New Vehicle Technology Awareness for Public Safety Divers
By Paul Bindon & Matt Stroud - MGS Tech

Technical Bulletin: Laminated Safety Glass
By Dan Felack Sr

Volume 6 * Issue 83

* MISSION REPORT *
NEWS EVENTS
DIVING MEDICINE
CONTINUING ED.
AND MORE!
Air Buys Time

I have been asked by a number of subscribers to write about equipment configurations. I am always hesitant about writing about specific equipment or specific brands or models. It is not that I do not have personal favorites; it is BECAUSE I have personal favorites that I have been reluctant.

It is has always been my opinion that equipment for a dive team is based on particular need, budget and availability. A small member team with an annual 20k budget is going to be better outfitted than a 20 member team with a 2K annual budget.

This month I offer an editorial about pony bottles. What I present here is not intended to be an “end all” to the topic nor is it intended to be used as a definitive standard. I present this opinion with the caveat that the configuration I offer is the one that I use and teach. It is also a configuration that has been modified at least four times. Equipment configurations, regardless of what you are using, should be considered works in progress and constantly tested for weaknesses and improved.

I do not expect my configuration to be accepted by everyone nor do I expect it to work for everyone in every situation. It works for my team, in my waters. If you have opinions to share, alternative configurations or suggestions join our discussion group and let’s talk about it. Use what works for you and be open minded to suggestions and possible changes. There will never be a one size fits all solution. Your goal should be to search and experiment until you are able to find what works for you.

Pony bottle and Pony Mount

To my way of thinking, if we dive FFM and a Pony and do NOT use a gas switch block, we need the pony to have a thumbnail SPG and a second stage regulator attached. Divers should also have a separate mask available to use with the standard scuba second stage. Consider this configuration for a minute. The diver is on SCUBA with a full face mask. The diver would likely have a console package with a SPG and either a computer or an analog depth gauge with a maximum depth indicator. The diver would not necessarily be diving with an octopus regulator, We are ADDING a gas switch block, a pony bottle with a pressure gauge and a second stage regulator, a spare dive mask and a way to mount the second stage. By adding all of this, we are basically giving the diver another SCUBA set up with a much smaller air cylinder.

If ALL of the divers are configured this way, they each carry a redundant air supply. If it is a redundant air supply, it is for them to use in an emergency, not hand off. If a diver is in trouble, his redundant air supply should buy enough time for the backup diver to respond, help or determine if more
time is necessary. **Air Buys Time.** I am not a fan of having my backup diver give up his redundant air supply. I would rather him attempt to rescue the diver, signal that he needs additional help or have or bring a larger contingency bottle down for a trapped diver. But I am not a fan of handing off the diver’s redundant air supply. In our emergency, to use this configuration, the diver must remove his FFM and utilize a back up mask and standard second stage. Once the FFM is removed, the diver loses whatever protection it was providing and eliminates the ability to use the comm system.

If the configuration advances and uses a gas switch block, we have to consider what we have achieved. We now have a system in place that allows the diver to **KEEP his FFM on if his primary air supply is compromised.** With a pony in place and attached by a low pressure hose to a switch block, air will be rerouted through the same plumbing; it will just come from a different source. The pony would be attached to the gas switch block with either a quick connect or screw connection. With a quick connect, it is possible to “plug in” another air supply or even a surface supplied air hose but to do so, the diver could lose air. If used, this transition **MUST – MUST be practiced until it can be done in any circumstance, in any possible conditions. **Air Buys Time.

We are at risk when we dive. We do our best to minimize that risk and most of us are advocates of redundant air supplies. But we must consider why they are there and for what purpose. Without going into a long explanation the simple explanation is: **Air Buys Time.**

If air buys time, when we absolutely need it, we need it immediately. That is what the pony is for. I prefer a 13 cf cylinder because of the size, weight, and our shallow depths. Others prefer a 19 and still others a 30 or larger. Depending on your typical dive depths, locations etc you will have your own preference. I would not consider using anything smaller than a 13 but would not say it is what you need for your team. We use pony bottle bags - not mounts. We find the bags to be very inexpensive and versatile.

If air buys time and our redundant air supply is what allows us to react to an emergency, MORE air will buy more time. How more air reaches the diver is the question and possibly the argument - not equipment configuration. If a gas switch block is being utilized, both the main cylinder AND the pony are connected to the switch block and we are committed to using the FFM. If we follow and agree with all of the arguments that claim the FFM makes our divers safer, we WANT to keep it on. To do that AND have a redundant air supply, air has to flow through the switch block. MORE air CAN flow through the switch block BUT it has to be able to be connected. If you use quick connects on the pony hose and opposing connector on the block, MORE air can be brought to the diver and connected through the switch block and the diver NEVER has to
remove his mask or lose comms if they exist. So this final configuration consists of a diver outfitted with SCUBA, a FFM, Gas Switch Block, Pony cylinder with SPD and second stage and a regulator necklace holding that reg just below the diver’s chin.

Is this a safer method than handing off each others redundant air supplies? I think so. We could also add another spare mask carried either around the neck of the divers or secured in a BC pocket. We discussed an air source failure but not a catastrophic FFM failure. That extra mask would sure come in handy and provide the last piece of an entirely redundant system.

But you will have to decide if the additional pieces of equipment add more elements that may or may not cause issues for the divers. It is easy to go too far. Let common sense prevail. We purposefully place ourselves at risk when we dive. The more we can minimize that risk the better for us but we will never eliminate the risk. If we have a problem underwater we need a lot of things to happen but none of them can occur if we are out of time.

**Air buys time.** Figure out how to get it to a trapped diver and then practice the techniques until it is second nature. The training aspect is as important as the equipment and one will not work without the other.

There is another option ... How long can you hold your breath?

Mark Phillips
Editor / Publisher
PSDiver Monthly
www.PSDiver.com

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**SPECIAL to PSDiver Monthly**

**New Vehicle Technology**

**Awareness for Public Safety Divers**

*By Paul Bindon & Matt Stroud - MGS Tech*

We at MGS Tech have been asked the “what if” question many times by agencies; “What if a hybrid or electric vehicle is submerged? What potential extra hazards do we now have with high voltage, SRS (Supplemental Restraint System) and complex body electronic systems?”

Vehicle extrication already has its challenges without adding the element of submersion. As time has passed, vehicle technology has become more complex. The presence of hybrid...

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If you would like to discuss this topic or any other, join our discussion group at: [CLICK HERE TO JOIN](#)
and electric vehicles on our roads has become more commonplace. Hearsay and misinformation about high voltage vehicles has added another challenge to the hazardous operation of underwater rescue and vehicle recovery.

In this article, we will discuss new vehicle technology (hybrid and electric vehicles) in a submersion scenario, with the goal of a technical understanding that will prevent hesitation when responding to an incident. We dedicate this article to Public Safety Divers and Fire Rescue dive teams who risk their lives to do a job for the benefit of others.

**The scenario**
You are lounging in your back yard and a vehicle crashes through your fence and into the pool, causing you to spill your beverage of choice all over your speedo. You are close enough to assist the occupants immediately and are equipped by your department with rapid response dive equipment. You have to respond. What if you happen to know that the vehicle is a hybrid? Would you still just jump in? What concerns do you have regarding the technology contained in the vehicle? High voltage (HV) batteries contained in hybrid and electric vehicles (EV’s) are a concern, right? What happens to all that electricity when it is submerged? How long will the battery retain its charge underwater? What will happen to you if you enter the water and attempt to extricate the occupants immediately after it is submerged?

Public safety divers encounter more new technology vehicles in the course of duties than ever before. The type of vehicle is not always apparent until after it is recovered. The training we at MGS Tech have provided to first responders has focused on treating all vehicles the same. From this point forward assume that every vehicle you respond to is a hybrid or electric vehicle so there are no surprises.

High voltage (HV) hybrid systems in vehicles today store electricity in the high voltage battery. The HV battery is used to power the propulsion systems and is not connected to the rest of the vehicle when it is turned off. To turn the vehicle on, 12V computer control is required to energize the relays within the battery that connects it to the rest of the high voltage system. If the vehicle is off, no electricity is present on the high voltage “orange wires” outside of the battery itself.

**Voltage storage underwater**
All batteries are part of direct current (DC) circuits. This is true whether it’s a small watch battery or a high voltage hybrid car or bus battery containing 100 to 800 volts. DC circuits have current flow that complete a loop circuit from one battery terminal to the other terminal. It follows the path of least resistance to complete the circuit back to itself. That means if the battery becomes submerged the current will not flow from the “+” terminal, out into the

**Note that the tail lights still function**
High voltage DC circuits in hybrid vehicles are also self-contained, and insulated from the rest of the vehicle. They also have their own “+” and “−” wires that do not interface with the body of the vehicle as part of the circuit (ground). All production vehicles are also mandated to have computer monitored safety systems that will isolate the voltage to the battery if damage to the vehicle somehow causes a high voltage system short to the body. Using the body of the vehicle as part of the circuit is, however commonly done with 12V vehicle circuits to simplify the wiring.

For more information, please review the “Basic Electrical Theory” article on our website at http://www.mgstechnet.net/media/mgs-articles

When the battery is submerged
The amount of time voltage is present inside a high voltage battery when it is submerged depends greatly upon the water quality. Water will conduct electricity better when it has contaminates in it. Clear fresh water has a very high resistance and will not conduct electricity as well as salt water or water containing a high mineral content. The discharge rate of the battery is also dependant on the voltage. You may have encountered a submerged vehicle that still had the headlights on. The fact is a 12 volt vehicle battery will retain its charge underwater much longer than a high voltage hybrid battery underwater. This is because higher voltage

Example of a Lithium Ion battery from the Chevrolet Volt

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is better able to push through the resistance of the water and complete the circuit to the opposite terminal, thus discharging more quickly than a lower voltage battery.

So, what actually happens when a high voltage battery discharges underwater? Hybrid and electric vehicles use Nickel Metal Hydride or Lithium Ion high voltage batteries. When either of these batteries is submerged, the flow of electricity through water from terminal to terminal inside the battery will actually split the H2O water molecule as it discharges. This will produce Hydrogen and Oxygen in a gas form. This process is commonly known as electrolysis. The amount of gas accumulation depends on the original battery voltage, water quality, how well the vehicle is sealed, and the amount of time underwater. To prevent these gases from becoming a fire or explosion hazard if they accumulate, simply ventilate the vehicle appropriately when it is removed from the water by breaking the glass or opening the door.

