just as if they were our mother, father, sister, brother, son, daughter," said Wallace.

Resources

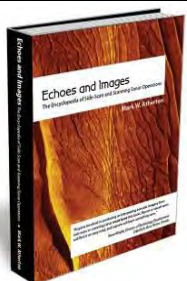
[Tribute to Kurt Ruppert Jr.](#)

[King County Search and Rescue](#)

[No Charge for Rescue Facebook page](#)

[Mountain Rescue Association's position on charging for rescue](#)

[National Association of Search and Rescue](#)



Mark Atherton's

Echoes and Images, The Encyclopedia of Side-Scan and Scanning Sonar Operations is the how-to guide for side-scan and scanning sonar operations.

For more information or to purchase your own copy, go to

<http://echoesandimages.com/>

Stolen motorcycles found in Lake Austin Parts found beneath Pennybacker Bridge (VIDEO ON SITE)

<http://www.kxan.com/dpp/news/local/austin/stolen-motorcycles-found-in-lake-austin>

27 Feb 2013, 3:19 Chris Sadeghi

AUSTIN

(KXAN) - More than a dozen motorcycles stolen over a number of years have all been found in the very same place.

In a spot that took a recreational diver to find them.



Austin police received a tip from that diver of several parts sitting on the floor of Lake Austin beneath the Pennybacker Bridge.

"It appears they have been discarded from atop the bridge based on where we they are finding the parts," said Detective Brent Mullinix with the APD Auto Theft Unit.

Mullinix said that parts to 15 motorcycles, one reported stolen as far back as 2005, have been recovered by the Department of Public Safety Dive Team.

The parts include a rusted out engine and several body frames.

Motorcycle thieves will strip a stolen motorcycle for valuable parts and discard the rest according to Mullinix.

"This is a good indication of what happens to those motorcycles that get stolen," said Mullinix. "Based on what we are seeing, it is obvious it was someone's pattern or some group's pattern."

The dive team has been searching the area beneath the bridge since Monday and will return on Thursday.

The owners who reported the motorcycle stolen will be contacted, but Mullinix said environmental concerns are also a reason why they want all the parts recovered.

"We need to remove all the stuff from the bottom for the safety of other people and the environment."

Minister Ashfield Announces the Acceptance of the CCGS Corporal Teather C.V.

http://www.nbcnews.com/id/50748217/ns/business-press_releases/t/minister-ashfield-announces-acceptance-ccgs-corporal-teather-cv/#.UTEa5TA4BP0

DARTMOUTH, NOVA SCOTIA — Editors' Note: There is a photo associated with this press release.

The Honourable Keith Ashfield, Minister of Fisheries and Oceans and Minister responsible for the Atlantic Gateway, announced the acceptance of the the third of the Canadian Coast Guard's new Hero Class vessels, the CCGS Corporal Teather C.V., built by Irving Shipbuilding Inc.



"Our Government is proud to name our ships built in Canada after Canadian heroes," said Minister Ashfield. "Not only does their construction support job creation and local business, once in action, the CCGS Corporal Teather C.V. will enhance maritime security along the Great Lakes and the St. Lawrence Seaway."

CCGS Corporal Teather C.V. was named after Corporal Robert Gordon Teather, C.V., a member of the Royal Canadian Mounted Police diving team in Surrey, British Columbia. Corporal Teather rescued two fishermen trapped in the hull of their capsized boat. This heroic rescue occurred in the early morning hours of September 26, 1981. Corporal Teather passed away November 14, 2004. For his actions Corporal Teather was awarded the Cross of Valour.

The Hero Class vessels are named for decorated soldiers, veterans and police officers as well as employees of

Fisheries and Oceans Canada and the Canadian Coast Guard. By naming these after Canadian heroes the Government of Canada hopes to encourage future generations to learn about Canadian history, culture and geography.

The Hero Class vessels are 47 metres in length with a displacement of 257 tonnes and a top speed of 25 knots.

The CCGS Corporal Teather C.V. will be based in Central and Arctic Region where it will enhance maritime security along the Great Lakes - St. Lawrence Seaway system. A formal naming and dedication ceremony will follow when the vessel makes its way to its home region.

For broadcast : The Honourable Keith Ashfield, Minister of Fisheries and Oceans today announced that the Canadian Coast Guard has accepted the third Hero Class vessel, the CCGS Corporal Teather C.V. The vessel was named after Corporal Robert Gordon Teather, C.V., a member of the Royal Canadian Mounted Police diving team in Surrey, British Columbia. Corporal Teather rescued two fishermen trapped in the hull of their capsized boat. This heroic rescue occurred in the early morning hours of September 26, 1981. Corporal Teather passed away November 14, 2004. For his actions Corporal Teather was awarded the Cross of Valour.

For more information on the Hero Class vessels, visit: [Canadian Coast Guard's "Hero Class" Vessels](http://www.ccg-gcc.gc.ca)

For more information about the Canadian Coast Guard, visit www.ccg-gcc.gc.ca

Internet: <http://www.dfo-mpo.gc.ca>

Niceville gets new fire boat

<http://www.nwfdailynews.com/local/niceville-gets-new-fire-boat-gallery-1.104175>

March 1, 2013 By ANGEL McCURDY / Daily News

NICEVILLE — The Fire Department now is prepared to respond to just about any situation on the water, thanks to a new piece of equipment.

The department received a 27-foot fire boat this week. It is equipped radar, sonar, dive racks for the scuba team and a pump capable of spewing 1,200 gallons of water per minute.

