



# NOAA Fleet Update

## OCTOBER 2014

The following update provides the status of NOAA's fleet of ships and aircraft, which play a critical role in the collection of oceanographic, atmospheric, hydrographic, and fisheries data. NOAA's current fleet of 16 ships – the largest civilian research and survey fleet in the world – and nine aircraft, are operated, managed, and maintained by NOAA's Office of Marine and Aviation Operations ([OMAO](#)). OMAO includes civilians, mariners, and officers of the United States NOAA Commissioned Officer Corps ([NOAA Corps](#)), one of the nation's seven Uniformed Services.



Find us on Facebook for the latest news and activities.

<http://www.facebook.com/NOAAOMAO>



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# OMAO and the NOAA Corps

## – In the News –



Below is a sampling of clips and web links to recent news items related to OMAO and the NOAA Corps.

### [Hawaii's Facing Its Second Hurricane Threat This Year](#)

-Slate.com

Just two months after the Big Island's first tropical storm landfall in generations, a potentially bigger threat looms. Tropical Storm Ana—soon to be a hurricane, the second to threaten Hawaii this year after Iselle in August—is expected to barrel through the island chain later this week. If Ana makes landfall at hurricane strength, it would be the first impact of that magnitude in Hawaii since Iniki devastated the island of Kauai in 1992. In recorded history, Hawaii has never been hit by two tropical cyclones in one year. A team of **NOAA Hurricane Hunters**, normally based in Florida, has again been dispatched to the islands to help monitor the storm. Very warm ocean temperatures are in the path of Ana, which will help the storm strengthen. A hurricane watch should be posted for the Big Island on Wednesday...

### [Hurricane Gonzalo remains on collision course for Friday landfall on Bermuda](#)

-Times-Picayne

Hurricane Gonzalo weakened slightly Wednesday afternoon (Oct. 15), but its 125 mph sustained winds still rank it as a major Category 3 storm. The National Hurricane Center warns it will still have Category 3 winds of 120 mph at 1 p.m. Central Daylight Time Friday, when it is expected to hit or be near the island nation of Bermuda. A hurricane warning is in effect on the island, and officials were urging residents to complete preparations to protect life and property. "Gonzalo is not quite as well organized as it was this morning," said Hurricane Specialist John Cangialosi in a 4 p.m. Central Daylight Time discussion message. "Satellite images show that the eye of the hurricane appears less distinct than it was earlier today, and radar images from a **NOAA Hurricane Hunter aircraft** earlier today suggested that the inner eyewall could be eroding."

### [Local fishermen recover seismologic buoy](#)

-Fort Bragg Advocate-News

Local Fort Bragg fisherman Bill Forkner and his crew on the F/V Miss Shirley were surprised in August when they encountered what appeared to be a large floating yellow plastic buoy, while albacore fishing about 60 miles off the southern Oregon coast. Captain Bill was quick to notice that the yellow object had a reward sticker with a phone number affixed and so the crew carefully retrieved the object, weighing over 100 pounds. Having no luck with the phone number, Bill asked local Fish and Wildlife biologist Pete Kalvass to help him track down the mysterious object's owners. Fortunately, the buoy had "Japan Marine Science and Technology Center" written on its side and Kalvass was able to track down researchers in British Columbia working jointly with Japanese seismologists who knew of the buoy's origins. The buoy is actually an On-Bottom Seismograph (OBS for short) and was part of an array of 35 OBSs set deep on the ocean bottom off of Vancouver Island, B.C. to study earthquakes. The Japanese researchers had a companion array set in the Japan Trench which had been there to record the Fukushima quake. The researchers on Vancouver Island contacted Kalvass and he was able to crate and ship the bulky object to Newport, Oregon, where it was to be placed on board a **NOAA ship** for the trip home.

### [Coast Guard, NOAA Sign Fleet Plan Agreement](#)

-Seapower Magazine

WASHINGTON — Senior leaders from the U.S. Coast Guard and the National Oceanic and Atmospheric Administration (NOAA) signed a **Fleet Plan** and Officer Exchange memorandum of understanding (MOU) at an Oct. 8 ceremony at U.S. Coast Guard Headquarters, according to a Coast Guard release. Coast Guard VADM Charles Michel, deputy commandant for operations, and NOAA VADM Adm. Michael Devany, deputy undersecretary for operations, were the signing officials for the joint letter of promulgation. The Coast Guard and NOAA have collaborated for more than 200 years. The Fleet Plan supplements the Cooperative Maritime Strategy (CMS) that was signed in February 2013 and establishes a course of action to guide cooperation in the operation and maintenance of marine and aviation platforms. This direction also expands valuable interagency work currently under way, such as repairing NOAA ships at the Coast Guard Yard and advancing Arctic preparedness through collaboration with the Coast Guard's Arctic Shield test and evaluation program...

### [NOAA Flies Over Arctic to Measure Extent of Sea Ice](#)

-Maritime Executive (from OAR web story)

NOAA researchers have set out on a two-week mission to fly over the Arctic to measure how much the ice has melted over the summer and gauge the speed of this fall's refreezing of sea ice. According to the National Snow and Ice Data Center, 2014's minimum sea ice extent was 1.94 million square miles, the 6th smallest on record. Aboard a **NOAA Lockheed WP-3D Orion aircraft**, a highly specialized four-engine turboprop known for its work as a hurricane hunter, researchers will use scientific instruments to measure the extent of this summer's melt before the ice begins freezing for winter. The Tampa, Florida-based aircraft will operate out of Fairbanks International Airport...

### [Build Tomorrow - Marvels of Engineering: Hurricane Hunters](#)

-CNN (Video only)

### [Scientists perform fish surgeries, use ROV to study Florida Keys' underwater world](#)

-Miami Herald

DRY TORTUGAS - As a 365-pound remotely operated vehicle was being deployed from the deck of the **Nancy Foster**, a group of curious onlookers showed up from the deep blue. "Oh, look, dolphins," Ensign Felicia Drummond exclaimed in delight to Jeff Shoup, commanding officer of the NOAA coastal research ship. Eight Atlantic spotted dolphins were swimming around the bright yellow, alien-looking creature that had just entered their water playground in the Dry Tortugas, the most remote part of the Florida Keys. "I've never seen that happen before," said Jason White, the pilot of the remotely operated underwater vehicle (ROV)...

Related Miami Herald video: <https://www.youtube.com/watch?v=oSHmD0WtWy8>

### [Researchers study if Arctic warming behind 'weird weather'](#)

-Seattle PI

The U.S. Navy is replacing its P-3 Orion sub-hunting airplanes. But the National Oceanic and Atmospheric Administration is still flying two specialized **P-3s to hunt hurricanes** and, with University of Washington researchers, some secrets of climate change. Thursday morning, a 12-person NOAA crew in blue flight suits, plus four climate scientists in jeans and untucked shirts, prepared to set off for Alaska, and a mission to monitor changing ocean and atmospheric conditions...

### [Special flight from Seattle to Arctic studies global warming](#)

-KING-TV (Seattle)

A mission to the Arctic is now underway aboard a sophisticated high tech weather plane to continue study of the melting of ice and the warming of the Arctic Ocean. The mission aboard a **Lockheed P-3 Orion aircraft** will be based out of Fairbanks, Alaska, for the next three weeks. On board are some of the nation's top scientists on climate change. "There's a continuous loss of ice," said Dr. James Overland, a research oceanographer with the Pacific Marine Environmental Laboratory in Seattle. Overland, the P-3 and its crew are with the National Oceanic and Atmospheric Administration, under the U.S. Department of Commerce...

