NOAA Fleet Update

FOR NOVEMBER 2013

The following update provides the status of the ships and aircraft in NOAA's fleet, including current location and planned mission(s). NOAA's ships and aircraft play a critical role in the collection of oceanographic, atmospheric, hydrographic, and fisheries data. NOAA's fleet of research aircraft and ships are operated, managed, and maintained by NOAA's Office of Marine and Aviation Operations (OMAO), which includes both civilians and the commissioned officers of the NOAA Commissioned Officer Corps (NOAA Corps), one of the seven Uniformed Services of the United States. Please click on the Table of Contents entry to be taken directly to a specific ship or aircraft. The fleet is listed based on the geographical location of their homeport/base starting in the Northeast and ending in the Pacific.

Find us on Facebook for the latest news and activities.

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NOAA’s Ships

NOAA's Ship Tracker (screen shot below) shows information about the location, present and past, of NOAA's ships.
http://shiptracker.noaa.gov

Ferdinand R. Hassler

Homeport and Commander: New Castle, NH – LCDR Ben Evans
Primary Mission Category: Hydrographic Surveys
Ship Status: Underway October 30 – November 8, 2013 & November 13 – 22, 2013
DEPART: Woods Hole, MA **ARRIVE:** Woods Hole, MA
DEPART: Woods Hole, MA **ARRIVE:** New Castle, NH

Project: Hydrographic Survey Operations in the Approaches to New York, NY

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.

Henry B. Bigelow

Homeport and Commander: Woods Hole, MA (currently docked in Newport, RI) – CDR G. Mark Miller
Primary Mission Category: Fisheries Research
Ship Status: Underway November 1 – 15, 2013
DEPART: Boston, MA **ARRIVE:** Newport, RI

Project: Autumn Multispecies 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 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 sonars.

Okeanos Explorer

Homeport and Commander: North Kingstown, RI – CDR Ricardo Ramos
Primary Mission Category: Oceanographic Exploration and Research
Ship Status: Underway November 1 – 4, 2013 & November 6 – 12, 2013
DEPART: North Kingstown, RI **ARRIVE:** North Kingstown, RI
DEPART: North Kingstown, RI **ARRIVE:** North Kingstown, RI

First Project: Orientation Cruise for NOAA Corps' Basic Officer Training Course (BOTC)

First Project Objectives: Provide ship time and allow new BOTC class bridge time onboard a NOAA vessel.

Second Project: Gulf of Maine 2013 Cyst Cruise

Second Project Objectives: Collect sediment cores and preserve samples 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 condition along the northern New England coasts in the spring and summer of 2014.

Thomas Jefferson

Homeport and Commander: Norfolk, VA – CDR Lawrence Krepp
Primary Mission Category: Hydrographic Surveys
Ship Status: Alongside Marine Operations Center – Atlantic, in Norfolk, VA, for standard maintenance and training.

Nancy Foster

Homeport and Commander: Charleston, SC – LCDR Nick Chrobak
Primary Mission Category: Oceanographic Research, Environmental Assessment
Ship Status: Underway November 5 – 9, 2013
DEPART: Charleston, SC **ARRIVE:** Charleston, SC

Project: Mapping Essential Fish Habitat in the Southeast US to Support Offshore Energy Spatial Planning and Ecosystem Management

Objectives: Characterize habitats and map distribution of fishes over fishing grounds and proposed wind energy development areas near Cape Fear, NC.

Ronald H. Brown

Homeport and Commander: Charleston, SC – CAPT Mark Pickett
Primary Mission Category: Oceanographic Research, Environmental Assessment
Ship Status: Underway November 11 – December 8, 2013
DEPART: Bridgetown, Barbados **ARRIVE:** Recife, Brazil

Project: The Pilot Research Moored Array in the Tropical Atlantic (PIRATA) Northeast Extension / Aerosols and Ocean Science Expeditions (AEROSE)

Objectives: Monitor the upper ocean and near surface atmosphere of the Tropical Atlantic via the deployment and maintenance of an array of moored buoys and automatic meteorological stations. This array is the Atlantic's analogue of the Pacific Ocean's Tropical Atmosphere Ocean (TAO) array. The PIRATA array consists of a backbone of ten moorings that run along the equator. Gain understanding of the impacts of long-range transport of mineral dust and smoke aerosols over the tropical Atlantic.

