USING NOAA TOOLS TO HELP DEAL WITH THE SINKING PROBLEM OF WRECKED AND ABANDONED SHIPS
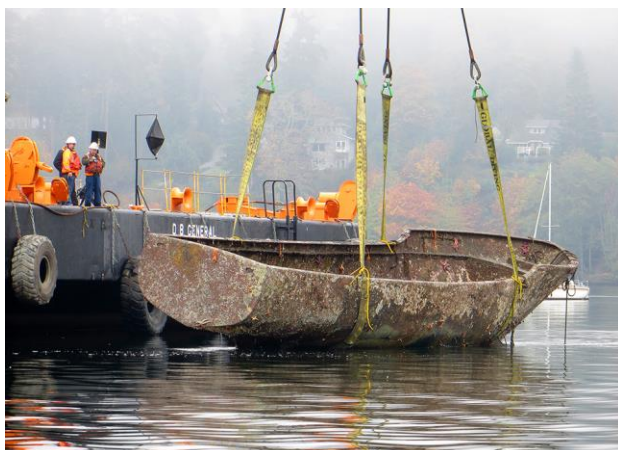

Photo: Clearing a derelict vessel from the Hylebos Waterway in Tacoma, Washington. NOAA has created several tools and resources for mapping, tracking, and dealing with shipwrecks and abandoned vessels. (Washington Department of Natural Resources/ Tammy Robbins) Used under Creative Commons Attribution-NonCommercial-NoDerivs 2.0 Generic license.

Walk along a waterfront in the United States and wherever you find boats moored, you won't be hard pressed to find one that has been neglected or abandoned to the point of rusting, leaking, or even sinking. It's a sprawling and messy issue, one that is hard to fix. When you consider the thousands of shipwrecks strewn about U.S. waters, the problem grows even larger.

How do these vessels end up like this in the first place? Old ships, barges, and recreational vessels end up along coastal waters for a number of reasons: they were destroyed in wartime, grounded or sunk by accident or storm, or just worn out and left to decay. By many estimates shipping vessels have a (very approximate) thirty-year lifetime with normal wear and tear. Vessels, both large and small, may be too expensive for the owner to repair, salvage, or even scrap.

So, wrecked, abandoned, and derelict ships can be found, both invisible and in plain sight, in most of our marine environments, from sandy beaches and busy harbors to the deep ocean floor.

As we've discussed before, these vessels can be a serious problem for both the marine environment and economy. While no single comprehensive database exists for all wrecked, abandoned, and derelict vessels (and if it did, it would be very difficult to keep up-to-date), efforts are underway to consolidate existing information in various databases to get a larger view of the problem.

NOAA has created several of these databases and resources, each created for specific needs, which are used to map and track shipwrecks and abandoned vessels. These efforts won't solve the whole issue, but they are an important step along that path.

Photo: The S/S America sank after hitting rocks in Lake Superior in 1928, but the wreck was found close to the water surface in 1970. This ship has become the most visited wreck in the Great Lakes, where divers can still see a Model-T Ford on board. (Public domain)

NOAA's Remediation of Underwater Legacy Environmental Threats (RULET) project identifies the location and nature of potential sources of oil pollution from sunken vessels. These include vessels sunk during past wars, many of which are also grave sites and now designated as national historic sites. The focus of RULET sites are wrecks with continued potential to leak pollutants.

Many of these wrecks begin to leak years, even decades, after they have sunk. An example of such a wreck is Barge *Argo*, recently rediscovered and found to be leaking as it lay 40 feet under the surface of Lake Erie. The barge was carrying over 4,500 barrels of crude oil and the chemical benzol when it sank in 1937. It had been listed in the NOAA RULET database since 2013. U.S. Coast Guard crews, with support from NOAA's Office of Response and Restoration, are currently working on a way to safely remove the leaking fuel and cargo.

As in the Barge *Argo* case, the RULET database is especially useful for identifying the sources of "mystery sheens" —slicks of oil or chemicals that are spotted on the surface of the water and don't have a clear origin. NOAA's Office of National Marine Sanctuaries and Office of Response and Restoration jointly manage the RULET database.

Information in RULET is culled from a larger, internal NOAA Sanctuaries database called [Resources and Undersea Threats (RUST)](#). RUST lists about 30,000 sites of sunken objects, of which about 20,000 are shipwrecks. Other sites represent munitions dumpsites, navigational obstructions, underwater archaeological sites, and other underwater resources.

Avoiding Future Wrecks

The [NOAA Office of Coast Survey's Wrecks and Obstructions Database](#) contains information on submerged wrecks and obstructions identified within U.S. maritime boundaries, with a focus on hazards to navigation. Information for the database is sourced from the [NOAA Electronic Navigational Charts (ENC®)](#) and Automated Wrecks and Obstructions Information System (AWOIS).

The database contains information on identified submerged wrecks and obstructions within the U.S. maritime boundaries, including position (latitude and longitude), and, where available, a brief description and attribution.

Head to the Hub

Recently, the NOAA Marine Debris Program developed and launched the [Abandoned and Derelict Vessels (ADV) InfoHub](#) to provide a centralized source of information on cast-off vessels that contribute to the national problem of marine debris. Hosted on the NOAA Marine Debris Program website, the ADV InfoHub will allow users to find abandoned and derelict vessel publications, information on funding to remove them, case studies, current projects, related stories, and FAQs.

Each coastal state (including states bordering the Great Lakes) will have a dedicated page where users can find information on state-specific abandoned and derelict vessel programs, legislation, and funding as well as links to case studies from that particular state and relevant publications and legal reviews. Each state page will also provide the name of the department within that state government that handles abandoned and derelict vessel issues along with contact information.

