

# MANAGEMENT OF ALASKA'S SUBMERGED CULTURAL RESOURCES: A CURRENT ASSESSMENT

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## ABSTRACT

Although half of our nation's coastline is within the political boundaries of Alaska, our state lags behind other coastal states in developing a dedicated program for managing the more than 3,000 shipwrecks and countless other cultural sites on our submerged lands. New and inexpensive remote sensing, navigation, and diving technologies have removed many of the obstacles that previously prevented site discovery and exploration. This has resulted in a drastic increase in incidents involving the disturbance of protected submerged cultural resources. The complex legal foundation for addressing submerged resources is grounded both in traditional admiralty law and more recent legislation aimed at resource protection. In practice, the protection of submerged cultural resource sites in Alaska is achieved largely through implementation of several sections of the Alaska Historic Preservation Act (AS 41.35), which gives the state title and management responsibilities for most nonmilitary historic resources within both coastal and interior riverine waters. The act provides for both the issuance of permits and enforcement. In recent years, the Alaska Office of History and Archaeology has begun to build partnerships with federal agencies and academic institutions to generate the baseline data needed to identify, manage, and interpret its rich maritime heritage.

**KEYWORDS:** maritime archaeology, underwater shipwrecks

## INTRODUCTION

According to recent GIS data, Alaska is bordered by 71,000 km of coastline (ACMP 2004) which stretches along three seas and comprises almost half the total U.S. maritime coast.<sup>1</sup> For sake of comparison, Florida has 1,926 km of coastline and Texas has 590 km of coastline. The majority of Alaska's coastal waters out to 4.8 km from shore are the management responsibility of the State of Alaska, along with those sections of the intertidal zone below mean high tide and the channels of navigable streams.<sup>2</sup> The numbers of both identified and potential submerged cultural resources

in these areas are immense. Submerged cultural resources encompass a wide range of sites, structures, or objects with historical, cultural, archaeological, or paleontological significance that are over 50 years old. Examples might include prehistoric or historic settlements engulfed by rising waters, submerged fossils, historic aircraft, and shipwrecks. The latter might include remnants of the vessel's structure as well as cargo and personal belongings of the crew and passengers. The U.S. Department of the Interior Minerals Management Service (MMS), which maintains

1 Until recently, Alaska was reported to have 53,100 km of coastline, but this figure has been increased to 71,000 km due to advances in GIS technology. The figure used for the total U.S. coastline is 14,2641 km, based on 1940s information compiled by NOAA.

2 Notable exceptions include intertidal and submerged lands that are (1) under the jurisdiction of federal agencies, (2) transferred to municipalities by the state, or (3) were patented for private ownership prior to statehood, as is the case with certain historic cannery sites.

the primary database of Alaska shipwrecks, estimates the presence of more than 3,000 shipwrecks in Alaska waters (Michael Burwell 2005, personal communication).

Shipwrecks have often been termed “time capsules” due to their ability to encapsulate a very specific period of history. Contents often include a wide array of structural and personal items that would not normally be preserved on terrestrial sites, particularly if vessels sank rapidly and were not salvaged. Some have speculated that the preservation of submerged resources in Alaska may be enhanced by colder water temperatures and remote locations, although this has not been substantiated. Preservation in a saltwater environment is affected by a complex mixture of temperature, turbidity, benthic variety and biomass, sedimentation, and other variables.

In addition to marine vessels, Alaska waters contain numerous historic aircraft, many of which were associated with World War II military activities. The locations of most shipwrecks and aircraft have not been physically verified through field investigation or remote sensing. Instead, mapped positions are often based on the last reported coordinates or relationship to visible geographic landmarks at the time of sinking. Of those wrecks whose exact locations are known, few have been subjected to field examinations by cultural resource professionals. Even fewer have been assessed for eligibility to the National Register of Historic Places. In addition to submerged watercraft and aircraft, there are innumerable prehistoric coastal and riverine sites that are now wholly or partially inundated due to erosion, past tectonic events, and fluctuations in sea level. While many of these resources are of considerable significance, baseline information on their current condition is virtually nonexistent.

## MANAGEMENT CHALLENGES

Despite the extraordinary length and complexity of Alaska’s coastline and its innumerable submerged cultural resources, the State of Alaska does not currently have a program specific to the investigation and management of submerged cultural resources or for maritime heritage education. It should be noted also that no other agency or university has this type of program in Alaska, although federal agencies such as the Minerals Management Service, the National Oceanic and Atmospheric Administration (NOAA), and the National Park Service (NPS) employ submerged cultural resource specialists in units outside Alaska.