Gordon Gunter

Homeport and Commander: Pascagoula, MS – CDR Hancock
Primary Mission Category: Fisheries Research
Ship Status: Underway November 8 – 26, 2013
DEPART: Norfolk, VA **ARRIVE:** Newport, RI

Project: Northeast Integrated Pelagic Survey

Objectives: The principal objective of the survey is to assess the pelagic components of the Northeast U.S. Continental Shelf Ecosystem from water currents to plankton, pelagic fishes, marine mammals, sea turtles, and seabirds. Quantify the spatial distribution of the following parameters: water currents, water properties, phytoplankton, microzooplankton, mesozooplankton, pelagic fish and invertebrates, sea turtles, marine mammals, and sea birds using traditional, novel techniques, and instruments.

Oregon II

Homeport and Commander: Pascagoula, MS – Master Dave Nelson
Primary Mission Category: Fisheries Research
Ship Status: Underway October 25 – November 9, 2013 & November 11 – 26, 2013
DEPART: Pascagoula, MS **ARRIVE:** Pascagoula, MS
DEPART: Pascagoula, MS **ARRIVE:** Pascagoula, MS

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

Objectives:

1) Sample the northern Gulf of Mexico 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 daily
5) Assess the occurrence, abundance, and geographical distribution of the early life stages of ichthyoplankton.

Pisces

Homeport and Commander: Pascagoula, MS – CDR Peter Fischel
Primary Mission Category: Fisheries Research
Ship Status: Underway November 1 – 8, 2013 & November 11 – 25, 2013
DEPART: Pascagoula, MS **ARRIVE:** Pascagoula, MS
DEPART: Pascagoula, MS **ARRIVE:** Pascagoula, MS

Project: Pelagic Acoustic Trawl Survey

Objectives:

1) Sample the northern Gulf of Mexico with 90-ft high-opening fish trawl to determine the abundance and distribution of pelagic fish species.
2) Collect length frequency data and biological samples of collected species.
3) Conduct conductivity/temperature/depth (CTD) casts to profile temperature, salinity, conductivity, transmissivity, dissolved oxygen concentrations, and fluorometry.
4) Collect ichthyoplankton samples with bongo and neuston samplers to map the distribution of fish eggs and larvae.
5) Collect benthic infauna.
6) Collect acoustic data with an EK60 sonar and bathymetric data with an ME70 sonar.

As NOAA planes surveyed Sandy's storm damage from above, NOAA ships *Ferdinand R. Hassler* (left) and *Thomas Jefferson* (right) searched for sunken storm debris in the Chesapeake Bay, VA, and New York Harbor, NY, respectively.

We continue to remember all who lost their lives during the storm, and those still working to recover from it.

Photos: October 2012

Rainier

Homeport and Commander: Newport, OR – CDR Rick Brennan
Primary Mission Category: Hydrographic Surveys
Ship Status: Alongside Marine Operations Center – Pacific, Newport, OR, for standard winter repair period, maintenance, and training.

Bell M. Shimada

Homeport and Commander: Newport, OR – CDR Scott Sirois
Primary Mission Category: Fisheries Research
Ship Status: Alongside Marine Operations Center – Pacific, Newport, OR, for standard winter repair period, maintenance, and training.

McArthur II

Homeport: Newport, OR
Ship Status: The ship is currently docked in Newport, OR, in layup status.

Fairweather

Homeport and Commander: Ketchikan, AK – CDR James Crocker
Primary Mission Category: Hydrographic Surveys
Ship Status: Alongside in Long Beach, CA conducting repairs to the ship's hydroacoustic system. The ship's launches continue conducting hydrographic survey operations on approaches to Los Angeles / Long Beach, CA

Project: Hydrographic Survey Operations on approaches to Los Angeles Long Beach, CA

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.