To see firsthand what happens when a high voltage NiMH battery is submerged in salt water, and the amount of electricity actually found in the water during submersion, click on the link to watch our “HV Battery Submersion Test” video. [http://www.mgstech.net/media/videos](http://www.mgstech.net/media/videos)

**How electronics react to water**
It has been observed that vehicles underwater have functioning headlights and power windows. Visible clues that the 12 volt system is operational may lead us to believe that all systems in the vehicle are still working; however, vehicle computers are not designed to operate in a submerged environment. They will cease to function if they become wet. An example you may have had firsthand experience with is a cell phone falling in the toilet. You might have a small chance to save the phone if you can dry it out properly without turning it on. If you drop that same phone in salt water, it is history! Like the cell phone, when automotive computers get wet, they also cease to function.

Early designs of supplemental restraint system (SRS) computers were located in the center console area but real world use by the general public quickly highlighted the need to protect them from spills. Rather than developing submergible computers, auto manufacturers...
simply provided a shield for the top of the SRS computer to protect it from that “super-size” soda spill. Newer vehicles now locate the SRS computer in a more protected location. They are generally found toward the firewall in the center console area. Similarly, the 12V controlled HV battery computer ceases to function when submerged. The HV system will then cease to function, and voltage will be contained within the battery. There will be no voltage on the orange wires.

**Conclusions**
The hazards posed by modern hybrid and EV vehicles are not much different than conventional vehicles. While the safety of the diver must still be paramount, the technology contained in the vehicle should not prevent you from performing your duties. You can safely approach these vehicles without fear of electrocution. However, even though newer technology vehicles often contain fewer fluids as compared to conventional vehicles, fluid loss from damaged fuel systems and lubricating oil is still a concern. As with any submersion situation, hazards, including water quality, temperature, entanglement and Hazmat are still present and should be given proper consideration. Adequate protection for the diver must be used in every case possible.

Since it is not always apparent that a vehicle is a hybrid or EV when it is involved in an accident or submersion, it makes sense to treat every vehicle as if it is equipped with a high voltage system, multiple airbags in the SRS system and HID headlights.

For more information regarding HID headlights, please review “HID Lighting: A Bright Idea?” article on our website at [http://www.mgstech.net/media/mgs-articles](http://www.mgstech.net/media/mgs-articles)

**Biography**
Matt Stroud is a 23 year veteran of Toyota Motor Corporation as a Toyota Certified Master Diagnostic Technician and an ASE Certified Master Diagnostic Technician, with 10 years certified in Hybrid technology. Matt has completed multiple extrication courses, giving him a strong knowledge base of fire tactics & terminologies. Due to heavy demand from the fire service, Matt founded MGS TECH in 2007, with the goal to teach firefighters/EMS personnel how to safely manage Hybrid & new technology vehicle incidents.

Paul Bindon joined MGS Tech in 2008 as a research specialist and on-site trainer and has completed extrication training at the Corona-X seminar. Paul is also an ASE Certified Master Auto Technician with over 23 years experience in the automotive field. He has been employed with Lexus Dealerships for the last 16 years, receiving both Master Diagnostic Specialist and Hybrid certification through factory training in the latest automotive technologies.

Both Matt & Paul currently perform all their own research on new technology vehicles in order to publish MGS TECH’s Hybrid Response Guide (HRG), electronic Hybrid Response Guide, Hybrid Tow Guide (HTG) and teach the Hybrid Safety Course to Firefighters around the country, including the 2010 and 2011 F.D.I.C. in Indianapolis, Indiana.
As automotive technology advances, it presents new challenges to the rescuers who find these vehicles involved in incidents. Some examples of these changes are airbags, hybrids, and alternative fuel vehicles. The latest change in automotive technology to provide the dive community its next challenge is the increase use of laminated window glass in the side windows of vehicles.

Previously, side windows in automobiles were tempered glass when once impacted by a sharp object, such as a spring punch or police officer’s ASP, would shatter into thousands of pieces of small glass. In the event of an accident, or a submerged vehicle, a spring punch could easily remove the window allowing for access into the vehicle to allow for victim searches. It was equally as easy to take out the front or back windows allowing for full access to the vehicle.

Laminated glass is a type of safety glass that holds together when shattered. In the event of breaking, it is held in place by an interlayer, typically of polyvinyl butyral (PVB), between its two or more layers of glass.

The interlayer keeps the layers of glass bonded even when broken, and its high strength prevents the glass from breaking up into large sharp pieces. This produces a characteristic "spider web" cracking pattern when the impact is not enough to completely pierce the glass. The use of laminated glass has been driven by a...
few factors: security; ability to maintain occupants to remain in the vehicle cockpit in the event of a crash or rollover; and for it sound deadening properties. As of this printing, it has not been confirmed, but it is believed that nearly all manufacturers are (to some degree) utilizing laminated glass in their vehicles.

Typically, if a vehicle went into the water, rescuers would/could dive into the water to reach the vehicle and by applying some means of impact, remove the side windows. We have all either read the stories or participated in those types of incidents. Today, that will not happen.

Laminated glass is the same as is utilized in the windshields of vehicles. Vehicle Rescue Technicians typically utilize Sews-All (reciprocating) saws or GlasMaster manual saws to cut the glass away on highway crashes. In an underwater scenario, it is obviously impossible to utilize an electric powered saw.

While the GlasMaster is a manually operated hand saw, a purchase point is required to force the blade through the glass in order to begin the sawing action. Axes, halligan bars, or other impacting devices can be utilized to create the saw blade opening above the water. It is not known if sufficient force can be generated underwater in order to remove the window to allow access to the vehicle.

From the Saflex Glass Website:

With standard tempered side windows, it takes a thief less than two seconds to break the glass and enter your car. But laminated glass made with Saflex® interlayers can provide up to 2 minutes of intrusion resistance - up to 60 times the security of tempered glass! ....... However, it takes a thief 20 to 30 seconds of continuous pounding to break laminated glass made with Saflex protective interlayer.

Additionally, as indicated in the information from the Saflex website, a pounding action with an ax or similar instrument can break through the glass. Again, it is not clear if sufficient force can be generated in an underwater environment to break through a windshield style glass in
a manner sufficient to affect a timely entrance into a vehicle.

So, as first responders, police officers, rescue divers, we all need to be aware of the technology. Some response actions may be:

- Try the obvious first, determine if the door is unlocked and pressure balanced that the door can be opened.
- Try breaking the window as it still may be tempered glass.
- Attempt to utilize an ax type of object to hack through the glass to create entry (do you have access to one in your immediate response vehicle?)
- Consider adding an IMMEDIATE response of a tow truck or rescue truck with a winch on any call of vehicle in the water. Assuming of course that there is an appropriate ground / ramp access to the vehicle. Perform a hook and yank process.

The unfortunate by-product of this effort to increase safety and security may be first responder’s ability to quickly extricate victims from submerged vehicles.

**This bulletin is being offered at this individual’s realization of how the change in technology potentially impacts the response of Water Rescue/Dive Personnel and is done so for educational purposes. There are open questions which the author has not tested and simply cannot answer at this time. All PSDiver Monthly readers are encouraged to further submit their input into the subject as it is anticipated to impact teams at some point in their operations.**

To join a group discussion, click [HERE](#)

The author is the Volunteer Dive Coordinator for the Lower Kiski Ambulance Service Public Safety Dive Team. He has been involved in Emergency Services diving off and on for the past 30 years. In addition, Dan is a PA Vehicle Rescue Technician with 34 years of involvement with the New Kensington Volunteer Fire Department. Dan can be contacted @ dfelack@verizon.net
MISSION REPORT

Woodstock Dive Team
Ice Rescue Dive Training
3/15/2011 by Lt. Allan Kelly

The Woodstock Dive & Rescue Team, which consist of three Fire Departments, in Woodstock, CT, The Muddy Brook Fire Dept, (MBFD) of North & East Woodstock, The Woodstock Volunteer Fire Association (WVFA), of Woodstock Hill and South Woodstock, and the Bungay Fire Brigade (BFD), of West Woodstock, in conjunction with Diver’s Cove, of Essex, CT, hosted a four day training and certification program for ice rescue divers and support personnel (tenders), on Thursday (2/24) thru Sunday (2/27), at the YMCA Camp, on Black Pond, in Woodstock, CT. The world renowned Team Lifeguard Systems, Inc. (TLS), of Shoken, NY, provided (4) instructors for the training.

Lt. Allan Kelly and the team members, all took responsibility for assisting with the plans. Lt. Allan Kelly was able to secure the use of the YMCA Camp. He also organized the list of all the proper diving equipment that was required for such a special event. Each of the other members ensured that the Dive Rescue Truck was well organized and the equipment was all in place.

About fifty rescue personnel, from six states, (CT, MA, NY, NJ, DE, & MD) took part in the training class. The four day program was divided into one and a half (Thr – Fri) days at WVFA for classroom instruction and two and a half (Fri – Sun) days at the

"This was an intense experience. The methodology in the way the course was delivered reduced the anxiety of many divers whom never attempted an ice dive. Having the knowledge and experience from this course has made our dive team more proficient and better prepared for these types of emergencies"

John A. Planas - Firefighter/Paramedic
Dive Rescue - Guilford Fire Department

Guilford Fire Dept’s Diver John Planas listening to additional instructions.
YMCA Camp, in Woodstock for simulated ice rescue. Each diver was required to make three different dives to become certified. There were thirty divers and eighteen tenders.

After using an auger and 36in chain saw, to cut through 27in of ice, the divers and tenders were prepared to put their newfound instruction to the real test. Three triangular holes were cut for the simulation, to take place. For all but two divers, this was their first time going under the ice. EMT’s were on-hand for any needed medical attention, and to monitor the diver’s blood pressure, prior to going under the ice. The Ambulance from WVFA was on-site for any emergency. During the training at the YMCA Camp, there were two medical incidents that took place; one for hyperthermia and the other for high blood pressure.

All but one diver used dry suits for diving. The only female diver participating, from the Southbridge Fire Dept., had to use a wet suit. She was not qualified for use of a dry suit. She had to be closely monitored. After diving, she had to be wrapped in a hypothermic stabilization bag, to avoid cold exposure, after each dive.

