

Burial at Sea in the 21st Century:

Tradition, Dignity, Regulation and Environmental Responsibility

Navy Funeral Honors Ceremony

“Now hear this. All hands not on watch muster on the fantail for a Burial at Sea committal service.” The Commanding Officer (CO) issues orders on 1MC – the ship’s general intercom. The Honor Platoon assembles in formation and the Chief Master-at-Arms (MA) directs all subsequent actions as the Casket Bearers place the flag-draped casket on the ‘committal board’ that extends beyond the rail of the vessel. With the casket oriented feet-first, orders are given to “Tilt the board and release the remains into the deep”. Next, three volleys are shot by the Firing Squad, the Bugler plays Taps and the accompanying U.S. flag is folded and presented to the CO by the MA for later transfer to the deceased’s family.

Preparations for the burial ceremony are very involved, beginning months before, with specific procedures for body preparation, modification of the biodegradable casket, shipment to the selected Navy port, scheduling of the vessel, selecting the target location for the burial service, etc. Full-body Burial at Sea remains one of the Navy’s most carefully orchestrated ceremonial responsibilities.

Burial at Sea in Contemporary Context

The U.S. Navy conducts approximately 1,200 to 1,500 Burials at Sea each year. Nearly ninety percent involve cremated remains. Full-body burials, while deeply rooted in naval tradition, now represent a small minority of cases.

These figures reflect broader national trends. In the United States, more than sixty-five percent of dispositions now involve cremation, a percentage that continues to rise. Among veterans alone, annual deaths exceed 600,000. Yet only a small fraction of those result in Navy-conducted Burial at Sea.

Beyond formal Navy ceremonies, civilian at-sea committals permit scattering of cremated remains at least three nautical miles offshore. Unlike Navy burials conducted during operational deployments, civilian services typically allow family members to be present and to participate directly in the ceremony.

As a result, the modern landscape of maritime memorialization has evolved. Traditional, institutionally conducted full-body Burial at Sea remains a solemn naval rite. At the same time, cremated remains committals—both military and civilian—have become the predominant form of return to the sea. This shift reflects not a diminishment of tradition, but an adaptation to contemporary practice, environmental awareness, and family-centered remembrance.

Regulatory Framework Governing Full-Body Burial at Sea

Modern full-body Burial at Sea is conducted under international and federal environmental regulations adopted in the late 20th century, principally:

- U.S. Marine Protection, Research and Sanctuaries Act (MPRSA) - Ocean Dumping Act (1972)
- Marine Pollution (MARPOL) Convention (1973/1978)
- U.S. Environmental Protection Agency (EPA) burial regulations codified under 40 CFR Part 229

These regulations established uniform environmental safeguards for ocean disposal, including full-body human remains in caskets:

Minimum Distance Offshore: In U.S. ocean waters, burial must occur at least three nautical miles from land (U.S. waters).

Water Depth: Full-body burial must occur in waters of sufficient depth to ensure permanent submergence (the Navy conducts burials in offshore waters exceeding 600 feet). For ash dispersal, no depth requirement is specified; only distance offshore.

Casket Construction: Biodegradable materials, exclusive of plastics or synthetics that would persist in the marine environment.

Rapid and Permanent Submergence: Assurance of immediate descent to the seafloor. Flooding ports drilled in caskets to allow rapid entry of water and prevention of buoyancy.

Additional weight may be required to ensure prompt sinking and prevent resurfacing.

Reporting Requirements: Burial coordinates (latitude/longitude), date, and vessel identification must be reported to the EPA within 30 days (civilian cases).

These requirements reflect a regulatory evolution during the 1970s toward environmentally responsible ocean practices, ensuring that Burial at Sea remains both dignified and ecologically compliant.

From Maritime Necessity to Regulated Practice

These modern safeguards stand in contrast to earlier maritime practices. For centuries, Burial at Sea was not ceremonial in the modern sense—it was practical. Imagine a slow fishing vessel working far offshore experiences the death of a crew member days from port. There were no refrigerated holds for preservation, no rapid communication ashore, and no regulatory framework governing ocean disposition. The crew had little choice but to conduct a brief service on deck and commit their shipmate to the sea. They remember their shipmate's final request: "Wrap me in canvas with a shot of chain—enough weight to reach the bottom—and lay me to rest in the deep."

In such cases, preparation was practical and direct. The deceased might be lowered over the rail with simple words of farewell. For working mariners of that era, the sea was both livelihood and final resting place. Burial at Sea was not ceremony layered in protocol—it was necessity carried out with respect—committals were understood as a natural extension of life at sea.

Cremation and the Modern Method for Return to the Sea

Over the past several decades, cremation has become the predominant form of disposition in the United States. National cremation rates now exceed sixty-five percent and continue to rise, reflecting changing cultural preferences, economic considerations, family mobility, and environmental awareness.

