



# Delivering the Goods

News from the U.S. Coast Guard Acquisition Directorate

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## U.S. Coast Guard Builds First 'Monopine' Rescue 21 Tower

By Linda M. Johnson

**W**ASHINGTON—The U.S. Coast Guard recently finished building its first "monopine"—a single-pole tower designed to look like a pine tree—in Big Sur, Calif., as part of the service's Rescue 21 search and rescue communications system. It is the first Rescue 21 tower with any kind of concealment structure.

The stealth tower is one of several remote fixed facilities along the central California coastline whose direction-finding antennas provide lines of bearing that help take the search out of search and rescue. The tower is undergoing testing this month and is expected to become operational in mid-July.

Rescue 21 was created to better locate mariners in distress and save lives and property at sea. The maritime version of 9-1-1, the Rescue 21 system provides coverage within 20 nautical miles of the U.S. shoreline and facilitates improved communications among first responders. The system also helps identify hoax calls that can unnecessarily divert Coast Guard assets and manpower.

The 65-foot monopine located at the Post Ranch Inn—a luxury resort with an elevation of 1,100 feet—replaces the old Coast Guard communications tower on Moro Rock at Point Sur. That tower did not provide the coverage needed to close the gaps along the southern portion of Coast Guard Sector San Francisco's area of responsibility.

The monopine design was carefully selected to blend in with the



A construction worker installs faux pine branches along the first monopine Rescue 21 tower in Big Sur, Calif. *Photo courtesy of Sang Yi with General Dynamics C4 Systems.*

existing environment and protect the scenic qualities of California's Big Sur coastline. The tower is camouflaged with faux bark cladding, and two VHF antennas and one UHF antenna are hidden among faux pine branches. However, the critical direction-finding antenna is top-mounted and uncovered to avoid any signal interference that could hinder the system's ability to locate a vessel in distress.

In addition, the tower's equipment shelter was built five feet below grade, cut into the slope of the mountain, and native shrubs will be

planted around the shelter to make it blend in better with its scenic surroundings.

*continued on page 2*

### inside:

Air Station Miami Update.....p3

National Security Cutter Bertholf Completes First Alaska Patrol, Showcasing Its Capabilities .....p4

Ask the Master Chief Q&A .....p5

*continued from page 1*

## **Tower Selection Process**

The tower selection process is a team effort among the Rescue 21 staff at Coast Guard headquarters and at the Project Resident Office (PRO) in Scottsdale, Ariz., working with the Coast Guard's Rescue 21 contractor, General Dynamics C4 Systems. The process begins with computer modeling to determine where towers are needed based on predicted coverage areas and overlapping coverage rings. Wherever possible, the Coast Guard tries to use or modify existing tower sites, preferably those already owned or leased by the federal government.

Once the field has been narrowed down to several existing tower sites, the team conducts surveys and performs structural analysis on potential towers. An existing tower must be in good working condition, structurally able to support the Rescue 21 equipment—including several antennas, the heaviest of which weighs 800 pounds—and accessible to Coast Guard personnel for maintenance purposes. It must also have access to sufficient electrical power.

If no government-owned tower sites meet these criteria, then the Coast Guard tries to work with an existing commercial tower owner, such as a cell phone company, to negotiate a long-term lease. Only when no existing tower is capable of accommodating the Rescue 21 system does the Coast Guard consider building a new tower with the help of a willing land owner.

For the Post Ranch site, Coast Guard real property specialist Nick Fiorentinos identified the location after driving the entire Big Sur section of Highway 1. One of the benefits of using that particular location was that it already had a substantial back-up electrical power system in place. Fiorentinos conducted delicate negotiations



Rescue 21's first monopine tower was designed to blend in with the scenic surroundings at Big Sur's Post Ranch Inn. *Photo courtesy of Lee Wilmany with General Dynamics Information Technology.*

with the inn's owner "to come up with a solution that met everyone's desires," he explained. "Once people realize that we're trying to save lives, they're usually more willing to work with us."

Cmdr. Sid Osgood, who commands the PRO, noted, "were it not for the proactive and innovative approach taken by Nick Fiorentinos in obtaining the lease for this site along one of the most challenging coastal areas for the Rescue 21 project, I'm quite confident that we'd still be looking for a site to provide this critical coverage."