"We currently have 202 commercial slips in Niceville, which doesn't count the recreational boats in Okaloosa County," Fire Chief Tommy Mayville said. "Okaloosa County is right up there in the top 10 for boating

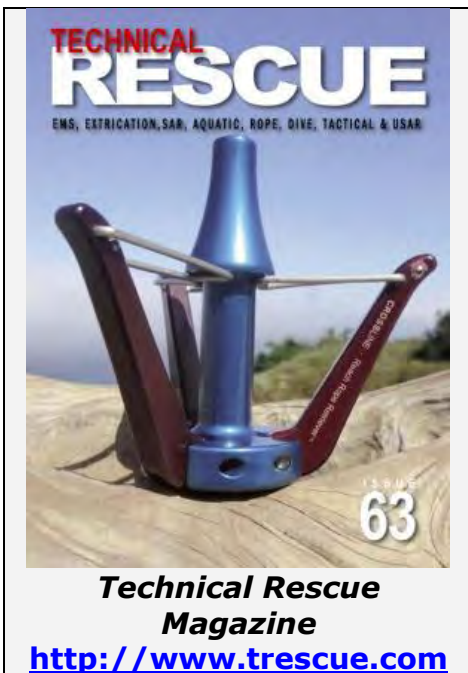


The Niceville Fire Department's new boat can pump 1,200 gallons of water per minute.

View a photo gallery of the fire boat. [Click Here>>](#)

Editor Note: WEAR YOUR PFDs – You never know when someone is going to snap a photo...

accidents in the state of Florida. Now, we will be able to fight fires and perform water rescues in adjacent bays."



The \$231,000 boat was funded by a port security grant, Mayville said. It is the department's largest boat and the second one in the county capable of rescues in deep water, he said.

Niceville also has paddle boards and a smaller boat that are used in shallow water.

"We've needed some type of water access to do whatever we needed to do around that (Citgo) barge and around the

docks in all our geographical areas," Mayville said. "I feel that we're pretty well equipped in the Niceville area.

"Now we have many ways to get to people in distress.

LETTERS TO THE EDITOR

Dear Mark

I read your journal with interest each month and have passed on the info to UK teams involved with this type of diving. My main job is as an incident investigator of diving accidents for a UK Government agency.

I recently have had two incidents where the divers concerned were using a new Suunto dive computer/watch.

Over the years I have, and I expect a number of other investigators have used the download facility of this maker of computer to provide information on what happened during the dive.

Recently Suunto upgraded the software to DM4/ Movescount and these new computer watches can only be downloaded via DM4.

On downloading you get the profile and some other data but you no longer have the facility to export the dive log to Excel or similar to allow for integration into other dive computers or to expand the profile over a certain part of the profile allowing the investigator to check what actually happened.

Could you please pass this onto your readers to let them know that this software is limited in what it can let the investigator do.

I have contacted Suunto and sent messages to other investigators I know in Europe and the US.

Regards
Nick Bailey



SPONSOR NEWS

UNDERWATER ROBOTIC TECH FIRM VIDEORAY CALLS POTTSTOWN HOME

[HTTP://WWW.POTTSMERC.COM/ARTICLE/20130224/NEWS01/130229667/UNDERWATER-ROBOTIC-TECH-FIRM-VIDEORAY-CALLS-POTTSTOWN-HOME?MOBREDIRECT=TRUE](http://www.pottsmmerc.com/article/20130224/NEWS01/130229667/UNDERWATER-ROBOTIC-TECH-FIRM-VIDEORAY-CALLS-POTTSTOWN-HOME?MOBREDIRECT=TRUE)

2/24/2013 **By Donna Rovins**

POTTSTOWN — A lot can happen in a year.

It was just last February when VideoRay LLC, a leading tech firm in the production of Underwater Remote Operated Vehicles, announced it wanted to call Pottstown home.



The Royal Netherlands Navy conducts a training exercise using the VideoRay Pro 4 equipped with a Blueview P900130 sonar in Den Helder, Netherlands. VideoRay submersible units are used around the world and are assembled in Pottstown.

Photo by Niels Visser * Courtesy of VideoRay

VideoRay started to put down roots in the borough: acquiring the Levitz building at 212 High St., choosing an architect and general contractor and converting the building into 32,000 square feet for sales, marketing, business development, administrative and production staff, with room to grow.

In December, the company completed its move, establishing Pottstown as its global headquarters.

VideoRay's most recent home had been a restored barn in East Pikeland. But VideoRay Vice President Chris Gibson said it outgrew the space. While most companies like VideoRay are located near the ocean, southeastern Pennsylvania is where VideoRay wants to remain.

"The reason that we're here, in southeastern PA, is because that's where the founders of the company grew up. We've all traveled all over the world and this is where we call home. This is where we want to live. This is where we want to bring up our families," Gibson said.

Gibson said the company looked at land in different areas, but Pottstown presented a unique opportunity for the firm. He said the company was excited by plans



**PSDiver – A
Textbook for Public
Safety Diving
By Mark Phillips
\$30.00**

**~ An introduction to
Public Safety Diving
and Underwater Crime
Scene Investigation
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promoting commercial and industrial development in Pottstown. And, working with the borough and Pottstown Area Industrial Development Inc. moved the project forward.

FOUND ON THE WEB

Investigating the Underwater Crime Scene

<http://www.csitechblog.com/2011/10/investigating-the-underwater-crime-scene.html>

Underwater Crime Scene Investigation

By: Don Penven, Technical Support Group

Most crime scene investigations are conducted using primarily land-based procedures. But the earth's surface is 70% water, which requires a thorough understanding of underwater investigation techniques for a successful outcome.

While the underwater environment offers significant challenges, the techniques employed still follow the basic crime scene protocols such as protection of the crime scene, interviewing witnesses and victims and maintaining the chain of collected evidence custody.

The single, most important point stressed in much of the available literature emphasizes the need to consider all underwater incidents involving a death be treated as a homicide (until ruled otherwise), and to proceed accordingly in collecting and preserving any possible physical evidence.

Only slight similarities exist in the methods and techniques employed in an underwater search compared with a land-based investigation. The purpose of land and water investigations is to locate and collect evidence that will stand on its own during a courtroom presentation. Either type of investigation is conducted by trained specialists whose purpose is to be certain that nothing in the scene is disturbed until the investigation is complete. Here, any similarity between land and underwater crime scenes ends because the underwater scene requires significantly different equipment, practices and procedures.

Those charged with underwater crime scene investigation (UCSI) must acquire the same basic skills required for any crime scene, but added to this is the need to be thoroughly trained in the proper and safe use of diving equipment. And as is the case with any crime scene, the investigator must possess a high level of skill in underwater photography.

Maintaining crime scene security offers many challenges.

