

ISCO & THE ISCO NEWSLETTER

The ISCO Newsletter is published weekly by the International Spill Control Organisation, a not-for-profit organisation supported by members in 45 countries. ISCO has Consultative Status at IMO, Observer Status at IOPC Funds and is dedicated to raising worldwide preparedness and co-operation in response to oil and chemical spills, promoting technical development and professional competency, and to providing a focus for making the knowledge and experience of spill control professionals available to IMO, UNEP, EC and other organisation.

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JAPAN DONATES VITAL OIL SLICK-MOPPING EQUIPMENT TO SRI LANKA



Training of Lankan coast guards



December 22 - Sri Lanka is an island situated on main international sealanes, besides being located on the Silk Route. Accordingly, a large number of vessels/ships pass Sri Lanka. However, in the event of a major oil spill, Sri Lanka has neither the facilities nor the expertise to arrest the situation.

"In the event of a major oil spill disaster Sri Lanka has to get assistance from India to arrest such a situation because we have no sophisticated equipment. Therefore, the Japanese government through its embassy in Colombo donated seven containers of oil mopping equipment to Sri Lanka to face such challenges, security advisor to the embassy of Japan in Sri Lanka Cap. R.M.K.U.B.I Rathnayake told The Island Financial Review.

The Island [Read more](#)

UN DEMANDS ISRAEL COMPENSATE FOR OIL SPILL ON LEBANESE SHORE

December 23 - The press office of Minister of Environment Mohammad Al-Mashnouq stated that "the United Nations General Assembly adopted on Tuesday a new resolution, which is the tenth of its kind, condemning 'Israel' and confirming the previous demand of \$856.4 million compensation for the oil slick on Lebanese shores."

171 State voted in favor of this resolution while 6 countries objected to it and 3 others abstained from voting. *Al-Manar News* [Read more](#)

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Incident reports from around the world

THAILAND: POLICE TO INVESTIGATE HUA SAI OIL SPILL

December 20 - Marine authorities filed a police complaint yesterday in response to the large amount of oil that has washed ashore since Friday in Nakhon Si Thammarat's Hua Sai district.

Over the past two days oil and tar balls washed onto a long stretch of Hua Sai Beach in Tambon Koh Phetch and Tambon Na Saton. Although the oil has been diluted by the seawater and waves carried much of it back out to sea, many tar balls and oil stains remained.

Military Circle 41 chief Maj-General Theenachat Jinda-ngern will coordinate the cleanup effort with local officials and the public, plus dispatch soldiers to help. *The Nation* [Read more](#)

NEW ZEALAND: OIL SPILL IN TAURANGA HARBOUR CLEANED UP



December 23 - An oil spill in Tauranga Harbour from a damaged fishing vessel has been cleaned up. Bay of Plenty regional harbourmaster Peter Buell said the spill created an oil sheen about a hundred metres long and two to three metres wide in the port area. *Radio New Zealand News* [Read more](#)

Incident reports from around the world (continued)

CANADA: NB POWER REPORTS OIL SPILL AT MACTAQUAC



Photo: Flows through the Mactaquac generating station were 187,000 gallons per second at the time of the oil spill.

December 24 - NB Power is reporting a spill of approximately 2,650 litres of Teresso 46 lubricating oil into the St. John River after a valve malfunctioned at the Mactaquac generating station on Tuesday.

The utility said the oil is non-hazardous and biodegradable, has low eco-toxicity

and is not expected to be harmful to aquatic organisms. *CBC News* [Read more](#)

AUSTRALIA: FREIGHT TRAIN CARRYING DANGEROUS ACID DERAILS NEAR JULIA CREEK

December 27 - A FREIGHT train has derailed in outback Queensland, spilling dangerous acid on the ground and causing an emergent situation to be declared.

Police say the 26 carriage freight train that derailed at 10:20 this morning about 20km east of Julia Creek was carrying about 200,000 litres of sulfuric acid.

The emergent situation has been declared to assist in the clean up of a "minor leakage" of the acid, along with some diesel fuel. *Courier Mail* [Read more and see photos and video](#) [Thanks to Don Johnston of ISCO Industry Partner, DG & Hazmat Group]

Incident reports from around the world (continued)

USA: WASHINGTON - CREWS WORK TO CLEAN UP OIL SPILL IN KENT WETLAND

December 29 - It could take several days to clean up oil discovered over the weekend at a wetland in Kent and officials estimate the cost of the cleanup will be more than \$50,000.