In recent years, new and inexpensive remote sensing, navigation, and diving technologies have removed many of the obstacles that previously prevented site discovery and exploration. This has resulted in a drastic increase in disturbance of protected submerged cultural resources. Artifacts from historic shipwrecks in Alaska waters decorate mantles throughout our state, having been indiscriminately removed by the unknowing or uncaring. At an increasing rate, artifacts from Alaska waters are being sold via eBay and other venues outside the state. Even more troubling are reports within the last several years of commercial dredging operations aimed at the large-scale removal of shipwreck artifacts for sale. The majority of the affected sites are located on or embedded in state submerged lands (i.e., between mean high tide and the 4.8 km limit), placing management responsibility on the state. However, remote locations and a lack of priority for law enforcement agencies, have made the protection of these sites difficult, if not impossible. This is complicated by a general misunderstanding of legal maritime salvage under admiralty law and the applicability of resource protection laws to submerged maritime heritage. Even professionals accustomed to dealing with other types of natural and cultural resource issues are not always able to transfer their mindsets from land to water, incorrectly equating the removal of submerged cultural materials to court sanctioned “finders-keepers” perceptions. In 2004, the well-publicized salvage activities of commercial divers on the Alaska steamship *S.S. Aleutian* brought Alaska’s historic shipwrecks to the attention of the general public. A series of newspaper articles describing these activities, and efforts by the state to litigate, have contributed to an increased awareness of the richness and vulnerability of Alaska’s maritime heritage.

Unlike many of Alaska’s approximately 30,000 identified terrestrial sites (AHRS data, October 2005), very little baseline information has been recorded for submerged resources. While we know that sites are degrading as a result of both natural processes and vandalism, we do not currently have sufficient information to document changes through time. Basic inventory and site characterization efforts are critical to the development of management strategies. A second line of defense in the protection of Alaska’s submerged sites is the development of data that will contribute to a better understanding of decay processes, corrosion, and biotic relationships specific to coldwater heritage resources. Such efforts have implications for the development of conservation plans in the event that collections are made. The wooden por-

tions of shipwrecks in tropical waters, along with associated metal artifacts, are typically poorly preserved due to intense submarine weathering, corrosion, and biological encrustation. Conversely, it is generally believed that colder waters support relatively less dense benthic biological populations and contribute to better wreck preservation. To achieve a better understanding of these processes, managers need baseline information on sediments, trace metals, organics, and benthic biota. This is best achieved through multidisciplinary collaboration with marine biologists, geologists, and other scientists with appropriate expertise. The only feasible way for the state to gather baseline information on its submerged heritage is through collaboration with other organizations.

### LEGAL FOUNDATION: HISTORIC PRESERVATION AND THE LAW OF THE SEA

The determination of ownership of historic shipwrecks and their cargo is derived from a sometimes complex and controversial balance between traditional admiralty law and more recent state and federal cultural resource management legislation. Presently there is no comprehensive set of legal standards for submerged resource managers. However, a good synopsis of maritime laws and cultural resources has been written by admiralty attorney David Howe (2000) for the Maritime Archaeological and Historical Society newsletter. Much of the limited discussion of maritime law that follows is derived from Howe's article.

Traditional maritime law in the U.S. consists of the "law of salvage" and the "law of finds." The law of salvage is grounded in ancient Roman law, which allows for the recovery of property in peril at sea and return to its owner for a reward. In Howe's synopsis:

In a nutshell, "salvage" means that if I save your property from peril at sea and return it to you, you owe me a reward for saving it. ... Salvage law promotes the unscientific destruction of historic wrecks and the permanent loss of the archeological evidence they contain by rewarding the economically efficient recovery of commercially valuable objects. (Howe 2000:1)

In old maritime cases, salvors successfully argued to the courts that wrecks even as old as 400 years were "in peril" for purposes of salvage awards. In some of the more recent cases, this argument has been rejected by the courts. More recent cases have also set precedents for the inclusion

of archaeological documentation in conjunction with salvage. However, the courts have not generally held salvors to the same standards required of good scientific archaeology. Under salvage, a property owner, which might include a successor insurance company, can prohibit, limit, and control recovery efforts. The property owner can also relinquish ownership and abandon the wreck, which may be desirable to avoid liability in some instances, particularly if the vessel contains hazardous materials. Under salvage law, a salvor's claim against the property generally is *in rem*, i.e., against the ship, rather than the owner *in personam*. The salvor "arrests" the wreck by removing an item (an artifact if the vessel is historic) to represent the vessel in legal proceedings. A federal court with admiralty jurisdiction *in rem* can decide everyone's rights in the case, even those who do not know the wreck is in dispute. For proceedings that involve historic shipwreck cases where states may wish to intervene, this is particularly problematic because the federal courts are not required to notify the state in whose waters the wreck is located.