The UCSI doesn't just surround the scene with yellow barrier tape. The investigator must keep in mind that this is not a "salvage operation," as was often how some underwater scenes were handled in the past.

In today's world underwater assignments are much more sophisticated, employing specialized equipment coupled with high-tech methods akin to those



used in underwater archeology. The precise location of every single artifact at the site is mapped and all evidence recovered is carefully preserved. Thanks to refinements in evidence collection techniques and innovative tools, the evidence can be preserved intact—making it usable for introduction during a criminal trial.

A major problem facing investigators has been estimating the time of death. A body that has spent several days submerged further complicates this finding.

Decomposition of a submerged body occurs rather rapidly due to environmental factors such as the presence of marine life, bacteria of many varieties and varying temperatures. These factors combine to confound the investigator at the scene in making it nearly impossible to determine if death was accidental or intentional. It may take weeks or months to arrive at a determination after recovering the body and post mortem examinations are

Water Recovery Operations
RANDOLPH COMMUNITY COLLEGE
ASH-RAND RESCUE & EMS
GUIL-RAND FIRE DEPARTMENT
PIEDMONT-TRIAD REGIONAL WATER AUTHORITY

WATER RECOVERY OPERATIONS
March 15/16/17, 2013
Randleman Regional Reservoir (Randolph County)

Being offered is an opportunity to learn and practice strategies and techniques that will improve the efficiency and safety of underwater recovery operations. Featured will be Side-Scan Sonar Operations, On-Water Navigation/Mapping and Documentation, plus K9 Deployment and Use. Lots of HANDS-ON training will be provided.

The best presenters available will deliver the training, including:

Gene Ralston-
Ray Smith-
Lisa Mayhew-
Cat Warren-
Roxye Marshall –
Nancy Hook –

K9 Deployment and use will be offered, including HANDS-ON for simulated searches. Attendance will be limited to provide the maximum of hands-on, allowing skills to be developed. Each person attending must provide compass, appropriate clothing for predicted weather, and PFD

This course is free to residents of North Carolina.
Non-resident must pay a fee of \$65.

For more information, and to pre-register please contact Jim Caroline Russell- Owen at RCC ESTC, 336.633.4165 or email jrowen@randolph.edu.

<http://ncarems.org/forum/showthread.php?tid=70>

completed.

A factor that influences the determination of a final outcome is the interference of marine life. Crabs and other sea creatures tend to make circular patterns while consuming flesh, which may falsely portray foul play. Marine life can destroy any evidence that may have been left with the body. Most often the body parts consumed first are the eyelids, lips and ears.

According to Gemma Dickson, a forensic biologist from New Zealand, "Unless a body is witnessed entering the water, there is no reliable method for determining the length of time that a body has been **submerged**"

What has been recently discovered, however, is that bacteria (*Phychromonas*) first begin to colonize decomposing bodies in the frigid temperatures associated with many free standing, natural bodies of water. It is specific genera in the Bacteroidales order, only colonized after 10 days of submersion, and it can accommodate many different

water environments. This bacterium thrives on the fecal matter associated with a decomposing body.

This new discovery could transform the field of general science, forensic and law enforcement studies and how bacteria interact with decomposing bodies. The same researchers in Australia are continuing their research using submerged pig heads and letting them decompose on their own in the water to study these bacteria.

All living creatures, including bacteria, excrete waste into the environment causing noxious odors that are specific to each bacterium. In the case where bacteria are feeding on a corpse, the surrounding soil or water can hold valuable information, so obviously samples must be collected.

Although bacteria prefer an oxygen-enriched environment, they have also been known to survive in anaerobic conditions. Research has found that psychrophilic bacterium was isolated from a cold current off the Monbetsu coast of the Okhotsk Sea in Hokkaido, Japan. The time and seasons of the year seem to have little effect on their growth because of the nourishing environment of the water.

Just as maggots recovered from a rotting corpse can give a good approximation of the time of death, so may microscopic organisms tell the investigator what happened. As in the case with blowfly larvae, maggots, and the pupae stage, growth cycles can give valuable



A Coffee Mug for Public Safety Divers

You did not know you needed one of these did you? Just imagine how cool you will look in the morning drinking your coffee from this awesome mug.

Hard to contain your excitement isn't it? Limited supply – Don't wait until they are gone and live with regret for the rest of your life![Order Yours Here!](#)

information. Perhaps it will not be long before bacteria will be telling the same story.

The point here is that the scuba-diving investigator should collect soil samples from around and under a submerged corpse, and to collect water samples adjacent from the corpse.

It is also recommended that items collected from underwater be packaged in the water in which it was found. This will reduce the chance of environmental deterioration that may be caused by removing items from the water.

Some basic tools needed by UCSIs will include: magnetometer or underwater metal detector, recovery magnet, hand trowel, sifting screens, underwater lighting equipment, waterproof camera and a variety of evidence containers.

This forensic tool of studying bacterial life cycles can also help aid those interested in identifying the body and giving surviving loved ones closure.

References:

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<http://writersforensicsblog.wordpress.com/2010/12/09/bacteria-and-time-of-death-a-new-forensic-tool/> April 4, 2011

Kade, Asher: "Underwater Crime Scene Investigation,"
<http://www.environmentalgraffiti.com/biology/news-breaking-news-bacteria-tells-time-death-submerged-bodies> , April 4, 2011

FOUND ON THE WEB

What do these numbers represent?



In 2010, while educating firefighters across the United States, I began to notice through stories and reports about the number of firefighters who had taken their lives. I began to collect reports through a confidential reporting system in late 2010 through Counseling Services for Fire Fighters. After much research and effort, I

realized this was a much larger issue than I thought, and expanded by starting Firefighter Behavioral Health Alliance. I am now collecting this data through FBHA also. This confidential report can be found on the list at the left "ff suicide report" or at www.csff.info under the tab "FF Suicide Report".

Starting January 1, 2013, I am gathering information internationally.