A spokesperson for the Department of Ecology estimates at least 300 gallons of oil were dumped in the area located off South 216th Street.

Larry Altose also said the spill does not appear to have been an accident. He said the oil was likely dumped there, though it's not yet known who might have done so or why. *King5.com* [Read more](#)

SRI LANKA: NAVY ASSISTS TO STOP OIL SPILL

January 1 - Naval troops assisted in the restoring of a leak in the oil pipeline that feeds the Muthurajawela Oil Refinery on Thursday (31st December 2015). Due to timely action taken to halt the leak made it possible to minimize the adverse affect caused to the environment.

According to Navy sources the oil spill was first noticed by a vigilant naval personnel attached to SLNS Kelani. The Navy was able to restore the oil pipeline with the assistance of the Petroleum Corporation and the Sri Lanka Coastguard Department. About 10,000 litres of kerosene had flowed into the lagoon due to the spill. *Sri Lanka Ministry of Defence* [Read more](#)

Other news reports from around the world (countries listed in alphabetical order)

GERMANY: MINI-SKIMMER FOR SHALLOW WATER OIL SPILLS

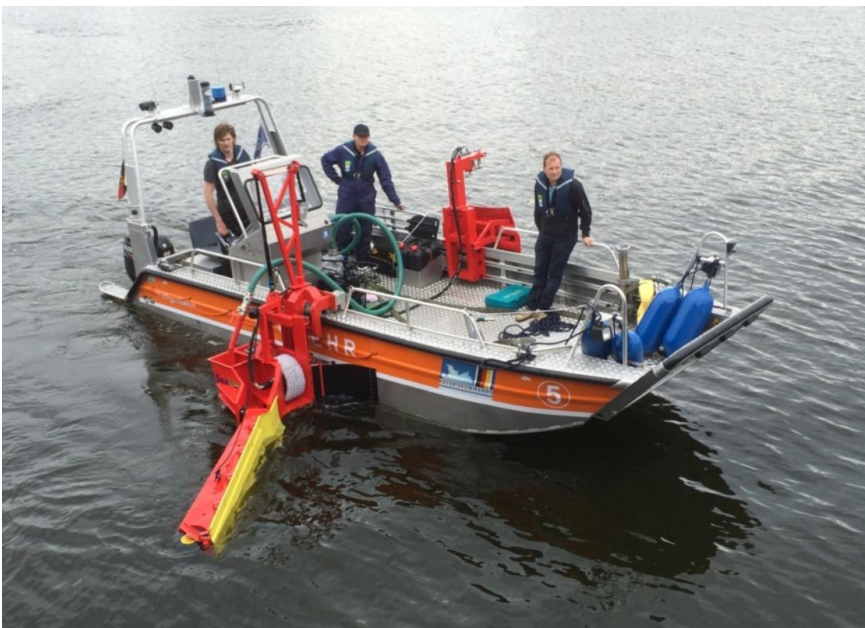


Photo: Oil skimmer on Faster 650 Cat (Photo: Nordland Hansa)

December 21 - The Central Coastal Command for Maritime Emergencies (CCME) in Germany has put a shallow-water oil skimming system into service on a flotilla of multi-purpose boats and will equip more.

The CCME has installed the SeaHow MiniBagger oil spill systems from Finland's Meritaito-SeaHow in Helsinki onto six 7.5m Faster 650 Cats, supplied by Nordland-Hansa in Rostock.

The CCME's Michael Friedrich told *Maritime Journal* the systems were being fitted on three further catamarans during 2016. They were acquired by the Federal Agency for Technical Relief (THW) in Berlin, which provides global technical and humanitarian aid. The CCME is responsible for oil spill response equipment and services in Germany. *Maritime Journal* [Read more](#)

NORWAY: MEASURES TO PROTECT ENVIRONMENT FROM MERCURY POLLUTION FROM U-864 WW2 SUBMARINE WRECK

December 19 - The Norwegian Coastal Administration (NCA) has awarded a contract to Van Oord Norway AS for counter filling in the wreck area for the submarine U-864, outside the island of Fedje on the west coast of Norway.

Intended to ensure seabed stability in the area, this operation must be conducted regardless of the main measure chosen to protect the environment against mercury pollution from the German World War Two wreck.

This Dutch company ranks one of the world leaders in installing counter fills and other advanced rock installations at sea beds and has long experience from similar assignments for the offshore industry in the North Sea.