### [Research expedition to the NW Hawaiian Islands returns with new discoveries](#)

-KHON (Honolulu)

Scientists returned Tuesday from a 25-day research expedition with specimens and photographs of new records of marine life from the Northwestern Hawaiian Islands, including sea urchins, sea cucumber, algae and reef fish possibly new to science. The crew of the **NOAA Ship Hiialakai** explored the deep coral reefs within the Papahānaumokuākea Marine National Monument. Besides what they brought back, researchers saw and photographed several fish species not previously seen by divers but known only from submersible observations...The primary mission of the expedition, which visited French Frigate Shoals, Lisianski Island, Pearl and Hermes Atoll, and Midway Atoll, was to use **advanced diving technology** to survey mesophotic coral ecosystems – deep coral reefs at depths between 180 and 300 feet. Deep-reef fish communities were found to be dominated by Hawaiian endemic species -- species found only in Hawai'i...

### [70 years ago, hurricane hunters got their start in the Great Atlantic Hurricane of 1944](#)

-Washington Post

Seventy years ago, four U.S. Army Air Forces crews made seven flights into the Great Atlantic Hurricane of 1944, proving the value of direct reports from inside tropical cyclones for forecasting purposes. Since then, air crews who have flown into hurricanes continue to help the National Hurricane Center make better, life-saving forecasts. Even with our advanced satellites and computer models, National Hurricane Center forecasters consider the information collected by airplanes flying directly through hurricanes invaluable for predictions...The only other organization in the world that flies airplanes with people on board directly into hurricanes is the National Oceanic and Atmospheric Administration's Aircraft Operations Center at based at MacDill Air Force Base in Tampa, Fl. It uses **two Lockheed WP-3 Orion hurricane hunters**, which fly into hurricanes primarily for research. When one of these airplanes is conducting research inside a hurricane it also supplies a continuous stream of data to forecasters, like the Air Force WC 130s...

# United States Coast Guard and NOAA Fleet Plan and MOU Signing Ceremony



The Coast Guard (CG) and NOAA Fleet Plan was signed on October 8, 2014, by VADM Charles Michel, CG Deputy Commandant for Operations and VADM Michael Devany, NOAA Deputy Under Secretary for Operations. The Fleet Plan operationalizes the Cooperative Maritime Strategy that was signed in February 2013 and establishes a course of action to guide cooperation in the operation and maintenance of marine and aviation platforms, joint operations, commonality, and research, development, test and evaluation.

<http://www.seapowermagazine.org/stories/20141009-coast-guard-noaa.html>

[Photo Credit: David Hall, NOAA]



The Coast Guard and NOAA Officer Exchange Agreement, an MOU establishing terms and conditions for the exchange of officer personnel between CG and NOAA, was signed on October 8, 2014, by VADM Charles Michel, CG Deputy Commandant for Operations, and RADM David Score, Director, NOAA Commissioned Officer Corps. The CG and Officer Exchange MOU is a prime enabler of the CG and NOAA Fleet Plan, and further strengthens the robust partnership between CG and NOAA by enhancing the active relationship between agencies by allowing the exchange of officer personnel for the purpose of sharing professional knowledge, expertise, and the doctrine of both services, and for the professional development of officers.

[Photo Credit: David Hall, NOAA]



# OMAO's Ships



OMAO's Ship Tracker (screen shot below) shows information about the location - present and past - of our fleet of research and survey ships. <http://shiptracker.noaa.gov>



OMAO's ships and related Marine Centers are listed below based on the geographical location of the vessels' homeports starting in the Northeast and ending in the Pacific.

## New Castle, NH

### **NOAA Ship *Ferdinand R. Hassler***

**Commanding Officer:** CDR Marc Moser

**Primary Mission Category:** Hydrographic Surveys

**Ship Status:** Underway October 13 – 24, 2014 and October 28 – November 8, 2014

**DEPART:** Norfolk, VA

**ARRIVE:** Norfolk, VA

**DEPART:** Norfolk, VA

**ARRIVE:** Norfolk, VA

**Project:** Hydrographic Survey Operations of the approaches to Chesapeake Bay, VA

**Objectives:** To support safe navigation through the acquisition and processing of hydrographic survey data for updating nautical charts and by the identification and dissemination of dangers to navigation as identified during the course of survey operations.

## Woods Hole, MA (currently docks in Newport, RI)

### NOAA Ship *Henry B. Bigelow*

**Commanding Officer:** CDR G. Mark Miller

**Primary Mission Category:** Fisheries Research

**Ship Status:** Underway October 7 – 24, 2014 and October 28 – November 14, 2014

**DEPART:** Newport, RI

**ARRIVE:** Boston, MA

**DEPART:** Boston, MA

**ARRIVE:** Newport, RI

**Project:** Autumn Bottom Trawl Survey

#### **Objectives:**

1. Determine the autumn distribution and relative abundance of fish and invertebrate species found on the continental shelf, including variable amounts of additional biological information obtained through intensive sampling effort.
2. Opportunistically test trawl gear, methods, or survey related equipment that may benefit the trawl survey in the future.
3. Collect oceanographic data including Conductivity, Temperature, and Depth (CTD) casts and bongo tows at selected stations.
4. Collect acoustic data along cruise tracks, as well as test and conduct preliminary survey operations with acoustic systems including the EK-60 and ME-70.

## Davisville, RI

### NOAA Ship *Okeanos Explorer*

**Commanding Officer:** CDR Ricardo Ramos

**Primary Mission Category:** Oceanographic Exploration and Research

**Ship Status:** Underway October 14 – 22, 2014 and October 23 – 25, 2014

**DEPART:** North Kingstown, RI

**ARRIVE:** North Kingstown, RI

**DEPART:** North Kingstown, RI

**ARRIVE:** Norfolk, VA

**Project:** Gulf of Maine Harmful Algal Bloom Forecast

**Objectives:** *Alexandrium fundyense*, commonly referred to locally as the New England “red tide” organism, is a Harmful Algal Bloom (HAB) species that requires careful management of shellfish resources to prevent Paralytic Shellfish Poisoning (PSP) in New England and Canadian coastal waters. This algae species produces cysts that overwinter in the sediments of the Gulf of Maine. The abundance of these cysts in the sediment during the fall and winter is a strong predictor of the magnitude of HAB bloom events during the following year. During this cruise, sediment cores will be collected and samples preserved to allow for the enumeration of *A. fundyense* cysts across a broad area of the Gulf of Maine in support of an accurate prediction of the potential red tide conditions along the northern New England coasts in the spring and summer of 2015.



NOAA Ship *Okeanos Explorer* is seen here alongside in Baltimore Harbor for the Star Spangled Spectacular event in September. NOAA R/V *Bay Hydro II* is shown here docked in front of NOAA Ship *Okeanos Explorer*. Senate staff joined officials from NOAA's Office of Marine and Aviation Operations (OMAO), the NOAA Commissioned Officer Corps, and NOAA's Office of Oceanic and Atmospheric Research for the transit up the Chesapeake Bay from Annapolis to Baltimore, Maryland. During the transit, the congressional staff met with the officers and crew of the vessel to learn more about OMAO, the NOAA Corps, and the ship's mission, programs, and activities.