The numbers in the boxes above are members who were active or retired firefighters who suffered deaths by their own choice. It should not be conceived as one of weakness but one where they might not have

believed they had any other options to relieve their pain. FBHA is dedicated to collecting the most accurate numbers regarding FF suicides and then updates this number as information is confirmed. It is also FBHA's objective to educate all of our brothers and sisters on suicide prevention through our workshop titled "Saving Those Who Save Others" in hopes to limit this number.

Regards,
Assistant Chief Jeff Dill
Founder of CSFF & FBHA

USA: Number is from information received from suicides ranging from the years 1880-2013. The total is comprised of 292 FF and 16 EMT/P

Firefighter Behavioral Health Alliance

<http://www.ffbha.org>

We are a newly formed non-profit organization set out to educate Senior Fire Officers, Firefighters, EMS and supporting personnel about behavioral health and the mental stressors that your type of job can have and the consequences of not recognizing them. It can take a serious toll on your work, family and social life. A large area of focus will be the rising number of firefighter suicides and bringing this awareness to the forefront.

Background:

In 2009, founder Jeff Dill, organized Counseling Services for Fire Fighters. CSFF was established based on the tragic events that surrounded Hurricane Katrina. When speaking with firefighters who returned after serving the community of New Orleans, he heard the pleas of

firefighters who had a difficult time talking with counselors who did not have any firefighting experience.

They became frustrated and never did seek the help they needed. It was CSFF mission to offer behavioral health workshops to support firefighters, train senior officers and educate clinicians on the benefits of understanding the life and emotions of firefighters.

In 2011, Firefighter Behavioral Health Alliance was organized based on the decreasing funds available for training at the Fire Department level and the staggering number of firefighter suicides. FBHA was established to directly educate firefighters/ Emergency Medical Services (EMS) personnel and their families about behavioral health issues such as depression, Post Traumatic Stress Disorder (PTSD), anxiety and addictions, as well as firefighter suicides. Through businesses, community support and sponsorships, it is our hope that the workshops and services will be offered at no charge to those in need.

Jeff holds a Master's degree and is a Licensed Counselor. He is an Assistant Chief at Palatine Rural Fire Protection District in Inverness, Illinois and is a member of the American Counseling Association, Illinois Counseling Association, Illinois Mental Health Counselors Association, Illinois Fire Chiefs Association, International Associations of Fire Chiefs, Illinois Professional Firefighters Association, and is an alumni member of the International Association of Fire Fighters.

Jeff Dill, and those working with FBHA are dedicated to educating firefighters and emergency service personnel on the importance of behavioral health and suicide awareness.

FOUND ON THE WEB

Outstanding educational videos: RESCUE FOR RIVER RUNNERS,

by Higgins &
Langley Board member, Jim Coffey and team

Episode One: Getting Started

<http://www.canoekayak.com/videos/canoe/rescue-for-river-runners/>

Episode Two: Group

Dynamics <http://www.canoekayak.com/videos/canoe/rescue-for-river-runners-2/>

Episode Three: Safe Swimming

<http://www.canoekayak.com/videos/skills/rescue-for-river-runners-3/>

Episode Four: Throw-rope skills

<http://www.canoekayak.com/videos/rescue-for-river-runners-4/>

Episode Five: Access and Mobility

<http://www.canoekayak.com/videos/rescue-for-river-runners-5/>

Episode Six: Rescue PFD Basics

<http://www.canoekayak.com/videos/rescue-for-river-runners-6/>

Episode Seven: Live-bait rescue

<http://www.canoekayak.com/skills/the-live-bait-rescue/>

Higgins and Langley Memorial Award

<http://health.groups.yahoo.com/group/HigginsLangleyMemorialAwards/>

The Higgins and Langley Memorial Awards honor outstanding achievement in the technical rescue discipline of swiftwater and flood rescue. They are not heroism awards, but rather recognize preparedness, teamwork, and a job well done, sometimes under extreme conditions, where training is vital to the success of rescue missions, as well as the safety of rescue personnel.

The awards were established in 1993 by members of the Swiftwater Rescue Committee of the National Association for Search and Rescue (NASAR) in honor of Earl Higgins, a writer and filmmaker who lost his life in 1980 while rescuing a child who was swept down the flood-swollen Los Angeles River, and Jeffrey Langley, a Los Angeles County Fire Department firefighter-paramedic, who lost his life in a helicopter incident in 1993.

There are several award categories, including the highest award presented: the Higgins and Langley Award for Outstanding Achievement in the Field of Swiftwater Rescue. The Program Development Award honors those who have developed and implemented stellar swiftwater rescue programs. The International Award honors international teamwork and individual accomplishments. Special Commendation Awards recognize individual

contributions, as well as teamwork. And on occasion, the Lifetime Achievement Award is presented.

The Awards are presented during the National Association for Search and Rescue Conference, followed by presentations at the local level.

For more information:

- <http://www.higginsandlangley.org>
- <http://www.cfspress.com/hlawards.htm>

FOUND ON THE WEB

'Water' you waiting for: Learn how to prevent drowning

<http://www.yumasun.com/articles/water-85653-children-child.html>

February 28, 2013 BY HILLARY DAVIS

From the river for a cool dip on a hot day to the bath tub for more practical matters, water is all around us.

It can also be a hazard for young children. Ryan Butcher, injury prevention coordinator for the Yuma County Health Department and a member of the county's child fatality review team, says drowning is the leading cause of death nationwide for children between the ages of 1 and 4 – an age range where many have not yet learned to swim, he says. In Yuma, one young child drowned in 2012, and two died this way in 2011.

Butcher says “active” supervision is key when it comes to kids and water, and the designated water-watcher should be clear who he or she is. Everybody seems to think somebody else is watching the kids, and that's how it turns out that nobody is, despite plenty of adults being nearby.



"Don't leave the children in the pool or near the water alone for a second," he says.

Mike Erfert of the Yuma Fire Department suggests **Adult supervision, Barrier fencing, and CPR** as the "ABCs" of drowning prevention:

– **Adult supervision** – and not just adult supervision, "but responsible, consistent, even relentless adult supervision," he says. The designated water-watcher shouldn't leave the area for any reason without finding a good replacement, and if none can be found, then it's time for everybody to get out of the water.