Oscar Dyson

Homeport and Commander: Kodiak, AK – CDR Mark Boland
Primary Mission Category: Fisheries Research
Ship Status: Underway October 26 – November 1, 2013 & November 3 – 7, 2013
DEPART: Kodiak, AK **ARRIVE:** Port Angeles, WA
DEPART: Port Angeles, WA **ARRIVE:** Alameda, CA

Project: Ecosystems & Fisheries- Oceanography Coordinated Investigations (Eco-FOCI) Mooring Recoveries and Deployments followed by transit to drydock

Objectives: Recover fifteen subsurface moorings and conduct one conductivity/temperature/depth (CTD) cast at each site for calibration. Moorings were located at the following locations: Chiniak Bay, Kennedy Entrace, Stevenson Entrance, Portlock Bank, Gore Point, Cross Sound area west of Juneau, Salisbury Sound, and the SW side of Baranof Island. Once Project is complete, Oscar Dyson will transit to Alameda, CA for a shipyard period.

Hi'ialakai

Homeport and Commander: Honolulu, HI – CDR Mike Ellis
Primary Mission Category: Oceanographic Research, Environmental Assessment
Ship Status: In transit to Seattle, WA, for a shipyard drydock period for routine maintenance.

Oscar Elton Sette

Homeport and Commander: Honolulu, HI – LCDR Stephanie Koes
Primary Mission Category: Fisheries Research
Ship Status: Alongside Marine Operations Center – Pacific Islands, Pearl Harbor, HI, for standard winter repair period, maintenance, and training.

Ka'imimoana

Homeport: Honolulu, HI
Ship Status: The ship is currently in a layup status in Newport, OR.

Incoming snowstorm over the Chukchi Sea as seen from one of NOAA's P3 aircraft during an Arctic Flux research mission out of Eielson Air Force Base, just outside Fairbanks, Alaska.
Photo Credit: Dr. Kevin Wood, NOAA/PMEL

NOAA's Aircraft

NOAA's fleet at the OMAO Aircraft Operations Center in Tampa, FL.

WP-3D (N42RF)

Home Base:	OMAO's Aircraft Operations Center (AOC), MacDill AFB, Tampa, FL
Temporary Base:	Fairbanks, AK
Commander:	CAPT Mark Nelson
Current Mission:	Arctic Flux – waters off the North Slope of Alaska until November 7, 2013

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. The operations described here are 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 (MIZ) off the northern coast of Alaska. Following the project, the aircraft will be inducted into scheduled phase maintenance.

WP-3D (N43RF)

Home Base: OMAO's Aircraft Operations Center (AOC), MacDill AFB, Tampa, FL
Aircraft Commander: TBD
Current Mission: 2013 Hurricane Reconnaissance and Research – Western Atlantic and Gulf of Mexico until November 30, 2013

Radar reconnaissance missions on NOAA WP-3D aircraft will be conducted to support tropical cyclone forecasting and the Hurricane Forecast Improvement Project. 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 NWS 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.

Twin Otter (N46RF)

Home Base: OMAO's Aircraft Operations Center (AOC), MacDill AFB, Tampa, FL
Temporary Base: Calgary, Alberta
Aircraft Commander: TBD
Current Mission: Corrosion Inspection

Aircraft is in a long-term scheduled corrosion inspection. Expected completion is in late winter.

Twin Otter (N57RF)

Home Base: OMAO's Aircraft Operations Center (AOC), MacDill AFB, Tampa, FL
Temporary Base: Coast Guard Air Station, Cape Cod, MA
Aircraft Commander: LT Dave Gothan
Current Mission: Northeast Right Whale Survey – Atlantic waters off of Maine, Massachusetts, and Rhode Island. November 1 – December 30, 2013

This survey will serve multiple objectives with respect to marine mammal conservation: 1) provide locations of Right whales to mariners, 2) provide description of right whale distribution to support the implementation of seasonal and dynamic area management, 3) provide annual photo-identification records on Right whales, as well as detailed vertical photogrammetry in selected periods, 4) provide information on the distribution and abundance of marine mammals and marine turtles in the winter, spring, summer and fall seasons, 5) provide sightings of dead whales, 6) provide information on the distribution of shipping and fishing gear, and 7) census seal populations along the New England coast.

Twin Otter (N56RF)

Home Base: OMAO's Aircraft Operations Center (AOC), MacDill AFB, Tampa, FL
Current Mission: Training

The aircraft will be utilized for flight training and then going into a short scheduled maintenance period before the end of the month. Next project will be a Southeastern Right Whale survey out of Saint Simons, GA, starting December 1.

