

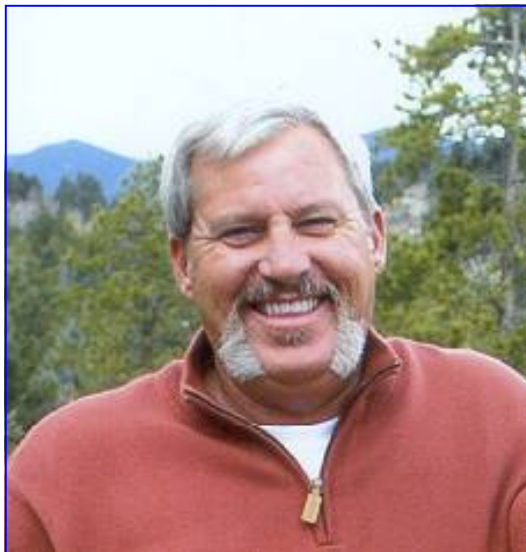


TOPSIDE



NOAA Diving Program News - April 2008

In Remembrance



Rusty Mason

People remember Rusty as a man who could bring smiles readily to their faces, and as someone with a true zeal for life. May those who knew him continue to smile, and know that his memory lives on.

~excerpted from the Memorial service

Rusty Mason—Biography

Rustin "Rusty" Mason, was born in 1953 in Evansville, IN. He attended the Florida Institute of Technology where he graduated in 1976 with a BA in Oceanographic Technology. Rusty was an active and beloved member of the dive community in the Lower Keys since 1990 when he first worked for Looe Key Reef Resort as a vessel operator and dive instructor. At the time of his death, Rusty was employed as a marine mechanic for the Florida Department of Environmental Protection's Office of Coastal and Aquatic Managed Areas working for the Florida Keys National Marine Sanctuary (FKNMS). Rusty's accreditations include serving as a USCG Licensed Vessel Operator, NOAA Working Diver, and NOAA Divemaster responsible for installation, repair and maintenance of mooring systems within the FKNMS. Rusty had been employed in this role since May 28, 2002. Outside of his everyday mooring buoy duties, he was routinely called upon to assist with numerous assignments. He played a key role assisting with vessel and dive support during NDP's dive training classes in Key West. Rusty regularly acted as vessel operator and dive support for FKNMS's annual coral spawning cruise. He also regularly provided boating support for researchers, elected officials, and other visitors to the sanctuary. His love for people and his outgoing nature made him a natural in this role. █

Rusty Mason, one of NOAA's own divers, perished during a dive accident on March 17, 2008.

An investigation is being conducted by the Monroe County Sheriff's Office. NOAA is also conducting its own internal/external investigation into the accident. NDC will provide more information to the NOAA diving community after receiving the investigation team's final report, anticipated in early May.

An agency-wide diving safety stand-down remains in effect until each diver has complied with the following mandate from the Director, NDC.

- Inspect all diver-worn and emergency equipment (oxygen kits, first aid kits),
- Review dive accident management plans, including the recovery and evacuation of unconscious divers, and
- Review dive procedures including air-sharing, out-of-air scenarios, and air management.

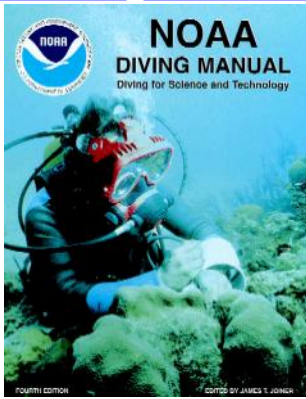
Unit Diving Supervisors are to notify Dave Dinsmore when the above requirements have been met. To date, a majority of divers and units have been approved to resume diving operations. Good job! █

New Training Announcements

NDC has developed a new web-based training module on NOAA Dive Procedures. This refresher module utilizes embedded video demonstrations conducted by NDC staff and includes training in self-rescue and buddy rescue techniques. This can be found on the NDC website, in the **Training & Certification - Annual Refresher** section.