– **Barrier fencing** around pools should be at least 4 feet high, with no gaps or spaces big enough for a small child to squeeze through. Gates should be self-closing and self-latching. Remember that kids are curious and resourceful, so keep patio furniture or other items that can be used to climb over the fence away, and keep toys out of the pool so little ones aren't drawn to the water.

– **CPR**, or cardiopulmonary resuscitation. C can also stand for classes, such as swim classes.

Both Butcher and Erfert stressed the difference between toys – including inflatable water wings, ride-on floaties and pool noodles – and genuine personal flotation devices when playing in the pool, river or lake. Proper life jackets or vests will be marked as being U.S. Coast Guard-

approved and can be relied upon as a safety device. Toys are just for fun.

Erfert says that when out boating, kids shouldn't take off their PFDs unless they aren't near the water. Especially in murky water, unstable sand bars and hard-to-see drop-offs can surprise waders, dumping them into the current or a deep hole.

"You cannot waterproof a child but you may make them more drowning resistant," Erfert says.

The common tip, whether around the pool, the tub, or open water, is to always be alert. That holds true for all ages.

"Adults and children should also use the 'Buddy System.' You should be with someone who is paying attention," Erfert says. "Never, regardless of your age, be swimming

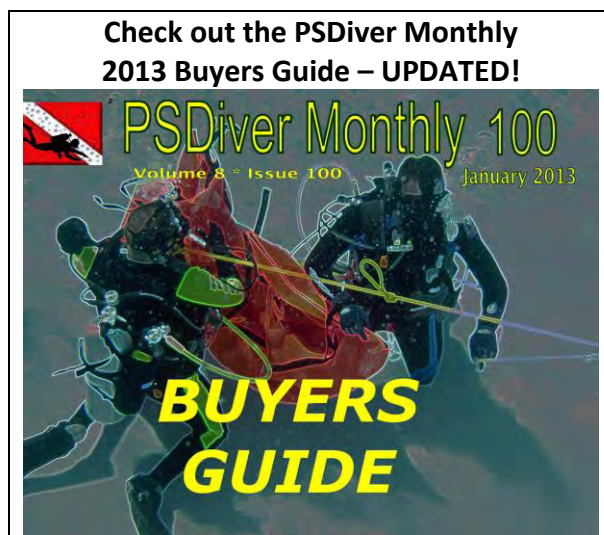
alone. A medical emergency that leaves a person unconscious or incapacitated might be serious on dry land, but will often be fatal in the water."

Learn water safety

The Yuma Fire Department is available to provide classes on water safety and other types of injury prevention for children and adults. For more information on water safety or if you would like to schedule a class for your group or organization, contact Mike Erfert at 373-4855.

Some drowning prevention tips to use or share:

- Actively supervise your children around water at all times, even if they know how to swim.



- Appoint a designated “water watcher,” taking turns with other adults.
- Learn infant and child CPR and keep a phone nearby in case of an emergency.
- Enroll your child in swimming lessons.
- Make sure your pool has four-sided fencing and a self-closing, self-latching gate. In addition, hot tubs should be covered and locked when not in use.
- Install a door alarm, a window alarm or both to alert you if a child wanders into the pool area unsupervised.
- Warn your children about the dangers of drain entanglement and entrapment and teach them to never play or swim near drains or suction outlets.
- Teach children that swimming in open water is not the same as swimming in a pool: they need to be aware of uneven surfaces, river currents, ocean undertow and changing weather.
- Teach children not to dive into oceans, lakes or rivers because you never know how deep the water is or what might be hidden under the surface of the water.
- Never leave your child alone or in the care of older children during bath time.
- Empty all buckets, containers and wading pools immediately after use. Store them upside-down and out of children's reach. Once bath time is over, immediately drain the tub. Keep toilet lids closed and use toilet seat locks.

2013 EVENTS



March 16-17	Catalina Island, CA	Casino Point
April 5-7	Tacoma, WA	Les Davis
April 12-14	Newport, OR	Oregon Coast Aquarium
*April 20-21	Pelham, AL	Dive Alabama
April 27-28	Eureka Springs, AR	Beaver Lake
May 4-5	Gloucester, MA	Stage Fort Park
*May 18-19	Bethlehem, PA	Dutch Springs
June 1-2	S. Beloit, IL	Pearl Lake
June 8-9	Monterey, CA	Monterey Breakwater
*Aug 25	Black River Falls, WI	Wazee Lake
*Sept 7-8	Ottawa, OH	Gilboa Quarry
Sept 21-22	Metropolis, IL	Mermet Springs
Sept 28-29	Bethlehem, PA	Dutch Springs
Oct 5-6	Alexandria Bay, NY	Alexandria Bay Marine Park
Oct 19-20	Rawlings, VA	Lake Rawlings
Nov 2-3	Chiefland, FL	Manatee Springs
*Nov 23-24	Terrell, TX	Clear Springs Scuba Park
Risk Management through Advanced Technology for Public Safety Professionals & Dive Teams at these Events on Friday		

For more information, go to www.safekids.org

DUI Offers Special Training Workshop for Public Safety Dive Teams

DUI's Dive Ops program is conducted as part of the annual DUI Drysuit Demo Tour. The workshop gives Dive Teams access to equipment and training to keep them safer, tips on grant writing, the ability to network with other teams, as well as the opportunity to TEST DIVE the equipment.

February 5, 2013 - February 7, 2013 ACSR 2013 Conference

The Association for Crime Scene Reconstruction (ACSR) began in 1991 with a group of professionals in Oklahoma and Texas who investigated crime scenes and performed forensic analyses and comparisons on evidence from crime scenes. These professionals saw a need for an organization that would encompass an understanding of the whole crime scene and the necessity of reconstructing that scene in order to better understand the elements of the crime and to recognize and preserve evidence.

College Park, GA www.acsr.org/conference

February 6-7 Subsea UK

Aberdeen, UK

www.subseauk.com/3196/subsea-2013

February 15-17, 2013 EUDI Show 2013

Fiera Milano, Pad 6, Milan, Italy

eudishow.eu



February 26, 2013 - March 1, 2013 PEAF 2013 Educational Conference

The purpose of the Property & Evidence Association of Florida, Inc. is to promote education and professionalism

of the Property and Evidence function within the State of Florida.