[Photo Credit: LCDR Wendy Lewis, NOAA]

## Norfolk, VA

### **NOAA Ship *Thomas Jefferson***

**Commanding Officer:** CAPT James Crocker

**Primary Mission Category:** Hydrographic Surveys

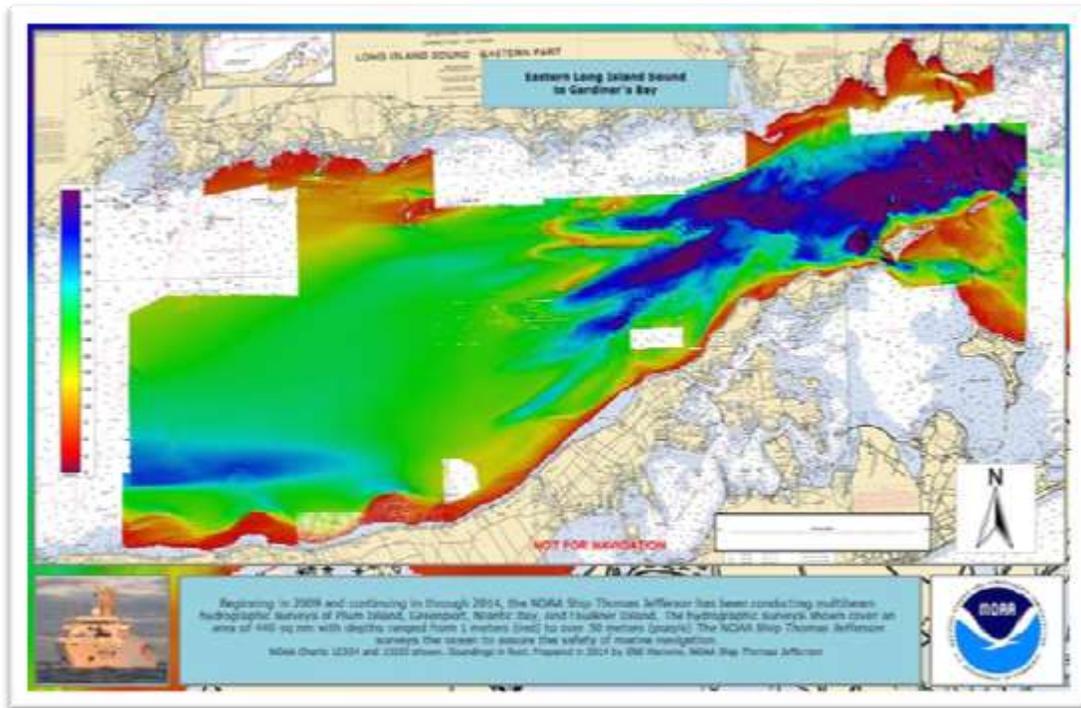
**Ship Status:** Ship Underway October 11 – 17, 2014

**DEPART:** New London, CT

**ARRIVE:** New London, CT

**Project:** Hydrographic Survey Operations in Long Island Sound, Buzzards Bay, and Narragansett Bay

**Objectives:** To support safe navigation through the acquisition and processing of hydrographic survey data for updating nautical charts and by the identification and dissemination of dangers to navigation as identified during the course of survey operations.



This image shows all the bathymetry data the NOAA Ship *Thomas Jefferson* has been collecting while surveying the depths of Long Island Sound for years, and they are almost finished! Some of the areas being resurveyed were last looked at in the late 1800s! More info: <http://bit.ly/ZSfScv>

[Photo: NOAA National Ocean Service]

## **OMAO'S MARINE OPERATIONS CENTER – ATLANTIC (MOC-A)**

**CAPT Anne Lynch, Commanding Officer MOC-A**

MOC-A serves as a homeport for one NOAA ship, and manages the day-to-day operations and provides administrative, engineering, maintenance, and logistical support for the research and survey ships in NOAA's Atlantic fleet. Each year these ships conduct dozens of missions to assess fish and marine mammal stocks, conduct coral reef research, collect seafloor data to update nautical charts, and explore the ocean.

## **Charleston, SC**

**NOAA Ship *Nancy Foster***

**Commanding Officer:** LCDR Jeffrey Shoup

**Primary Mission Category:** Oceanographic Research, Environmental Assessment

**Ship Status:** Alongside in Charleston, SC, for standard repair period, maintenance, and training.

## **NOAA Ship *Ronald H. Brown***

**Commanding Officer:** CAPT Joseph Pica

**Primary Mission Category:** Oceanographic Research, Environmental Assessment

**Ship Status:** Underway October 6 – November 1, 2014

**DEPART:** Honolulu, HI

**ARRIVE:** Kwajalein, Republic of Marshall Islands (RMI)

**Project:** Tropical Oceans Atmosphere (TAO) 170W/165E

**Objectives:** Conduct maintenance of the TAO Array along the 170°W and 165°E meridians. Conduct underway operations between stations, including mooring recoveries, deployments, and repairs.

## **Pascagoula, MS**

### **NOAA Ship *Oregon II***

**Commanding Officer:** Master Dave Nelson

**Primary Mission Category:** Fisheries Research

**Ship Status:** Underway October 7 – 22, 2014 and October 24 – November 6, 2014

**DEPART:** Pascagoula, MS

**ARRIVE:** Galveston, TX

**DEPART:** Galveston, TX

**ARRIVE:** Pascagoula, MS

**Project:** Southeast Area Monitoring and Assessment Program (SEAMAP) Fall Groundfish

**Objectives:**

1. Sample the northern Gulf of Mexico (GOM) with SEAMAP standard trawl sampling gear to determine the abundance and distribution of benthic fauna.
2. Collect size measurements to determine population size structures.
3. Record profiles through the water column of temperature, salinity, fluorescence, dissolved oxygen, and turbidity using a Conductivity/Temperature/Depth (CTD) unit at SEAMAP stations.
4. Collect water samples weekly and perform benchtop dissolved oxygen tests.
5. Assess the occurrence, abundance, and geographical distribution of the early life stages of ichthyoplankton in the sampling using a bongo frame and neuston frame.

### **NOAA Ship *Gordon Gunter***

**Commanding Officer:** Master Don Pratt

**Primary Mission Category:** Fisheries Research

**Ship Status:** Underway October 15 – 27, 2014

**DEPART:** Pascagoula, MS

**ARRIVE:** Pascagoula, MS

**Project:** Southeast Area Monitoring and Assessment Program (SEAMAP) Fall Ichthyoplankton Plankton Survey / Pelagic Survey

**Objectives:**

1. Assess the occurrence, abundance, and geographical distribution of the early life stages of fall spawning fishes, especially king and Spanish mackerel, red drum, and snappers.
2. Describe the pelagic habitat of fish larvae through physical and biological measurements.
3. Map the distribution of fish eggs and invertebrate zooplankton.
4. Study extrusion of smaller fish larvae through the standard SEAMAP bongo nets.
5. Examine the spatial resolution of red and vermilion snapper distribution.
6. Collect detailed observations of net-caught jellyfish and ctenophores.

## **NOAA Ship *Pisces***

**Commanding Officer:** CDR Peter Fischel

**Primary Mission Category:** Fisheries Research

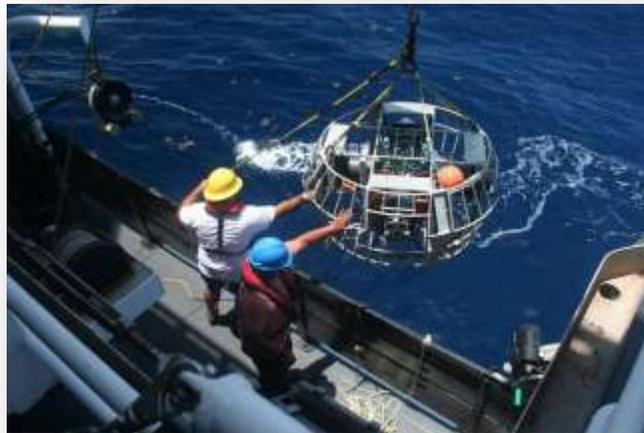
**Ship Status:** Underway October 14 – 28, 2014

**DEPART:** Newport, RI

**ARRIVE:** Newport, RI

**Project:** Deepwater Biodiversity

**Objectives:** Collect fish, cephalopod, and crustacean specimens from the bottom and midwaters at maximum depths possible with available trawl wire. These collections will be used for tissue samples, photographs of freshly collected specimens and systematic characters, and voucher specimens in museum collections at the National Museum of Natural History, Peabody Museum, the Museum of Comparative Zoology, and the Delaware Museum of Natural History. These collections and observations contribute to ongoing research on biodiversity of deepwater nekton and other megafauna in the western North Atlantic. Additionally, the cruise will provide educational experience in deep-sea biology to students in several institutions.