Stringent requirements have been set for environmental monitoring of the work. Such checks will be conducted during the maritime operations by the Norwegian Institute for Water Research (Niva) as a subcontractor to Van Oord.

"Following a detailed evaluation, Van Oord was found to have submitted the best overall tender," says Johan Marius Ly, director of emergency preparedness at the NCA.

New geotechnical analyses of the seabed in the area around the Second World War wreck were conducted in 2013. On that basis, experts from the Norwegian Geotechnical Institute (NGI) and DNV GL recommended that counter filling should begin as soon as possible. *The Norwegian Coastal Administration* [Read more](#)

Other news reports from around the world (continued)

UK: UKSPILL ANNUAL AWARDS 2016: NEW DEADLINE FOR SUBMISSIONS - 15TH JANUARY 2016

December 21 – The Award Categories are -

1. Individual Award – to recognise a new to spill industry individuals who have made outstanding progress and contribution
2. Domestic Responder – to recognise response actions by and from within a company to a spillage incident within the UK which results in a significant success for that company in the field of spill response.
3. International Responder - to recognise response actions by and from within a company to a spillage incident outside of the UK which results in a significant success for that company in the field of spill response.
4. Manufacturer / Service Award – to recognise the launch of an innovative new product or service for the oil spill market

If you would like to put forward your company or nominate an individual for an award then the following process applies:

- Your company must be a eligible member (Corporate, Basic or Associate) of UKSpill at the time of your submission
- Submissions must be made to info@ukspill.org no later than 15th January 2016
- Submissions should be in a pdf format
- Submissions must not exceed 2000 words and should:
 - Clearly state the award category you are entering your submission to
 - Describe the event / incident which is to be judged and explain how the individual or team made an outstanding contribution to the success of the project
 - or, describe the product / innovation developed, its application and why this is a development worthy of recognition from the Industry
 - Be supported by photographs and or data where relevant and any client testimonial

USA: STUDY ASSESSED IMPACTS OF DEEPWATER HORIZON OIL SPILL ON SEA TURTLES

December 23 - Researchers investigating the impacts of the Deepwater Horizon oil spill on sea turtles found that over 320,000 juvenile sea turtles from populations throughout the Atlantic Ocean were likely present in the northern Gulf of Mexico during the 87-day oil spill. The study, led by researchers at the University of Miami (UM) Rosenstiel School of Marine and Atmospheric Science, has important implications for international management and restoration efforts following oil spills.

"There is a perception that the spills impacts were largely contained to the northern Gulf of Mexico, because that is where the oil remained," said study's lead author Nathan Putman, a researcher at the Cooperative Institute for Marine and Atmospheric Studies located at the UM Rosenstiel School. "However, this overlooks the movement of migratory and dispersive marine animals into the area from distant locations."

Researchers used a computer model to backtrack virtual particles from the Gulf of Mexico spill site to determine the probability of young sea turtles arriving to this area from across the Atlantic. The abundance of turtles in the vicinity of the oil spill was derived by forward-tracking particles from 35 major nesting beaches using knowledge of their population sizes, oceanic-stage durations, and survival rates.

The simulations showed that upwards of 320,000 green (*Chelonia mydas*), loggerhead (*Caretta caretta*) and Kemp's ridley (*Lepidochelys kempii*) turtles were likely present within the spill site. More than 95 percent of sea turtles present at the spill site are thought to have originated from outside of the U.S., including from populations throughout the Gulf of Mexico, Caribbean, northern South America, and western Africa.

"Our findings give new geopolitical context to the scope of the spill, placing its impacts far beyond the present focus on the northern Gulf of Mexico," said Putman. *EurekaAlert* [Read more](#)

USA: FIRST RESPONDERS OFTEN UNPREPARED FOR DERAILMENTS

December 22 - Trains carrying hazardous materials — from chlorine and hydrochloric acid to ethanol and crude oil — roll through neighborhoods and business districts nationwide every day.

Most of them go unnoticed, and nearly all reach their final destination without incident.

But when they crash, the consequences can be dire. About 1.4 million Ohioans live within a half-mile of rail lines where Bakken crude is transported.

State officials say they have no specific plans to handle derailments of trains carrying Bakken crude oil. First responders in small, remote towns sometimes aren't equipped to handle toxic spills and explosions. And big-city fire departments aren't always trained to handle the most-dangerous chemicals.