Orlando, FL <http://peaf.us/id1.html>

March 1-3, 2013 DIVE TRAVEL SHOW 2013

La Pipa Pavilion MADRID, SPAIN

DiveTravelShow.com



March 5-7 Subsea Tieback 2013

San Antonio, TX www.subseatiebackforum.com

March 11, 2013 - March 14, 2013 Kansas Division of the IAI Spring Educational Conference

The Kansas division of the IAI aims to associate persons who are actively engaged in the profession of forensic identification, investigation and scientific examination of physical evidence, in an organized body within the state of Kansas, so that the professions, in all of its branches, may be standardized and practiced effectively and scientifically.

Topeka, KS www.kansasiai.org

March 12, 2013 - March 15, 2013 WAI Annual Conference

The mission of the Wisconsin Association for Identification is to provide educational seminars to members of the law enforcement community, to disseminate useful information related to all the disciplines of the forensic sciences, to provide local administration in the state of Wisconsin for the international professional certification programs of the International Association for Identification, and to encourage the highest ethical standards in the collection, preservation, and examination

of evidence.

Rothschild, WI www.thewai.org

March 13, 2013 - March 15, 2013
CTIN Digital Forensics Conference

CTIN is a not for profit association dedicated to support digital forensics investigators through training, meetings, and facilitated communication. CTIN was created in 1986 and has trained thousands of members through the years. Our membership is comprised of both public and private sector employees.

Seattle, WA www.ctinconference.org

March 13th-15th 2013 - 2013 NDPA Symposium

[Click HERE to download the AGENDA !](#)

[Click HERE to Download the Symposium BROCHURE](#)

This year the Symposium is jam packed with a wide variety of breakout sessions, demos on the beach and in the pool, fun activities and lots of networking opportunities!

March 16, 17 2013

OZTeK Dive Conference & Expo 2013

Australian Technology Park, Eveleigh,
Australia

diveoztek.com.au



18 March to 20 March 2013

Scuba Fest 2013 <http://www.scubafest.org/2013/>

Hosted by the ohio council of skin and scuba divers (ocssdi), this event promises to provide a weekend of fun, social gathering, underwater photography competition, exhibits, presentations and saturday night banquet with keynote speaker.

Plus psi visual inspection workshops, travel seminars, door prizes, silent auction, and more!

March 18-20

SPE Americas E&P Health, Safety, Security, Environment

Galveston, TX

www.spe.org/events/hsse/2013



March 19-21

Decommissioning and Abandonment Summit

Houston, TX

www.decomworld.com/decommissioning



March 19-21

NACE Corrosion

Orlando, FL

<http://events.nace.org/conferences/c2013/president.asp>

March 19-21

Decommissioning & Abandonment
Houston, TX;

www.decomworld.com/decommissioning



March 20-22

Offshore Mediterranean Conference

Ravenna, Italy

www.omc.it/2013/



March 23, 2013

Western NC Death Investigation Symposium

Winston-Salem, NC

kfritz@wakehealth.edu; agurley@wakehealth.edu

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Western NC Death Investigation Symposium

Winston-Salem, NC

kfritz@wakehealth.edu agurley@wakehealth.edu

March 23, 24 2013

LIDS – London International Dive Show

<http://www.diveshows.co.uk/>

LONDON, UK

TWICE A YEAR THE DIVING WORLD GEARS UP FOR TWO HIGHLIGHTS OF THE SPORT'S CALENDAR - THE LONDON INTERNATIONAL DIVE SHOW (LIDS) AT EXCEL, AND THE BIRMINGHAM DIVE SHOW (DIVE) AT THE NEC.



March 24, 2013 - March 28, 2013

10th Annual Advanced DNA Technical Workshop – Bode West

The Advanced DNA Technical Workshops are designed to provide DNA training on the latest techniques and technologies to the forensic scientific community as well as the opportunity for scientists to openly share experiences from their laboratories. Leaders from various law enforcement and federal agencies will provide lectures, demonstrations, and mini-workshops on new technologies, new concepts, and challenges in the DNA identification field. This DNA forensic workshop includes a 2-day Technical Session comprised of technical presentations and mini-workshops. In addition to the Technical Session, attendees are encouraged to register for the workshops and a ½ day Technical Leader Session.

San Diego, CA www.bodetech.com

March 25, 2013 - March 29, 2013

CAPE Annual Training

CAPE has always advocated education and safety in property and evidence handling. We hold a yearly training seminar to bring the best information and technology to our members. The annual training seminar provides an opportunity to network with other agencies within a unique learning experience.

Rancho Mirange, CA www.cape-inc.us

March 25-28

U.S. Hydro

New Orleans, LA

www.hypack.com/ushydro/2013/

March 27, 2013 - March 29, 2013

EuroForensics 2013: 4th International Forensic Sciences, Cyber Security and Surveillance Technologies Conference & Exhibition

EuroForensics is dedicated specifically to the needs of government bodies, law enforcement agencies, cyber crime investigators, anti-fraud professionals, risk and compliance officers, crime scene investigators, and forensic medicine experts. The latest developments in the fields of Digital Forensics, Cyber Security, Intelligence & Surveillance Technologies, Crime Scene Investigation, Forensic Medicine, Fraud Preventions, and White Collar Crime Investigation Techniques will be discussed by globally known specialists.

Istanbul, Turkey

euroforensics.com

April 26-28, 2013

[Be A Diver Adventure Sports Festival](#)

Fort Lauderdale, Florida

May 20-24, 2013 Underwater Investigation Workshop.