Deck hand Chris Remaley and Fisherman Noel Gemo stabilize the camera array as it is lowered over the side of NOAA Ship *Pisces*. There are four individual camera units aligned in a + pattern to record a 360 degree view of the ocean floor. The array is lowered to the bottom of the seafloor and allowed to record for 40 minutes.

[Photo: ENS Jacob Barbaro, NOAA]

## **San Diego, CA**

### **NOAA Ship *Reuben Lasker***

**Commanding Officer:** CDR Keith Roberts

**Primary Mission Category:** Fisheries Research

**Ship Status:** The ship is alongside in San Diego, CA, due to voltage and harmonic issues within the propulsion motors and will remain alongside as solutions are developed.

## Newport, OR

### **NOAA Ship *Rainier***

**Commanding Officer:** CDR E.J. Van Den Ameele

**Primary Mission Category:** Hydrographic Surveys

**Ship Status:** Underway October 6 – 17, 2014 and October 20 – November 6, 2014

**DEPART:** Seward, AK

**ARRIVE:** Kodiak, AK

**DEPART:** Kodiak, AK

**ARRIVE:** Seattle, WA

**Project:** Hydrographic Survey Operations in the vicinity of the North Coast of Kodiak Island, AK and San Juan Islands.

**Objectives:** To support safe navigation through the acquisition and processing of hydrographic survey data for updating nautical charts and by the identification and dissemination of dangers to navigation as identified during the course of survey operations.

### **NOAA Ship *Bell M. Shimada***

**Commanding Officer:** CDR Brian Parker

**Primary Mission Category:** Fisheries Research

**Ship Status:** In drydock at Bay Ship & Yacht Shipyard in Alameda, CA, for a scheduled repair period.



NOAA Ship *Bell M Shimada* is seen here entering Alameda, CA, for her scheduled drydock period. She'll be shipshape in no time!

[Photo: Lt. Matt Forney, NOAA]

## OMAO'S MARINE OPERATIONS

### **CAPT Eric Berkowitz, Director of Marine Operations**

OMAO's Marine Operations oversees operations of the three regional Centers, including the Marine Operations Center-Pacific, Marine Operations Center-Atlantic, and Marine Operations Center-Pacific Islands.

## OMAO'S MARINE OPERATIONS CENTER – PACIFIC (MOC-P)

### **CAPT Douglas Baird, Commanding Officer MOC-P**

MOC-P serves as a homeport for two NOAA ships, and manages the day-to-day operations and provides administrative, engineering, maintenance, and logistical support for the research and survey ships in NOAA's Pacific fleet. Each year these ships conduct dozens of missions to assess fish and marine mammal stocks, conduct coral reef research, collect seafloor data to update nautical charts, and explore the ocean.

## Ketchikan, AK (currently docks in Newport, OR)

### **NOAA Ship *Fairweather***

**Commanding Officer:** CDR David Zezula

**Primary Mission Category:** Hydrographic Surveys

**Ship Status:** In drydock at Bay Ship & Yacht Shipyard in Alameda, CA, for a scheduled repair period. Expected departure mid-January.



[NOAA Ship \*Fairweather\*](#), as seen from the water, is in dry dock for repairs at Bay Ship & Yacht Shipyard in Alameda, CA.

[Photo Credit: LT Matthew Forney, NOAA]

## Kodiak, AK

### **NOAA Ship *Oscar Dyson***

**Commanding Officer:** CDR Arthur “Jesse” Stark

**Primary Mission Category:** Fisheries Research

**Ship Status:** Underway October 9 – 17, 2014

**DEPART:** Kodiak, AK

**ARRIVE:** Newport, OR

**Project:** Transit to Marine Operations Center – Pacific, in Newport, OR, for scheduled maintenance and dockside repairs. Expected departure mid-January.

## Honolulu, HI

### **NOAA Ship *Hi’ialakai***

**Commanding Officer:** CDR Daniel Simon

**Primary Mission Category:** Oceanographic Research, Environmental Assessment

**Ship Status:** Alongside Marine Operations Center – Pacific Islands, Pearl Harbor, HI, after successful completion of all projects for the year. The ship will remain alongside until January for scheduled maintenance, routine repairs, crew rest, and training.



One of NOAA Ship *Hi’ialakai*’s last projects of the fiscal year made the news and a whole new underwater world was discovered in the coral reefs of Papahānaumokuākea Marine National Monument.

<http://www.kitv.com/news/scientists-explore-underwater-world-in-northwestern-hawaiian-islands/28347022>

## **NOAA Ship *Oscar Elton Sette***

**Commanding Officer:** CDR Stephanie Koes

**Primary Mission Category:** Fisheries Research

**Ship Status:** Underway September 25 – October 27, 2014

**DEPART:** Pearl Harbor, HI

**ARRIVE:** Pearl Harbor, HI

**Project:** Marine Debris Survey and Removal in the Northwestern Hawaiian Islands,

### **Objectives:**

1. Support in-water and shoreline marine debris surveys and removal operations at French Frigate Shoals, Maro Reef, Laysan Island, Lisianski Island, Pearl and Hermes Atoll, and Midway Atoll.
2. While in transit shipboard 500 m conductivity-temperature-depth (CTD) casts and water samples will be conducted opportunistically at designated permanent stations along the Hawaiian Archipelago.
3. Oceanographic equipment including Ecological Acoustic Recorders, Sea Surface Temperature buoys, and Subsurface Temperature Recorders will be opportunistically deployed, replaced, or removed within the PMNM.



Are you interested in a first-hand account of the marine Debris Team's operations?

NOAA's Marine Debris Blog – Keepin' the Sea Free of Debris!

<http://marinedebrisblog.wordpress.com/>

NOAA Ship *Oscar Elton Sette* has wrapped up operations at Maro Reef and the Coral Reef Ecosystem Division (CRED) Marine Debris Team has already collected approximately 10 tons of debris and derelict fishing gear! Now they are at Midway, Pearl, and Hermes.

<https://www.facebook.com/video.php?v=838014919566774&set=vb.741495615885372&type=2&theater>

[Photo Credit: NOAA]

## **OMAO'S MARINE OPERATIONS CENTER – PACIFIC ISLANDS (MOC-PI)**

**CAPT Robert Kamphaus, Commanding Officer MOC-PI**

MOC-PI serves as a homeport for two NOAA ships, and manages the day-to-day operations and provides administrative, engineering, maintenance, and logistical support for the ships in NOAA's Pacific Islands' fleet.



# OMAO's Aircraft



## Tampa, Florida

### OMAO'S AIRCRAFT OPERATIONS CENTER (AOC)

**CAPT Harris Halverson, Commanding Officer AOC**

The AOC, located at MacDill Air Force Base, serves as the main base for OMAO's fleet of nine aircraft and provides capable, mission-ready aircraft and professional crews to the scientific community. Whether studying global climate change or acid rain, assessing marine mammal populations, surveying coastal erosion, investigating oil spills, flight checking aeronautical charts, or improving hurricane prediction models, the AOC flight crews continue to operate in some of the world's most demanding flight regimes.