The boom in domestic oil production and a too-small pipeline network have pushed most of the crude oil drilled in the Bakken shale formation in North Dakota and Montana onto the nation's rail network, where it's shipped through small towns and big cities to coastal refineries. A Dispatch analysis of Federal Railroad Administration data found that problems with worn-down tracks and mistakes made by train operators and others plague U.S. railroads. *Emergency Management* [Read more](#)

People in the news

USA: BILL SCHMIDT, PROGRAM MANAGER AT OHMSETT, RETIRES



After 19 ½ years as facility manager, Bill Schmidt is retiring at the end of December.

During his tenure, Schmidt has fostered a dedicated and knowledgeable staff of 19 from an original team of nine, and developed Ohmsett into a world renowned oil response testing and training facility.

In 2012, with much of the area and facility devastated during Hurricane Sandy, Schmidt led his team through the recovery process to get the facility online within four weeks.

With his final tank refurbishment project behind him, Schmidt has the accomplishment of taking a facility built in the 1970s with the ability to only test 70-80 days out of the year, to a state-of-the-art facility that reached a record of 184 test days.

“BSEE has been fortunate to have Bill’s continued support and expertise,” say David Moore, chief of the Oil Spill Preparedness Division for the Bureau of Safety and Environmental Enforcement. “Having Bill on-site has allowed us to be confident that Ohmsett is being operated in full compliance with the Oil Pollution Act of 1990.” *Ohmsett Gazette* [Read more](#)

Science and technology

NEW UNDERWATER DRONE FLIES AND SWIMS

December 10 - Rutgers University engineering researchers have developed a drone that is just as at home underwater as it is flying through the air.

The U.S. Office of Naval Research awarded Rutgers University in the U.S. a grant to develop a drone – equally adept at flying through the air and navigating underwater – that could speed search-and-rescue operations, monitor the spread of oil spills and help the Navy rapidly defuse threats from underwater mines.

Javier Diez, a professor in the Department of Mechanical and Aerospace Engineering, had been dabbling with the concept for years with the help of his graduate and undergraduate students. But when he demonstrated it to Navy research officials earlier this year, they almost immediately funded his work on new versions of the air-and-water craft.

“Waterfowl are still better at flying than swimming, and flying fish are still better at swimming than flying. Our device is equally adept at both,” said Diez. “In a sense, we are defying nature rather than emulating it.”

Diez predicts many potential applications. For search and rescue, for instance, the vehicle could scan the water from above to locate missing swimmers and sailors, and upon spotting shipwreck debris could dip underwater to further examine the scene. At an oil spill site, it could map the spread of a spill and see how deep the plume reaches. *The Maritime Executive* [Read more](#)

FLOATING WASTE DAM TO BE TESTED IN NORTH SEA

December 31 - A revolutionary floating dam that traps plastic bags, bottles and other waste choking the world's oceans will be tested at sea for the first time in 2016, the Ocean Cleanup foundation said.

"It will be the first time our barrier design will be put to the test in open waters," the foundation said of the 100m long barrier segment that will be deployed 23km off the coast of the Netherlands in the second quarter of the year.

Most ocean waste collection programmes use boats to scour the surf for the plastic flotsam and jetsam in which dolphins, seals and other sea creatures become entangled.

Ocean Cleanup’s barrier uses currents to passively ensnare waves of garbage - while allowing fish and other sea creatures through.

The foundation said the goal of the North Sea test, which comes after earlier tests in controlled environments on Dutch lakes, was "to monitor the effects of real-life sea conditions, with a focus on waves and currents". *News 24* [Read more](#)

Publications

EXPLORE OIL SPILL DATA FOR GULF OF MEXICO MARINE LIFE

December 27 - In the wake of the Deepwater Horizon oil spill, the sheer amount of data scientists were gathering from the Gulf of Mexico was nearly overwhelming. Everything from water quality samples to the locations of oiled sea turtles to photos of dolphins swimming through oil—the list goes on for more than 13 million scientific records.

So, how would anyone even start to dig through all this scientific information? Fortunately, you don’t have to be a NOAA scientist to access, download, or even map it. We have been building tools to allow anyone to access this wealth of information on the Gulf of Mexico environment following the Deepwater Horizon oil spill.

We’re taking a look at two of our geographic information systems tools and how they help scientists, emergency responders and the public navigate the oceans of environmental data collected since the 2010 Deepwater Horizon oil spill.

Publications (continued)

When it comes to mapping and understanding huge amounts of these data, we turn to our GIS-based tool, the Environmental Response Management Application, known as ERMA®. This online mapping tool is like a Swiss army knife for organizing data and information for planning and environmental emergencies, such as oil spills and hurricanes.