The law of finds, which applies only to property voluntarily abandoned by its owner, means that whoever finds sunken property and takes control over it can become its new owner. There is a common misconception that the schoolyard rule of "finders-keepers" (law of finds) automatically applies to any sunken property under federal admiralty law. However, there are many mitigating circumstances. From a liability standpoint, as noted above, it may be more desirable to salvage a vessel than to own it.

Over the last several decades, several federal and state laws were enacted to protect historical values of submerged cultural resources. Applicability depends upon the nature of the resource (i.e., shipwreck, submerged aircraft, or embedded archaeological or historical materials), location, and whether the resource was/is a federal property (i.e., military). Laws of particular interest include the Alaska Historic Preservation Act (AS 41.35) and its implementing regulations (11 AAC 16); the Abandoned Shipwreck Act (43 U.S.C. Part 39); the Archaeological Resources Protection Act (16 U.S.C. Part 470aa-470mm); and Department of State Public Notice 4614 (FR 69[24]:5647-5648).

The Alaska Historic Protection Act (AS 41.35) addresses the protection and management of cultural resources on all state lands, including state submerged lands and tide-lands. Neither AS 41.35 nor its implementing regulations contain language specific to submerged cultural resources

except as indicated below, yet the law clearly intends that these resources be included:

The state reserves to itself title to all historic, pre-historic, and archeological resources situated on land owned or controlled by the state, including tideland and submerged land, and reserves to itself the exclusive right of field archeology on state-owned or controlled land. (AS 41.35.20)

The state's legal basis for claiming title to submerged resources is partially founded in the Abandoned Shipwreck Act (43 U.S.C. Part 39, 1988) and its implementation guidelines (54 FR 13642, 1989). Under the Abandoned Shipwreck Act (ASA), the federal government asserted title to three categories of abandoned shipwrecks, then transferred title to most wrecks to individual states. Categories are:

1. abandoned shipwrecks embedded in a state's submerged lands (i.e., out to 4.8 km);
2. abandoned shipwrecks embedded in coralline formations protected by a state on its submerged lands; and
3. abandoned shipwrecks located on a state's submerged lands and included in or determined eligible for inclusion in the National Register of Historic Places.

The ASA provides that laws of salvage do not apply to shipwrecks protected under the act, but problems arise from the fact that the ASA does not adequately define "abandonment," a term that has been subject to varying interpretations by the courts. The ASA encourages states to carry out their responsibilities under the act in a manner that also protects natural resources and habitat areas, guarantees recreational exploration of shipwreck sites, and allows for shipwreck investigations and recoveries consistent with the protection of historical values and environmental integrity. The National Park Service ASA guidelines, which are advisory and nonbinding, help states comply with the ASA and set forth recommended components for a shipwrecks management plan. Links to the ASA and ASA guidelines, as well as other cultural resource management laws, may be found at <http://www.cr.nps.gov/linklaws.htm>. Following passage of the ASA and the development of ASA guidelines, many states developed active programs for managing historic shipwrecks and other submerged cultural resources. Some of these state programs include staff positions for a state underwater archaeologist. A few states, including Alaska, have lagged behind, while other states (for example, Wisconsin and Michigan) have implemented model programs.

Submerged military craft (including vessels and airplanes) of all nations are managed under a separate set of principles, laws, guidelines, and legal precedents. Customary international law, as practiced by most of the world's leading maritime countries, recognizes the special status of sovereign vessels. This includes the sovereign nature of sunken vessels and perpetual ownership by their flag country. Precedents under international law indicate that ownership of a military or state vessel can only be transferred: (1) if captured or surrendered in battle before sinking, (2) by an international agreement, or (3) by an express act of abandonment, gift, or sale under international law and the law of the flag state (Pixa 2004). A protagonist nation does not acquire title to enemy craft through the act of sinking them or through the passage of time. For example, Spain has never abandoned or relinquished title to ships sailing under the flag of the Kingdom of Spain during colonial times. According to Spanish law, interests in the ships and their contents can only be extinguished through "specific actions pertaining to particular vessels or property taken by Royal Decree or Act of Parliament" (Pixa 2004). During the late 1990s, Spain began successfully meeting legal challenges by salvors attempting to gain rights to historic Spanish vessels in U.S. waters. In 2002, the Embassy of Spain provided notice to the U.S. that salvage or other disturbance of Spanish sunken vessels or their contents may not be conducted without express consent by an authorized representative of the Kingdom of Spain.

