NOAA NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
UNITED STATES DEPARTMENT OF COMMERCE

Congressional Brief: Sample of 2010 NOAA Activities

NOAA's work touches the daily lives of every person in the United States and in much of the world. From weather forecasts in the Midwest to fisheries management on the East Coast, from safe navigation to coastal services in the Gulf, from remote sensing to climate research and ocean exploration, NOAA's products and services contribute to the foundation of a healthy economy and affect approximately one-third of the nation's gross domestic product.

NOAA worked with Congress to support important legislation including:

- Passage of:
  - *Shark Conservation Act and International Fisheries Agreement Clarification Act*
  - *America COMPETES Reauthorization Act*
  - *Longline Catcher Processor Subsector Single Fishery Cooperative Act*
- Consideration of sanctuary expansion, corals, fisheries, resource protection, hydrographic services, climate change, oil spill related legislation, and more.

Complete details on the stories highlighted below may be viewed at: http://www.noaa.gov/2010_newsarchive.html.

Did you know? NOAA protects critical habitats and builds sustainable fisheries.

January – **NOAA and Fishermen Cooperate on Research into Monkfish Migration**

Researchers are working with commercial fishermen to put electronic tags on hundreds of monkfish (*Lophius americanus*) in the waters of southern New England and the Gulf of Maine to track where the commercially important fish goes during its lifetime, and to answer other questions about its biology. Although monkfish is the highest valued finfish in the northeast U.S., aspects of the fish's basic biology and behavior are poorly understood, such as their migration patterns, what depths they live in and how they use habitat.

March – **NOAA Launches Interactive Marine Protected Areas Mapping Tool**

NOAA's National Marine Protected Areas Center has created a new interactive online mapping tool that, for the first time, allows users to view boundaries and access data for more than a thousand marine protected areas (MPAs) in the United States. MPAs are conservation areas that include the marine environment, such as some National Parks and National Wildlife Refuges, National Marine Sanctuaries and similar areas managed by state, local and tribal governments. The mapping tool allows users to view all the MPAs in a specific location or across an entire region, as well as search for conservation purpose, managing agency and level of protection.

April – **Deepwater Horizon / BP Oil Spill Response**

As the nation's experts on oceanic and atmospheric science and the lead science agency for oil spills, NOAA was on-scene at the Deepwater Horizon incident since the earliest moments of the crisis and worked to protect habitats and fisheries. Our scientists used data from satellites, aircraft, ships, buoys, and gliders to collect and provide mission-critical information to guide the emergency response and now the long-term restoration of the Gulf Coast. Much of that information is now centralized, including daily weather and oil trajectory forecasts, emergency fisheries closure and re-opening maps, mission reports, and much more. The Deepwater Horizon Archive (http://www.noaa.gov/deepwaterhorizon/) is designed for many users, from scientists and researchers seeking data to citizens wanting to learn more about the spill's impact on the Gulf.

Staff on the NOAA Ship *Gordon Gunter* deploy a glider to track the oil in the Gulf. Credit: NOAA.

June – **NOAA Protects U.S. Waters From Illegal, Unreported and Unregulated Fishing**

A Spanish-flagged fishing vessel faces a possible $7.4 million civil penalty for 67 counts of fishing in U.S. waters without a U.S. permit, according to NOAA's Office of General Counsel for Enforcement and Litigation in the Pacific Islands region. The penalty would be the highest ever assessed by NOAA. NOAA issued the Notice of Violation and Assessment, known as a NOVA, on June 2 to Spanish company Albacora S.A., owner of the *Albacora Uno*. It charges the purse seine vessel with fishing inside the U.S. Exclusive Economic Zone (EEZ) in the western and central Pacific Ocean over two years. The case resulted from an investigation by agents with NOAA's Office of Law Enforcement (OLE), who boarded the vessel when it docked in the U.S. port of Pago Pago, American Samoa, in March 2010, and found records documenting the *Albacora Uno's* activities in U.S. waters. The *Magnuson-Stevens Fishery Conservation and Management Act* prohibits foreign-flagged vessels from catching, taking or harvesting fish, or supporting those actions, in U.S. waters without a U.S. permit, which the *Albacora Uno* did not have.