Most divers commented on how cold and freezing it was. Part of the simulation, had the divers lying on a rescue sled to disperse their weight, as standing or walking on the ice, might break through, if it were a real “thin ice” situation. The diver’s were referred as “dopes on a rope”. They were at the mercy of the tenders, who were being trained to guide the divers under the ice, to the search points.
It was an intense training program, under weather conditions, that were, at times less than ideal. Be it rain or snow, the divers and their tenders pressed forward. Some comments from the divers after their first under ice experience varied from; “it’s really dark under there”, “this is really cool”, and “damn, what a rush you can get”. Each diver was pulled out of the hole, on a rescue sled, to make for a fast and easy exit, and then pulled to the shore line. They were then escorted, inside the building, to get warm, to hydrate themselves, and to have something to eat. Food for snacks, breakfast, and lunch, was provided by the WVFA and the MBFD Women’s Support Teams. After diving, and then a warm up time, each diver was required to go back out on the ice as a tender, and assist with the overall operation going on.

By the end of the training program, all divers became certified in Ice Rescue Diving. The tenders, became certified in, Ice Rescue Support. Overall this event was very well received, and very well organized. The feedback to date has all been very positive.

Allan Kelly
Lt. - Woodstock Dive Team
Volunteer rescue divers provided the district with a helping hand — and fin — on Friday to get heavy duct work out of the Valley High School swimming pool.

Members of the public safety dive team with the Lower Kiski Ambulance Service have trained at the New Kensington pool and agreed to use their skills to help retrieve a 10-foot segment of steel tubing that fell into the pool’s deep end.

About half the ducts that ventilate the swimming pool area fell from the ceiling between 5 p.m. Jan. 29 when the last people who used the pool left that Saturday, and midnight Jan. 30 when maintenance workers arrived, said Mike Orr, the facilities director.

The pool has been closed since.

Orr said a contractor was called in to examine the remaining ducts to determine whether they were secure. On Tuesday, while scaffolding was being set up, the rest of the ductwork fell.

At that time, a section of ductwork — made of double-walled stainless steel, 26 inches in diameter and weighing between 400 and 450 pounds — came down onto a table and rolled across the deck into the pool, settling 12 feet under water in the deep end.

The fall from the 20-foot ceiling broke floor tiles, bleachers and some swimming and physical education equipment.
"It did look like mayhem in here — all twisted metal," maintenance worker Kevin Kranik said.

To remove the heavy duct from the water, divers inflated an air bag attached to the duct to make it rise. They then floated it to the shallow end, where it was taken out of the water.

"The biggest problem is it was in the deep end," said Scott Wolfe, a diver and president of the Logans Ferry Fire Department in Plum. "You can't work in there without breathing apparatus."

There is damage to the PVC lining of the aluminum pool, Orr said, but it can be patched. There has been no evidence of water loss, he said.

District architect Jay Johnston is preparing a new design for the ventilation system that will rely on lightweight nylon rather than metal. The nylon will weigh a little over two pounds per foot, compared with 45 pounds for a steel duct.

Orr said it appears that chlorine in the air caused a connector made of nickel to deteriorate. When the connector broke, a steel strap snapped and the ductwork began to fall. As the ducts twisted, they snapped the remaining support straps.

District officials believe the ventilation system was installed during the high school renovation project in the late 1990s. When board members questioned whether there was a design flaw and if a contractor should be held liable, Orr and district Solicitor Tony Vigilante said that is an issue for the district's insurance company.

Orr said insurance is covering the cost of the duct removal, design work, installation of new ducts and
repairs or replacement of damaged equipment. There should be no cost to the district.

It was not immediately known how much the project will cost or when it will be completed.

The scaffolding in the pool is scheduled to be removed Monday.

Orr said that he'll have the air system to the pool turned on then. If there is adequate ventilation, the pool can be reopened.

If not, the pool will have to remain closed until the new nylon ducts are installed.

Orr said the district will begin advertising for bids for the project next week. A contract would be awarded in about a month, with work beginning in about six weeks, he said.

Four arrested over human leg find
7 March 2011

Four people have been arrested after a human leg was found in a Lincolnshire canal. The leg is believed to be from a male in his late teens or early 20’s.

The leg was spotted by a member of the public at Tetney Lock on Thursday and was recovered by police divers.

Humberside Police urged anyone with information to contact them and warned that people may find "further body parts" in the future.

DCI Mark Oliver said: "It will not be solved without the help of the public who may have seen the disposal of some body parts and may still, unfortunately, find further body parts in the future."

He added that addresses in Grimsby and Scunthorpe were being searched and witnesses were being interviewed.

Police are hoping information from the public would help identify the victim.
River death: Father spoke of prison
http://www.fifetoday.co.uk/news/river_death_father_spoke_of_prison_1_1488306
10 March 2011 12:22

The half-sister of a five-year-old girl who died after being trapped underwater in a freezing river in Worcestershire has told a court their father spoke about going to prison the night before the tragedy.

Birmingham Crown Court has heard that Gabrielle Grady spent two hours submerged in the River Avon in Evesham, Worcestershire, stuck in her father's car after he drove into the water on February 11 last year. She died three days later.

Christopher Grady, 42, is on trial accused of Gabrielle's murder and the attempted murder of his then six-year-old son Ryan Grady, who was on the back seat of the car when it began to sink but was rescued from the water by police divers. He denies both charges.

His daughter Kristie Grady, from a previous marriage, told jurors she feared he was planning to harm Ryan and Gabrielle's mother Kim Smith, 37, when she spoke to him on the evening of February 10.

She said: "He asked me if I would look after the children if he ever went into prison. I thought he was trying to say that he was going to hurt Kim." The 21-year-old told the court the first she knew about the river tragedy was when she received a text message from Kim Smith at 9.29am on February 11 which read: "Your dad is killing the kids in the river, police are after him now."

Earlier in the trial jurors heard that Grady and his ex-partner Miss Smith had a "volatile" relationship and often argued about his access to the children.

The court heard that Grady's life "started to unravel" at the beginning of 2010. He had been evicted from his home because of rent arrears and owed £2,800 to Robert Lewis, landlord of his business premises, the prosecution said.
Mr Lewis said he thought Grady, a self-employed welder and blacksmith, was "as low as a man can get", and might kill himself in the weeks before the incident.

Grady, of no fixed address, was remanded in custody and the trial was adjourned until Friday morning.

**Divers search Thames for murder gun: Tip-off sparks hunt for revolver used to kill man outside prison**


10 Mar 2011 **Justin Davenport, Crime Editor**

Police divers searched the bed of the Thames in a hunt for a gun used in a suspected gangland killing. They launched a search near Wandsworth Bridge for a revolver used in the shooting dead of Darcy Austin-Bruce after a tip-off.

The 20-year-old was shot outside Wandsworth prison after he had been visiting an inmate in May 2009.

Police said a man wearing a crash helmet approached him in the prison yard and fired a volley of shots with a handgun. The gunman ran back to a waiting scooter driven by a second man and the pair sped off.

Mr Austin-Bruce, from Fulham, suffered several gunshot wounds to the chest and died at the scene.

Detectives from the Operation Trident squad which investigates gun crime in the black community said they had received intelligence in recent days about the weapon, believed to be a revolver.

Sources said it was hoped that the gun might have fallen nearer to the river bank rather than in the centre where it was likely to have been swept away by the current. Police frogmen carried out the search at slack water which allowed them only one and a half hours before the tide turned and they had to abandon the hunt.
Detective Chief Inspector Gordon Allison, who is leading the investigation, said: "We have had information very recently that the gun was thrown from the bridge. This is very much an ongoing inquiry. We are trying to obtain as much evidence as possible in relation to this crime."

A total of nine people have been arrested in connection with the inquiry and three men have been charged with murder.

**PTC sacks dive team**

http://www.thecitizennews.com/articles/03-11-2011/ptc-sacks-dive-team

March 11, 2011 by John Munford

Due to a lack of funding, the Peachtree City Fire Department will be disbanding its dive team.

The department will still have the capability to provide safety for events such as the Peachtree City Triathlon and the annual dragon boat races, but they will not be able to recover anyone who goes below the surface of the water, officials said.

The city also will lose the capability of searching underwater for evidence and other items. So in such situations the city will have to summon a dive team from a neighboring jurisdiction, which will cost time but most likely not money.

The city was facing a $18,262 shortfall this year to meet new requirements and to overcome budget cuts that delayed necessary equipment upgrades, fire officials said. Also looming next year is an estimated cost of $41,000 for a required communications device that allows for communications between underwater and land-based personnel.

While there were some concerns about eliminating the dive team as the city is about to gain another drinking water reservoir in Lake McIntosh, the cost was seen as too high by a majority of council.

A vote that denied a staff request to take the funds out of the city’s reserves was approved on a 3-2 vote. In favor of cutting the funds were council members Eric Imker, Kim Learnard and Vanessa Fleisch.

Voting against were Mayor Don Haddix and councilman Doug Sturbaum.
Fire Chief Ed Eiswerth said if the city decided to bring back the dive team after a period of time, it would cost upwards of $100,000 to accomplish.

**Keep bubble, but cut rescue team?**

http://www.thecitizen.com/articles/03-29-2011/keep-bubble-cut-rescue-team

Letters to the Editor - Peachtree City
March 29, 2011 Submitted by Letters to the Editor.

I don’t make it a habit to get involved in city politics, but after learning that the city plans to disband the Peachtree City Fire Department’s Dive Rescue Team due to funding cuts, I decided to email our mayor and City Council asking why they would cut funding for a valuable emergency service, yet they find funding to replace bubbles over swimming pools that are a constant drain on the city’s resources and to remediate cracks in tennis courts.

Mayor Haddix and Mr. Sturbaum replied to my email the same day. They had both voted to provide the funding for the dive team. The only other response I received to date was from Ms. Learnard.

Her reply explained that the dive team never saved anyone and their primary focus was to pull dead bodies and evidence out of the water. She further explained that we could have Henry County’s dive team do that for us, which would only take about two extra hours.

She also pinned the blame for our budget issues on the past administration’s habit of expanding facilities without factoring in the operating costs for future budgets. I never received a reply from Ms. Fleisch or Mr. Imker.

My reply to Ms. Learnard: So, what you’re saying is that in the unlikely event that a car plummets off the bridge into Lake Peachtree or Lake Kedron, and submerges, that our city will choose to wait a couple of hours for Henry County to come fish out the corpse instead of having our own, qualified rescue workers save the victim.