ERMA not only allows pollution responders to see real-time information, including weather information and ship locations, but also enables users to display years of data, revealing to us broader trends.

For instance, say you want to know the likelihood of sea turtles being exposed to heavy oil during the Deepwater Horizon oil spill. ERMA enables you to see where sea turtles were spotted during aerial surveys or captured by researchers across the Gulf of Mexico between May and September 2010. At the same time, you can view data showing the probability that certain areas of the ocean surface were oiled (and for how long), all displayed on a single, interactive map.

Perhaps you want to focus on where Atlantic bluefin tuna were traveling around the Gulf and where that overlaps with the oil spill's footprint. Or compare coastal habitat restoration projects with the degree of oil different sections of shoreline experienced. ERMA gives you that access.

You can use ERMA Deepwater Gulf Response to find these data in a number of ways (including search) and choose which GIS "layers" of data to turn on and off in the map. To see the most recently added data, click on the "Recent Data" tab in the upper left of the map interface, or find data by browsing through the "Layers" tab on the right. Or look for data in special "bookmark views" on the lower right of the "Layers" tab to find data for a specific topic of interest.

Now, what if you not only want to see a map of the data, what if you also want to explore any trends in the data at a deeper level? Or download photos, videos or scientific analyses of the data?

That's where our data management tool DIVER comes in. This tool serves as a central repository for environmental impact data from the oil spill and was designed to help researchers share and find scientific information ranging from photos and field notes to sample data and analyses.

As Ocean Conservancy's Elizabeth Fetherston put it: "Until recently, there was no real way to combine all of these disparate pixels of information into a coherent picture of, for instance, a day in the life of a sea turtle. DIVER, NOAA's new website for Deepwater Horizon assessment data, gives us the tools to do just that.

"Data information and integration systems like DIVER put all of that information in one place at one time, allowing you to look for causes and effects that you might not have ever known were there and then use that information to better manage species recovery. These data give us a new kind of power for protecting marine species."

One of the most important features of DIVER, called DIVER Explorer, is the powerful search function that allows you to narrow down the millions of data pieces to the precise set you're seeking. You do it one step, or "filter," at a time.

The Maritime Executive and NOAA [Read more](#)

Links for recent issues of other publications (in alphabetical order)

AMSA Aboard	News from the Australian Maritime Safety Authority	December 2015 issue
ASME EED EHS Newsletter	News and commentary on HSE issues from George Holliday	Most recent issue
Bow Wave	Sam Ignarski's Ezine on Marine & Transport Matters	Current issue
Cedre Newsletter	News from Cedre in Brittany, France	November 2015
Celtic Biogenie enGlobe Newsletter	Latest Remediation and related technology news	Autumn 2015 issue
CROIERG Enews	Canberra & Regions Oil Industry Emergency Response Group	Current issue
EMSA Newsletter	News from the European Maritime Safety Agency	November 2015 issue
Energy Institute eBulletin	News from the Energy Institute	April 2015 issue
Environmental Technology Online	Environmental Monitoring, Testing & Analysis	November 2015 issue
IMO News Magazine	News from the International Maritime Organization	No 4, 2015
IMO Publishing News	New and forthcoming IMO publications	December 2015
Intertanko Weekly News	International news for the oil tanker community	No 51 2015
IPIECA eNews	Int'l Petroleum Industry Environmental Conservation Assoc'n	February 12 issue
JOIFF "The Catalyst"	Int'l Organisation for Industrial Hazard Management	October 2015 issue
MOIG Newsletter	News from the Mediterranean Oil Industry Group	Most recent Issue
NOAA update	Oil spill response news from NOAA OR&R	April 2015
OCIMF Newsletter	News from the Oil Companies International Marine Forum	December 2015 issue
Pollution Online Newsleter	News for prevention & control professionals	December 23 issue
Sea Alarm Foundation Newsletter	Oiled wildlife Preparedness and Response news from Sea Alarm	Autumn 2015 issue
SAC News	Oil spill related and other news from Alaska	Dec.11 issue 2015
Technology Innovation News Survey	From US EPA - Contaminated site decontamination	November 1-15, 2015
The Essential Hazmat News	Alliance of Hazardous Materials Professionals	December 28 issue
Transport Canada Newsletter	News and articles re transport of dangerous goods in Canada	Winter 2014 issue
USA EPA Tech Direct	Remediation of contaminated soil and groundwater	January 1, 2016 issue
USA EPA Tech News & Trends	Contaminated site clean-up information	Fall 2015 issue
WMU Newsletter	News from the World Maritime University	December 2015 issue

Your editor depends on regular receipt of updated links for listed publications. If these are not received, relevant entries may be discontinued.