In 2003, the Russian Federation stated a similar position:

Under international law of the sea all the sunken warships and government aircraft remain the property of their flag State. The Government of the Russian Federation retains ownership of any Russian sunken warship, including the warships of the Russian Empire and the Soviet Union, regardless [of] the time they sank. These craft are considered places of special governmental protection and cannot be salvaged without special permission of the Government of the Russian Federation. (Pixa 2004)

This has implications for Russian colonial warships, such as the *Neva*, whose undiscovered wreckage is in Alaska waters. It would not apply to private commercial vessels such as the Russian bark *Kad'yak* (1850–60), subject of ongoing archaeological research. The *Kad'yak* is owned by the State of Alaska under the ASA (i.e., it is "embedded" and on the National Register of Historic Places).

Alaska incidents involving submerged historic military properties have focused primarily on efforts to locate and salvage military aircraft or parts. Past management practices for U.S. military wrecks, both submerged and terrestrial, have varied according to land ownership and the branch of service the craft was associated with. In October 2004, Title XIV of the FY2005 National Defense Authorization Act (Public Law Number 108-375) codified the protected sovereign status of sunken U.S. military craft and their permanent U.S. ownership, regardless of location and the passage of time. This law, known as the Sunken Military Craft Act, encourages reciprocal enforcement and protection of sunken military craft by foreign sovereigns, as well as the development of bilateral and multilateral agreements. The law also provides a mechanism for permitting and civil enforcement to prevent unauthorized disturbance. A more thorough discussion of the Sunken Military Craft Act has been posted on the Naval Historical Center, Underwater Archaeology Branch website (NHC 2004).

### **SUBMERGED CRM OPERATIONAL PRACTICES IN ALASKA**

In practice, the protection of submerged resource sites in Alaska is achieved largely through implementation of those sections of the Alaska Historic Preservation Act that address title and ownership (AS 41.35.10), permits (AS 41.35.080), and unlawful acts (AS 41.35.200). In most situations, the state assumes a colorable claim to nonmilitary historic resources on state submerged lands—i.e., they are property of the state unless someone with a stronger claim prevails in court. This allows for enforcement of violations that would compromise the integrity of the resource. The state act does not specify a minimum age for covered artifacts, but for consistency with the National Register of Historic Places, it is generally held to be 50 years. The unauthorized removal of artifacts more than 100 years old, and the transport of those items outside Alaska, is also a violation of the Archaeological Resources Protection Act (ARPA) and may be prosecuted under federal law as well as state law. This has bearing on cases in which items covered under the act are illegally removed, then sold outside Alaska.

The state requires any person wishing to conduct removal of artifacts or any sort of archaeological investigation on state lands to get a permit. This is consistent with

other states' policies, which generally require permits even for passive survey efforts (i.e., magnetometer, sonar, etc.) if part of an organized effort to locate or document historic or archaeological resources. Permits ensure that work is undertaken by persons or organizations qualified to perform the work without compromising the resource and that the state receives a report of findings that will help with continued management of the resource. In Alaska, archaeology permits are issued by the chief of the Office of History and Archaeology (OHA) through authorities delegated from the commissioner of the Alaska Department of Natural Resources through the director of the Division of Parks and Outdoor Recreation. It should be noted that even in situations where salvage rights have been awarded by a federal court (for example, on a vessel that is not covered under the ASA), the state may require the salvor to obtain an archaeology permit before disturbing the sediments in which the wreck is imbedded. Thus, inclusion of an archaeology plan in a salvage effort may be (and usually is) required both by a federal court under the terms of a salvage award and by the state under the terms of its permit.