I get it. It’s all about budget. We need nice tennis courts and bubbles over our swimming pool.

As a taxpayer, I strongly disagree with your decision. That car could be mine or that of my husband or child. If our leaders have spent money unwisely in the past, unwisely cutting funding from city services is not the way to correct it. Protecting your citizens should always take priority.”

Time and again we have seen budgets for city services cut: raises suspended, pay cuts, and benefits reduced for safety personnel, outsourcing landscape maintenance (we all know how that one has turned out), etc.
Yet we continually read about funding for recreational upgrades. If you agree that our emergency services are more valuable to the well-being of our community than recreation upgrades, please contact the City Council. Apparently three of the five stand with Ms. Learnard.

Kim Hamm - Peachtree City, Ga.

Dad accused of murder after driving kids into river claims he didn't know it was there

http://www.mirror.co.uk/news/top-stories/2011/03/12/dad-accused-of-murder-after-driving-kids-into-river-claims-he-didn-t-know-it-was-there-115875-22984499/

By Richard Smith 12/03/2011

Christopher Grady, 42, sobbed as he told a jury he turned to five-year-old daughter Gabby and said: "What the f*** have I done?" He said son Ryan, six, replied: "Something really bad, Dad."

Gabby died after being trapped in the submerged car for two hours. Ryan was saved by police divers.

Grady was on anti-depressants when he drove them into the freezing water 13 months ago. He said the children's mum, his ex-partner Kim Smith, 37, had been trying to stop him seeing them.

But giving evidence yesterday, he said: "When my car went into the river, I didn't even know the river was there. I was driving down a field, I was just driving down a field. I would never ever hurt any of my children deliberately."

"It is possibly the hardest thing any father can ever have to deal with, losing their child. But to lose their child and be blamed for it is just like 100 times worse than just losing the child so I don't really know what kind of words can make me say how I feel about it to tell the truth."
Grady sobbed uncontrollably as he told of searching for Gabby inside the car as it sank into the River Avon in Evesham, Worcs. Asked if he wanted to continue, he replied: "I have been waiting to say this for a year." He went on: "I thought I was looking everywhere - I did look everywhere.

"I am under water with my eyes open and I could see the steering wheel, I knew where I was in the footwell, I grabbed the pedals. I looked everywhere. I went down to try and find Gabby about five times and every time I was going down there I could feel these different things."

"The water was inside filling up really quickly. There was no panic to get Ryan out because as far as I knew I could see the water had stopped and it gave me more time to find Gabrielle."

"There was big blobs of brown. I could not even see my hands in front of my face. I tried to save Gabby but I couldn't find her. I told Ryan I had to go and find Gabby. I thought I was looking everywhere, I did look everywhere."

Grady said he grabbed Ryan, who was in the back seat, as his head was seconds from going under the water-filled car, telling him: "Hold my arm and what ever you do do not let go of my arm." He added: "By the time I left the vehicle, I was 100% Gabby was not in there."

Under cross-examination, Graham Reeds QC disputed Grady’s claim it was an accident.

Grady, who has three other children from a previous relationship, replied: "My daughter died because the car went into the river and I was driving the car which makes it my fault - but I didn't intend to drive the car into the river in the first place."

He said he wanted the children to live with him for their safety, claiming Miss Smith was taking crack cocaine and heroin. But Mr Reeds responded: "This was nonsense. You were trying to put the knife in because you detested her." The self-employed blacksmith and welder's life "started to unravel" at the start of last year, Birmingham crown court heard.
He was evicted from his home because of rent arrears and owed £2,800 to Robert Lewis, landlord of his business premises. Mr Lewis said he thought Grady was "as low as a man can get" and might kill himself in the weeks before the river plunge. Grady, of no fixed address, denies murder and attempted murder. The trial continues.

**Teenager charged with murder, sexual assault over body in suitcase**


March 12, 2011From: NewsCore VIDEO ON SITE

The 19-year-old accused was arrested Friday night at a motel on Parramatta Road in Ashfield, in Sydney's inner west, police said. He has been refused police bail and was due to appear court tomorrow.

Construction workers found the black suitcase with the woman's body stuffed inside it floating in a canal near a western Sydney park yesterday morning and contacted police.

Police divers crawled on all fours through the knee-deep water in the canal searching for clues where the suitcase was found, while Superintendent Peter Marcon appealed for anyone who had seen anything in the busy nearby park to come forward.

The woman was identified as a 24-year-old from Croydon in Sydney, but police are waiting for autopsy results to reveal exactly how she died. They said the woman was last seen alive Wednesday, March 9.

**Canal search yields grisly find of human remains**


Canal search yields grisly find of human remains

TEENAGER has been charged with murder and aggravated sexual assault today after the body of a woman was discovered stuffed in a suitcase in a shallow canal.
March 12, 2011

By Clementine Cuneo From: The Daily Telegraph

HUMAN remains stuffed inside a muddied suitcase are believed to be those of a woman reported missing about a week ago.

Construction workers made the grisly discovery yesterday morning when they pulled a soggy black suitcase from a canal in a Sydney park and opened it up, The Daily Telegraph reported.

Although a post-mortem examination was still under way last night, senior police officers said they believed the remains were those of a woman reported missing from the Ashfield area about a week ago. It is understood the woman had been missing for a few weeks before police were contacted. "We are thinking that at this stage, although it is very, very early days," a police source said.

The remains were taken to Glebe morgue for an autopsy and to be identified.

A team of construction workers connecting an oil line in Meadowbank Park found the suitcase just after 8.30am. The bag was floating in the water near the work site, and employees pulled it out and opened it up.

One of the distressed workers who looked inside said they knew straight away the contents were human. "It was pretty full on ... there was no mistaking what we saw," the worker, who asked not to be named, said.

The bag was found in a shallow canal that runs through the park.

Superintendent Peter Marcon said it was unclear whether the bag had been dumped in the canal recently or if it had been washed down from the Parramatta River. "Of course we are treating this as suspicious" Supt Marcon said. "It is a very sensitive investigation."

He said the contents of the bag were more like body parts than bones, suggesting they had not been in the bag for an extended period. "We're just going to look at every possible thing that we can and see where it takes us," Supt Marcon said.

Police divers waded through the water yesterday, looking for clues, while forensic officers scoured the park and nearby swamp land.

A resident whose yard backs on to the canal said his dogs had been unusually anxious after they were disturbed by something over the fence in the early hours of Thursday. "The dogs were barking and carrying on more than usual..."
about 3am," the resident, named Lionel, said.

Clean Up Australia Day volunteers tidied the area only last weekend and the bag had not been found then.

Wanted: Rescue diver for 300 lakes


Mar 20, 2011 Times of India

BANGALORE, India: As lives are lost, so is time. All it takes to cut short an agonizing wait is a diver. When two boys drowned in Nelligudda lake at Bidadi recently, their parents watched in horror as rescue personnel used hooks to fish out the bodies.

The reason: the city doesn't have a single trained diver for such rescue operations.

Tired of waiting, the parents paid some residents to search the murky waters for the bodies. "From morning to evening, all they did was move around with a hook in the water so that the bodies would get caught. How practical is that?" asked Bhaskar, father of Jagdeesh, one of the victims. The lake is 30 to 50 feet deep.

the fire department passed the buck, saying the Lake Development Authority (LDA) is responsible. Director of fire and emergency B G Chengappa said their firemen are already overworked. "Training divers would be an additional burden on us. Why is the fire and emergency department held responsible for cases of drowning? The LDA is responsible for maintaining lakes. Why have they not deployed divers at water bodies? It is a practical option as lives could be saved that way," he said.

In three months, the department received 647 cases of fire accidents. "Every firefighter available is being deployed and re-deployed. There is hardly anyone to spare. Fishing out bodies is only a secondary job, our primary task is to fight fire," he said.

However, Chengappa believes that the hooks are useful. "Most of the lakes are not clean. It is difficult for divers to move around. In such cases, hooks can do a better job," he said.

The question, however, still remains: How many lives will it cost for a rescue diver to come into the picture?

Council scraps dive team to cut costs

http://www.markdalestandard.com/PrintArticle.aspx?e=3043296

March 26, 2011 DENIS LANGLOIS Sun Times staff
Owen Sound's fire department will now respond to fewer types of medical calls and scrap its dive team as a way to cut costs.

Firefighters will no longer automatically respond, along with paramedics, to "less serious" calls such as those related to childbirth, miscarriage, hypothermia, near drowning, drug overdose, allergic reactions, chest pain or seizures under a revised tiered response model approved Thursday by city council.

Mayor Deb Haswell said the changes will make Owen Sound's fire department more affordable and won't affect public safety.

"I don't believe that anyone in this city is going to be put into any kind of jeopardy by changing this system," she said Thursday during the second day of final budget talks at city hall.

City councillors who support the revised tiered response model say there is no need for both an ambulance and a fire truck to respond to all medical calls.

Under the new system, firefighters will still respond, along with paramedics, if a person is not breathing, is in cardiac arrest or is unconscious. They would still attend motor vehicle, farm and industrial accidents or at the request of paramedics. Firefighters would also respond to less-urgent medical calls between midnight and 6 a.m., when only one ambulance is available in the city, and to multi-casualty incidents.

Coun. David Adair, chairman of the committee that recommended the changes, said the revised tiered response model will save the city $10,000 to $15,000 annually in fuel, maintenance and repair costs.

Council also voted to withdraw about $130,000 from a reserve fund to purchase a mini-pumper, which it says will further reduce wear and tear on full-size fire trucks and postpone the need for a replacement. Council will also put less money into its vehicle replacement fund each year since it is extending the life of its full-size pumper.

City council has been debating reducing the fire department's tiered response model for about nine months. It was a main hangover.
election issue, due to the department's $3.5-million cost to taxpayers.

The Owen Sound Professional Fire Fighters Association protested the changes when they were put forward previously, saying the reduction is an attempt to save a few bucks at the expense of public safety.

President Dave Cruickshank sat through the discussion on the fire department's budget, but did not comment afterwards to the media. He said he would issue a statement later.

Adair said Grey County emergency services supports council's move.

The city's fire department responded to nearly 1,000 medical calls — about 67% of its total calls — in 2009. That number would have been cut by more than half under the revised tiered response model, according to numbers supplied by city hall.