### Gulfstream IV (N49RF)

**Aircraft Commander:**

TBD

**Current Mission:**

Hurricane Surveillance and Research. Western Atlantic and Gulf of Mexico

**Dates of Operation:**

October – November 30, 2014

NOAA's Gulfstream IV aircraft is in #Hawaii and launching surveillance missions around Tropical Storm #Ana on October 16 and 17. Track their flight! <http://flightaware.com/live/flight/NOAA49>



The radar reconnaissance missions will use the G-IV's Tail Doppler Radar (TDR) system to obtain high-density, three-dimensional measurements of the inner core wind structure of tropical cyclones, potentially throughout its full life cycle. The National Weather Service is seeking to gather data on the performance of the TDR observation system and will work with the Hurricane Research Division to develop observing strategies for maximizing the utility of the TDR with the goal of improving hurricane track and intensity forecasts.

## WP-3D (N43RF) – “Hurricane Hunter”

**Aircraft Commander:**

TBD

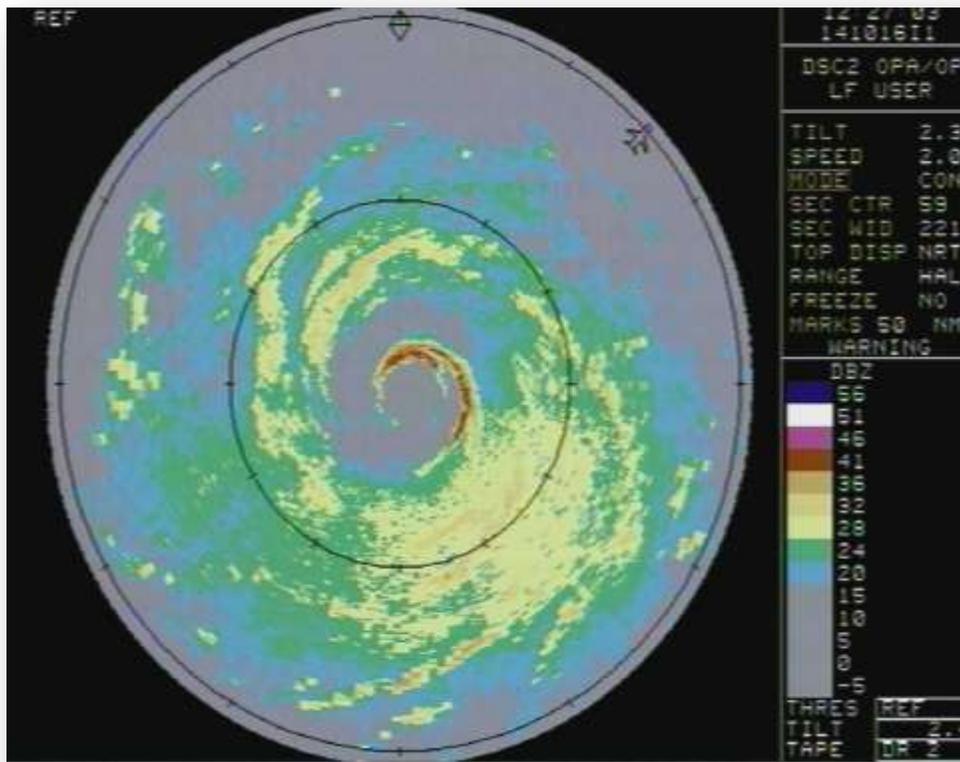
**Current Mission:**

Hurricane Reconnaissance and Research. Western Atlantic and Gulf of Mexico

**Dates of Operations:**

October – November 30, 2014

Aircraft returned to MacDill Air Force Base in Tampa, FL, on October 16, after a good day flying in Hurricane Gonzalo, satisfying both National Hurricane Center (NHC) reconnaissance tasking needs as well as those of the ocean winds folks. Crew obtained three fixes for NHC and transmitted a number of radar images, one of which is shown below. A third mission into Hurricane Gonzalo is planned for today, October 17. This will be an NHC tasked mission as well as a science flight for ocean winds. These flights will use the WP-3D's tail Doppler radar system to obtain high-density, three-dimensional measurements of the inner core wind structure of each tropical cyclone, potentially throughout its full life cycle. The hurricane research missions will also use the WP-3D to support the calibration/validation of satellite measurements and instrumentation development for the tropical cyclone environment and sampling of other aspects of the tropical cyclone inner core. These measurements will be used to enhance the accuracy of track and intensity guidance generated by NOAA's numerical weather prediction models. They will also be used directly by NOAA National Weather Service hurricane specialists with the ultimate outcome being improved accuracy of intensity and track forecasts, extended forecast/warning lead-times and improved confidence levels by decision makers.



Radar image from P-3 N43RF of Hurricane Gonzalo on October 16, 2014.

### **WP-3D (N42RF)**

**Aircraft Commander:** CAPT Harris Halverson and CDR Mark Sweeney  
**Temporary Base:** Fairbanks, AK  
**Current Mission:** Arctic Flux Mission over the waters off the North Slope of Alaska  
**Dates of Operations:** October 1 – 21, 2014

The Arctic Weather and Fluxes research flights will test the hypothesis that newly sea-ice free regions in the Arctic that produce anomalies in ocean heat storage and surface heat fluxes in early fall are large enough to have systematic impacts on atmospheric temperature, humidity, winds and clouds. These modified thermodynamic and wind fields, in turn, represent a major source of forcing of the regional meteorology that impact local storms and wave fields, and potentially larger-scale Arctic and sub-Arctic weather. This is part of a major, multi-institutional effort featuring a variety of atmospheric, oceanographic and sea ice measurements from ships and buoys deployed in the marginal ice zone off the northern coast of Alaska.



The NOAA Hurricane Hunters operating out of Fairbanks Int'l Airport for project "Arctic Flux".  
[Photo Credit: Mr. Paul Flaherty, NOAA/AOC]

### **Twin Otter (N46RF)**

**Aircraft Commander:** LT Matthew Nardi  
**Current Mission:** Various locations for Snow Survey/ Soil Moisture Surveys  
**Dates of Operation:** October – November 30, 2014

The aircraft is also conducting Snow Survey operations for the National Operational Hydrologic Remote Sensing Center (NOHRSC). Operations in October will primarily be focused on establishing new flight lines and for soil moisture surveys in the upper Midwest and southern Canada.

### **Twin Otter (N48RF)**

**Aircraft Commander:** LT Michael Marino and LT David Gothan  
**Temporary Base:** West Palm Beach, FL  
**Current Mission:** Various locations for LiDAR Evaluation  
**Dates of Operation:** October – November 30, 2014

The aircraft is conducting an evaluation of a topometric-bathymetric Light Detecting and Ranging (LIDAR) system for the Remote Sensing Division of the National Geodetic Survey. The system can scan coastlines and simultaneously measure ground heights above the surface as well as the depths below, near the shoreline. The data could potentially be used to update nautical charts.



NOAA Twin Otter (N48RF) is seen here in Key West, FL, during a pre-flight check before flying in support of a Florida Keys coastal mapping mission.  
[Photo Credit: ENS Billy Bonner, NOAA]

### **Twin Otter (N56RF)**

**Temporary Base:** Calgary, AB  
**Current Mission:** Scheduled Maintenance Period  
**Dates of Operation:** October – December, 2014

Aircraft is in an extended scheduled maintenance period for the next three months.

### **Twin Otter (N57RF)**

**Current Mission:** Scheduled Maintenance Period  
**Dates of Operation:** October 1 – 31, 2014

The aircraft will be undergoing scheduled maintenance during the month of October. It will resume a North Atlantic Right Whale survey in November.