The most-used inventory of Alaska shipwrecks is maintained by the Minerals Management Service, the federal agency responsible for managing submerged resources on the outer continental shelf. In 1992, the MMS published *Shipwrecks of the Alaskan Shelf and Shore*, a comprehensive compilation of shipwrecks in Alaska waters, including both outer continental shelf and coastal waters (Tornfelt and Burwell 1992). The volume built on unpublished MMS shipwreck inventories compiled by Evert Tornfelt during the 1980s. Due to the conscientious efforts of its creators, the 1992 volume omitted specific location coordinates. Michael Burwell presently maintains an online version of the MMS database, renamed "Shipwrecks Off Alaska's Coast," at <http://www.mms.gov/alaska/ref/ships/>. Also in 1992, the City and Borough of Juneau published a detailed inventory of shipwreck sites within its boundaries (City and Borough of Juneau 1992), restricting specific location information to a confidential supplementary volume. The Alaska Heritage Resource Survey (AHRS) database contains some historic shipwrecks but is incomplete. Shipwrecks listed in the AHRS consist largely of those assigned a number as a consequence of compliance or management issues or as a result of receipt of formal reports such as the City and Borough of Juneau volume.

## PAST AND PRESENT INITIATIVES FOR SUBMERGED CRM IN ALASKA

As in other regions, Alaska's coastal communities have long held an intense interest in their maritime heritage. Primarily outlets for this interest have included the development of local museum exhibits and the publication of articles in popular maritime-oriented journals and magazines. It wasn't until after the development of statewide preservation programs in the late 1960s and early 1970s that maritime heritage resources began to be widely viewed in the context of resource management. Even so, the management of maritime heritage has lagged behind that of terrestrial sites. In 1979, the Alaska Office of History and Archaeology and collaborators secured a U.S. Department of the Interior grant to organize a conference entitled "The Sea in Alaska's Past" in Anchorage. The published proceedings (OHA 1979) illustrate Alaska's diverse and rich maritime history but do not address management issues. In 1983, with a grant from the University of Alaska Sea Grant program, the University of Alaska, Sheldon Jackson

College, OHA, and the U.S. Geological Survey collaborated on a workshop in Sitka that was more focused on marine archaeology, maritime legal issues, and resource management. The published proceedings (Langdon 1983) are a valuable resource and represent a "coming of age" for Alaska.

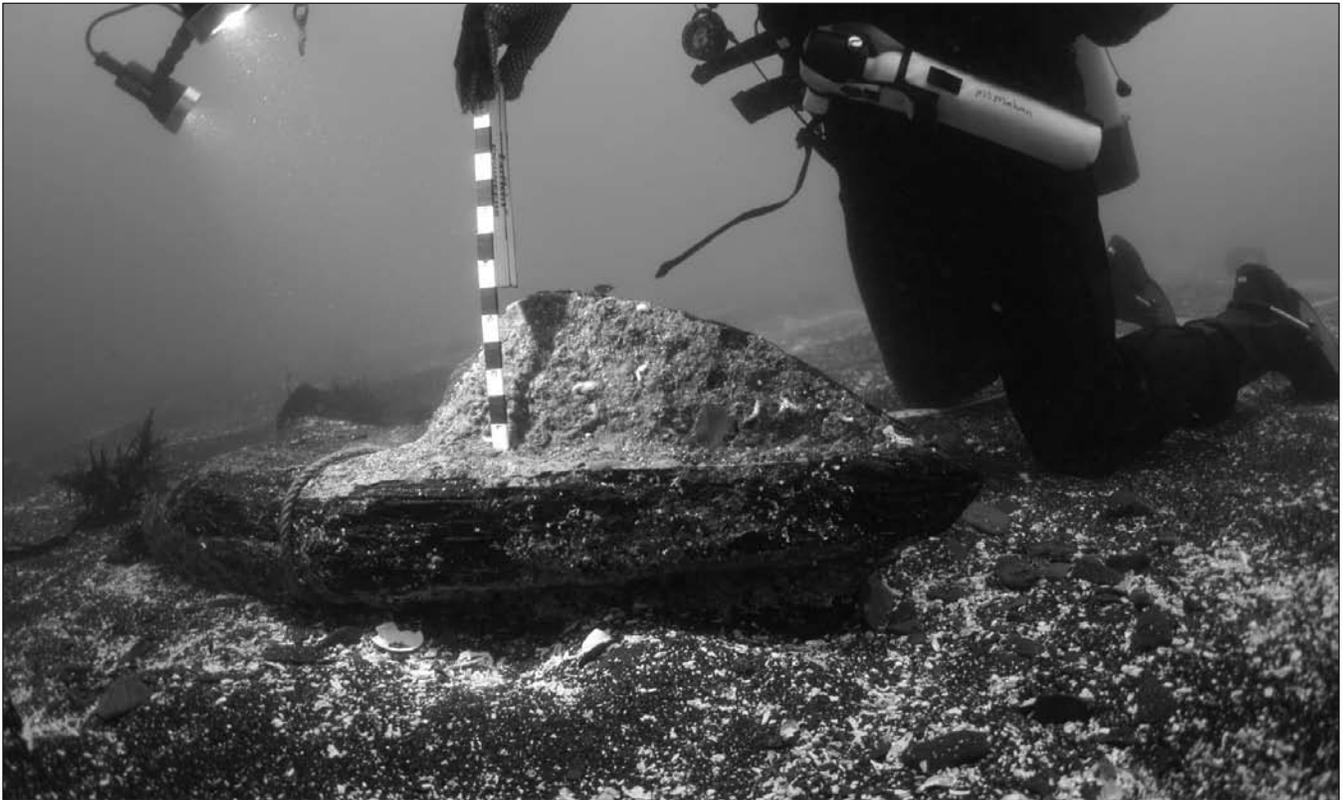
Now, 20 years later, the state is beginning to build partnerships with federal agencies and academic institutions to generate the baseline data needed to identify, manage, and interpret its rich maritime heritage. In recent years, the state has participated in several collaborative projects that generated resource management opportunities and positive media attention. In 2003, OHA took part in an initiative by NOAA's Office of Ocean Exploration to develop a comprehensive shipwreck database for the Pacific Coast. The accompanying workshop, funded by NOAA, provided an opportunity for OHA to begin interacting with submerged-resource professionals throughout the U.S. In August 2003, OHA teamed up with NOAA National Marine Fisheries (NMFS) scientist Brad Stevens and the Baranov Museum, along with divers Josh Lewis, Steve Lloyd, and Verlin