Scraping the dive team will save taxpayers $15,000 a year, plus eliminate the need to spend $20,000 this year to purchase new dry suits and face masks, according to city hall numbers.

Only Coun. Peter Lemon opposed the move.

Seven firefighters are currently trained for water rescue, body recovery and evidence and vehicle recovery.

Adair said Owen Sound's dive team is almost exclusively used as a "recovery" unit, rather than a rescue unit.

Over the past five years, the team has participated in five dives for body recovery, three dives for evidence recovery, one call to assist a boater and one call to assist another municipality. The team was also on standby for two events, participated in one demonstration and installed a fountain for the Festival of Northern Lights.

Adair said few municipal fire departments have their own dive team. The OPP and Coast Guard both operate rescue-recovery units, he said.

"I want a safe community and an efficient community and the dive team's part of that vision," he said.

Adair said if council is to eliminate the dive team, now's the time to do it when the city has been asked to set aside $20,000 to buy new equipment.

"The cost for the dive team keeps going up and up and up every time the province changes the safety rules," he said.
FOUND ON THE WEB

The Runaround
Mar 28, 2011 By Eve Kidd Crawford

So two journalists and a lawyer walk into a police station ... and yes, actually this is a joke, a horrible joke, because among the three of us – articulate, well-educated people – we could get absolutely nothing accomplished.

Here’s the story: My best friend, James “Jim” Dugan, is missing ... sort of. He’s missing in the sense that we don’t have his body but not in the sense that we don’t know where he is. We know where he is. He is in the Mississippi River. And we can’t seem to get anyone to care.

The official release that the police sent out had his name wrong, his height wrong, his tattoos wrong. But the worst error in the whole release was this (taken from the Times-Picayune): “A friend last saw James Dugan, 42, sitting on a dock near Chartres and Alvar streets about 4 a.m. Tuesday, according to officer Hilal Williams, a New Orleans Police Department spokeswoman.”

The Times-Picayune had to report what was in the release; I get that entirely.

But the official release from the police neglected to mention the very important fact that the dock he was seen sitting on? Collapsed into the Mississippi River with him and his friend on it! The girl he was with made it to shore. She thought he did, too. But he hasn’t been seen since.

Divers from a volunteer search group finally went out today, nearly a week after Jim went missing.

I’m sorry. This is scattered. Let me begin at the beginning.

I got a text message from Jim at 2:41 a.m. on Tuesday morning. I wrote him back the next morning when I woke up, and when I hadn’t heard back from him by the time I got off work, I called a few other friends to see if they’d heard anything from him. They all said his phone was going straight to voicemail. That wasn’t particularly unusual, but my hackles went up anyway, and my friend and coworker, Sarah Ravits, and I decided to drive to his home in Bywater to check on him after we got off work at 5:30. It was eerily silent, although maybe it only seems that way in retrospect. Next we drove to his work – he waited tables at Bistreaux and Le Meritage at Maison Dupuy. And we were told he never showed up for his shift, which was not like him at all. (Jim quit jobs but always in a spectacular and dramatic fashion, not just by
flaking out.) We got truly worried at that point and checked some of his favorite hangouts: nothing. We called central lockup and hospitals. Finally, we went by our friend Jeremy’s house because Jeremy had seen Jim the night before at around 9. Jeremy said when he last saw him, Jim was on his way to meet a girl named Kelly. Sarah went to Jim’s Facebook page, searched his friends list and sent a message to the only Kelly on the list asking her to get in touch if she was indeed the Kelly who had been out with Jim the night before.

Early the next morning, after I still hadn’t heard from Jim, I contacted the NOPD and asked that someone do a welfare check to see if he was in his house. I also alerted them to the fact that his dog was inside the house and needed to be let out and fed. I was told someone would call me back; no one ever did.

In the meantime, Sarah and I went back to his house on our lunch break around 12:30 with my boyfriend, Robert. On our way there, we heard from Kelly. She was the right Kelly, and she said she and Jim had been drunk on a pier over the Mississippi when it collapsed, sending them both into the water. At that point, we called 911.

And since then, it has been completely frustrating at every turn. Kelly told the first officer that she thought Jim made it out of the water but was too drunk to be sure. We later heard from a friend, Travis Shuler, that Kelly made a formal written statement that said he had made it out, although on a Facebook group that Shuler started called “Help Find Jim Dugan,” (which now has more than 1,600 members) she told only her original story, that she really wasn’t sure whether he got out or not. I called the police to tell the sergeant in charge of the investigation that I had heard Kelly say – to me and Sarah and the responding officer – that she wasn’t sure whether he got out; I did this only because it seemed that police were treating it as a missing persons investigation when in fact no one could confirm that he had gotten out of the water. I called on Friday night, and I was told that the sergeant was gone for the weekend. As of right now, Monday at 7 p.m., I have heard nothing back.

On Saturday, Jim’s friend Abby Van Deerlin, a lawyer, and Sarah and I, two journalists, went to the Bywater police station with printouts from the Facebook group in which Kelly had stated, again, that she could not be sure he made it out of the water. We just wanted the police to know that there was a very high probability that he did not make it out of the water and that they should be focusing their efforts there.

At that point, the woman behind the desk said that NOPD didn’t handle anything in the water. She told us that she couldn’t even swim and that it was far too dangerous for NOPD to do water searches. She said Coast Guard would help recover a body when it surfaced. She said Harbor Police could possibly help search for a body. She said we could call the coroner. She did not seem to sense our urgency.

We asked when we could expect anyone to look at our printouts, and she said nothing could happen until the only copy machine in the office was fixed because she’d need to make copies for every person involved in the case. When will it be fixed? we asked. She didn’t know...
Feeling defeated, we left. Abby made the copies herself and delivered them back to the police station. No one has contacted any of us about them.

Jim’s mom and brother, in town from his native New York, have been getting the runaround from everyone. Jim’s brother and friends searched the wooded area around where the dock collapsed and even waded into the water themselves to search. His brother said on Facebook on Saturday night: “As far as I can tell no one has searched the wooded area where Kelly got out of the river. I will tomorrow. If you want to join me meet me at Jim’s place at 8:30. I will be at the bottom of Pauline St. at 9:00 AM. I have seen the area and it is thick and full of thorn bushes. I understand that going in to the area is trespassing. I know NOPD did not go into the area to look for my brother. I doubt they will come in to find me... and if they do at least they are finally in the area he was last seen (in or out of the water).”

A volunteer dive team from Texas, EquuSearch, was finally called in by the police yesterday. They have known since Wednesday that he had fallen into the river and not been seen since.

Another friend, Molly, called both NOPD and Harbor Police and had this to say on the Facebook group: “I called NOPD just to ask why Harbor Police or Coast Guard haven’t resumed a boat search to supplement the dive team search, and mostly just to let them know that the public cares about this. So I was surprised when neither the NOPD public information officer nor the Harbor Police shift lieutenant could give me accurate information about the search. NOPD sent me to Harbor Police, saying they would be the ones to decide to resume a boat search. But when I called Harbor Police, they said NOPD’s the lead and they’re waiting on instructions from them. So I called NOPD back, got in touch with Officer Williams, the public information officer on duty at the dive search site. She repeated what the other PIO had said, that Harbor Police is responsible for deciding whether to resume a search. I told her what HP had told me, that NOPD is the lead, and that it looks pretty bad that neither of them knows what the other is doing or supposed to be doing. So all I said was, if NOPD has not yet coordinated a resumed downriver search with Harbor Police, Coast

http://t-rescue.com

PSDiver Monthly Issue 83 31
Guard and downriver parish emergency operations, then that should be done, because obviously you can't rely on this dive team searching one spot on the river. She said she would look into it."

Molly later reported back that the Coast Guard wasn’t involved because they only look for living people and the detective and the Coast Guard had determined that it was impossible for him to have survived in the river. We all knew that. We weren’t living in a fantasy world where he’d be found alive in the river clinging to a piece of driftwood. But we were never told – by anyone – why dive teams weren’t called in sooner, and it’s been nothing but a jurisdictional nightmare since this all began. I know resources are scarce everywhere, but, you know, they found Douglas Schantz. They found Brian Reed. Jim wasn’t a big shot, and his brother doesn’t play pro-football. But Jim was still better-connected in terms of friends and resources than many other people, and we all should be worth looking for. As Jim’s friend Margaret Davidson said on the Facebook group: “What about people who fall into the water who don’t have 1,600 friends with computers and connections? This whole thing is heartbreaking, and the idea of the countless others that it’s happened to without so much as a whisper just makes it that much more despicable.”

Sarah and I went today to search surveillance footage from Turn Services, a private business located near where Jim went into the river. We found nothing, but it was good to be able to cross that off the list. “Have the police contacted you?” Sarah asked. They said no, no one from the police had been in touch.

I watch a lot of horrible crime TV shows. I know that Law & Order is fiction, but even so, I never thought that the response from the police would be this lackluster. I have constantly defended the NOPD and their efforts. I’ve said what a hard job it is that they have to do, hard and dangerous and heroic. I know that they are spread thin in terms of manpower and resources. But the way this case has been handled leaves me shaken and scared and absolutely lacking in confidence at their ability to serve and protect me and my friends.

Folks, this man wasn’t a millionaire, but he wasn’t a nobody – and that shouldn’t matter anyway. Jim was one of the smartest, funniest, most charismatic people I have ever known, as well as one of the most loyal. He was the former executive director of the Louisiana Landmarks Society. He was passionate about New Orleans and its people. Most important, he had a 7-year-old daughter. He is worth looking for.

I love this city as much as anyone, and I try to laugh off so many of its flaws. Maddening City Hall bureaucracy,
potholes that don’t get filled, the fact that some of the school zone flashers and speed cameras haven’t been automatically reset to Daylight Savings Time: I just shrug and say, “Eh, it’s New Orleans” and drink a Bloody Mary at brunch with the sun on my shoulders and feel privileged to live here. But not right now. I’m sorry, but the way this is being handled is absolute bullshit.

One of Jim’s neighbors, Elizabeth Underwood, posted this on the Facebook group: “The whole Bywater neighborhood, where I live, is on 100 percent alert and 100 percent supportive and sending love and prayers to Jim’s family. We will do what our cops and government will not – that’s how it is after every disaster we survive. I’m in awe of everyone connected to Jim and this search – the honor and dignity being expressed here is a sign of what an incredible man Jim is. We’re seeing search and rescue teams finally being deployed and news crews from all channels down here – kudos to everyone involved in this effort for making this happen. Onward, friends. This is the saddest yet most beautiful example of ‘social networking’ we have ever seen.”