### **Jet Prop Commander (N45RF)**

**Aircraft Commander:** LCDR Patrick Didier  
**Current Mission:** Various locations for Snow Survey / Soil Moisture Surveys  
**Dates of Operation:** October 2014 – April 30, 2015

The aircraft is conducting Snow Survey operations for the National Operational Hydrologic Remote Sensing Center (NOHRSC), utilizing an Airborne Gamma Radiation detector to make airborne Snow Water Equivalent (SWE) and soil moisture measurements in the Midwest. Airborne SWE measurements are used by NWS Weather Forecast Offices (WFO) and NWS River Forecast Centers (RFC) when issuing river and flood forecasts, water supply forecasts, and spring flood outlooks. Survey locations will be determined based on NOHRSC tasking. Operations in October will primarily be focused on establishing new flight lines and for soil moisture surveys in the upper Midwest and New England.

### **King Air (N68RF)**

**Aircraft Commander:** LCDR Rebecca Waddington and LT Tanner Sims  
**Current Mission:** Various locations for coastal mapping  
**Dates of Operation:** Continuous operations

The King Air is conducting Coastal Mapping mission flights in various locations during October. The Coastal Mapping work is an on-going mission, run by the Remote Sensing Division of the National Geodetic Survey (NGS), with the goal of providing a regularly-updated national shoreline for supporting marine navigation, defining territorial limits, and managing coastal resources. Stereo photogrammetry and Light Detecting and Ranging (LIDAR) are used to produce a digital database for a national shoreline.



# Unmanned Systems Support



## NASA Global Hawk

**Location:** NASA Wallops Flight Facility, VA

**Dates:** October

The NASA Global Hawk Unmanned Aircraft System has wrapped up operations on the Hurricane and Severe Storm Sentinel (HS3) project. The Global Hawk has no planned activity for October.



On October 11, Representative Andy Harris (R MD-1) sponsored an Aerospace Career Day at the airport in Easton, Maryland. The Day was attended by over 100 students and their parents and was as an opportunity to speak with leading experts in the space and aviation industry about potential career paths. **CAPT Philip Hall** (center in photo) an officer in the NOAA Commissioned Officer Corps who is a Global Hawk Unmanned Aerial Systems (UAS) pilot attended and spoke about his work, the UAS work of NOAA's Office of Marine and Aviation Operations, and his experience as an aerospace engineer. CAPT Hall was joined at the Day by representatives from NASA, the Federal Aviation Administration, and aerospace industry representatives from throughout Maryland.

[Photo: CAPT Hall is joined by Matthew Nemphos and Kevin Reigrut, staff for Representative Harris]

## Coyote®

**Location:** Bermuda  
**Dates:** September (prior testing)  
**Mission:** Hurricane data collection testing

The Coyote® is a buoy-like device with a five-foot wingspan that has been developed as an expendable UAS deployed from an A-size sonobuoy tube to perform intelligence, surveillance, and reconnaissance missions while the host aircraft remains in safe airspace. NOAA has adapted the Coyote® for launch into a tropical cyclone/hurricane to study the interaction between the sea surface and atmosphere and its influence on hurricane development.

NOAA celebrated a record in September after deploying Coyotes® inside the retreating Hurricane Edouard. Coyotes® are the first unmanned craft deployed directly inside a hurricane, launched out of the belly of a NOAA P-3 Hurricane Hunter aircraft. The mobile drones collected data from the lowest layers of the atmosphere and the upper part of the ocean interface. Four Coyotes® were launched over a span of three days. The NOAA team were congratulated on their mission by Premier Michael Dunkley, Deputy Governor Ginny Ferson, U.S. Consul General Robert Settje, and Junior National Security Minister Jeff Baron.

Tests were successful and data transmitted by the Coyotes® will be analyzed, and ultimately help improve hurricane prediction models allowing more accurate forecasts in the future.



**Rear Admiral Anita Lopez (one star) shakes hands with Bermuda Premier Michael Dunkley after the successful Coyote® missions.**

[Photo Credit: David Hall, NOAA]

## Hexacopter

**Location:** Aleutian Islands, Alaska  
**Dates:** September 21 – mid October, 2014  
**Mission:** Steller Sea Lion Fall Female Capture Cruise

National Marine Mammal Laboratory intends to image nearly 40 sites for groups of sea lions. In particular, a reproductive adult female must be present for capture, sampling, and eventual release. After capture, the APH-22 hexacopter will be used to obtain aerial images of the female. The images collected by the UAS will be used to measure the sea lion form images to compare the measurements collected in hand. UAS flights will be conducted as one of several mission objectives during the cruise aboard a vessel operated by a crew with experience in Alaska. This portion of the western distinct population segment of Steller sea lions is declining at a rapid rate which is impeding the recovery of this *Endangered Species* Act protected population.



# OMAO Partnerships



## United States Senate Committee on Commerce, Science, and Transportation – Office of Ranking Member, Senator John Thune (R-SD)

**Location:** Washington, DC

**Detail:** LCDR Wendy Lewis, NOAA Commissioned Officer Corps

LCDR Lewis is currently on detail to the Committee and the office of Ranking Member Thune where she will be assisting on activities pertaining to oceans, atmosphere, and fisheries policy, as well as other matters within the Committee's jurisdiction

## National Science Foundation

**Location:** Antarctica

**Mission:** LTJG Joe Phillips, NOAA Commissioned Officer Corps

Members of the [NOAA Commissioned Officer Corps](#) carry out NOAA's mission in remote locations across the globe. LTJG Phillips is assigned to Antarctica where he serves as the Station Chief for NOAA's Atmospheric Research Observatory (ARO) at the Amundsen-Scott South Pole Station. The ARO at the Amundsen-Scott South Pole Station is a National Science Foundation facility used in support of scientific research related to atmospheric phenomena.

## Department of Defense - U.S. Pacific Command (USPACOM)

**Location:** Honolulu, HI

**Embedded Liaison:** CAPT Barry Choy, NOAA Commissioned Officer Corps

The U.S. Pacific Command (USPACOM) area of responsibility encompasses approximately half the earth's surface and more than half of its population. The 36 nations that comprise the Asia-Pacific include: two of the three largest economies and nine of the ten smallest; the most populous nation; the largest democracy; the largest Muslim-majority nation; and the smallest republic in the world. The region is a vital driver of the global economy and includes the world's busiest international sea lanes and nine of the ten largest ports. By any meaningful measure, the Asia-Pacific is also the most militarized region in the world, with seven of the world's ten largest standing militaries and five of the world's declared nuclear nations. Under these circumstances, the strategic complexity facing the region is unique. CAPT Choy is linked closely with the activities within the region allowing for identification of opportunities and cooperation between USPACOM and NOAA, and better overall government function situational awareness in the region.

## Department of Defense - U.S. Northern Command (USNORTHCOM)

**Location:** Boulder, CO

**Embedded Liaison:** CAPT Mark Moran, NOAA Commissioned Officer Corps

U.S. Northern Command (USNORTHCOM) partners to conduct homeland defense, civil support, and security cooperation to defend and secure the United States and its interests. NORTHCOM's area of responsibility includes air, land, and sea approaches and encompasses the continental United States, Alaska, Canada, Mexico, and the surrounding water out to approximately 500 nautical miles. It also includes the Gulf of Mexico, the Straits of Florida, and portions of the Caribbean region that include The Bahamas, Puerto Rico, and the U.S. Virgin Islands. CAPT Moran serves as the liaison for the NOAA Corps, helping to plan, organize, and execute homeland defense and civil support missions.

