

## MANIFEST

A Message From the  
Wheelhouse

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Reflecting on the Conception

Gauntlet News & Updates

## THE LOOKOUT

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<https://northernatlanticdive.com>

[info@northernatlanticdive.com](mailto:info@northernatlanticdive.com)

Editors-in-Chief:

Heather Knowles  
David Caldwell

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## A Message From the Wheelhouse

Thanks for checking out Issue #12 of The Lookout, our annual newsletter covering wide ranging topics that are historical, technical, and relevant to our diving community in Massachusetts. This issue covers our 2019 diving season, which included the long-awaited identification of the Allentown. In addition we share our thoughts on the Conception fire, plus articles on GUE training and highlights from a great season of local wreck diving.

We'd like to thank all our customers and crew for your continued support and participation aboard Gauntlet. The 2020 diving season will be an exciting one. We hope that you'll join us on our adventures whether you are looking for training or just some great wreck diving off the coast of New England!

We hope you enjoy this issue of The Lookout!

Heather and Dave

## Continuing Education in a Global Community: GUE Tech 1

Over the years, Global Underwater Explorers (GUE) has evolved from an elite training organization with a narrow scope intended to support exploration diving with team-based approaches to a more accessible global community offering something for almost everyone. GUE's mission statement reflects the expanded role they are playing in the diving world: "Global Underwater Explorers is building global communities of passionate divers, empowered by high-quality training and organized to support wide-ranging diving activities. These communities contain and partner with dedicated explorers, conservationists and scientific researchers to conduct a diversity of aquatic initiatives around the world" (GUE, 2019). An organization with at one time limited accessibility is now finding increasing success by building upon a strong foundation and diversifying its training programs, all without compromising the quality that has made GUE respected.

As the diving industry as a whole struggles to survive, training agencies have largely turned to its membership instead of prospective divers as a way to make money. More courses, higher fees, outdated manuals, attempts to implement online learning, re-qualifications with a marketing focus, and a proliferation of instructor trainers making more instructors seems to be the current formula for many agencies. However, none of this really benefits the customer, the student. It has become more difficult to identify a quality instructor. In fact, it is becoming more difficult to identify a quality training agency since new agencies seem to come up as some kind of response to the inadequacy of another. The diving industry as a whole seems lost and unable to adapt to different business models, and perhaps a different type of customer. This is not to say that all training agencies or instructors are inadequate, but it is to say that it becomes increasingly difficult for quality instructors to remain engaged and active teaching when the standards continue to decline but costs continue to rise. This is where GUE is different.



Photos from practice sessions, top to bottom: practicing valve drills at 10 feet; optimizing stability and trim; timed ascents on an SMB with multiple failures occurring.

GUE defines itself as “a leader in scuba education, developing numerous industry-first training protocols with a global cast of extremely knowledgeable professional educators and producing divers of exceptional quality. These educational programs enable divers to enjoy a nearly unlimited range of opportunities, including conservation programs, exploration projects, and documentation adventures. GUE-trained divers are found in far-reaching global communities that offer many social and support opportunities alongside a host of unique and challenging underwater projects” (GUE, 2019). Said another way, GUE is about more than training, but it is rooted in high quality training. And this is fundamentally what make GUE attractive to us since it is a way of building community, which is without a doubt what the diving industry needs to survive, especially in smaller communities such as New England, with dwindling numbers of retail stores, charter boats and divers. GUE’s increasing accessibility means there is room for this kind of training without it being exclusive to the point of denying other training or forms of diving. Training does not have to be exclusively one agency or another. Divers do not need to dive CCR or open circuit exclusively. A diver who prefers to dive side mount can and also should be proficient in back mount scuba. Training is not a linear process with a start and finish, it is a continuous cycle.

Our interest in GUE finally led us to take a Fundamentals class in 2018. We reviewed our GUE Fundamentals class in [Issue 11](#) of The Lookout newsletter. After some consideration, we decided we wanted to continue our training with GUE and enrolled in a Technical Diver 1 class with Bob Sherwood. Many asked us why we were doing the class since none of this training was required; we have all the certification cards we will ever need. But since we view training as a continuous cycle, we felt there was something to learn and we wanted to build upon the GUE foundation we endeavored to create by taking fundamentals.



Preparing for dives during the Tech 1 class.