REMEMBERING THE VETERANS THAT SERVED AMERICA AND THE HISTORIC SHIPWRECKS THEY LEFT BEHIND

An article reprinted here with the kind permission of NOAA's Office of Response and Restoration

Picture: Beyond their military and historic significance, these wrecks also represent an enormous human toll. The Allied tanker Dixie Arrow was torpedoed in 1942 by a German submarine during the Battle of the Atlantic. The wreck lies off North Carolina's Cape Hatteras, but due to the way it was destroyed, this wreck does not likely pose any threat of pollution today. (U.S. Navy/National Archives)



Did you know that over 20,000 shipwrecks rest on the ocean floor off our coasts?

The past century of commerce and warfare has left us with this legacy of sunken vessels dotting the seafloor around the United States.

While some of these are naval vessels, a large proportion are [merchant vessels destroyed during war time](#). These wrecks are skewed heavily to World War II casualties such as those fallen during the "[Battle of the Atlantic](#)."

Some wrecks, such as the Civil War casualty, the [USS Monitor](#), have been listed as National Historic Landmarks or on the National Register of Historic Places. Many of them, such as the [USS Arizona at Pearl Harbor, Hawaii](#), are either civilian or military grave sites.

Map on right: More than 20,000 shipwrecks exist in U.S. waters. Many are naval and commercial vessels destroyed during wartime. (NOAA)



Beyond their military and historic significance, these wrecks also represent an enormous human toll.

Today—on Veterans Day in the United States, Armistice Day or Remembrance Day in other nations—we honor the men and women who have served in the armed forces of all nations, and commemorate those who gave their lives in that service, including those in the U.S. Merchant Marine.

The Terrible Cost of the Battle of the Atlantic

During World War II's Battle of the Atlantic, which lasted from September 1939 until the defeat of Germany in 1945, German U-boats and warships (and later Italian submarines) were pitted against Allied convoys transporting military equipment and supplies across the Atlantic to Great Britain and the Soviet Union. This battle to control Atlantic shipping lanes involved thousands of ships and stretched across thousands of square miles of ocean.

The losses in the battle were staggering. Between January and June 1942 alone, this battle resulted in the sinking of almost 500 ships. Historians estimate that more than 100 convoy battles took place during the war, costing Britain's Merchant Navy more than 30,000 men and around 3,000 ships. The terrible cost for the Germans was 783 U-boats and 28,000 sailors, about 75% of the U-boat force. [Although casualty statistics vary](#), we know that the U.S. Merchant Mariners suffered the highest rate of marine casualties of any service in World War II.

While many of these sunken vessels in U.S. waters rest in the Atlantic Ocean or Gulf of Mexico, numerous wrecks, such as the [S/S Montebello](#), can be found in the Pacific. And of course, the wartime toll was spread across the world's oceans, touching nearly all parts of the globe.

NOAA's Role with Undersea Wrecks



On April 17, 1943, Coast Guardsmen on the deck of the U.S. Coast Guard Cutter Spencer watch the explosion of a depth charge that blasted a Nazi U-boat's hope of breaking into the center of a large convoy of ships. World War II left thousands of Allied and Axis ships -- and soldiers -- on the bottom of the ocean. (U.S. Coast Guard)

NOAA is involved with shipwrecks in a number of ways. The agency's role ranges from [offering scientific guidance to the U.S. Coast Guard during pollution responses](#), to [stewarding the diverse natural and cultural resources](#) surrounding wrecks in national marine sanctuaries, to [creating navigational charts](#) that show the precise locations of wrecks that could hinder maritime traffic. Most of the 20,000 wrecks resting off our coasts are old and did not carry oil as fuel or hazardous cargo; however, some of the more recent wrecks have the potential to contain—and sometimes leak—oil.

In 2002, for example, the decaying wreck of the [S/S Jacob Luckenbach](#) (carrying supplies to support the Korean War) was identified as the source of mysterious, recurring oil spills that had killed thousands of seabirds and other marine life along California's coast. Our office joined with the U.S. Coast Guard and other agencies to [remove the approximately 100,000 gallons of oil](#) remaining in the wreck, protect the resources of the Great Farallones National Marine Sanctuary, and [restore critical seabird breeding habitat in the U.S. and Canada](#) to make up for the harm caused by the oil releases.