I agree. But I wish it didn’t have to be this way. I want Facebook to show me which of my high school rivals got fat and whether my ex-boyfriends have gotten married and how cute my friends’ babies are. I want the police to help find missing people and recover bodies.

If anyone wants more information, please go here.

**Video File: Divers Begin to Search for James "Jim" Dugan -- Jon Huffman Reports -- 03/28/11**

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**Body believed to be missing man located under collapsed pier**


March 29, 2011 Meg Farris / Eyewitness News

**VIDEO ON SITE**

NEW ORLEANS – The search for a New Orleans man who has been missing for a week is apparently over after a private search team from Texas said it believes it has located the body of James Dugan.

“I truly believe that he’s caught up in debris down there,” said EquuSearch founder Tim Miller. “It’s really hard to tell because there’s so much stuff that’s just intertwined.”

A dive team will go into the Mississippi River near the pier on Alvar and Chartres to try to retrieve the body, which is underneath the collapsed pier, among wood and concrete.
The discovery ends a week of searching for Dugan after he and a female friend went into the water after venturing out on the pier that collapsed.

The woman made her way out of the water, but it took several days for the water to be searched by authorities, angering friends and family.

“There’s the fact that there needed to be a Facebook group created before the NOPD actually took this case seriously,” said Kara Larson, Dugan’s friend.

Friends began searching all of Dugan’s bars and hangouts, finding only his dog at home, uncared for.

Tuesday they gathered on the riverfront as the search went on – consoling each other and sharing stories of James with his mother, who came down from New Orleans.

“It’s been an unbelievable experience,” said Eleanor Dugan. “The people of New Orleans have been marvelous.”

“We got comments that the Coast Guard had already done a helicopter search, which ended up not being true,” said Sarah Dunn, Dugan’s friend. “The Harbor Patrol told us that the NOPD had all control and that they couldn’t do anything and the NOPD told us the Harbor Patrol had control and they couldn’t do anything.”

“We were contacted on Wednesday afternoon and we certainly took appropriate action that we believe was necessary,” said NOPD Deputy Superintendent Marlon Defillo.

Friends said they alerted police a day and a half after he disappeared and that they found the female friend.

“The last time she had seen him and they had been drunk on a pier when it collapsed and she got to shore and she thought he had gotten to shore as well and she had apparently been trying to find him,” said Eve Crawford.

Dugan’s mother said she has talked to the young lady and said the woman is “extremely traumatized” by the whole ordeal.

EquuSearch Locates Body in Mississippi River, Believed to be Bywater Resident Jim Dugan

29 March 2011  WGNO ABC26 News

A mother holds on to memories and friends after learning the body of her 42-year-old son Jim Dugan may be trapped in debris under this dock at the Alvar Street Warf.

Eleanor Dugan remembers, "he was the proverbial knight in shining armor, if you had a problem, Jimmy was there."EquuSearch Director Tim Miller who began searching yesterday says he's almost certain sonar images have captured Dugan's body."I truly believe that we have got a good picture of Mr. Dugan down there, but also in my experience, this is an impossible dive."An impossible dive a separate team will attempt tomorrow.

The 42-year-old, who lives blocks away, went plummeted to his death one week today when he and a friend stood
on a closed off, rotting dock. His friend made it out. Now others are not happy with how the NOPD handled the case. Friend Kara Larson says, "It was primarily a land search to my understanding until the facebook group was created and there was a push to actually look where he was." Marlon Defilo with the NOPD says, "we don't have the divers or the expertise to go into the Mississippi River so the notifications were made and unfortunately we've had similar incidents like this and we followed protocol." As for Dugan's mother, she's pleased with how the search has gone.

**DAN Announces New Standards for Becoming a DAN Instructor Trainer**


Expanded Eligibility Supports Mission to Improve Dive Safety

Released on: 3/30/2011

(DiveNewswire) DURHAM, NC: DAN® Education has opened opportunities to become a DAN Instructor Trainer to a wider set of skilled and experienced teachers. Over the years, DAN has had to tell many good instructor trainers they couldn’t be DAN trainers because they lacked a scuba instructor trainer rating. Many of these people have had years of teaching instructor-level classes in other programs but simply weren’t interested in becoming scuba diving course directors, instructor qualifiers or instructor trainers.

“Experience in diving is certainly one part of being a DAN Instructor Trainer,” said Eric Douglas, director of DAN Education. “But enthusiasm, love of teaching and experience in other venues are often just as important. We wanted to find a way to welcome people with great teaching credentials into leadership roles within the DAN Education system.”

While previous qualifications to be a DAN Instructor Trainer included a requirement of certification as an active scuba instructor trainer or course director, the new requirements provide options that recognize the various paths divers may follow to acquire the skills necessary to become a DAN Instructor Trainer.

The prerequisites to attend the DAN Instructor Trainer Workshop (ITW) now include the following qualifications:

**Attendees must be:**

- an active scuba instructor trainer with a recognized training agency, **OR**
- an active PADI Instructor Development Course (IDC) Staff Instructor or SS DiveCon Instructor and with DAN Diving Emergency Specialist (DES) Instructor recognition, **OR**
- an instructor trainer with a recognized CPR/first aid organization and with DAN DES Instructor recognition

By requiring new DAN Instructor Trainers who aren’t diving instructor trainers to hold the DES Instructor rating, these new trainers will have a useful combination of instructor-trainer-level experience along with dive leader credentials and experience teaching DAN classes.
“DAN’s mission is to increase dive safety through a variety of means, including education,” said Nick Bird, CEO and chief medical officer of DAN. “We’re constantly looking for ways to offer more education to diving and medical professionals of every level, and expanding our leadership opportunities helps to do just that. The more people we have teaching in the field, the more information is disseminated to those wanting to learn.”

For more information on becoming a DAN Instructor Trainer, contact DAN Education at (919) 684-2948 or oxygen@diversalertnetwork.org

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**South Korea Developing Underwater Search-and-Rescue Robot Crawlers**


By Jeremy Hsu  04.19.2010

Underwater swimmers and crawlers could speed up rescue efforts for incidents such as the recent sinking of a South Korean Navy frigate

South Korea's flock of [robotic teachers](http://www.popsci.com/technology/article/2010-04/south-korea-boosts-funding-underwater-search-and-rescue-robots) look and sound goofy, but the nation is deadly serious about its latest project: developing aquatic robots by 2016 which can swim and crawl their way across the seafloor several miles down for search and rescue purposes, according to the [Korea Times](http://www.popsci.com/technology/article/2010-04/south-korea-boosts-funding-underwater-search-and-rescue-robots).

The government announced today that it would spend about $18 million (20 billion won) over the next five years to create its creepy-crawly robot. That represents a doubling of the project's budget following the sinking of the South Korean Navy frigate Cheonan late last month, which killed dozens of sailors.

Such six-legged devices would walk at speeds of 98 feet per second and swim at up to 59 feet per second. The design specs call for it to patrol the seabed at depths of about 3.7 miles.


The South Korean ministry believes that having such a drone might have sped up search and rescue efforts for the Cheonan sinking incident, which took place in the West Sea with strong tidal currents and poor visibility.

NEAR DROWNING
MARK HARRIES

Prolonged immersion in a fluid results in drowning if the victim asphyxiates, but in near drowning should he survive. The clinical picture is usually one of asphyxiation, often with pulmonary edema caused by water inhalation, in a profoundly cold subject. Complete recovery after 40 minutes submersion has been documented. (1) The resuscitation and subsequent management of near-drowned victims differs from all other emergencies in which cardiopulmonary arrest is a feature.

INCIDENCE
The incidence of near drowning is unknown but that of drowning ranges from 0.4 to 9.0 deaths per 100,000 per year, being highest in the warmer and less well-developed countries. Overall male deaths outnumber female by 4 to 1. In the age range 1-14 years, only road traffic accidents and cancers account for more deaths. Two-thirds die in fresh water, chiefly because the opportunity to drown in unguarded inland waters is greater than in the sea. (2) Between 25% and 50% of adults who drown show evidence of recent alcohol ingestion. (3)

PATHOPHYSIOLOGY
Death following submersion is by asphyxiation, but a person who survives receives a thermal challenge if the water is below body temperature, lung injury if water is inhaled and brain injury if the resulting hypoxemia is not treated promptly.

Effects of cold
Both the specific heat and thermal conductivity of water are significantly greater than those on air, and so body cooling is much faster in water than in air at the same temperature. Sudden immersion of an unacclimatized subject in ice-cold water results in reflex hyperventilation and tachycardia often with supraventricular ectopic beats and hypertension, a response known as cold shock. (4) Drowning may occur at this early stage unless a buoyancy aid is used, enabling the airway to be held above the surface of the water. A clothed adult immersed in water below 5°C can be expected to lose consciousness in less than an hour. Without a correctly inflated life jacket, water will then enter the unprotected airway. Cold water also severely limits swimming ability as a result of loss of synchrony between stroke and breathing. (5)

Post-immersion collapse
Head-out upright immersion in water at body temperature results in a 32-66% increase in cardiac output caused by
the pressure exerted by the surrounding water, an effect similar to wearing a gravity suit. On leaving the water the assistance to circulation is removed and, in addition, there is gravitational venous pooling. In normal individuals with intact homeostatic responses, these changes are compensated for by baroreceptor reflexes. The result is an increase in heart rate, cardiac output and vascular smooth muscle tone. Following prolonged immersion in cold water these responses are compromised. It is likely that post-immersion circulatory collapse is the cause of death among those found conscious in cold water wearing a life jacket, but who perish within minutes of rescue. A mean increase in heart rate of 16% during vertical lifting from water compared with lifting the victim in a horizontal or sifting position has been reported. (6)

**Asphyxiation**

Infants show the apneic phase of the diving response when thrown into water, but this reflex tends to wane by the toddler stage. (7) After infancy submersion beyond the breath-hold breaking point ends in involuntary gasps and aspiration.

Postmortem measurements of lung weight show that between 10% and 18% of those who drown inhale very little water, hence the term, dry drowning. (8) Failure of water to enter the lungs has been attributed to laryngospasm. However, the trachea and bronchial tree form a blind ending tube and filling may well not occur, if for example, the victim is submersed face down or head down. Doubtless there is a gradation from asphyxiation with very little water in the lungs to lungs that fill completely.