The purpose of the GUE Tech 1 class is to prepare divers to begin their path to technical diving safely, with confidence, and with a base of solid skills and knowledge. For divers that wish to continue their training within GUE, the course is a prerequisite for GUE rebreather courses, advanced technical GUE training, and GUE project and exploration diving. For us, from a standpoint

of diving concepts such as dive planning and decompression, we viewed it as an opportunity to learn another method and add a tool to our toolbox. We also wanted to continue to improve our control in the water, particularly during ascents without a line. And if we decided to continue with further GUE training, we would be progressing within the matrix of prerequisite courses.

Our GUE Tech 1 class included a third teammate, which added to the benefit of taking the class since we were meeting another potential dive partner and making a new friend, but it also increased the complexity of the dives (with respect to simulated failures that can be unleashed) with a 3-person team. We trained in Alexandria Bay, NY where we would not only be using dry gloves (which makes everything a lot more challenging) but we would also be dealing with strong current in the St. Lawrence River. Neither of these factors were in the equation when taking Fundamentals in Florida,

for example, but they were all welcome challenges because we weren't doing this solely for a card; we wanted to be "in the suck." And we got our wish.

The GUE Tech 1 class differs from Fundamentals in several ways and one way in which it differs is that there are no simulated equipment failures or problem scenarios in fundamentals. Where the fundamentals class is a process of building a foundation and then developing that foundation with increased task loading, Tech 1 is about more complex dive planning and problem solving. It is about managing a growing number of failures and using your judgment to make decisions about handling those failures. And if there are any weakness in your foundation (such as stability or buoyancy) they will be revealed because when enough pressure (stress) is applied, the first thing that will break down is control. For example, a dive team might find that enough masks (and back up masks) disappear that ultimately an ascent without a mask is required for one diver, and his or her teammates need to manage that situation. In another situation, one might become so stressed and task loaded with problems that the disappearance of a decompression bottle (taken by a sneaky instructor) goes unnoticed. Or in yet another scenario there might be an out of gas situation that requires a diver to decide how to manage remaining resources within the team while coping with other failures. The experience of the class develops an individual's skills for dealing with problems and stress through the use of procedures. And however unlikely some of these failures might be, the goal of the training is essentially to teach one how to plan, manage resources and solve problems, building off the foundation of basic skills and stability achieved in the fundamentals class.



Dave, Heather and Bob are all smiles after a successful class.

The GUE Tech 1 class was the most difficult dive class we have ever taken. We had to work extremely hard to earn our certification, but we were happy with the results even if the process was painful at times. During the class, we received a lot of support and encouragement from other GUE instructors and divers. It is this sense of professionalism and community that we appreciate and have tried to build within our own network of friends, customers and students on the Gauntlet. We're pleased it includes the GUE community. So, what's next? Well, certainly there are some bets out there on whether we'll take more classes—sure, it could happen. In the meantime, we're finding enjoyment in taking our learnings and applying it to both our teaching and personal diving.

## 2019 Diving Highlights

The 2019 diving season was a good one with adventures ranging far and wide from Alexandria Bay to Massachusetts Bay to the Red Sea! Below is a recap of some highlights:

### Trips to “A-Bay”

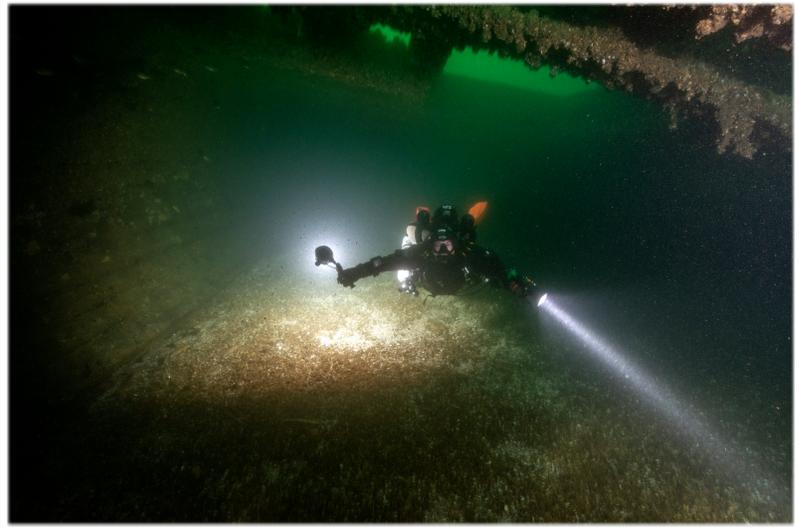
This year we made a few trips to Alexandria Bay, NY for training and diving in the St. Lawrence River. This area is known for great diving due to the variety of shipwrecks and the accessibility. The river conditions are generally good with visibility and comfortable water temperatures during the main diving season. The current is quite strong, so diving in the area is not without its challenges, but overall this is an A-list diving destination and for those of us in New England, it's a fairly easy 5-6 hour drive!

