

3 Examples of Coastal Resilience in Action

Coastal resilience is an effort to support our planet's coastlines and help them survive. Nothing is so destructive that a healthy coastline can't bounce back from the brink of disaster - not even a Category 5 hurricane or a man-made ecological catastrophe.

Preserving shorelines and waterways requires input from the planet's top ecological risk management experts. When a crisis occurs, it takes tremendous effort to halt the destruction, then manage the process of restoring the natural balance.

Below, we'll examine three [water management projects](#) that show the impact of coastline preservation and waterway risk management. These success stories come from Versar, one of the world's foremost authorities on coastal resilience and a top government contractor for billion-dollar environmental preservation projects.

Maryland DNR Power Plant Research Program

This coastal resilience program began decades ago and continues to this day, supporting the health and vitality of our precious waterways. In 1974, the Maryland Department of Natural Resources launched its [Power Plant Research Program](#) to monitor and minimize the impact of power plants on aquatic and terrestrial ecosystems.

Versar joined the project nearly 45 years ago to conduct research into power generation and transmission and evaluate the impact of the program. Related activities include preparing site assessments, supporting permits and renewals, and generating project assessment reports, which are similar to federal environmental assessments.

This involves a vast array of environmental management tasks like investigating regulatory standards, doing water quality tests and aquatic field surveys, conducting laboratory studies, monitoring pollutants, analyzing discharge elimination systems, assessing the ecological effects of existing systems, and evaluating the potential impact of proposed systems.

For example, Versar researched a specific type of fragile underwater ecosystem known as a benthic habitat. The state of Maryland needed this data before proceeding with a potential offshore wind energy development program. The Versar team highlighted a need for Atlantic coastal nearshore benthic mapping and biological inventories, providing crucial data for state officials to use in planning future projects.

Groundwater Remediation at Hanscom Air Force Base

The Air Force Civil Engineer Center (AFCEC) and [Hanscom Air Force Base](#) in Bedford, Massachusetts needed urgent remedial action for its wells and groundwater. The base hired Versar in 2012 for a 7.5-year contract to perform site analysis, make recommendations, initiate ecological remediation activities, and conduct ongoing monitoring.

One of the primary field activities involved with the project was placing emulsified vegetable oil and microbe injections in existing wells, newly installed injection wells, and at direct injection points. The essential environmental goal of this work was to significantly reduce volatile organic compound (VOC) concentrations in the base's groundwater.

Versar took baseline and post-injection groundwater samples and monitored all involved sites for the effectiveness of remedial treatments. Under a long-term monitoring program, the Versar team checked 52 locations for water quality and elevation, then performed laboratory testing.

This information was submitted to authorities including AFCEC, the Massachusetts Department of Environmental Protection (MassDEP), and the United States Environmental Protection Agency (USEPA). Versar delivered detailed data that assisted these agencies with protecting state and federal lands and preventing groundwater contamination.

Kuwait Naval Base Breakwater, Pier, and Harbor

This project launched in 2019 at Kuwait Naval Base as part of a construction phase support contract with the United States Navy and the Kuwait Navy. Formally known as [USACE-TAM CPSS Project Task Order 28](#), the scope of the project involves demolishing, renovating, and reconstructing a pier, breakwater, control tower, and harbor.

Versar took charge of pier and breakwater renovations and support services for the naval base. The company was selected for this military contract based on its team of specialized marine engineers, including a project engineer who could serve as the only on-site representative with the technical marine engineering background to review and approve technical details.

As an example of the complex challenges that arose during this project, the team discovered degraded underwater foundation blocks that threatened the entire structure of the naval base's waterway. Versar's project engineer developed a sound solution that provided strong support for the pier and breakwater while respecting environmental concerns.

The team tackled unexpected issues throughout the project. As construction continued into the colder months, Kuwait's winter winds began to whip waves over the breakwater sea wall into the construction zone. The project engineer and Versar's entire team worked diligently to protect the job site and minimize interruptions so the project could continue.

Managing a marine engineering project like this is extraordinarily complex, particularly while operating in an overseas zone under strict military specifications. The Kuwait Naval Base project involved dynamic job site conditions, challenging topography, harsh weather, and a delicate seabed that could suffer damage without proper construction management.

At the successful conclusion of this project, government contacts confirmed that Versar's project engineer and team met or exceeded expectations. Versar developed innovative solutions that were even faster and less expensive than initially projected.

Versar Embodies Coastal Resilience in Action

Here in the United States, tremendous funding is now allotted for programs to manage the looming threat of climate change. [Versar](#) is uniquely qualified to manage environmental programs that require a superior level of ecological risk management expertise.

For almost 50 years, Versar has handled large-scale waterway and coastal resilience program management, engineering, staffing, construction, hazardous materials handling, munitions disposal, and ecological remediation activities. Our clients are in the governmental, municipal, military, and industrial sectors and we operate in some of the world's harshest environments and most dangerous zones.

At Versar, we're dedicated to fostering awareness and education about the emerging field of coastal resilience. [Visit our site](#) to learn more about how coastal risk mitigation is helping our planet's coastlines survive and thrive.

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