## **Department of Defense - U.S. Navy**

**Location:** Washington, DC

**Embedded Liaison:** CDR Christiaan Van Westendorp, NOAA Commissioned Officer Corps  
The NOAA liaison to the Oceanographer of the Navy serves as the Head of the Interagency Policy Branch of the International and Interagency Policy Division, Office of the Oceanographer of the Navy, located at the U.S. Naval Observatory. The mission of this Division is to coordinate and execute the Oceanographer of the Navy functions related to policy and programs involving international and/or interagency oceanography. Oceanography includes meteorology, oceanography, mapping, charting and geodesy, astronomy, and precise time and time interval. Starting in July, CDR Van Westendorp will serve as the interface for the Oceanographer of the Navy between Navy and U.S. Federal Agencies including NOAA.

## **Department of Defense and NOAA's Office of Coast Survey**

**Location:** Silver Spring, MD

**Embedded Liaison:** CDR Matthew Wingate, NOAA Commissioned Officer Corps  
NOAA's National Ocean Service Office of Coast Survey (OCS) is the lead federal provider of nautical charts and hydrographic survey data of the U.S. Exclusive Economic Zone. Meeting this responsibility requires active cooperation and coordination with federal partners in the Departments of Defense and Homeland Security with which NOAA shares responsibility for U.S. navigational products and services. CDR Wingate tracks, coordinates, and adds value to existing activities involving OCS subject matter experts and partners, seeks and develops additional opportunities for collaboration, and increases visibility and access to these activities and partnerships for OCS leadership.

## **Department of Homeland Security - U.S. Coast Guard**

**Location:** Washington, DC

**Embedded Liaison:** CAPT Jeremy Adams, NOAA Commissioned Officer Corps  
As the NOAA liaison to the United States Coast Guard (USCG), CAPT Adams maintains a current and comprehensive knowledge of interagency activities and policies related to the USCG and NOAA. He identifies potential conflict or benefit issues for analysis and evaluation, conducts appropriate assessments and studies, and serves as the interface between NOAA and the USCG. CAPT Adams initiates, designs, and implements strategies through federal agency liaison and coordination that results in cooperative arrangements for maritime security, oceanographic research, hazardous materials spill response, and many other activities.

## **Department of State - North Atlantic Treaty Organization – Science and Technology Organization, Centre for Maritime Research and Experimentation**

**Location:** Le Spezia, Italy

**Embedded Liaison:** LTJG Kevin Michael, NOAA Commissioned Officer Corps  
As the NOAA liaison to the North Atlantic Treaty Organization (NATO), Centre for Maritime Research and Experimentation (CMRE), LTJG Michael will be part of their unmanned systems engineering team. CMRE is a world-class scientific research and experimentation facility that organizes and conducts scientific research and technology development, centered on the maritime domain, delivering innovative and field tested science and technology solutions to address defense and security needs of the Alliance. LTJG Michael will assist with the development of unmanned systems that have the ability to sense, comprehend, predict, communicate, plan, make decisions, and take appropriate action to achieve mission goals.



# Teacher At Sea Program



The mission of the Teacher at Sea (TAS) program is to give teachers a clearer insight into our ocean planet, a greater understanding of maritime work and studies, and to increase their level of environmental literacy by fostering an interdisciplinary research experience. The program provides a unique environment for learning and teaching by sending kindergarten through college-level teachers to sea aboard NOAA research and survey ships to work under the tutelage of scientists and crew. Then, armed with new understanding and experience, teachers bring this knowledge back to their classrooms. Since its inception in 1990, the program has enabled more than 600 teachers to gain first-hand experience of science and life at sea. By participating in this program, teachers enrich their classroom curricula with knowledge that can only be gained by living and working side-by-side, day and night, with those who contribute to the world's body of oceanic and atmospheric scientific knowledge. Below is a list of the NOAA Teachers at Sea for the current monthly update for the 2014 Field Season. Once they have embarked on their cruise, you can gain access to their blogs which document their missions at sea and offer a wealth of information about the research being conducted as well as personal stories. More info: <http://teacheratsea.noaa.gov>

2014 Current TAS Placements Blogs – <http://teacheratsea.noaa.gov/2014/index.html>

## **NOAA Ship *Rainier***

**Name:** Ms. Lauren Wilmoth

**School:** Jefferson County High School – Knoxville, TN

**Cruise:** Hydrographic Survey, October 6 – 17, 2014

**Blog:** <http://teacheratsea.noaa.gov/2014/wilmoth.html>



NOAA Teacher at Sea, Lauren Wilmoth, on board [NOAA Ship \*Rainier\*](#) describes joining some of the divers on a launch vessel in a cove near Seward, AK: "The launch that I participated in on Tuesday was awesome! We went to an area called Thumb's Cove. When they returned to the boat from their dive, they said the water was much warmer than the air. The water temperature was around 10.5°C or 51°F while the air temperature was hovering right above freezing. One diver, Katrina, took an underwater camera with her. They saw jellyfish, sea urchins, and sea stars."

**TAS '14 Lauren Wilmoth** <http://tinyurl.com/m29hqb3> **#ScienceatSea**

[Photo: ENS Micki Ream diving in Thumb's Cove  
Photo Credit: ENS Katrina Poremba]



# OMAO - NOAA Dive Program



OMAO manages and implements NOAA's Dive Program (NDP), which trains and certifies scientists, engineers, and technicians from federal, state, tribal governments, and the private sector to perform the variety of tasks carried out underwater to support NOAA's mission. NDP also has cooperative diving agreements with over 100 government agencies and academic institutions. NOAA has more than 400 divers who perform over 14,000 dives per year. The NDP is headquartered at the NOAA Diving Center at the NOAA Western Regional Center in Seattle, Washington. [http://www.ndc.noaa.gov/gi\\_program.html](http://www.ndc.noaa.gov/gi_program.html)



The [NOAA Diving Program](#) conducts working diver training classes for personnel throughout NOAA, as well as from other Federal and State agencies. Here's a great shot from the current class, showing some students in the NOAA Dive Center's training tank. The NOAA Dive Center is at NOAA's Sand Point facility in Seattle, Wash.

[Photo: Greg McFall, NOAA]



# OMAO - NOAA Small Boat Program



OMAO sets policy and provides safety inspections for almost 400 small boats operated by the various Line and program offices throughout NOAA, which support fisheries laboratories, dive support, nautical charting, ocean and Great Lakes research, and more. More info: <http://www.sbp.noaa.gov/>



NOAA small boats support many diverse operations across the country.

[Photos: NOAA]



# Office of Marine and Aviation Operations

Providing environmental intelligence for a dynamic world.



The personnel, ships, and aircraft of NOAA play a critical role in gathering environmental data vital to the nation's economic security, the safety of its citizens, and the understanding, protection, and management of our natural resources. The NOAA fleet is managed and operated by the Office of Marine and Aviation Operations (OMAO), an office comprising civilians, mariners, and officers of the NOAA Commissioned Officer Corps, one of the seven uniformed services of the United States. NOAA's roots trace back to 1807, when President Thomas Jefferson ordered the first comprehensive coastal surveys. Those early surveys ensured safe passage of ship-borne cargo for a young nation. As the needs of the nation have grown, so too have OMAO's responsibilities. Today, OMAO civilians and NOAA Corps officers operate, manage, and maintain NOAA's active fleet of 16 research and survey ships and 9 specialized aircraft. Together, OMAO and the NOAA Corps support nearly all of NOAA's missions.