The AE Vickery is a popular and accessible wreck for divers ranging from recreational advanced OW to technical diver. The Vickery is a 136 foot long wooden schooner that was built and launched in 1861 at Three Mile Bay in New York. On August 17, 1889, while carrying a load of corn to be delivered to Wisers Distillery in Prescott, Ontario, the Vickery struck Rock Island Shoal and sank adjacent to the ledge. Fortunately, the crew survived the sinking. The wreck presently rests at an angle to the shoal with depths ranging from 60 feet to 115 feet on the wreck and up to 150 feet out in the sand where the masts can be found. The current is quite strong in this area and getting down and over to the wreck takes some effort, but once on the wreck there are ways to avoid the current and remain sheltered. The pay off for this effort is diving a very well preserved late 19th century wooden schooner! This is an excellent training site and all around good dive representative of the area.

For the best support in the area, [Blue Foot Diving](#) and [All About Scuba 1000 Islands](#) are the go-to operations for charters and fills.

### Mass Bay & Stellwagen

Locally in our waters comprising Mass Bay and Stellwagen Bank National Marine Sanctuary, we had a pretty good record for getting out this year, including a weekend in late December with diving on both days!



Inside the wreck of the AE Vickery, taking a break from the current.

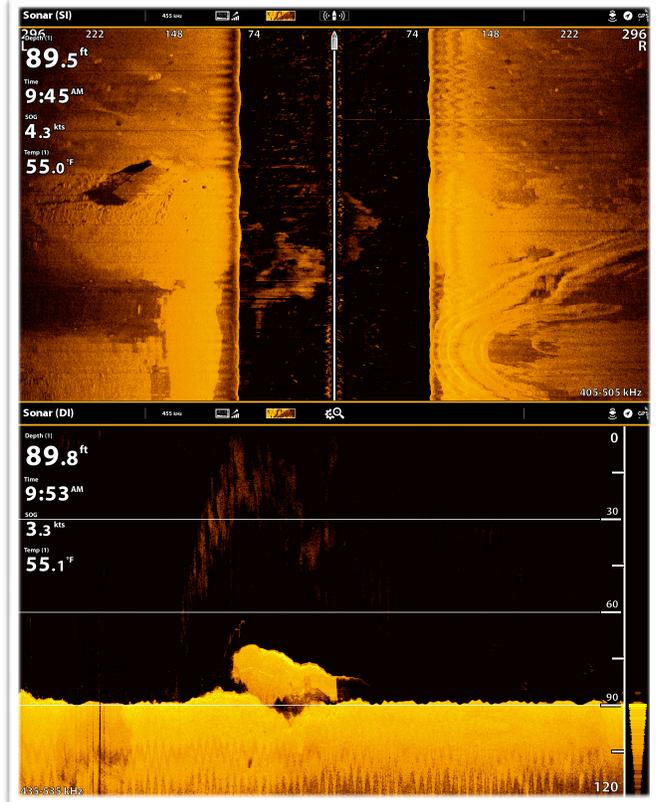


Exploring the ever-crumbing remains of the Pinthis.

Visibility did seem to be a challenge throughout the year with some wrecks being consistently low visibility when they are not always that way. It is hard to be sure of the reason—warming water temperatures, dredging operations? Either way, the camera seemed to stay topside more than we would have liked, but sometimes that is the way it goes.

To that end we visited a “new” wreck that sank in December 2018—a barge off Nahant known as Barge 200. While the wreck is not all that new by this point, we had finally gotten around to checking it out in November 2019. And in keeping with the low visibility theme, it was rough with maybe 3 feet of visibility. It might be a nice dive, but we do not know! We did get a nice image of it with our new Humminbird Solix—certainly we saw more of the wreck with this instrument than we did on the dive!