Leaking wrecks like the [Jacob Luckenbach](#) are one reason NOAA maintains a large database of shipwrecks, dump sites, navigational obstructions, underwater archaeological sites, and other underwater cultural resources, known as the Resources and Undersea Threats (RUST) database.

Beginning in 2010, NOAA's Office of Response and Restoration and Office of National Marine Sanctuaries systematically analyzed a subset of those wrecks which could pose a substantial threat of leaking oil still on board. This work is part of NOAA's Remediation of Underwater Legacy Environmental Threats (RULET) project. ([Read more about the work conducted](#) and the [final report \(PDF\)](#).) After the report was completed in 2013, the U.S. Coast Guard has worked to incorporate the information and recommendations into their regional contingency plans.

NOAA also has the privilege of protecting shipwrecks and naval battlefields through its [National Marine Sanctuaries](#) office. The [first NOAA national marine sanctuary](#) was designated in 1975 to [protect the U.S. Navy warship USS Monitor](#), and other sanctuaries

have followed in these footsteps of preserving historic wrecks. Today, you can explore fascinating undersea wrecks at [Florida Keys National Marine Sanctuary](#), [Thunder Bay National Marine Sanctuary](#) in the Great Lakes, and at [other sanctuaries](#).

Wrecks and Reefs

Sometimes these submerged shipwrecks can serve as [artificial reefs](#). Sunken wrecks are actually the most prevalent type of artificial reef. As artificial reefs, shipwrecks can create both amazing homes for a diversity of marine life and popular attractions for commercial and recreational fishers, divers, and snorkelers.

Occasionally, vessels are even sunk intentionally for this purpose. However, it can be very costly to prepare the vessels to become artificial reefs, which requires removing paints and other hazardous materials in the hull. Another consideration is the stability of the vessel and its danger to living things around it. For example, if the vessel is in shallow water, will it flip over in a storm and crush the new coral growing there? Could people or marine life get caught inside it? These considerations are why artificial reefs are often found in [deep water](#) and [why establishing an artificial reef](#) requires special review and permitting processes.

Through the study, protection, and promotion of our diverse legacy of undersea wrecks, national marine sanctuaries help us learn more about and celebrate our merchant marine and military history.

Explore Shipwrecks While Staying Dry

You can learn more about [NOAA expeditions between 2008 and 2011](#), which explored the World War II wrecks in the "Graveyard of the Atlantic."

You also can watch a video of researchers first discovering the long-lost location of the [USS Monitor's wreck](#) in 1973 off the coast of North Carolina.

See what it's like to dive among the many wrecks at the bottom of Lake Huron in Thunder Bay's "[Shipwreck Alley](#)":

[Take a video tour of the wreck of the USS Arizona](#), sunk by Japanese planes on December 7, 1941, and pay homage to the members of the U.S. armed forces who gave their lives.

<http://www.nps.gov/media/video/view.htm?id=3C2D346C-ACCA-F877-D5B9753F59D58EE0>

Events

UPCOMING EVENTS SUMMARY

COUNTRY	2016	TITLE OF EVENT	LOCATION
For more information click on Title of Event			
USA	Jan. 4-6	No Spills Annual Conference	Acme, Michigan
UK	Jan 27-28	IMarEst – Offshore Units & Application of MARPOL	London
JAPAN	Jan 28-29	PAJ Symposium 2016	Tokyo
UK	Feb 9	UK Spill Members' Meeting and Dinner	London
UK	Feb 15-19	IMO Pollution Prevention & Response S/C'ttee.	London
UK	Feb 17-18	Society of Maritime Industries Conference	Hull
SAUDI ARABIA	Feb 22-24	PetroEnvironment 2016	Dammam
CANADA	Mar 23-24	8th Arctic Shipping Summit	Montreal
NIGERIA	Mar 29-31	Clean Niger Delta Conference	Abuja
UK	April 18-22	IMO Marine Environment Protection Committee	London
UK N. Ireland	April 26-28	ISAA Training Days 2016	Enniskillen
AUSTRALIA	May 2-6	Spillcon 2016	Perth, WA
CROATIA	May 10-12	ADRIASPILLCON 2016	Opatija
UAE	May 17-18	Offshore Arabia Conference & Exhibition	Dubai
NETHERLANDS	May 24-26	Bon Agreement WG on Counter Pollution Activities	Scheveningen
USA	June 21-23	Clean Pacific Conference & Exhibition	Seattle, WA
CANADA	July 7-9	AMOP Technical Seminar	Halifax
INDIA	August TBA	Oil Spill India	Mumbai
UAE	October TBA	EI Middle East HSE Technical Forum	Abu Dhabi
To request posting of an event of interest to the Spill Response Community please send details to the Editor			