Twin Otter (N48RF)

Home Base: OMAO's Aircraft Operations Center (AOC), MacDill AFB, Tampa, FL
Aircraft Commander: LT John Rossi
Current Mission: Snow/Soil Moisture Surveys, Location TBD, Until November 30, 2013

Aircraft will operate throughout the northern portions of the US and southern portions of Canada to collect Snow Water Equivalent (SWE) and soil moisture measurements. The National Operational Hydrologic Remote Sensing Center (NOHRSC) has developed, and currently maintains, an operational Airborne Gamma Radiation Snow Survey Program to make airborne Snow Water Equivalent (SWE) and soil moisture measurements. 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.

Jet Prop Commander (N45RF)

Home Base: OMAO's Aircraft Operations Center (AOC), MacDill AFB, Tampa, FL
Temporary Base: Naples, FL
Aircraft Commander: LT Paul Hemmick
Current Mission: Scheduled Maintenance until mid-November. Snow/Soil Moisture Surveys after maintenance is complete.

Aircraft will be also be utilized for Snow Survey Operations and Soil Moisture Surveys.

Gulfstream IV (N49RF)

Home Base: OMAO's Aircraft Operations Center (AOC), MacDill AFB, Tampa, FL
Aircraft Commander: TBD
Current Mission: Hurricane Surveillance. Western Atlantic and Gulf of Mexico until November 30, 2013.

NOAA's Gulfstream IV aircraft will support operational tropical cyclone forecasting and the Hurricane Forecast Improvement Project. The G-IV will be the primary aircraft for surveillance missions with the Air Force's WC-130J and NOAA's WP-3D aircraft serving as backup platforms. 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.

King Air (N68RF)

Home Base: Manassas, VA
Aircraft Commander: LT Rebecca Waddington / LCDR Scott Price
Current Mission: Various locations for coastal mapping. Continuous operations.

The King Air will continue supporting coastal mapping. Mission priorities in November are Mobile Bay, the east coast of Florida, and Cape Lookout. The aircraft will be on stand-by for redeployment if post hurricane damage assessment flights are needed for the remainder of the season.

The NOAA Hurricane Hunters Crew and Scientists of 'Arctic Flux - 2013' pose in front of N42RF after a recent mission. To read more about the Arctic Flux project, check out www.polarresearch.net/ #noaa #noaa42 #climatechange
Photo: Provided by Dr. Muyin Wang

Unmanned Systems Support

Puma

Location: Lake Borgne, LA
Dates: November 4 - 9, 2013
Pilot in Command: TBD

River Forecasting Mission:
The over-arching objective of this project is to determine the operational capability of the PUMA to meet River Forecasting Center requirements. These requirements include determining; the topography and bathymetry of river beds, vegetation type and coverage in areas adjacent to rivers, water flow rates, and water content in adjacent areas

Location: Channel Islands, CA – Channel Islands National Marine Sanctuary Survey
Dates: November 17 - 22, 2013
Pilot in Command: TBD

Channel Islands Mission:
The PUMA system will be utilized with the goal of integrating the platform as part of the Channel Islands National Marine Sanctuary's (CINMS) research and enforcement vessel operations. Flights will be conducted from the Sanctuary's vessel for living marine research (LMR) surveys and marine zone enforcement.

Mark Rogers, with the OMAO Aircraft Operation Center, launches a Puma unmanned aircraft system from the ice in the Arctic during the U.S. Coast Guard-led, multi-agency Arctic Shield 2013 exercise.
Photo Credit: CDR Jeremy Adams-NOAA

NOAA Partnerships

NASA C-23 Sherpa

Location: Fairbanks, AK
Mission: Carbon in Arctic Reservoirs Vulnerability Experiment (CARVE), Arctic region in Alaska.
Pilot Second in Command: LCDR Jason Mansour

A NOAA Corps pilot, LCDR Jason Mansour, will be flying as Second In Command on the NASA Sherpa aircraft for the CARVE project. The project will collect detailed measurements of important greenhouse gases on local to regional scales in the Alaskan Arctic and demonstrate new remote sensing and improved modeling capabilities to quantify Arctic carbon fluxes and carbon cycle-climate processes. Ultimately, CARVE will provide an integrated set of data that will provide experimental insights into Arctic carbon cycling.

NOAA aviators (LCDR Phil Eastman, LT David Gothan, LT Rebecca Waddington and LCDR Jason Mansour) in front of the NASA C-23 Sherpa aircraft used for missions in Alaska.