NOAA has the largest fleet of civilian research and survey ships in the nation. The fleet ranges from large oceanographic ships capable of exploring and charting the world's deepest ocean, to smaller vessels responsible for surveying the shallow bays and inlets of the United States. The fleet supports a wide range of marine activities including fisheries surveys, nautical charting, and ocean and climate studies. Based throughout the continental United States, Alaska, and Hawaii, the ships operate in all regions of the nation and around the world. NOAA's aircraft provide a wide range of airborne capabilities. Our highly specialized Lockheed WP-3D turboprop "hurricane hunter" aircraft are equipped with an unprecedented variety of scientific instrumentation, radars, and recording systems for both in situ and remote sensing measurements of the atmosphere, the Earth, and its environment. Together with NOAA's Gulfstream IV-SP hurricane surveillance jet, these aircraft greatly improve our physical understanding of hurricanes and enhance the accuracy of tropical cyclone forecasts. NOAA's light aircraft also play a vital role in monitoring our environment. Our King Air, Commander and Twin Otter aircraft support marine mammal population studies, shoreline change assessments, oil spill investigations, and snowpack surveys for spring flood forecasts.

The NOAA fleet provides immediate response capabilities for unpredictable events. For example, after Hurricane Sandy, NOAA ships *Thomas Jefferson* and the newly commissioned *Ferdinand R. Hassler* conducted emergency bathymetric surveys to locate possible submerged navigational hazards in the ports of New York and Virginia. These surveys enabled the ports to reopen quickly. Aerial images of storm-stricken regions, taken by NOAA aircraft, helped residents and emergency workers to quickly assess the condition of houses, bridges, and vital infrastructure.

In 2011, OMAO's Aero Commander and Jetprop Commander aircraft conducted snow surveys, which increased the accuracy of National Weather Service's flood forecasting during a record year of snow and floods. In 2010, the NOAA fleet and the NOAA Corps played a major role in the response to the BP Deepwater Horizon oil spill, conducting extensive studies in the Gulf of Mexico to monitor the health of the ecosystem. NOAA's entire Atlantic fleet and over a quarter of the total strength of the NOAA Corps were deployed to the Gulf following the spill, developing mission plans and assisting response efforts.

While manned aircraft and sea-going vessels have been, and will continue to be, a primary source of environmental data, new technology will have a significant role to play in the future NOAA fleet. OMAO, in coordination with other NOAA offices and federal agencies, is evaluating and deploying remotely piloted underwater and aircraft systems that could significantly contribute to environmental observations. OMAO's ongoing challenge is to meet the growing demand for *in situ* scientific data while providing the highest level of service. As NOAA's fleet continues to age, maintenance costs steadily increase. Operational costs have increased as well, driven largely by rising fuel costs. To better serve the needs of the nation, NOAA is examining the composition of the fleet through an exhaustive and critical review of at-sea science and observation requirements. Our objective is to develop a clear, cost-efficient path forward to ensure that the NOAA fleet can continue to conduct at-sea surveys and research vital to fisheries management, updating nautical charts, responding to natural and manmade disasters, and understanding coastal and marine systems more fully. Meeting these requirements is essential to developing sustainable, science-based management and conservation plans that protect the health and resiliency of these resources over the long-term.

We are also continuing our effort to build a civilian and NOAA Corps officer work force that is uniquely qualified to gather critical environmental intelligence and be adaptive and responsive to a changing world. We transitioned our basic NOAA Corps officer training class to the U.S. Coast Guard Academy, where newly commissioned officers train alongside Coast Guard officer candidates, developing skills and professional relationships that will benefit both services, especially during challenging times.

Finally, we continue to expand our partnerships with other federal agencies. We are proud of our longstanding and fruitful working relationships with the U.S. Air Force, U.S. Coast Guard, U.S. Navy, and U.S. Public Health Service and through the Interagency Working Group on Facilities and Infrastructure, continue facilitating cross-agency cooperation for the federal fleet of research and survey ships. Active collaboration among the Federal family is critical to ensuring the long-term capability and success of the federal ocean infrastructure. Our partners' success is our success.



# NOAA Commissioned Officer Corps



– Supporting NOAA’s Science, Service, and Stewardship –

The NOAA Commissioned Officer Corps (NOAA Corps) is one of the nation’s seven uniformed services and serve with the ‘special trust and confidence’ of the President. NOAA Corps officers are an integral part of the National Oceanic and Atmospheric Administration (NOAA), an agency of the U.S. Department of Commerce. With 321 officers, the NOAA Corps serves throughout the agency’s line and staff offices to support nearly all of NOAA’s programs and missions. The combination of commissioned service and scientific expertise makes these officers uniquely capable of leading some of NOAA’s most important initiatives.

The NOAA Corps is part of NOAA’s Office of Marine and Aviation Operations (OMAO) and traces its roots back to the former U.S. Coast and Geodetic Survey, which dates back to 1807 and President Thomas Jefferson. In 1970, NOAA was created to develop a coordinated approach to oceanographic and atmospheric research and subsequent legislation converted the commissioned officer corps to the NOAA Corps.

The NOAA Corps today provides a cadre of professionals trained in engineering, earth sciences, oceanography, meteorology, fisheries science, and other related disciplines. Corps officers operate NOAA’s ships, fly aircraft, manage research projects, conduct diving operations, and serve in staff positions throughout NOAA.

## **Benefits of the NOAA Corps to the Nation**

The combination of commissioned service with scientific and operational expertise, allows the NOAA Corps to provide a unique and indispensable service to the nation. NOAA Corps officers enable NOAA to fulfill mission requirements, meet changing environmental concerns, take advantage of emerging technologies, and serve as environmental first responders. For example:

- In 2012 after Hurricane Sandy, seafloor sonar surveys completed by NOAA ships and small boats helped reopen Baltimore and Virginia ports, quickly restarting commerce and allowing Navy ships to return to port. New York and New Jersey ports were reopened, enabling emergency supplies to reach some of the hardest-hit areas. Maritime traffic resumed more quickly because NOAA embedded regional navigation managers within command centers.
- Hours after Sandy, NOAA planes and scientists conducted aerial surveys of the affected coastlines and immediately published the photos online, allowing emergency managers and residents to examine the damage even before ground inspections were permitted. These surveys are also vital to FEMA assessment teams and other on-the-ground responders and those managing oil spill clean-up and damage assessment. Over 3,000 miles of coastline have been surveyed, and over 10,000 images processed to document coastal damage and impacts to navigation.
- In 2011, OMAO’s Aero Commander and Jetprop Commander aircraft conducted snow surveys, which increased the accuracy of National Weather Service’s River Forecast Centers flood forecasting during a record year of snow and floods.

- After Hurricane Irene in 2011, the NOAA Ship *Ferdinand Hassler* and team completed 300 lineal nautical miles of survey work in less than 48 hours providing a Damage Assessment that enabled the U.S. Coast Guard to re-open ports and restore more than \$5M per hour in maritime commerce less than 3 days after the storm.
- More than 80 officers, or a quarter of the NOAA Corps' total strength, were re-assigned and/or deployed to support the Deepwater Horizon disaster response in the Gulf in 2010.
  - Eight NOAA-owned vessels, or the entire Atlantic fleet, were also deployed to the Gulf of Mexico for spill response, as well as several aircraft.
- NOAA Corps officers who run NOAA's Ships support fish stock and marine mammal assessments, marine ecosystem studies, ocean exploration, coral reef preservation and protection, and mapping and charting around the United States and the Arctic, and more.
- NOAA Corps officers who run NOAA's Aircraft collect environmental and geographic data essential to studying climate change, assess marine mammal populations, survey coastal erosion, investigate oil spills, and improve hurricane and winter storm forecasts as they pilot the WP-3D Orion hurricane hunters and other aircraft that fly through, and above the storms to obtain critical forecasting data.

Find out more about the NOAA Corps, its mission and history at <http://www.noaacorps.noaa.gov/>.



On October 2, a promotion ceremony was held in Silver Spring, MD, for local officers. A total of forty-six officers were promoted throughout the NOAA Corps, ranging from LTJG to CAPT, two of which hold liaison positions. Bravo Zulu!

[Photo Credit: David Hall, NOAA]