Not all dives were low visibility though. We made an early July trip to the Paul Palmer and enjoyed excellent visibility and relatively light current. We also had a few dives on the Poling with 40-50 feet of visibility in the early summer. Many of the deeper wreck trips blew out, and we otherwise spent our deeper trips exploring the Allentown, which you can read about in this issue.



Humminbird Solix images (side view and down view) of the Barge 200 off Nahant.

MAUE Diver Event

MAUE or Massachusetts Underwater Explorers is a Facebook group intended to create a local community of GUE and like-minded divers for the purposes of networking, socializing, identifying training opportunities and finding dive partners. The group encompasses the New England area, although it is centered on Massachusetts. In the last few years, the group has become less active, but this year we decided to get involved to rekindle some activity. The main objective for this year was to organize and conduct a diver event to bring the community together for some diving and fun.



MAUE Diver Event group photo—it was a great day of learning and fun!

The goals of the diver event were to introduce divers to GUE and training opportunities through a workshop format. The event was open to both GUE trained divers as well as those

interested in GUE but without prior certification. Our goal with bringing GUE philosophy and training to the area is to see divers getting high quality training and offering highly experienced divers the opportunity to “brush up” with critical review and opportunities for self improvement.

We had a great day of learning and fun with workshops on backplate/harness configuration and an in-water session on body position and trim. There were scooters and other equipment available for demo too. We finished off the day with a BBQ followed by a primer on SMB deployment—a skill that is truly harder than it looks! The event was a success with a good size group of divers of all levels. We are considering putting this together again so if you're interested, be sure to let us know!

### Red Sea, Egypt

Towards year end, we found ourselves finally heading to the Red Sea for a wreck diving safari aboard the MV Legends, based out of Hurghada, Egypt. We were especially excited about this trip since our 2011 trip was canceled due to sociopolitical issues in Egypt erupting just a few months before our planned visit. However, things have improved and an opportunity presented itself for us to go so we took it!

We spent a week diving from the MV Legends on a northern wrecks (and a few reefs) safari. This route took us north towards the Sinai Peninsula and then back down to

Hurghada. We visited 6 wrecks and a few different reefs. The wind prevented us from doing a few wrecks on the wish list but we had a great time and would certainly consider the Red Sea a top diving destination. Following the week of diving, we traveled by land to Cairo where we took in the historic sights, including the epic Pyramids at Giza, which is truly an amazing place to see.



Exploring the Rosalie Moller in the Red Sea.

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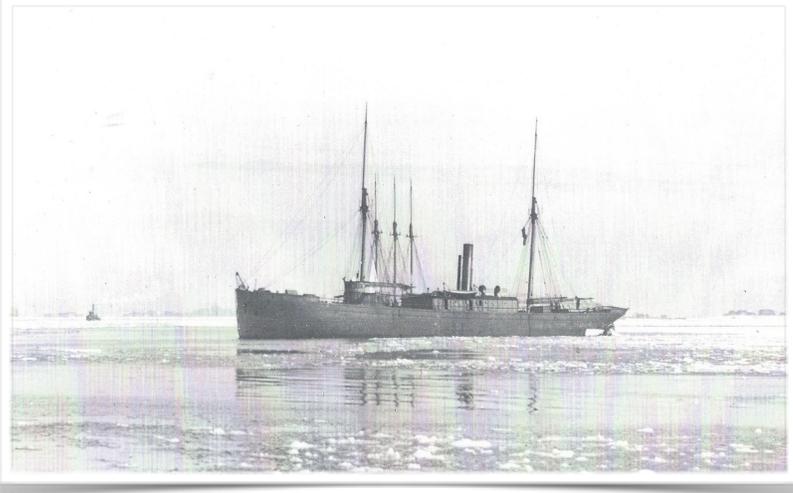
## Mystery of Lost Steamship Allentown Solved

The final resting place of the doomed collier Allentown has finally been determined after more than 130 years. The Allentown was one of six Reading-class colliers, built at the Philadelphia, Pennsylvania shipyard of William Cramp & Son Ship and Engine Building Company for the Reading Railroad. The Allentown, hull number 190, was launched in June 1874. The 1583 gross ton iron collier measured approximately 250 feet in length, with a breadth and depth of 37 feet and 20 feet, respectively. The Allentown carried a crew of 18 men.