Recovery from asphyxia following long periods of submersion occurs in circumstances that favour rapid cooling, such as those arising when a small child or infant is submerged in ice-cold water, typically below 5°C. (9) It seems probable that circulatory arrest occurs well after the head is immersed so that cerebral perfusion continues during the cooling process. Experience in children undergoing open head surgery shows that, with hypothermia, circulation can be arrested for at least 30 minutes.

The survival advantage bestowed by submersion in ice-cold water is exemplified by the unique set of circumstances surrounding a young female skier. She was with friends when she fell down a water filled gully and became trapped beneath an ice sheet. She struggled for 40 minutes while attempts were made to extract her before all movements ceased. Her body was recovered through a hole cut in the ice one hour and nineteen minutes later. Though she was clinically dead, cardiopulmonary resuscitation was administered throughout the air-ambulance flight to hospital where her core temperature was 13.7°C. She was resuscitated by means of an extracorporeal membrane oxygenator and then spent a further 35 days on a ventilator. At 5 months, her faculties had recovered sufficiently to allow her to return to work as a hospital doctor. (10) (Table 1)

**Fluid-electrolyte effects**

Much higher death rates follow immersion in fresh water than in the sea. However, this has little to do with the salinity of the water, but derives from the quality of the rescue services, which are sparse on inland waters by...
comparison with the coast. Experiments with dogs suggest that fresh water instilled into the trachea produces more lung injury than either isotonic or hypertonic saline. (11) However in humans, fresh water washes out surfactant, causing atelectasis and intrapulmonary shunting. By contrast, salt water aspiration appears to be associated with very little alveolar-capillary damage. (12) Earlier claims that red cell hemolysis gives rise to hyperkalemia has been refuted. On the contrary, hypokalemia is seen after both fresh and salt water aspiration. The volume of water that would have to be inhaled to cause clinically significant red cell hemolysis is greatly in excess of that which can produce irreversible pulmonary damage. (13) Ventricular fibrillation following immersion is predominately a complication of hypothermia and not of electrolyte imbalance. The electrolyte changes that are seen probably result from absorption of ingested fluid from the stomach rather than from the lungs. High serum sodium and magnesium levels may be seen after immersion in sea water but seldom require treatment. Water intoxication causing convulsions in infants has been described rarely.

EMERGENCY MANAGEMENT
Swimmers recovered unconscious from shallow water should be assumed to have suffered fracture or dislocation of the cervical spine, particularly if there is injury to the face or head. Care must be taken not to over-extend the neck during expired air resuscitation. The head and neck must be immobilized during transport to hospital. Rupture of the liver or spleen may have occurred if the victim has entered the water from a height.

After removal from the water the subject should be laid prone and cardiopulmonary resuscitation carried out in all other respects in the usual way. (14) The quality of the resuscitation procedure is the single most important factor that determines outcome. The subject’s prognosis is transformed if the heart can be restarted at once. Simcock reported that around 70% of subjects arriving in the emergency room of a hospital apneic, but with a pulse, could be expected to survive, and compared with only 8% in whom the heart was not restarted outside hospital. (15) It may be necessary to continue chest compression for an hour or more, and attempts at resuscitation should not be abandoned while the subject remains cold. Pragmatic advice on the management of hypothermia in the field is available from the Medical Commission on Accident Prevention. (16)

Regurgitation of gastric contents during resuscitation occurs in nearly all unconscious victims. The airway should therefore be secured with an endotracheal tube as early as possible and high-concentration oxygen given. The pulse may be slow and of low volume making assessment very difficult. An added dilemma is that bradyarrhythmias may be converted to ventricular fibrillation by chest compression in profoundly cold subjects. For this reason, great care is needed in assessing the carotid pulse. Palpation for at least 10 seconds is recommended.

MANAGEMENT IN HOSPITAL
Near drowning is a medical emergency. At worst the subject may present deeply unconscious with acidosis and profound hypothermia. Pulmonary edema is an early
complication. Cerebral edema and septicemia may develop later and is life threatening.

**Early measures**
Subjects who appear to be completely well should be kept under observation for 6 hours in case of delayed-onset pulmonary edema (secondary drowning). They may then be discharged provided there is no cough or lung crackles, the chest radiograph shows no shadows and the respiratory rate and arterial oxygen level is normal with the subject breathing air. Anyone who has inhaled water is at risk of infection and should be followed up with a chest radiograph. Unconscious or apneic subjects require intubation and positive pressure ventilation with a high concentration of oxygen. Venous access through a central line is essential both for monitoring pressure and for giving fluids or drugs. An electrocardiogram may reveal bradyarrhythmias or ventricular fibrillation in those who appear to be pulseless. Blood should be drawn for both aerobic and anaerobic culture. Broad-spectrum antibiotics effective against Gram-negative organisms should be given (Table 2).

**Arterial blood gases**
A low PAO2 in a subject breathing air provides an early indication that water has been inhaled and suggests pulmonary edema or atelectasis with shunting. Arterial gases and pH should be measured in all subjects, including those who are conscious and apparently well on arrival in hospital. Modern analyzers assume a normal body temperature of 98.6°F. Failure to enter a low core temperature in those who are hypothermic will result in a falsely high arterial oxygen reading. Differences become significant when core temperature is as little as 10°C below normal. As, in practice, recordings around 300°C are not unusual, this correction is essential. An initial arterial pH of 7 or less is a poor prognostic sign.

**Electrocardiography**
In immersion victims, abnormalities of cardiac rhythm are the result of hypothermia coupled with hypoxia rather than of changes in serum electrolytes. Sinus or nodal bradycardia is common, making the carotid pulse very difficult to find in some cases. Nevertheless circulation may still be adequate, so early monitoring of the electrocardiogram is essential to establish cardiac activity. Ventricular dysrhythmias induced by hypothermia do not respond to DC cardioversion; once established, the treatment of fibrillation is to support the circulation with chest compression until the temperature of the myocardium (deep body) exceeds 280°C.

**Venous pressure and intravenous drugs**
A central venous line provides access and allows pressure measurement. This becomes important in the event of pulmonary edema when its use to monitor the optimum level of positive end-expiratory pressure (PEEP) may be critical. Central venous pressure is often low initially and plasma expansion is indicated. Acidosis is managed with mechanical hyperventilation; sodium bicarbonate is seldom needed. Use of systemic corticosteroids has not been convincingly shown to prevent the development of pulmonary edema or to influence its course, and is not recommended. Antibiotics should be given after first obtaining a blood culture.

**Hypothermia**
A fully conscious subject may be hypothermic and yet not shiver, underlining the importance of rectal temperature readings. Hypothermic subjects must be rewarmed and their rectal temperature measured with a low reading thermometer. The probe should be placed at least 10 cm beyond the anal sphincter to avoid erroneously low readings from the cooler periphery. Aspiration of stomach contents by nasogastric tube prevents further absorption of water or salt and removes the risk of regurgitation. Rewarming in bath water at 104°F is most satisfactory. If not possible, then passive rewarming is achieved by insulation in thick woolen blankets after first cutting off wet clothing. A short-lived fall in core temperature, commonly seen as rewarming commences and known as the after drop, is caused by continued loss of heat through conduction from the core to the cooler peripheral tissues. It occurs independently of blood supply and is not a risk factor. (18)

Active rewarming by heating the blood with extracorporeal bypass can be life saving for those found unconscious with profound hypothermia. (19) Bolte and colleagues (20) used this technique to revive a child who had been submerged in ice cold water for 66 minutes. Letsou et al. (21) reviewed the clinical course of five subjects each presenting with a rectal temperature below 26°C all of whom were rewarmed on bypass. Three survived to be discharged with normal mental scores. Over several years, Swiss mountain, rescue teams have recovered the bodies of 46 victims of avalanche or incarceration in ice, all were sent to one of three major centres in Switzerland with extracorporeal blood rewarmed facilities. Fifteen out of 32 people rewarmed in this way have survived. (22) (Table 3)

**Pulmonary edema**
Pulmonary edema occurs only in those who have inhaled water and usually within 4 hours of aspiration. (23) It is believed to be the result of a plasma leak through a damaged alveolar-capillary membrane and not of fluid overload. Left atrial pressure remains normal throughout, a picture similar to adult respiratory distress syndrome.

The earliest sign of impending pulmonary edema is a falling PAO2, and may precede any changes seen on the chest radiograph. Respiratory distress should be treated promptly by assisted ventilation and with positive end expiratory pressure (PEEP). The pressure setting is that which maintains the PAO2 above 10 kPa with a FiO2 that ideally should not exceed 0.6. Pressures above 2.0 kPa may be needed to obtain satisfactory arterial oxygenation following fresh water aspiration but are poorly tolerated because of impairment of cardiac output.

**Cerebral edema**
Cerebral edema is the result of hypoxemia and contributes further to any damage the hypoxia may already have induced. There was a vogue for more aggressive treatment in children with prolonged hypothermia by means of barbiturate-induced coma. However, no improvement in outcome has been demonstrated, so the technique has been abandoned, and with it the need to monitor intracranial pressure.

(24) Reducing the PACO2 by mechanical hyperventilation induces cerebral vasoconstriuction and may be useful. Early use of diuretics such as mannitol may also help.
Septicemia
Lung infection is common following near drowning. Septicemia and brain abscess have also been reported suggesting that arterial embolization of infected material occurs, possibly as a result of pulmonary barotrauma. As well as common pathogens, exotic organisms have been described, including Pseudomonas pu trifaciens, (25) Pseudomonas pseudomallei, (26) Aspergillus fumigatus, (27) lactose-positive Vibrio sp. (28) and Petriellidium boydii. (29) Leptospirosis is a hazard well recognised in inland waters. Victims of such immersion should be warned of fever developing within a few days of the accident and offered short-term follow-up.