The CARVE (Carbon in Arctic Reservoirs Vulnerability Experiment) mission occurs throughout the year primarily within Fairbanks, AK, studying air quality within the area. NOAA's Aviators are acting as Second-In-Command on the aircraft.
Photo Credit: LCDR P. Eastman, NOAA

Teacher At Sea Program

The mission of the National Oceanic and Atmospheric Administration's (NOAA) 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 2013 field season has ended, and the **2014 NOAA Teacher at Sea Call for Applications** will be open via its **online** application system from October 21 - November 18, 2013. Applications are due **NOVEMBER 18, 2013 at 5 p.m. Eastern Time. To apply, teachers must go to** http://tasweb.ecs-federal.com/default.aspx.

IMPORTANT NOTE: Letters of recommendation must be submitted via the online application system and are due by November 18, 2013 at 5 p.m. Eastern Time.

For answers to Frequently Asked Questions visit http://teacheratsea.noaa.gov/about/faqs.html

Please note the change in dates for the Call for Applications is due to the Federal Government Shutdown that occurred from October 1-16, 2013.

About OMAO

NOAA's Office of Marine and Aviation Operations operates a wide variety of specialized aircraft and ships to complete NOAA's environmental and scientific missions. OMAO is also responsible for the administration and implementation of the NOAA Diving Program, Small Boat Program and Aviation Safety Program, to ensure safe and efficient operations in NOAA-sponsored underwater activities and aviation and small boat operations. The Director of OMAO and the NOAA Corps is Rear Admiral Michael S. Devany (two star). Rear Admiral (lower half or one star) David A. Score is the director of the Marine and Aviation Operations Centers.

NOAA's Aircraft Operations Center (AOC), located at the MacDill Air Force Base in Tampa, Florida, is home to NOAA's fleet of aircraft. These fixed-wing aircraft operate in some of the world's most remote and demanding flight regimes--over open ocean, mountains, coastal wetlands, Arctic pack ice, and in and around hurricanes and other severe weather--with an exemplary safety record. There are no comparable aircraft in the commercial fleet to support NOAA's atmospheric and hurricane surveillance/research programs. AOC provides unique specialized platforms to NOAA's scientists. The hard-working versatile aircraft collect the environmental and geographic data essential to NOAA hurricane and other weather and atmospheric research; provide aerial support for coastal and aeronautical charting and remote sensing projects; conduct aerial surveys for hydrologic research to help predict flooding potential from snow melt, and provide support to NOAA's fishery research and marine mammal assessment programs.

NOAA's ship fleet provides hydrographic survey, oceanographic and atmospheric research, and fisheries research vessels to support NOAA's strategic plan elements and mission. The vessels are located in various locations around the United States. The ships are managed by the Marine Operations Center, which has offices in Norfolk, Virginia, Newport, Oregon, and Honolulu, Hawai'i. Logistic support for these vessels is provided by the Marine Operations Center offices or, for vessels in Woods Hole, Massachusetts; Charleston, South Carolina; Pascagoula, Mississippi; San Diego, California; Kodiak and Ketchikan, Alaska; and Honolulu, Hawaii; by Port Captains located in those ports.

NOAA's aircraft and ship fleet is operated and managed by a combination of NOAA Corps Officers, wage marine and civilian employees. NOAA Corps pilots are the only pilots in the world who are trained and qualified to fly into hurricanes at dangerously low altitudes (below 10,000 feet). Officers and OMAO civilians also frequently serve as chief scientists on program missions. The wage marine and civilian personnel include licensed engineers, mechanics, navigators, technicians, and members of the engine, steward, and deck departments. Administrative duties and navigation of the vessels are performed by the commissioned officers. The aircraft and ship's officers and crew provide mission support and assistance to embarked scientists from various NOAA laboratories as well as the academic community.

In addition to NOAA's research fleet, OMAO is fulfilling NOAA's ship and aircraft support needs with contracts for ship and aircraft time with other sources, such as the private sector and the university fleet.

The NOAA Commissioned Officer Corps

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

The NOAA Commissioned Officer Corps (NOAA Corps) is one of the seven uniformed services of the Unites States 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 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 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.

- 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.

- 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 Corps, its mission and history at http://www.noaacorps.noaa.gov/.