*Figure 1. East Carolina University archaeologists mapping timbers at the Kad'yak site. Photo by NOAA archaeologist Tane Casserley.*

Pherson in a successful search for the wreck of the Russian American Company bark *Kad'yak* (Figs. 1–3). Following the discovery of the *Kad'yak*, OHA collaborated with East Carolina University and other partners on a grant proposal to document the wreck. The team was eventually awarded grants from NOAA's Office of Ocean Exploration and the National Science Foundation for basic documentation and mapping of the wreck (OHA 2004). The wreck was added to the National Register of Historic Places in July 2004, just

before the start of fieldwork at the site. Confirmation of the wreckage as the *Kad'yak* prompted an article in the *New York Times*, followed by nationwide media coverage, increased awareness of the importance of Alaska's submerged heritage sites, and the publication of an exemplary report (Cantelas et al. 2005). The *Kad'yak* work constituted the first substantive underwater archaeology in Alaska, having been preceded by a 1989 effort by underwater archaeolo-



*Figure 2. Dave McMahan measuring an anchor fluke at the Kad'yak site. Photo by NOAA archaeologist Tane Casserley.*



*Figure 3. Believed to be the hub from the ship's wheel, this artifact facilitated a quick positive identification of the Kad'yak. Photo by Dave McMahan.*

gists brought to Alaska by the National Park Service to verify the locations of World War II craft in Kiska Harbor.<sup>3</sup>

In February 2004, in the wake of litigation over the steamer *SS Aleutian* and the discovery of the *Kad'yak*, OHA organized a workshop to discuss submerged resource management issues in Alaska. Invited speakers and participants included representatives from state and federal agencies in Alaska as well as submerged resource management specialists from agencies and academic institutions outside Alaska. In conjunction with the workshop, several underwater archaeologists and maritime historians gave well-received public presentations at venues in Anchorage and Kodiak. The Kodiak visit also presented an opportunity for trained underwater archaeologists to examine the *Kad'yak* for the first time and provide insights helpful in planning its further investigation and management.

Also early in 2004, OHA began developing a memorandum of understanding (MOU) with NOAA's Office of Ocean Exploration (in draft). When finalized, the MOU will offer increased opportunity for mutual assistance and cooperation in protecting Alaska's submerged heritage resources. Already, NOAA's Office of Ocean Exploration has facilitated the collection of multibeam sonar data by the NOAA research vessel *Rainier* at the *Kad'yak* site.

In the spring of 2004, OHA collaborated with the U.S. Forest Service (USFS), MMS, NPS, and the Public Broadcasting System series "The History Detectives" to document recently discovered intertidal wreckage near Katalla (Figs. 4–6). The wreckage was believed to be that of the *SS Portland*, credited with helping launch the Klondike Gold Rush following an infamous prior history (Jensen 2005). The PBS producers shared in the cost of



*Figure 4. Documentation of the SS Portland wreckage was a collaborative effort of OHA, MMS, NPS, USFS, and the PBS History Detectives team (pictured). Photo by Dave McMahan.*

<sup>3</sup> The intent is to acknowledge the pioneering work of formally trained underwater archaeologists in Alaska, not to discount the efforts of underwater photographers and others who have contributed valuable information.