The November gale of 1888 was a particularly devastating storm in New England. An estimated 15-20 ships were wrecked between Scituate and Boston during the storm, with loss of life and property, including and most notably, the iron-hulled collier Allentown. On November 21, 1888, the Allentown departed Philadelphia heavily loaded with 1650 tons of anthracite coal with an expected arrival in Salem, Massachusetts to offload the coal. However, while underway, the Allentown

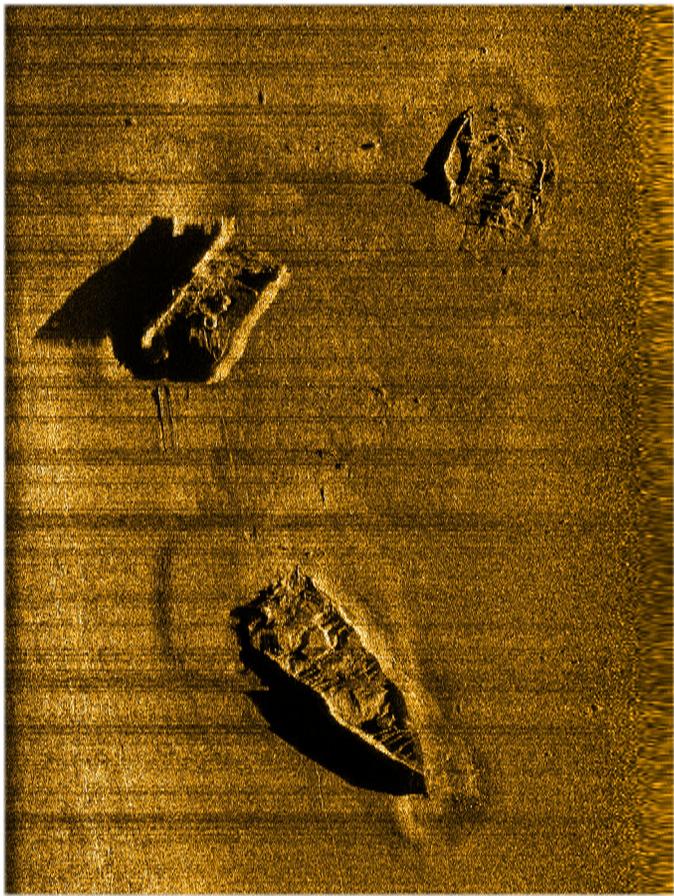
encountered the brunt of the severe nor'easter that developed into a hurricane-strength storm and never reached Salem. The Allentown foundered sometime around November 27, 1888. None of the crew survived.

Based on debris and witness accounts, the Allentown was believed to have foundered off Cohasset, Massachusetts. In the days following the loss, scattered debris from the Allentown washed ashore along the waterfront beaches from Cohasset to Scituate. On November 28, 1888, one body believed to be a crew member from the Allentown washed ashore in Scituate. Villagers reported hearing a whistle out in the fog sounding at brief intervals during the storm, believed to be the Allentown seeking help. The debris and witness accounts suggested the Allentown had foundered on ledges in the vicinity of Minot's Light; however, despite the supposition



Steamship Allentown, sunk November 1888.

the Allentown foundered off Minot's Light, the Allentown had essentially vanished without a trace with only ominous debris washing ashore.



Side scan sonar image of the Allentown wreck site.

The Allentown's loss has remained a mystery for over 130 years. Initial discovery of a portion of the wreck was made by NOAA's Office of National Marine Sanctuaries (ONMS) during a survey of Stellwagen Bank National Marine Sanctuary. Northern Atlantic Dive Expeditions (NADE) partnered with the ONMS through a research agreement to initially explore the site; however, since the site is not located in Stellwagen Bank National Marine Sanctuary, Heather Knowles and David Caldwell of NADE assumed project leadership, continuing to research the site, locating the third and final piece of wreckage, performing remote sensing surveys and exploration dives to ultimately determine the identity of the Allentown.

The Allentown was found some distance from the area of Minot's Light and rests in over 200 feet of water much further to the north off Cape Ann. To date, the exploration project has spanned four years. Poor weather and difficult conditions at the wreck site hampered progress. The wreck consists of three distinct sections, and coupled with

low visibility, deep water and strong currents, exploration of the Allentown has been challenging and slow.