Winston-Salem, NC

kfritz@wakehealth.edu; agurley@wakehealth.edu

March 23, 2013

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May 20-24, 2013 Underwater Investigation Workshop.

http://www.chaminade.edu/grad/si/underwater_forensic_investigation.php

Chaminade University, Honolulu, Hawaii

Jun 8, 2013 - Jun 9, 2013

SCUBA SHOW 2013 - Long Beach **Events** Calendar :
[Long Beach ...](#)

November 6-9, 2013

DEMA Show 2013

Orlando, Florida

November 12-14

Subsea Survey IMMR

Galveston, TX

www.subseasurvey.com

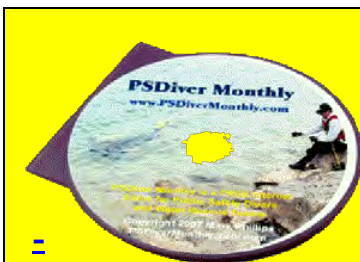


December

Oil & Gas Safety Conference/OSHA E&P

www.oshasafetyconference.org/Events/ugm/Osha2012/default.aspx

**If you have an event to share, email the information to PSDiverMonthly@aol.com
Subject Line - EVENTS**



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Diving Medicine Online

[Ernest Campbell, MD, FACS](#)

**Comprehensive information
about diving and undersea
medicine for the non-medical
diver, the non-diving physician and the
specialist** <http://www.scuba-doc.com>

Exercise, Diving and the Heart

Work and Exercise

Diving can affect the heart and blood vessels mainly by the amount of exercise involved. Exercise produces a need for increased oxygen to produce increased activity, and the heart and circulation are affected in some way by any form of exercise. In diving, the circulatory system is affected by several forces acting on the heart and blood vessels. Some of these are:

- Changes in pressure, secondary to breathing a high density gas mixture which increases the pressures in the heart (afterload).
- A high oxygen concentration (hyperoxia) can slow the heart rate, a commonly observed phenomenon.
- An increase in hydrostatic pressure can alter electrical conduction in the heart. (excitability and conduction speed)
- During decompression, bubbles (gaseous pulmonary embolism) may increase right heart pressures and cause a paradoxical embolism in

patients with a right-to-left shunt (patent foramen ovale).

- Immersion, (getting into the water to the neck), increases the blood flowing into the heart (preload).
- Hypothermia also plays a role causing vasoconstriction (afterload), slowing the heart rate. These factors may disturb cardiac function and expose patients with heart disease to accidents during underwater diving.

Exercise causes an immediate response

Exercise generally causes an immediate response in the cardiovascular system. This response includes local blood flow changes which then cause reflexes that then cause an increased cardiac output (how much blood the heart is pumping out). From the cardiovascular standpoint, exercise is any activity that raises the resting oxygen consumption above basal levels. Thus swimming, walking with heavy gear, climbing ladders and performing heavy labor relating to diving are all sensed by the heart and cardiovascular system as forms of exercise and require an increased output.

Functional reserve

The normal heart has a backup reserve and the heart at rest is working at a small percentage of its maximal capacity. Measurement of how hard the heart can perform may be necessary to find out if there are any limitations due to heart disease. A reduction in the ability of the heart to pump enough blood to meet maximal needs can go undetected unless it is tested and found to be diminished.

FREE TO DOWNLOAD

Edmond's Diving Medicine for Scuba Divers 2012 edition (4th English edition)

Exercise Stress Testing

Exercise stress testing is used to measure cardiovascular reserve when assessing the heart. Used mainly to detect coronary disease, its application in testing for cardiac reserve in divers is also important and useful. A diver should be able to exercise on the treadmill without chest pain, severe shortness of breath, or blood pressure changes.

Radionuclide Studies

The physical stress imposed by diving can be simulated by the use of radionuclide (isotopes) standard clinical tests and an assessment of capability to dive can be made from the results.

In dealing with patients with heart disease, it is important to understand the relationships among external physical work, myocardial oxygen consumption, and blood flow to the myocardium. Understanding these relationships will provide the basis for assessing the performance of an individual with heart disease, and determining their ability to dive.

Cardiac Work, Oxygen Consumption, and Blood Flow

Increased Heart Muscle Blood Flow

As the work demands of the heart increase the heart does not greatly increase its extraction of oxygen. Usually only a small increase in oxygen extraction occurs (e.g., an increase of 2 ml of oxygen per 100 ml of blood from a baseline of 10) whereas large increases in myocardial blood flow provide the increased oxygen needs when myocardial work load increases.

Why is hypertension so damaging to the heart muscle?

Increased cardiac work arises from increases in arterial pressure with little change in the amount of blood flow passing through the heart (pressure work), or by increases in blood flow with almost constant pressure (volume work) (Wiggers and Sarnoff). It is possible to experience diving environments which produce either primarily pressure work on the heart or- primarily volume work on the heart. For example, isometric work associated with heavy lifting raises the arterial blood pressure and causes an increase pressure load on the heart, whereas the work associated with swimming causes an increase flow demand on the heart and results in a volume load. The studies of Samoff et al demonstrated that a pressure work load is more demanding in terms of myocardial oxygen consumption than an equivalent volume load. It is important to remember this difference when considering the diver with hypertension.

Coronary Artery Disease

Other studies have shown that the heart muscle depends on increasing blood flow to supply oxygen demands: when flow restrictions occur due to narrowed arteries to the heart, the muscle cannot obtain adequate oxygen by increasing oxygen extraction, and oxygen deficits occur during exercise. Chronic pressure or volume overload-induced muscle enlargement of the heart, decreased blood flow in the heart arteries (coronaries), and congenital heart disease (valvular and septal defects) all may affect myocardial oxygen consumption, myocardial blood flow, and blood flow distribution to the myocardium. Better understanding of these blood flow principles will aid significantly in assessing the diver with heart disease.

Physical Fitness

Divers need to obtain a physical fitness that allows maximum oxygen consumption. This is the ability to do work, such as swimming a reasonable distance with diving gear without getting too short of breath, and be able to help a partner who has been injured or requires assistance to return to the boat. One way of adjusting to the fitness needs of diving is to carefully plan your dives, avoiding situations requiring excess physical exertion above and beyond your physical capacities. This works well for the elderly diver or the diver who has physical incapacities. The best way is to exercise regularly.