REQUIRED - Divers using Standardized Equipment Program gear must be trained in use of the equipment per NDP regulations. If you have not received formal training in the use of the DUI Weight and Trim System, Shadow in-line alternate air source, and UWATEC bottom timer/depth gauge, you must complete the requirement. Steve Urick provides directions in a memo that is on the NDC website, in the **Standard Equipment Program—Training Requirements** section. NDC has also posted the equipment manuals there for your reference. Work with your UDS to complete this requirement and notify Jennifer Carriere at NDC. She will update your training record. Thank you. █

NOAA Diving Manual Survey



It has been six years since the current NOAA Diving Manual was published and NOAA is starting to make plans to revise it. The 4th edition was well received by the diving community, but NDC feels the 5th edition can be even better. NDC is soliciting comments, suggestions and ideas from the general diving community on how to make the manual more useful and complete. You can help with this by completing the survey that can be found on the NDC website under **Reports & Publications - NOAA Diving Manual**. When you finish, your comments will be sent directly to the desk of Director Dave Dinsmore via e-mail. Thank you for taking the time to complete this survey. The information you provide will help NDC plan and produce the 5th edition.



New Tethered SCUBA Class!

The NDC is pleased to announce it will be offering a new advanced diving course during the week of July 21 (tentatively). The course will teach the use of tethered SCUBA equipment utilizing voice communications and light-weight surface-supplied diving systems. The use of these systems by NDP-trained divers and supervisors will be an approved option for the conduct of diving operations throughout the agency. These systems are commonly used in the diving industry, are applicable to many NOAA projects, and provide safety and economic advantages. NDC has purchased four units and has other equipment on loan for training purposes. The course is still being developed and space will be limited. More information will be forthcoming. Parties interested in attending this initial training session should contact Steve Urick.



Upcoming Training Classes

May 05 - May 23	Working Diver	Seattle
May 19 - May 23	Divemaster	Seattle
July 21 - July 25	Tethered SCUBA	Seattle



SEP O2 cylinders: from the desk of Bill J. Gordon

*** DO NOT EXCHANGE SEP OXYGEN CYLINDERS, GET THEM REFILLED. ***

NDC specifically purchases new steel cylinders with lever handles as we build SEP oxygen kits. Painted steel generally holds up better to the environmental conditions at sea, provided the O2 kits are kept dry and the foam is dry before the kit is stored. The steel cylinders NDC purchases can be overfilled by 10% when "+" tested during hydro, giving each O2 kit an additional 3 ft3. Steel cylinders can go 10 years between hydro's when "*" tested. NDC is trying to lessen the work required by ships personnel and dive lockers to maintain their equipment.

People in a hurry have mistakenly exchanged instead of refilling SEP specially chosen oxygen cylinders that had new valves and, more importantly, a known history of service. When you exchange SEP cylinders, instead of getting them refilled, there are several possible outcomes, all of them bad.

- Exchanged cylinders may not have a new hydro test (the full 5 years or the full 10 years for steels with *), therefore you may find that next year you may be sending cylinders out for hydro.
- The hydro dates may be staggered; one goes out in 2 years, the other in 4 years. You just multiplied your work load by a factor of ~ 4.
- If the cylinders are not "+" tested, they can only be filled to working pressure giving you 3 ft3 less than the bottles NDC originally shipped out.
- You may be given non painted aluminum cylinders that are more susceptible to corrosion in saltwater environments.
- Your exchanged cylinder valves may be in less than acceptable condition.
- The burst discs in the exchanged cylinder valves may be corroded or weakened by unknown filling practices or excessive filling cycles.
- The gasket seating surface on the exchanged valves may be damaged.
- The exchanged valves may require a wrench to open them.
- The exchanged cylinders may be of different heights causing damage to SEP dual yoke manifolds.
- The history of the exchanged cylinders is unknown. After the last hydro they may have been overfilled or exposed to excessive heat increasing the likelihood of catastrophic failure.