The amount of time it takes from the selection of the tower's site to the completion of construction varies greatly depending on the location, negotiations with owners and completion of consultations required by the National Environmental Policy Act. The Rescue 21 project and its tower sites are subject to federal, state and local environmental

regulations. The Coast Guard works hard to minimize any potential environmental impacts from the Rescue 21 system on migrating birds, wetlands, historic and cultural sites, and other ecologically fragile natural resources.

That's where Thomas Tansey, Rescue 21's environmental program manager, comes in. A retired Coast Guard commander, he conducts environmental assessments and makes sure that the Coast Guard complies with all applicable environmental statutes, often working with other federal agencies and state historic preservation offices.

Tansey advises the service on the potential environmental obstacles of choosing certain tower sites and tries "to steer the Coast Guard toward sites that would have the least environmental impact and that are easier, quicker and more cost-effective to build," he explained.

*continued on page 3*



continued from page 2

More than a year before tower construction begins, Tansey also conducts visual impact studies using a balloon as a visual stand-in for a proposed tower's height to identify critical views. For the Post Ranch tower, the team performed a balloon test at the site in December 2009 and a full site survey in June 2010.

The Coast Guard submitted the tower's proposed design to the California Coastal Commission, known for its strict regulations, in February 2011 and received approval to move forward with construction in mid-April. Employees of Eagle Communication Services and General Dynamics Information Technology—subcontractors hired by General Dynamics C4 Systems—worked seven days week for more than a month to finish building

the tower before the inn's peak tourist season began Memorial Day weekend.

The construction effort was overseen by Lt. Frank Paula, Senior Chief Petty Officer Greg Ruetten and Chief Petty Officer David Fantley, who balanced the interests of all stakeholders and coordinated with the contractors and Post Ranch Inn staff to ensure everyone was well-informed.

"The Post Ranch site represents the latest outstanding example of teamwork among our project, colleagues and contractor partners to deliver these critical capabilities in some of our nation's most challenging regions while maintaining the Coast Guard's excellent reputation for

environmental stewardship," said Gene Lockhart, deputy project manager for the Rescue 21 project.

The Post Ranch tower site is a great example of the lengthy behind-the-scenes planning process that goes into the deployment of the Rescue 21 communications system, which is being installed in stages across the U.S. and now covers approximately 37,000 miles of U.S. coastline.■

For more information on Rescue 21, please visit [www.uscg.mil/acquisition/rescue21](http://www.uscg.mil/acquisition/rescue21).

## Air Station Miami Update



A HU-25 Falcon jet departs Coast Guard Air Station Miami June 1 on its final mission. The Falcon is being replaced by the HC-144A Ocean Sentry as part of the Coast Guard's recapitalization efforts. During their 29 years of service, Falcon jets from Air Station Miami accrued more than 150,000 flight hours. *U.S. Coast Guard photo by Petty Officer 3rd Class Barry Bena.*

## National Security Cutter Bertholf Completes First Alaska Patrol, Showcasing Its Capabilities

The U.S. Coast Guard Cutter Bertholf, the service's first National Security Cutter (NSC), recently completed its first patrol of the harsh waters of Alaska and the Bering Strait. At 418 feet long, the NSC is the most technologically advanced cutter in the service's history and is proving itself capable of handling the world's coldest and roughest seas.

Over the course of Bertholf's month-long Alaska patrol, it travelled close to 10,000 miles, its crew performed approximately 20 fisheries law enforcement boardings in seas up to eight feet, and its helicopter conducted more than a dozen flights observing the fishing fleet.

"In partnership with other federal, state, tribal and local agencies, we ensure that fishing activities are conducted in accordance with the rules and regulations that not only govern how fishing is conducted, but also where, when and how much fish can be harvested to ensure a sustainable fish population that is vital to our national and economic security," explained Capt. John Prince, Bertholf's commanding officer, in a May 9 blog post on the Alaska patrol.

"We've experienced 20-foot seas and winds in excess of 60 knots with temperatures below freezing, and despite these sea conditions, the ship has remained within pitch and roll limits to launch our helicopter," he said. "We have been able to make a comfortable 12 to 15 knots through the water in seas up to 14 feet, validating the seakeeping and stability of the NSC and our ability to respond quickly to any emergency."