Power Display

In select parts of the country, the Office of Response and Restoration is now using its [Environmental Response Management Application (ERMA®)](#) to map the locations of and key information for abandoned and derelict vessels. ERMA is our online mapping tool that integrates data, such as ship locations, shoreline types, and environmental sensitivity, in a centralized format. Here, we use it to show abandoned and derelict vessels within the context of related environmental information displayed on a Geographic Information System (GIS) map. [In Washington's Puget Sound, for example](#), the U.S. Coast Guard and Washington Department of Natural Resources can use this information in ERMA to help prioritize removing the worst offenders and raise awareness about the issue.
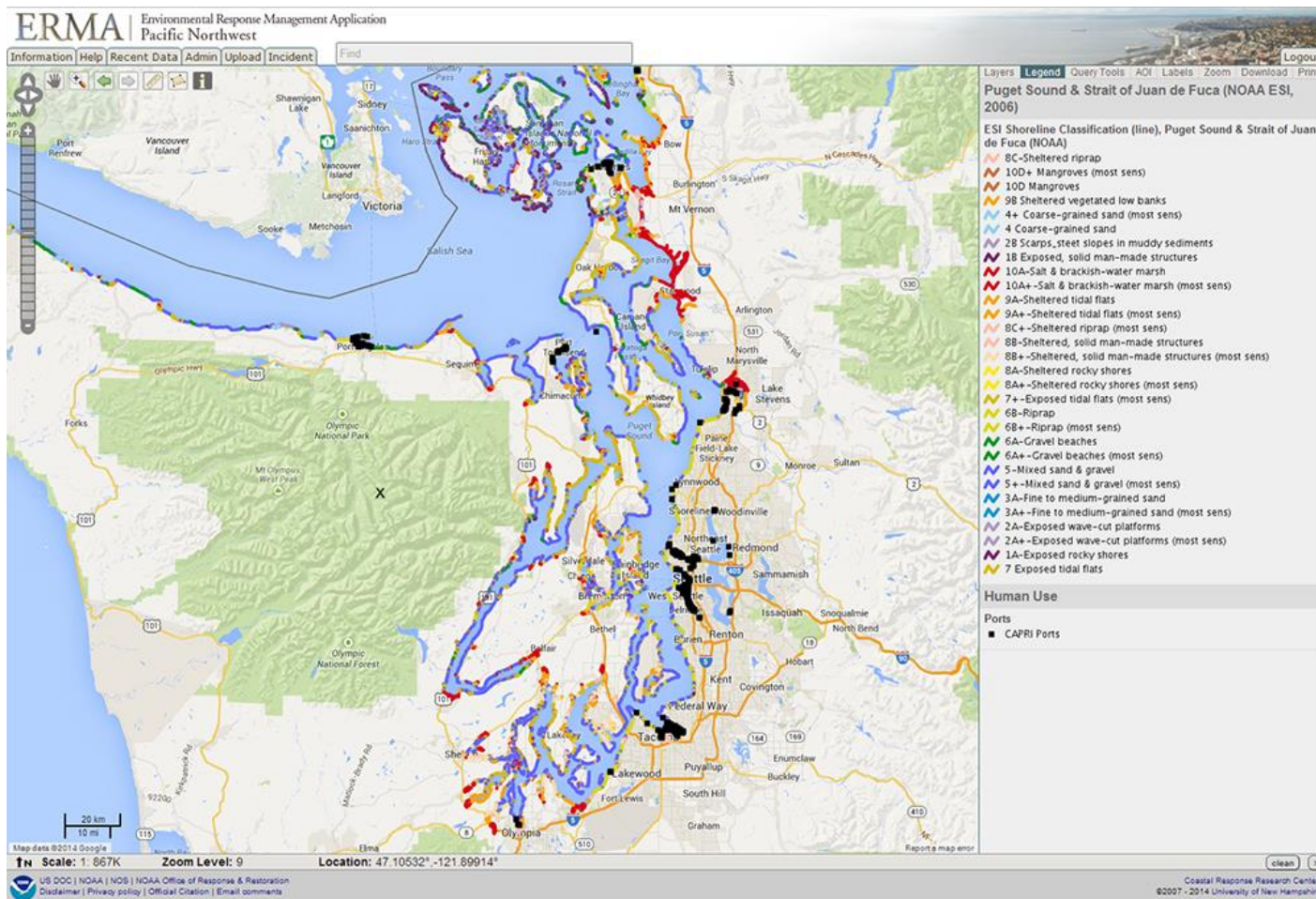
A view of Pacific Northwest ERMA, a NOAA online mapping tool which can bring together a variety of environmental and response data. Here, you can see the black dots where ports are located around Washington's Puget Sound as well as the colors indicating the shoreline's characteristics and vulnerability to oil. (NOAA)

Now part of both Pacific Northwest ERMA and Southwest ERMA (coastal California), our office highlighted ERMA at a May 2015 NOAA Marine Debris Program workshop for data managers. This meeting of representatives from 15 states, four federal agencies, and Canada showcased ERMA as an efficient digital platform for displaying abandoned vessel information in a more comprehensive picture at a regional level.

Once again, removing abandoned vessels or reducing their impacts can be very difficult and costly. But we have been seeing more and more signs of progress in recent years, which requires an increasing amount of collaboration among local, state, and federal agencies and education among the public. By providing more detailed and comprehensive information, NOAA is hoping to help resource managers prioritize and make more informed decisions on how to address the various threats these vessels pose to our coasts.

The Office of Response and Restoration's Doug Helton also contributed to this post.

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To view the original source document please click on https://usresponserestoration.wordpress.com/2015/11/13/using-noaa-tools-to-help-deal-with-the-sinking-problem-of-wrecked-and-abandoned-ships/

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