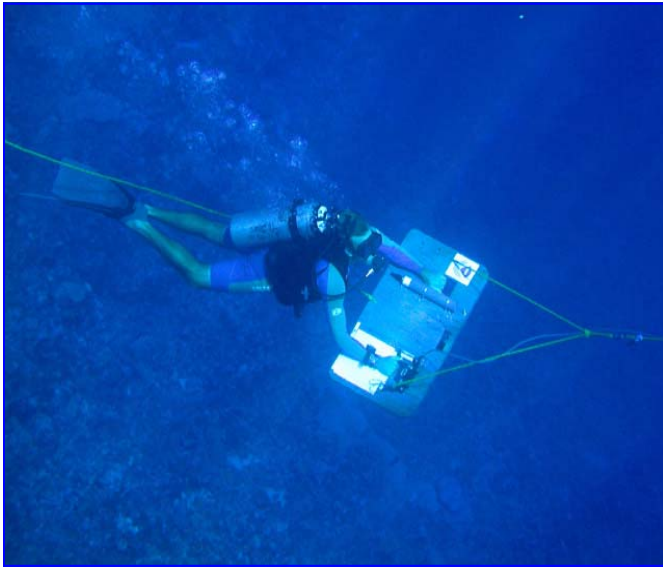
If you received an SEP oxygen kit in the last 3 years, it shouldn't require hydro testing until at least 2014, unless someone has exchanged the oxygen cylinders. Units are responsible for the upkeep and cost associated of SEP oxygen kits. The SEP O2 kit program saves NOAA time and money and provides quality controls; i.e., known histories of cylinders, valves and burst discs.

*** DO NOT EXCHANGE SEP OXYGEN CYLINDERS, GET THEM REFILLED. ***

~ thanks, Bill



Towboarding in Hawaii




Towboarding is nothing new. The idea of towing divers from a boat probably developed when divers decided to search for more dive sites. Since 1990, the Pacific Island's Fisheries Science Center (PIFSC) in Honolulu, Hawaii has been utilizing SCUBA towboarding to do just that, quickly survey large areas of ocean bottom. Dr. Frank Parrish, NMFS LODO, developed the PIFSC towboards from towboards he had used as a teenager. Towed from a small boat on 200 feet of line, the early PIFSC towboards were 2/3 the size of a desktop. They had a slate for recording observations, either a Nikonos still camera or a bulky housed VHS camera and a telegraph system the diver used to signal the tow boat. Using dots and dashes, the divers could communicate "okay, stop, faster, slower, help". A chase boat followed the diver's bubbles and in good conditions could watch the towed divers from the surface.

Towboards were first used to depths of 120 feet to search for abandoned lobster trap strings in the Northwestern Hawaiian Islands (NWHI). Only one abandoned trap string was located, however, the bottom habitat observations were monumental; until then no one had seen the bottom. The following two years, the towboards were used to survey the fishery's bottom habitat and again in 1997 to map the habitat zones of French Frigate Shoals. In 2000, SCUBA towboards were used to survey Howland, Baker, and Jarvis Islands; Palmyra atoll, Kingman reef and the NWHI. Since then SCUBA towboarding has surveyed hundreds of kilometers of habitat; the older cameras have been replaced by digital, but the design itself is relatively unchanged.

A smaller cousin, the snorkel towboard, has been used since 1996 to survey the shallow waters of the NWHI for marine debris. Able to be towed at a faster speed and more nimble than the SCUBA towboard, the snorkel towboard can maneuver around the rugose shallow coral reef terrain. At least half of the 500 plus tons of marine debris removed from the NWHI were located via this survey method.

Since its introduction in 1990, towboarding has been a versatile tool in the PIFSC diving toolbox. For more information on this capability you can contact Ray.

~ by Ray Boland 

Unit Diving Supervisor—Profile



Ray Boland is the UDS for NMFS - Pacific Islands Region. He supervises 10% of NOAA's divers and is an outstanding contributor to the NOAA Diving Program. This year, Ray will be coordinating the Inspiration Closed-Circuit Rebreather study.

I am a biologist first. Being a Unit Dive Supervisor (UDS) for NOAA is a secondary role for me. When it comes to my performance evaluation I am evaluated on the science I have or haven't produced. However, this does not mean I do not pay attention to being a UDS or take it seriously.


My primary duty as UDS is to insure that my divers are able to dive, as safely as possible following all policies and procedures, to complete their projects. Divers have the responsibility that they are conducting their dives in as safe a manner as possible; its integral with every dive. It's my job to make sure that nothing has been missed.

My secondary duty as UDS is to keep the NOAA Dive Program in a state of advancement in the forms of better or safer policies, creating reciprocity agreements or the inclusion of new technologies that allow NOAA divers to efficiently gather data or complete their projects.