More than half of U.S. commercial seafood harvests come from Alaska,



In April, the NSC demonstrated America's commitment to preserving balance in the Arctic region when the crews of the Bertholf and the Russian Federal Security Service frigate Vorovsky shared training and best practices for several types of missions. *U.S. Coast Guard photo by Petty Officer 1st Class Sara Francis.*

with more than five billion pounds of fish and shellfish harvested annually. "And, as seen on TV, we battle oftentimes harsh sea conditions to safeguard our fellow citizens from the perils of the sea and one of the most dangerous U.S. professions—commercial fishing," Prince wrote.

"This is no easy task, and it takes a highly capable ship and crew, equipped with the right tools, command-and-control systems, onboard sensors, information exchange and weapons systems," he noted. "The ship must be able to get on scene quickly, maintain continuous presence for extended periods, monitor the areas with sensors and carry out the mission using a variety of tools such as small boats and helicopters. And it

must be able to do all these things in both fair and foul weather." According to Prince, "From what I have observed on this patrol, and during previous patrols on Bertholf as far south as South America, the National Security Cutter is that ship and more."

Prior to its Alaska patrol, the Bertholf completed a patrol of the Eastern Pacific, which stretches from the coast of Chile to Mexico's border with the U.S. Thanks to the NSC's high-tech capabilities and interoperability with the Coast Guard's federal partners, its Eastern Pacific patrol resulted in successful disruption or interdiction of nearly half a billion dollars' worth of cocaine.

*continued on page 5*

*continued from page 4*

For example, Bertholf's modern command-and-control, radar and sensor systems helped it work with the U.S. Navy to coordinate the efforts of multiple assets and interdict a go-fast vessel off the coast of Costa Rica.

"Our speed and seakeeping allowed us to respond quickly to all tasking, including a three-day run at 20 knots on the main diesel engines that only used 25 percent fuel as compared to 70 percent fuel that would have been used on a High Endurance Cutter due to the need for its turbines to achieve such

speed," Prince explained in a May 26 blog post. "The speed, endurance and capabilities of the National Security Cutter will be invaluable in every Coast Guard at-sea mission, but most critically in the Pacific where these capabilities are necessary."

A total of eight NSCs are planned to replace the 378-foot High Endurance Cutters that have been in service since the 1960s. The second NSC, Waesche, recently conducted at-sea refueling operations for the first time in the ship's history and has been undergoing Combined Combat System Ship Qualification

Trials to test its weapons systems. The third NSC, Stratton, is under construction and more than 85 percent complete, with delivery expected later this year.

As Prince noted, the Bertholf's crew is "learning new and more efficient ways to do things each and every day, and the contributions the National Security Cutter is making to the Coast Guard, the Department of Homeland Security and our nation will only grow as the days go by." ■

For more information on the NSC, please visit [www.uscg.mil/acquisition/nsc/](http://www.uscg.mil/acquisition/nsc/).

## ASK MASTER CHIEF AYER

**Q.** I like all the new stuff we're getting, but what are we doing to make sure we can support the new stuff in the long run?

**A.** One of our key goals in acquisition is to ensure that whatever asset we provide is sustainable and supportable throughout its lifecycle. In order to make this happen, one of the first things we develop is something called an ILSP, an Integrated Logistics Support Plan. We don't necessarily have all the right answers at the beginning of the program, so the plan is continuously reviewed and updated as more information becomes available.

The plan covers things like supportability, which includes maintenance planning, manpower, personnel, training and facilities/infrastructure. It also includes sustainability elements such as supply support and the areas of environment, safety and occupational health. The ILSP's development is a team effort and includes key players from the support and operational communities. Part of the acquisition oversight process requires that the ILSP be developed and approved by the Deputy Commandant for Mission Support before we get the go-ahead to move into production.

The Response Boat-Medium (RB-M) is a good example of our logistics support goals in action. Each RB-M is delivered with an extensive logistics support package that includes everything from electronic technical pubs and drawings, to a support hotline that units can call whenever they need to.

Additionally, we have a unit called the Asset Project Office whose job is to facilitate logistics support transitions from acquisition to sustainment. Once an asset is moved into the support phase, we continue to work with the program and the product line managers to support the asset throughout its lifecycle. It really is a cradle to grave team effort.

— MCPO Brett F. Ayer, Command Master Chief, Coast Guard Acquisition Directorate

*[To submit a question for an upcoming Acquisition Directorate newsletter, please e-mail Master Chief Brett F. Ayer directly at: [Brett.F.Ayer@uscg.mil](mailto:Brett.F.Ayer@uscg.mil) or [acquisitionwebsite@uscg.mil](mailto:acquisitionwebsite@uscg.mil).]*