For diving fitness, a moderate exercise program that can be done 4-5 days a week is adequate for the casual diver. Swimming is the best exercise for diving, but jogging, walking, biking or rowing should do the same thing--- increase your pulse rate, breathing rate and oxygen intake. Conditioning improves the maximum oxygen intake. You should establish a target heart rate, which can be determined by the formula:

Target Heart Rate= (220 minus age) x .70

When you exercise you should aim for a pulse rate derived from this formula with a five minute warm-up, the 30 minutes of keeping your pulse rate at the target, followed by 5 minutes of cool down. If you are over 35 years of age you should get a medical examination before beginning the exercise program; this should include an Exercise Stress Test. Once started, you should take 2-3 months to build up to your target, then take 40 minutes 5 days a week to maintain yourself at your target level.

References:

1. Medical Seminars Lectures
2. Diving Medicine, Alfred A. Bove, MD, PhD
3. Diving and Subaquatic Medicine, Edmonds, Lowry and Pennefeather.



Continuing Education

PSDM-CE-101

- 1) A person can suffer permanent irreversible brain damage in as little as _____ minutes after heart stoppage or breathing stoppage.
 - a. 6
 - b. 10
 - c. 20
 - d. 30
 - e. 60
- 2) Breath hold diving should only be used in rescue mode if you have practiced and know your limits.
 - a. True
 - b. False
- 3) The term "Golden Hour" starts at:
 - a. The time rescue action starts
 - b. The time of the 911 call
 - c. The time of heartbeat or breathing stoppage
 - d. Arrival at the hospital
- 4) Water rescue/recovery procedures may fall under OSH more so now than has been in the past.
 - a. True
 - b. False
- 5) Water rescue action should and probably must be prefaced by department _____ & _____.
 - a. Budget & Leadership
 - b. Contracts & Budgets
 - c. SOG/SOP and Training
 - d. 1 trained and 1 untrained person
- 6) Primary sub-surface rescue should not be performed until there is a _____ in place.
 - a. Full team
 - b. Mutual aid team notified
 - c. News media on site
 - d. Backup
 - e. Any of the above
- 7) CCGS Corporal Teather CV is _____.
 - a. Lead diver for the Canada dive team
 - b. Commander-Vice of all CCGS
 - c. Chapter five of the CCGS dive manual
 - d. A boat
- 8) Response to a suicide incident includes preparing for a hostile person with intent to harm you.
 - a. True
 - b. False
- 9) Divers should have a yearly _____.
 - a. Review of SOG/SOP(s)
 - b. Test of diving skills
 - c. Physical exam
 - d. Any or all of the above

- 10) Children in water should always be visual and audible monitored by an adult.
- True
 - False
- 11) Always follow the orders of your superior as it relates to SOG/SOP.
- True
 - False
- 12) The first piece of diving gear to be removed is _____.
- Mask
 - Fins
 - BCD & Tank
 - Weight (s)
 - A or C

TEAM DISCUSSION

1. Discuss with your team the origin of the term "Golden Hour" and your teams' interpretation of the term as it relates to your response.
2. Discuss with your team the negative image your team may display to the public when being seen on a boat without your PFD on.
3. Discuss with your team how you view firefighter turnout gear and water related response (non-fire).
4. Discuss with your team the characteristics of your response to a suicide person threatening to jump or already in the water. Develop a REASONABLE course of action with contingencies that could be used as a baseline Operational Guide. Set up a joint training day with Fire and LE and practice.

IMPORTANT NUMBERS:

Chemical spill information can be obtained by calling 1-800-424-9300.

DAN Medical Information Line at 1-919-684-2948
DAN operates a 24-hour emergency hotline (1-919-684-9111) to help divers in need of medical emergency assistance for diving or non-diving incidents

Centers for Disease Control and Prevention
1600 Clifton Rd. Atlanta, GA 30333, USA
800-CDC-INFO (800-232-4636)
cdcinfo@cdc.gov

PSDiver Monthly is a free subscriber E-Zine distributed by Press Release notice and website download. We have a world wide distribution and a verified email subscriber list of over 13,000.

PSDiver Monthly is the magazine for PSDiver and is edited and published by [Mark Phillips](#)

Associate Editors:

[Lynn Wright](#)

[Dominique Evans-Bye](#)

Continuing Education Editor: [Chuck Elgin](#)

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These training agencies have recognized PSDiver Monthly as a valued addition to their programs and Continuing Education requirements.

Public Safety Diving

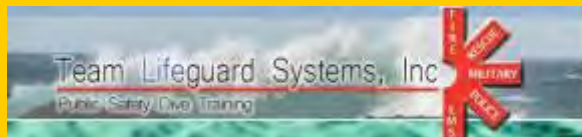
Association(PSDA) recognizes and approves the PSDiver CE program. Each month's Q&A program credits 1 CEU for renewal up to a maximum of 3 CEUs from this source for each year's renewal.



ERDI Recognizes and supports the PSDiver Monthly CE Program. Contact your ERDI Instructor for details.

Life Saving Resources

Lifesaving Resources advocates the need for Public Safety and Rescue personnel to be trained in Water and Ice Rescue and recognizes the PSDiver Monthly CE Program for continuing education training and credits.



Lifeguard Systems – TEAM LGS

Dive Rescue International

Dive Rescue International has remained exclusively committed to providing training and equipment for all public safety professionals involved in aquatic incidents.



We welcome all training agencies and organizations to participate. For details, email PSDiverMonthly@aol.com

PSDM 101 CE Answers

1	2	3	4	5	6	7	8	9	10	11	12
A	A	C	A	C	D	D	A	D	A	A	D

If you would like to be part of our Continuing Education Team and help us with this section contact Mark at PSDiverMonthly@aol.com – Subject Line: Continuing Ed.

The Train –

A man and a woman, who have never met before, find themselves assigned to the same sleeping room on a transcontinental train. Though initially embarrassed and uneasy over sharing a room, the two are tired and fall asleep quickly...he in the upper bunk and she in the lower.

At 1:00 AM, he leans over and gently wakes the woman saying, "Ma'am, I'm sorry to bother you, but would you be willing to reach into the closet to get me a second blanket? I'm awfully cold."

"I have a better idea," she replies. "Just for tonight, let's pretend that we're married."

"Wow! That's a great idea!!" he exclaims.

"Good," she replies. "Get your own blanket."

[illegible]

[illegible][illegible]