*Figure 5. A view of the SS Portland wreckage from bow to stern, showing the double Scotch boilers and engine. A portion of starboard hull is visible. Photo by Dave McMahan.*



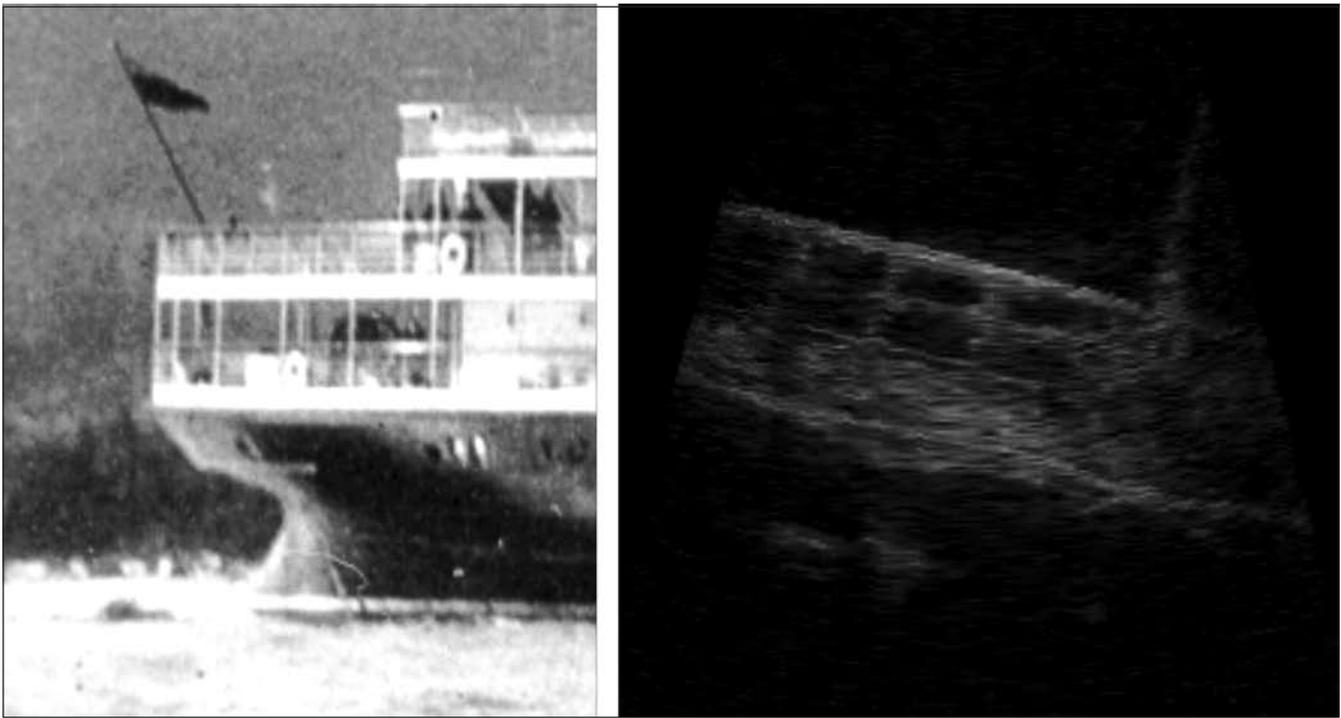
*Figure 6. Nautical archaeologist John Jensen confirmed the identity of the SS Portland by measuring the diameters of the engine cylinders. Photo by Dave McMahan.*

documenting the wreck and, at OHA's request, brought in nautical archaeologist and historian John Jensen to oversee the effort. The documentary, which confirmed the wreck-age as that of the *SS Portland*, aired in August 2004. OHA is presently working on a National Register of Historic Places nomination for the shipwreck.