When I have a question, I consult my well-worn copy of the NOAA Dive Regulations, NAO 209-123; it answers just about every question. I also consult with my LODO, Dr. Frank Parrish, whose 20 years of experience and corporate knowledge of the NOAA Dive Program are an invaluable resource. For really big questions I contact Dave Dinsmore.

The UDS draws its power from the NOAA Dive Program and is the local representative of Dave Dinsmore. I have stopped dive projects, put additional requirements on divers and their projects, or rejected them outright. On the flip side I have defended divers, their projects and NOAA dive policies against those who have no official capacity to dictate diving or NOAA dive policy. The UDS is that powerful, the UDS **IS** the NOAA Dive Program. But the power must be used wisely otherwise your divers won't listen, and Dave Dinsmore and NDP won't support you.

To me, what is the UDS job in one sentence? To enable your divers and their projects; and to uphold the NOAA Dive Program and its policies.

~ by Ray Boland 

Diving Projects around the Nation in March



NOAA Scientific Diver, Amy V. Uhrin (NOS/CCFHR) prepares to conduct a habitat survey in a soft coral reef.

Credit: Michael Judge (NMFS/SEFSC)



NOAA Working Divers Roger Mays (NOS/CCFHR Unit Dive Supervisor) and Brett Harrison (NOS/CCFHR) operate the push-net to collect juvenile fish and invertebrates in a sea-grass bed.

Credit: John Burke (NOS/CCFHR)

Divers from NOAA's Center for Coastal Fisheries and Habitat Research divers, with the assistance of divers from NOAA/NMFS/Southeast Fisheries Science Center, NOAA/NOS Center for Coastal Monitoring and Assessment and the State of Florida Fish and Wildlife Conservation Commission, completed 436 dives along the southern coast of Isla Vieques, Puerto Rico during a recent research cruise (March 26 – April 4) aboard NOAA Ship NANCY FOSTER. This cruise marks the 4th year of operations in support of an ongoing, collaborative effort between CCFHR and NOAA's [Office of Response and Restoration](#). The goal of this study is to collect data which will serve to prioritize conservation efforts related to the cleanup and restoration of Vieques' coastal waters. Underwater diver surveys are designed to identify benthic habitats of high value for fisheries by quantitatively sampling benthic habitats and associated fish communities within coastal shelf habitats. To view the daily cruise web log, visit <http://www.ccfhr.noaa.gov/stressors/landuse/pr2008/welcome.html>.

~submitted by Amy Uhrin 

Ships: Lessons Learned

Recently NOAA SHIP NANCY FOSTER was a victim of the common "late night crab pot in the propeller" incident, leading to 10 man hours of diving.

Fortunately, NANCY FOSTER could secure the z-drive and run off the main engine till the following day. Once anchored FOSTER sent down divers and it was soon clear that there was a bigger issue: the polypro line had melted and fused to the shaft. After two hours of "trimming" the ship decided to secure the propeller for the rest of the cruise and continue the work in port. Once at the pier in San Juan, cutting, prying, crimping and sawing was not successful. The engineers offered an air gun which could pound its way into the mass. After an hour working with the pneumatic tool the pieces could be pried off and once again the Z-drive could be used.

Lessons learned:

- Find a good anchorage, bouncing in the swells made the dive much more difficult.
- Use the air gun early to save time and frustration
- Switching dive teams prevented exhaustion and brought new perspective
- Dive time could have doubled in bad visibility.

~submitted by Divemaster LT Sarah Mrozek 



NOAA Maritime Heritage Program archaeologist Tane Casserley joined Alaska state archaeologists, the wreck site discoverer and his dive team on the *Torrent* Project, a joint field survey to document the remains of the *Torrent* that sank in 1868 off the Kenai Peninsula. Operating off the vessel, *Obtainium*, they were able to make one dive a day over three days on the site, due to the tremendous tidal changes in the area, from March 27-30. This project was one of the first partnerships between the state and the public to document a maritime archaeological site in Alaska. The team recorded a wealth of still and video documentation and all data will go towards nominating the shipwreck to the National Register of Historic Places. This project is part of an ongoing partnership between NOAA's National Marine Sanctuaries Maritime Heritage Program and the state of Alaska to aid in the documentation and management of the state's historic resources.

~Photo and text submitted by Tane Casserley 