This demographic shift has reshaped maritime memorial practice. While full-body Burial at Sea remains a solemn and legally permissible option—particularly within the U.S. Navy—the majority of contemporary sea committals now involve cremated remains.

The ceremony itself, however, need not be diminished. Military honors may still be rendered. A chaplain may preside. Coordinates must be recorded and preserved. In civilian settings, families are often present and may participate directly in the act of committal—something rarely possible during Navy-conducted shipboard burials.

Conventional Nearshore Ash Dispersal

Conventional nearshore ash dispersal may be conducted from either a private vessel or a licensed commercial charter operating in compliance with EPA regulations. The vessel proceeds at least three

nautical miles offshore, where the ceremony is conducted and the ashes are committed to the sea. Vessel size is typically selected according to the number of family members or celebrants attending—ranging from small privately owned boats or six-passenger fishing charters to larger vessels capable of accommodating extended family, clergy, or military honor details. Once on station, the ceremony is often intentionally simple and brief. A short reading, prayer, or reflection may be offered, followed by the release of the ashes. In many cases, the time spent at the committal site lasts only a few minutes before the vessel begins its return to port.

The advantages of nearshore dispersal are accessibility and practicality. It is comparatively economical, straightforward to schedule, and allows family members to be present and participate directly in the act of committal. Travel time is limited, weather windows are easier to find close to shore, and sea conditions are generally more manageable than in open-ocean environments. Regulatory compliance is clear and reported to the EPA within 30 days.

There are, however, inherent limitations. Nearshore waters are heavily trafficked by commercial vessels, recreational boaters, and fishing activity. Coastal currents, tides, and wind-driven circulation can transport surface materials toward shoreline environments. Nearshore waters are often shallow compared with offshore sites. While fully lawful and widely practiced, conventional nearshore dispersal emphasizes simplicity and proximity rather than remoteness, depth, or connection to the broader open-ocean environment.

New Technology for Offshore Committal and Ash Dispersal

For many mariners and lifelong lovers of the sea, proximity to shore does not fully capture their sense of connection to the ocean. They may express a wish for their ashes to be dispersed far offshore where currents carry them into the open North Atlantic and over time, the ashes will settle into deep ocean basins. The northward-flowing Gulf Stream current off Florida's east coast is particularly well suited to such dispersal. As one of the most powerful and persistent western boundary currents on the planet, it transports large volumes of warm water along the continental margin and into the North Atlantic. Its strong flow, fifteen-mile width, half-mile vertical extent, and distance from shore reduce the likelihood of near-term return to coastal environments and provide direct connection to the broader oceanic circulation system. This current selection and deployment location are based on established, multi-decade Gulf Stream transport patterns.

Recently, a small veteran-owned company has emerged to facilitate offshore ash dispersal using surface drifting platforms deployed directly into major ocean-current systems. Return To Sea, LLC's compact surface drifter begins releasing the cremated remains upon deployment and continues release as it drifts. Once deployed from a vessel operating twenty or more miles offshore within the Gulf Stream, the platform transmits its satellite-based position for weeks, allowing family members to observe the trajectory of the memorial voyage through a secure website interface.

Because offshore deployments may involve extended, open water transit and ocean sea states, family members may choose not to participate in person. Unattended release voyages can be conducted by experienced mariners, an option particularly meaningful for families who live far from Florida's east coast, where such dispersal trips typically originate.

Compared with conventional nearshore services, offshore current-based committal offers several distinguishing features. The release occurs well beyond coastal zones, in deeper and less trafficked waters. The dispersal becomes integrated into large-scale ocean circulation rather than confined to nearshore environments. The tracking component provides families with continuing engagement beyond a brief ceremony at sea, transforming a single moment of release into an extended memorial journey.

This approach also accommodates what might be called "never too late" committals—situations in which cremated remains have rested in an urn for years following an earlier death. Adult children or surviving spouses may later decide to honor long-standing wishes for return to the sea. Offshore dispersal allows those delayed intentions to be fulfilled thoughtfully and in full regulatory compliance, even decades after the original passing.

Conclusions

As cremation continues its steady rise across the United States, maritime committal practices are evolving alongside it. What was once a necessity for those who pass away while at sea, new Burial at Sea procedures are emerging, shaped by environmental awareness and technological capability. Modern satellite tracking, precise navigational positioning, and current-based deployment methods allow families to honor enduring maritime traditions while remaining fully compliant with environmental regulation. In this way, contemporary ash dispersal at sea honors dignity, respect for the ocean and responsibility toward it—uniting heritage, science, and sustainability in a manner suited to the 21st century.

Author biography

Dr. Scott E. McDowell earned a Ph.D. in Ocean Physics and worked in private industry for thirty years, conducting complex studies of currents and large eddies in the deep ocean worldwide. Since retirement, he has developed Return To Sea, LLC with his son, inventing the unique satellite-tracked drifting buoys that release cremated remains into the deep North Atlantic Ocean. www.returntosea.com