Equipment for sale

AEROSPACE RESOURCES UK: BRITTEN NORMAN ISLANDER BN2A-26 WITH EASA-CERTIFIED AERIAL SPRAY SYSTEM

Available immediately. 1973 MSN 334. New Annual and ARC. Airframe 9260 hrs; Engines 615/615 hrs; Propellers 178/0. This unique aircraft has been operating in the UK under EASA AOC conditions, is exceptionally well equipped and has been maintained to very high standards.

420 litre capacity variable rate spray system Spray rate variable > 40 litres per min * Adaptable nozzles for variable droplet size * Suitable for oil dispersants such as Slickgone and insecticides * New Annual and ARC by RGV Aviation * Easily converted back to pax configuration – 10 seats included * 4 seats with spray system installed * New paint 2013 * Recent undercarriage overhaul (APPH legs) *

For more detailed specification, maintenance records and sale price contact Aerospace Resources Ltd. Tel: +44 (0)20 8476 8650 Fax: +44(0)20 8770 2194 Web: www.resource.aero email: info@resource.aero

Company news

ISCO MEMBER, T&T SALVAGE SUCCESSFULLY COMPLETES ANOTHER SUBMERGED OIL RECOVERY OPERATION

In early December 2015, T&T Salvage successfully completed the recovery of a highly toxic cargo from the sunken tank barge ARGO in Lake Erie. The ARGO, constructed in 1911, sank in 1937 with a cargo of benzol that contained a high percentage of the carcinogen benzene. As the only Coast Guard recognized Salvage and Marine Firefighting service provider with a base of operations in the Great Lakes, that is also a Coast Guard classified Oil Spill Recovery Organization, T&T was selected by the Coast Guard to design a diver directed hot-tapping and pumping system to recover the remaining high benzene cargo from the sunken barge at a depth of approximately 50-feet below the lake's surface. Led by T&T's Great Lakes Response Center, the system included pumping the cargo to a series of storage tanks onboard a barge equipped with designed-for-purpose inert gas and vapor recovery systems to ensure the safety of the public and responders. Working in a Unified Command that included the Coast Guard, U.S. and Ohio Environmental Protection Agencies and National Oceanic Atmospheric Administration, T&T successfully achieved all operational objectives – from safely conducting around-the-clock cold water contaminated water diving operations to collecting environmental and barge hull samples for further analysis.

Earlier this year, in September 2015, T&T successfully responded to a tank barge collision in the Mississippi River, quickly salvaging and lightering the damaged tank barge, and then managing the associated spill of over 2,800 barrels of a heavy clarified slurry oil that quickly sank to the river's bottom. With a team experienced in submerged oil detection and recovery operations, T&T designed a recovery system that included an environmental clam shell with a geo-referencing system and a waste stream management system to safely and effectively recover the sunken oil.

"These successful sub-surface pollution response operations demonstrate T&T's unique combination of marine salvage and pollution response expertise, and our team's ability to consistently achieve success in the most demanding operational environments" said Jim Elliott, T&T's Vice President. <http://www.ttsalvage.com/>

ISCO MEMBER, CHEMTEX INC., OPENS NEW GEORGIA, USA MANUFACTURING FACILITY

Chemtex, Inc., a manufacturer of sorbent products used to clean oil spills on both land and water and with its corporate headquarters located in Cumberland, Rhode Island, USA announced recently, its plans to build a new manufacturing facility located in Milledgeville, GA.

The facility is more than 80,000 sq ft and will be responsible for the manufacturing of meltblown polypropylene rolls, pads, booms, socks, and pillows. These products can be used for small one gallon spills on a plant floor as well as a one million gallon catastrophic incident on the ocean.

Now, with locations in Halifax Nova Scotia, Cumberland RI, and Milledgeville GA, Chemtex can provide same day or two day delivery for the entire eastern seaboard of North America. When it comes to fast response times during a major event on the East Coast, "we feel that Chemtex is well positioned". Chemtex has invested well over 1 million dollars into the new facility and plans to hire up to 80 employees over the next 5 years. For more information on Chemtex, please visit www.chemtexinc.com

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