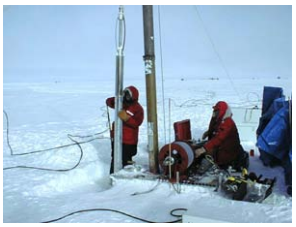
September – **Resource Restoration Planning Process Begins for BP/Deepwater Horizon Oil Spill**

The Department of the Interior, the National Oceanic and Atmospheric Administration, and the co-trustees for natural resources affected by the BP/Deepwater Horizon oil spill started the injury assessment and restoration planning phase of the Natural Resource Damage Assessment, a legal process to determine the type and amount of restoration needed to compensate the public for harm to natural resources and their human uses as a result of the spill. This is the second phase of the NRDA process. During the injury assessment and restoration-planning phase, trustees will assess the nature and amount of injuries and develop a restoration plan. The goal is to recover from responsible parties damages equal to what is necessary to return the environment to the conditions that would have existed if the oil spill had not occurred and to recover compensation for the diminished value of the injured resources.

October – **NOAA and Partners Celebrate Dam Breaching on Patapsco River**

NOAA and local partners celebrated the opening of 20 miles of stream habitat along the Patapsco River in Maryland and its tributaries, a critical step in restoring the Patapsco River and restore the health of the river and strengthen the environmental community. Removing the dam will enhance the health of the river by allowing the natural transport of sediment, restoring 20 miles of spawning habitat for migratory fish—including American eel and alewife—and other species, and creating a safer recreation area.

Did you know? NOAA conducts critical research and expeditions to advance our understanding of the oceans and atmosphere.



January – **Emissions of Potent Greenhouse Gas Increase Despite Reduction Efforts**

Despite a decade of efforts worldwide to curb its release into the atmosphere, NOAA and university scientists have measured increased emissions of a greenhouse gas that is thousands of times more efficient at trapping heat than carbon dioxide and persists in the atmosphere for nearly 300 years. The substance HFC-23, or trifluoromethane, is a byproduct of a refrigerant in air conditioners and refrigerators and a starting material for producing heat and chemical-resistant products, cables and coatings. Scientists measured air collected from above the snow surface and down to 380 feet below the snow surface.

April – **"Vital New Roadmap" Underscores Need to Study Climate Change, Human Health Links: Asthma, Cancer, Weather Disaster-Related Illnesses Cited Among Concerns**

The vulnerability of people to the health effects of climate change is the focus of a report released by an NIH-led federal interagency group that includes NOAA. The report, "A Human Health Perspective on Climate Change," calls for coordinating federal research to better understand climate's impact on human health and identifying how these impacts can be most effectively addressed. The report was published by *Environmental Health Perspectives* and the National Institute of Environmental Health Sciences.

June – **NOAA Announces Funding to Support Ocean and Coastal Observation Technologies**

A $4 million NOAA grant will help a university consortium evaluate the readiness of marine forecasts, such as flooding from storm surge or seasonal dead zones, along the Atlantic and Gulf of Mexico coasts and improve those forecasts for use by emergency managers, scientific researchers and the general public. The competitive grant, from NOAA's Integrated Ocean Observing System (IOOS®) program, will go to the Southeastern Universities Research Association, a group of more than 60 universities that work with government agencies and researchers to advance information technology and improve understanding of coastal, ocean, and environmental phenomena. IOOS is a tool for tracking, predicting, managing, and adapting to changes in our marine environment.