The determination of the Allentown's identity would not have been possible without collaboration and teamwork. Collaborators and contributors include Matthew Lawrence of NOAA, Mark Munro of Sound Underwater Survey, and the NADE exploration dive team of David Caldwell, Heather Knowles, Tim Maxwell, John Minigan, Jessica Morrison, Josh Rackley, Eric Takakjian, Scott Tomlinson, and Feng Zhang. Notably, in 2017, the team carried Explorers Club Flag number 210. This honor carries significance within the Explorers Club as a symbol of engaging in scientific exploration.

The Allentown has been explored under a permit from the Massachusetts Board of Underwater Archaeological Resources (MBUAR). The Allentown is a historic wreck, and as it is a grave site the wreck should remain undisturbed and treated with respect. We will be presenting on the Allentown at the upcoming [SECONN Dive Club New England Wreck Symposium](#) on February 1, 2020. Hope to see you there!



Porthole on the wreck of the Allentown.

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## Reflecting on the Conception Fire

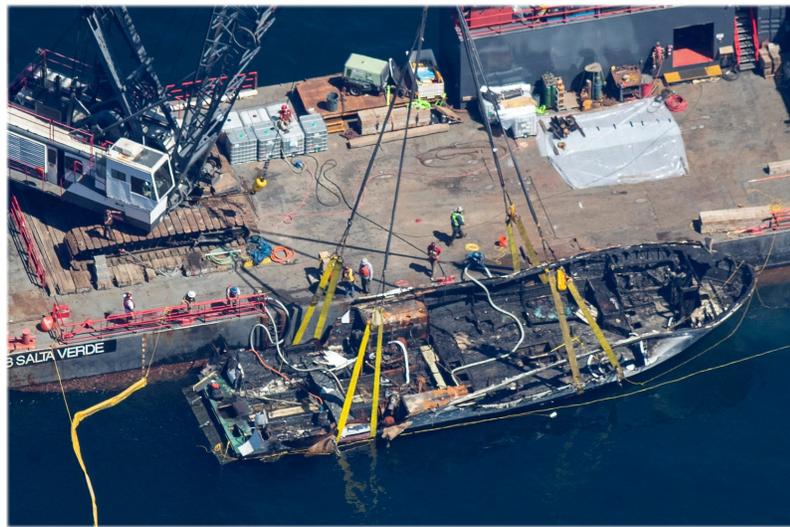
The fire aboard the MV Conception resulting in the deaths of 33 passengers and 1 crew member sent shock waves through the global dive community. It was difficult to grasp that a fire on what was considered to be a routine trip with a highly regarded dive operation claimed the lives of every passenger, and that the crew, with the exception of one, had barely escaped. The reasons for this are far more complex than one might imagine, but the issues can be mitigated by all of us taking greater personal responsibility for our safety and insisting on high standards from operators.

Many wondered how a tragedy like this could happen, and the simple answer appears to be complacency, but the truth is, it is a lot more complicated than that. The failure chain that led to this accident started years ago, when the US Coast Guard opted not to adopt recommendations that would apply to all passenger vessels regardless of age and that would have made strides in addressing known safety issues. These recommendations, made by the NTSB in 1996 following a review of a series of fires and other accidents involving fatalities over a 30 year period, put forth more robust requirements for escape routes and hatches, among other changes. The lack of implementation in part due to agency cost, resource and enforcement concerns allows boats falling under this exception to operate under "legacy" standards despite higher risk from a safety perspective because it would be too costly to update to current standards.

Added to the problem of lack of a robust regulatory environment is the problem of oversight. The fact is, the standards to run a dive boat are very low. Almost anyone can become a captain. There is no real verification of experience, nor is there a practical exam involving boat handling or how to

respond to emergencies. No specific procedures for diving operations need to be in place. Going out on an uninspected passenger vessel with an inexperienced crew can carry a significant risk. Even US Coast Guard inspected and certified vessels are not necessarily evaluated for the conduct of diving operations. The problem is so pervasive it led to the US Coast Guard issuing the controversial [2012 guidance for dive boats](#) (updated in 2018). This document acknowledges diving operations are not regulated by the US Coast Guard, but it makes an attempt to set some standard for the conduct of dive operations and diver safety. Implementation of this guidance has been inconsistent at best. So, if the US Coast Guard does not regulate dive boat safety, who does?