In 2005, OHA received two grants relating to maritime projects. The first, from the NPS Beringia Program, will allow for the development of a popular publication on the *Kad'yak* project. The publication, in both English and Russian, is being developed by maritime archaeologists and *Kad'yak* participants Evguenia Anichtchenko and Jason Rogers. A second grant was awarded by NOAA's Office of Ocean Exploration for the collection of baseline information on several popular shipwrecks in the Juneau area. OHA's partners include biologists and chemical oceanographers from the University of Alaska Fairbanks, MMS, NOAA Marine Sanctuaries, and consulting maritime archaeologist John Jensen. The project's goals, accomplished in April 2006, included extensive photo documentation, collection of GPS coordinates, interviews with recreational divers and historians, documentation of biotic communities, placement of markers citing protected status, and chemical analysis of sediment and structural samples, which may contribute to our understanding of

cold-water decay processes (Fig. 7). The project included a strong public outreach component, which allowed for presentations in Juneau and Haines and extensive interaction with the media.

In addition to OHA projects, others have begun efforts directed at research and interpretation of Alaska's maritime heritage. In 1998, a team of scientists on the Jeremy Project used a remote operated vehicle (ROV) to collect underwater video off Alaska's northern coast. The images include ballast piles and silt-covered timbers, possibly associated with the loss of the 1871 whaling fleet. These images provide important clues as to the condition of wrecks in the region. During the summer of 2005, a team of scientists from the University of Minnesota and the Barrow Arctic Science Consortium returned to the region to conduct a systematic sonar survey at Point Belcher in an attempt to ascertain the presence and condition of the 1871 whaling fleet. Despite bad weather and poor visibility, the team identified sonar targets that they hope to investigate during follow-up work. In 2004, Evguenia Anichtchenko produced a master's thesis that describes the fleet of the Russian-American Company from 1799–1867 (Anichtchenko 2004). In Kodiak, the Kodiak Maritime Museum was established in 2003. It is dedicated to the preservation of Alaska's maritime heritage, an understand-



*Figure 7. Undated image of the Princess Kathleen stern (left) and a high-frequency Didson sonar image of the Princess Kathleen stern (captured by John Kelley, University of Alaska Fairbanks Institute of Marine Science) in April 2006.*



*Figure 8. Underwater archaeologist Jason Rogers examines the wreckage of the side-wheel steamer Eliza Anderson, Dutch Harbor, in March 2006. Photo by Dave McMahan.*

ing of the commercial fishing industry, and the protection and conservation of marine resources (Kodiak Maritime Museum 2003). In southeast Alaska, the Juneau-Douglas City Museum featured a 2005 exhibit entitled “Pleasures and Perils: Juneau Steamships and Shipwrecks.” In addition to interpreting this important facet of Alaska history, museum staff interfaced with OHA to ensure that exhibit materials contained a strong preservation ethic. During 2005 and 2006, underwater archaeologist Jason Rogers and recreational diver Roger Deffendall located and began documenting the submerged remains of the historic steamer *Eliza Anderson* just offshore in Dutch Harbor (Fig. 8). This project, being conducted under a state permit, is a good example of collaboration between underwater professionals and the recreational dive community.

#### **THE FUTURE OF SUBMERGED RESOURCE MANAGEMENT IN ALASKA**

Due to the remote locations of most of our submerged sites, it is unrealistic to expect that regulation and enforce-

ment alone can protect these resources. Along with the gradual compilation of baseline information, the most important step in resource protection is the development of public education and diver outreach programs. This should be a standard component of grant proposals involving submerged cultural resources. Some states, such as Wisconsin, have secured grants to develop underwater heritage trails. Such trails include monuments and/or plasticized maps and interpretive literature that help promote stewardship. Other regions have been successful in collecting baseline information on underwater resources through collaborative relationships with avocational underwater archaeology groups. The most notable of these groups in the U.S. is the Maritime Archaeological and Historical Society (MAHS). Based on the eastern seaboard, the group has developed a training and certification program that includes a taped lecture series and an underwater field school. Applicants must also sign an ethics statement as a condition of membership. Some states only allow MAHS-certified divers to participate with archaeologists on state projects. The Underwater Archaeological Society of British

Columbia (UASBC) is another prime example of collaboration between professional underwater archaeologists and recreational divers. The organization, one of the largest avocational underwater archaeology groups in Canada, conducts essentially all underwater archaeology in the region. Their surveys, in which artifacts are left in situ, form the cornerstone of British Columbia's submerged resources inventory. Working closely with the Vancouver Maritime Museum, the organization has published an assortment of shipwreck guides and survey reports of interest both to professional archaeologists and recreational divers. Both MAHS and the UASBC have expressed interest in collaborating on Alaska projects, as have numerous independent Alaska divers.

Our state has a wealth of existing information on submerged resources within recreational dive communities from Barrow to Ketchikan. Only through interaction and outreach can we direct their energies in a direction that will encourage meaningful data collection and stewardship.

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