July – **NOAA Ship *Fairweather* Maps Bering Straits**

As Arctic ice recedes, countries are looking forward to faster, safer and more efficient sea routes across the top of the world and NOAA sent one of its premier surveying vessels, NOAA Ship *Fairweather*, to detect navigational dangers in critical Arctic waters that have not been charted for more than 50 years. *Fairweather*, whose homeport is Ketchikan, Alaska, spent July and August examining seafloor features, measuring ocean depths and supplying data for updating NOAA's nautical charts spanning 350 square nautical miles in the Bering Straits around Cape Prince of Wales. The data will also support scientific research on essential fish habitat and will establish new tidal datums in the region.

September – **Scientists Find 20 Years of Deep Water Warming Leading to Sea Level Rise**

Scientists analyzing measurements taken in the deep ocean around the globe over the past two decades find a warming trend that contributes to sea level rise, especially around Antarctica. Greenhouse gases in the atmosphere, such as carbon dioxide, cause heating of the Earth. Over the past few decades, at least 80 percent of this heat energy has gone into the ocean, warming it in the process.

Did you know? NOAA protects lives and livelihoods.

January – **NOAA Dispatches High-Tech Research Plane to Improve Winter Storm Forecasts**
NOAA's Gulfstream IV aircraft, known for investigating Atlantic hurricanes, began flying over the North Pacific Ocean to fill gaps in atmospheric observations, to enhance forecasts of winter storms for the entire North American continent through improved computer modeling. These flights helped us better observe and understand the current state of the atmosphere over the Pacific, where most of North America's weather originates, in order to better predict future conditions across the U.S. and Canada 3-6 days in advance.

March – **Newest NOAA Geostationary Satellite Reaches Orbit**
NOAA and NASA officials announced a new Geostationary Operational Environmental Satellite (GOES), successfully reached its initial orbit, joining four other GOES spacecraft that help NOAA forecasters track life-threatening weather and solar activity. GOES-P captures higher resolution images of weather patterns and atmospheric measurements than those provided by earlier satellites. The higher resolution allows forecasters to pinpoint the location of severe weather with greater accuracy.

December **– NOAA Satellites Aid in the Rescue of 295 People in 2010**
In 2010, NOAA satellites were critical in the rescues of 295 people from life-threatening situations throughout the United States and its surrounding waters. The satellites picked up distress signals from emergency beacons carried by downed pilots, shipwrecked boaters and stranded hikers, and relayed the information about their location to first responders on the ground. NOAA's polar-orbiting and geostationary satellites, along with Russia's COSPAS spacecraft, are part of the international Search and Rescue Satellite Aided Tracking system, called COSPAS-SARSAT. This system uses a network of satellites to quickly detect and locate distress signals from emergency beacons onboard aircraft and boats, and from smaller, handheld personal locator beacons called PLBs.

December – **Forecast System to Warn of Toxic Algal Outbreaks Along Texas' Shoreline**
Texas officials and coastal managers will now receive early notice of outbreaks of toxic algae that threaten public health and affect beach and fishing activities along the coast. Weekly bulletins generated by the NOAA Harmful Algal Bloom Operational Forecast System are based on observations from state partners, coupled with models, imagery and data from NOAA's powerful tide and current and weather systems. The most common harmful algal bloom that occurs in the Gulf of Mexico is known as "red tide" and is caused by the algal species *Karenia brevis*. Occurrences of red tide have historically resulted in fish and marine mammal deaths, shellfish contamination and even human health risk in the form of respiratory distress.

Year Round – **NOAA Issues Millions of Forecasts, Warnings, Alerts, and Outlooks to Help Protect the Lives and Livelihoods of Every American.**

- Daily national, regional, and local weather forecasts and warnings
- Hurricane, tornado, and inland flooding warnings and watches
- Seasonal weather outlooks for hurricanes, wildland fire, drought, temperature, and precipitation
- Marine and aviation forecasts, advisories, and warnings and tsunami alerts and warnings
- Space weather warnings, watches, alerts, and predictions

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