Click HERE for REFERENCES

RECALL NOTICE

PSDM Editors Note:
This recall was issued March 22, 2011 and has the issue and serial numbers wrong. OTS posted an alert on their site concerning the issue in November of 2010. We would encourage you to visit their site and follow the directions posted to determine if you have one of these particular regulators. As of March 30 they reported to be 85% compliant with the recall released on March 22!
http://www.otscomm.com/GFFM-NOTICE.html

FOR IMMEDIATE RELEASE
March 22, 2011 Release #11-180

Firm's Recall Hotline: (877) 270-1984
CPSC Recall Hotline: (800) 638-2772
CPSC Media Contact: (301) 504-7908
HC Media Contact: (613) 957-2983

Ocean Technology Systems
Recalls Guardian Full-Face Diving Masks Due to Drowning Hazard

WASHINGTON, D.C. - The U.S. Consumer Product Safety Commission and Health Canada, in cooperation with the firm named below, today announced a voluntary recall of the following consumer product. Consumers should stop using recalled products immediately unless otherwise instructed. It is illegal to resell or attempt to resell a recalled consumer product.

Name of Product: Guardian full-face diving masks

Units: About 1,700 in the U.S. and 80 in Canada

Manufacturer: Undersea Systems International Inc. dba Ocean Technology Systems, of Santa Ana, Calif.

Hazard: The purge assembly on the diving mask can disengage from the regulator, resulting in loss of air to the diver. This poses a drowning hazard to the consumer.
Incidents/Injuries: The firm has received one report of a disengaged assembly. No injuries have been reported.

Description: This recall involves Guardian full-face diving masks with serial numbers 9051284 through 10070954. The serial number is printed on the main regulator body. The diving masks were sold in various colors. The Ocean Technology Systems' logo is affixed to the front of the mask.

Sold by: Diving equipment retailers and direct sales nationwide from September 2010 through November 2010 for about $800.

Manufactured in: Taiwan

Remedy: Consumers should immediately stop using the diving masks and contact Ocean Technology Systems for instructions on conducting a test of the regulator and returning the masks for a free repair.

Consumer Contact: For additional information, contact Ocean Technology Systems toll-free at (877) 270-1984 anytime, or visit the firm's website at www.otscomm.com. Consumers can also email the firm at recall@otscomm.com


CPSC is still interested in receiving incident or injury reports that are either directly related to this product recall or involve a different hazard with the same product. Please tell us about it by visiting www.saferproducts.gov

The U.S. Consumer Product Safety Commission is charged with protecting the public from unreasonable risks of injury or death from thousands of types of consumer products under the agency's jurisdiction. The CPSC is committed to protecting consumers and families from products that pose a fire, electrical, chemical, or mechanical hazard. The CPSC's work to ensure the safety of consumer products - such as toys, cribs, power tools, cigarette lighters, and household chemicals - contributed significantly to the decline in the rate of deaths and injuries associated with consumer products over the past 30 years.

To report a dangerous product or a product-related injury, call CPSC's Hotline at (800) 638-2772 or CPSC's teletypewriter at (301) 595-7054. To join a CPSC e-mail subscription list, please go to https://www.cpsc.gov/cpsclist.aspx. Consumers can obtain recall and general safety information by logging on to CPSC's Web site at www.cpsc.gov.
* EVENTS *

DUI RISK MANAGEMENT
2011 TRAINING PROGRAM

April 1 Pelham, AL Alabama Blue Water Adventures
April 8 Austin, TX Windy Point Park
May 13 Gloucester, MA Stage Fort Park
May 20 Bethlehem, PA Dutch Springs
June 10 Black River Falls, WI Wazee Lake
Aug 19 Tacoma, WA Les Davis Park
Sept 16 Ottawa, OH Gilboa Quarry
Oct 21 Rawlings, VA Lake Rawlings
Nov 11 Chiefland, FL Manatee Springs
Nov 18 Terrell, TX Clear Springs Scuba Park

TEST DIVE THE WHITES FUSION DRY SUIT
To attend a Fusion Demo Day, you have to register and pay the applicable fee.
Click HERE for REGISTRATION INFO

April 9th Orange County, CA Corona del Mar State Beach
April 10th Vista, CA Aqua Lung America

April 16th-17th San Marcos, TX Aquarena Springs
April 30th-May1st Pelham, AL Alabama Blue Water Adventures
May 14th-15th Bethlehem, PA Dutch Springs
May 21st-22nd Findlay, OH Gilboa Quarry
June 18th-19th Kankakee, IL Haigh Quarry
June 25th-26th Metropolis, IL Mermet Springs
Sept 10th Gloucester, MA Stage Fort Park
Sept 17th-18th Prince William County, VA Millbrook Quarry

SWAT Counter Terrorism Operations
March 8-11, 2011 - Camp Blanding, FL

Beneath The Sea 2011 Expo
March 25, 26, 27

Navy League Sea-Air-Space 2011
April 11th - 13th National Harbor, MD, USA

SWAT Counter Terrorism Operations
April 12-15, 2011 - Yakima Firing Range, WA

National Drowning Prevention Symposium
April 14 -26 Colorado Springs, CO

Maritime Security Expo
May 4-5, 2011 Baltimore, MD

Ocean Technology Systems
Interspiro Divator MKII (AGA) Full Face Mask - Technical/Maintenance Course
May 19, 2011 9am to 5pm
Port of Oakland, Oakland, CA
Cost $175 per Student Pre-Registered

If you have an event or know of an event that might be of interest to PSDiver Monthly subscribers send the information to: PSDiverMonthly@aol.com
Ocean Technology Systems
Guardian Full Face Mask 
Technical/Maintenance Course
May 20, 2011 - 9am to 5pm 
Port of Oakland, Oakland, CA
Cost $100 per Student Pre-Registered 
$85 per technician tool kit

Scuba Show
June 4 - 5, 2011 - Long Beach, CA

6th Annual Homeland Security Professionals 
Conference & Expo
October 3-7, 2011 - Las Vegas, NV

Subsea Survey Conference 2011
Dec 13 – 15, 2011 - Houston, TX

The Science of Wound Care, diving and Hyperbaric Medicine - 2nd Annual Conference and Expo
August 4-7, 2011 - Palm Beach, FL

1) Which of the following uses the body of the vehicle for part of the electrical circuit.
   a. Hydrid battery 
   b. 12 Volt battery 
   c. Both
   d. Neither

2) Electrical splitting of the water produces.
   a. Hydrogen/Oxygen
   b. Nitrogen/Oxygen
   c. Hydorgen/Nitrogen
   d. All of the above

3) Laminated glass provides _____ times the protection than tempered glass.
   a. 20
   b. 40
   c. 60
   d. 80

4) Prior to a diver going under Ice you should record his/her_________.

Vintage Scuba 
Standard Dress
5) The amount of time voltage is present inside a high voltage battery when it is submerged depends greatly upon the water quality...
   a. True
   b. False

6) Laminated shatters more easily than non-laminated due to the type of glue used in construction.
   a. True
   b. False

7) When submerged, the HV battery system will
   a. Super heat the orange wires
   b. Rapidly discharge
   c. Only have enough power to electrocute the first diver
   d. Cease to function, containing voltage in the battery

8) Laminated glass holds together after shattering. This results in
   a. A vehicle retaining an air pocket when submerged
   b. Greater resale value
   c. More difficulty for a rescuer to remove the glass
   d. Dive gloves becoming unnecessary

9) A 12 volt battery will retain it’s charge underwater much longer than a high voltage hybrid battery....this is because the hybrid battery__________
   a. Discharges as it sits, waiting on a charge
   b. Has less amps
   c. Is less dense
   d. Has more power to overcome resistance

10) The best way to cut thru a glass underwater is to use a 12 volt saws-all.
    a. True  b. False

11) Dispatch of which of the following is best suited to assist in getting a submerged vehicle to the surface or bank.:
    a. Helicopter with winch
    b. Tractor with cable
    c. Fire truck with ladders
    d. Any recreational diver with 100 pound lift bags
    e. Tow Truck
12) As a safety precaution, after removing a hybrid or electric vehicle from the water
   a. The battery should be recharged
   b. The battery should be removed
   c. The gases should be vented
   d. A report should be sent to CarFax

13) When responding to a vehicle in the water you should
   a. Always wear a speedo
   b. Always assume it is hybrid or electric
   c. Never assume it is hybrid or electric
   d. Wear a darken mask to avoid glare from the headlights

14) A diver responding to a hybrid vehicle underwater should
   a. be careful not to accidentally deploy the airbag.
   b. Carry a voltmeter in his speedo
   c. Ensure adequate protection but have no fear of electrocution
   d. Call Matt and Paul on their 24-hr helpline, (976) MGS-TECH

15) Near-drowning victims can suffer from
   a. Infection from microorganisms
   b. Pulmonary edema
   c. Hypothermia
   d. All of the above

16) Swimmers recovered unconscious from shallow water should be assumed to have suffered
   a. From foul play
   b. Constriction from speedos
   c. Greatly
   d. Fracture or dislocation of the cervical spine

17) In humans, freshwater produces more lung injury than salt water
   a. True  b. False

18) No one has survived submersion underwater for over an hour
   a. True  b. False

19) It is best to lift a hypothermic person out of the water
   a. In the vertical position
   b. In the horizontal position
   c. In the left lateral position
   d. In the face down position

20) Care for severely hypothermic unconscious drowning victims include
   a. Secure airway with an endotracheal tube
   b. High-concentration oxygen
   c. Palpation for at least 10 seconds
   d. All of the above
21) A short-lived fall in core temperature, commonly seen as rewarming commences and known as the __________, is caused by continued loss of heat through conduction from the core to the cooler peripheral tissues.

22) Sudden immersion of an unacclimatized subject in ice-cold water results in reflex hyperventilation and tachycardia often with supraventricular ectopic beats and hypertension, a response known as ____________.

23) Subjects who appear to be completely well should be kept under observation for ________ in case of delayed-onset pulmonary edema (secondary drowning).

24) It may be necessary to continue chest compression for an hour or more, and attempts at resuscitation should not be abandoned while the subject remains ________.

25) Failure of water to enter the lungs has been attributed to__________.

**Team Discussion:**

1. Discuss your teams guidelines and procedure for initial response to vehicle in water.
2. Discuss your teams procedures for removing glass from a vehicle underwater.
3. Review your teams training when dealing with a submersed vehicle.
4. Discuss your teams thoughts and sog’s pertaing to low air situation. Also with the loss of primary air...

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.

**Lifesaving 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**

We welcome all training agencies and organizations to participate. For details, email PSDiverMonthly@aol.com
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Assistant Editors: Lynn Wright Dominique Evans-Bye

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CE 83 Answers

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21) after drop  
22) cold shock  
23) 6 hours  
24) cold  
25) laryngospasm