Truth Aquatics was a well-regarded dive operation, in many ways pioneering in the California live-aboard arena over a period of decades. The captain was extremely experienced and most of the crew, even the junior deckhands, had been on previous trips and met defined qualifications to be crew. Yet the boat was not equipped to manage battery charging that has become commonplace on dive boats, and the crew was out of compliance with watch requirements. Unfortunately, even a boat that meets the standards and requirements for an inspected vessel with a sizable, trained crew can fall short because the standards are outdated and oversight is not adequate to ensure compliance.



The burnt remains of the MV Conception following its recovery.

Lithium based batteries have been suggested (not yet proven) to be the cause of the Conception fire. Most basic marine wiring systems aren't designed to handle the kind of load that they routinely see aboard live aboard style boats where every passenger has several high capacity items that require charging. And because this problem is unique to dive boats, which are not regulated, dive boat operators have not been required to upgrade systems to ensure safe charging of batteries. Any enhancements to systems are voluntary and not formally evaluated for adequacy. Lithium ion and lithium polymer batteries can have devastating consequences if they catch fire

because it is extremely difficult to extinguish the fire. Most consumers are not well educated about their batteries and how to handle them because the manufacturers do not address the issues adequately. That said, none of this is an excuse or justification for not creating a safe environment for handling equipment like this. The problem is no regulatory body or agency has defined a standard or is holding dive boats accountable to comply with a standard.

Lack of applicable standards, poor oversight by regulators and the use of equipment boats are not equipped to handle are the principle issues in this "perfect storm" that contributed to the devastating Conception fire. Complacency and poor conduct of the crew was a major factor too, but regulatory oversight through various types of inspections could have made a difference. This is not to say the answer to every problem is a regulation. And while there may be legal and regulatory changes to address some of these issues, the scope will be only so inclusive, it will likely be limited to the US or at least inconsistently adopted globally. So what can we do about it as individuals?

In the wake of the Conception fire, we spent a great deal of time discussing the situation and what we could do to learn from the tragedy. As both dive boat operators and occasional passengers on

boats we appreciated the complexity of this situation. We started with an examination of our personal practices and if there was anything we could do to improve the way in which we handled our batteries at home and while traveling or in the field. With an assortment of lithium ion batteries for cameras, strobes, video lights, dive lights, heater packs and some lithium polymer batteries, which are commonly used in R/C devices such as drones, we felt that we could improve our safety by using explosion and fire resistant containers and bags while charging and storing our batteries. We also added ABC dry chemical fire extinguishers to each work station where batteries are stored.



Various battery charging and storage options. From top, clockwise: Bat Safe charging box, a large ammo canister and a small/medium size battery charging/storage bag.

Regarding the Gauntlet, which is an uninspected passenger vessel, we incorporated new procedures for the handling and charging of batteries aboard the boat (which is not often needed on day trips but would be applicable on overnight trips we occasionally do). We have always strived to exceed standards for an uninspected passenger vessel. For example, Gauntlet has a life raft (in addition to PFDs) and a Category 1 406 MHz EPIRB. Neither of these things are required. That's right, in some cases you might be going out on a boat without an emergency beacon to transmit your position if the vessel were to sink. When the NTSB recommendations on the Conception fire are released, whether they result in regulatory changes or not, we will re-examine our procedures to ensure we do our best to meet a high standard.

Overall, the best thing all of us can do in the present situation is to reflect on our personal behavior. Having a high degree of situational awareness is essential, regardless of whether you're aboard the best run boat with the best crew or in a largely unknown situation aboard a private boat. In some ways, the Conception fire has resulted in an "awakening" in the dive

community with passengers questioning operators and thinking about their safety perhaps in a way they had not done before. This is a good thing, although it is also important not to become by default distrustful. Before a trip, research what things should be in place. During boat briefings, ask questions and in some cases, verify information, such as personally checking an escape hatch if a dry run isn't part of the briefing. Trust, but verify. Be responsible with your batteries, learn about safe practices with them and make being safe your personal responsibility. If you see something that looks wrong, question it. Take action if no one else does. Speak up about your experiences both good and bad. Many problems could be corrected (one way or another) if the community standards demanded it. Stay safe out there!

## Gauntlet News & Updates

Gauntlet will be in the water this winter and in our regular winter slip. The last few years, harsh winter weather has resulted in few, if any, charters. So we're going to be determining if we offer a charter on an ad hoc basis and otherwise waiting until the March time frame before publishing a regular schedule. In the meantime, check the website's [Gauntlet Blog](#) for periodic updates, and if you have any questions about the upcoming season or would like to join our email list, drop us a note.

