



GULF OF MEXICO NEWS

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June 2012



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NOAA Gulf of Mexico News

Back-to-back La Niñas cooled globe and influenced extreme weather in 2011

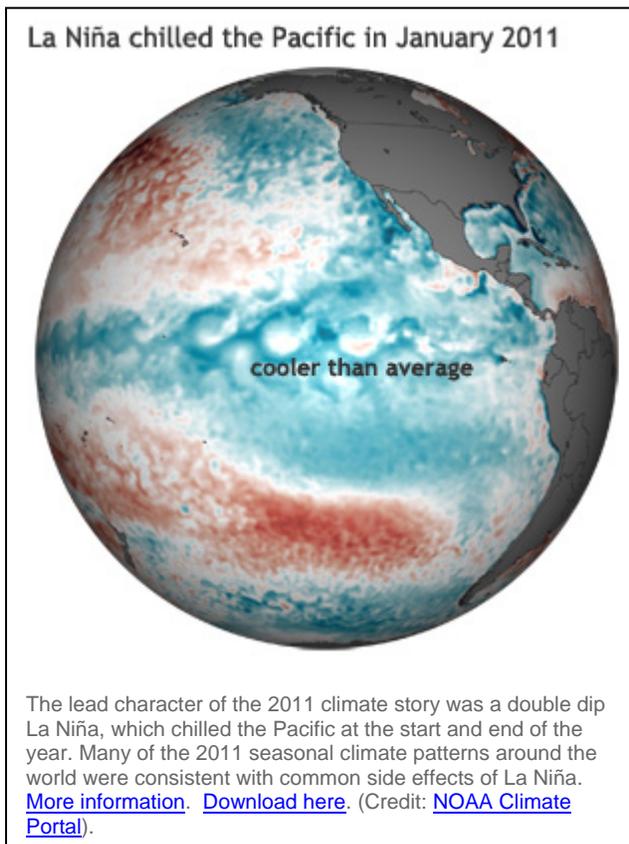
New NOAA-led report examines climate conditions experienced around the world

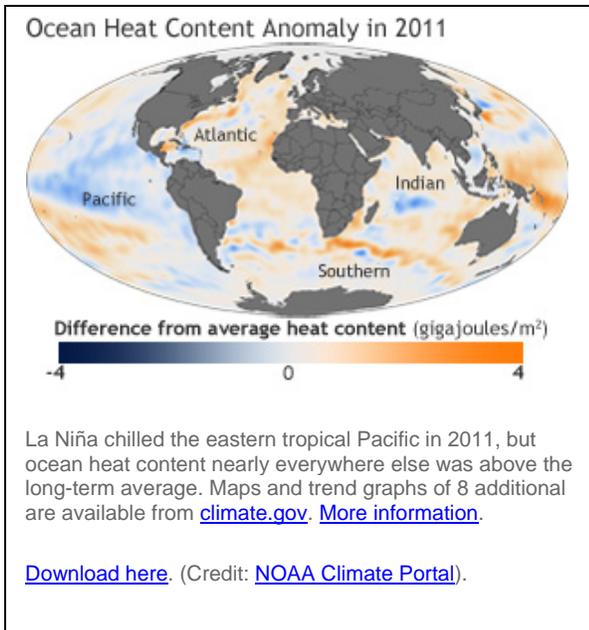
Worldwide, 2011 was the coolest year on record since 2008, yet temperatures remained above the 30 year average, according to the *2011 State of the Climate* report released [online](#) today by NOAA. The peer-reviewed report, issued in coordination with the American Meteorological Society (AMS), was compiled by 378 scientists from 48 countries around the world. It provides a detailed update on global climate indicators, notable weather events and other data collected by environmental monitoring stations and instruments on land, sea, ice and sky.

“2011 will be remembered as a year of extreme events, both in the United States and around the world,” said Deputy NOAA Administrator Kathryn D. Sullivan, Ph.D. “Every weather event that happens now takes place in the context of a changing global environment. This annual report provides scientists and citizens alike with an analysis of what has happened so we can all prepare for what is to come.”

Two back-to-back La Niñas, each characterized by cooler-than-average water temperatures in the eastern equatorial Pacific, affected regional climates and influenced many of the world’s [significant weather events](#) throughout the year. These included historic droughts in East Africa, the southern United States and northern Mexico. La Niña conditions contributed to an above-average tropical cyclone season in the North Atlantic hurricane basin and a below-average season in the Eastern North Pacific. It was also associated with the wettest two-year period (2010–2011) on record in Australia, which was particularly remarkable as the wet conditions followed a decade-long dry spell.

The Arctic continued to show more rapid changes than the rest of the planet. Sea ice shrank to its second smallest “summer minimum” extent on record during 2011, as older ice (four to five years old) reached a new record minimum at more than 80 percent below average. Overall, glaciers around the world continued to lose mass. Loss from Canadian Arctic glaciers and ice caps were the greatest since measurements began in 2002.

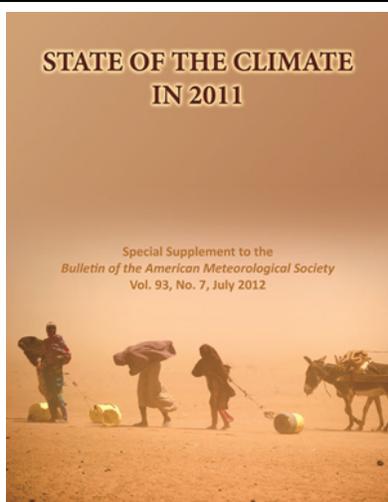




The report used 43 climate indicators to track and identify changes and overall trends to the global climate system. These indicators include greenhouse gas concentrations, temperature of the lower and upper atmosphere, cloud cover, sea surface temperature, sea level rise, ocean salinity, sea ice extent and snow cover. Each indicator includes thousands of measurements from multiple independent datasets.

Highlights:

- Warm temperature trends continue:** Four independent datasets show 2011 among the 15 warmest since records began in the late 19th century, with annually-averaged temperatures above the 1981–2010 average, but coolest on record since 2008. The Arctic continued to warm at about twice the rate compared with lower latitudes. On the opposite pole, the South Pole station recorded its all-time highest temperature of 9.9°F on December 25, breaking the previous record by more than 2 degrees.
- Greenhouse gases climb:** Major greenhouse gas concentrations, including carbon dioxide, methane, and nitrous oxide, continued to rise. Carbon dioxide steadily increased in 2011 and the yearly global average exceeded 390 parts per million (ppm) for the first time since instrumental records began. This represents an increase of 2.10 ppm compared with the previous year. There is no evidence that natural emissions of methane in the Arctic have increased significantly during the last decade.
- Arctic sea ice extent decreases:** Arctic sea ice extent was below average for all of 2011 and has been since June 2001, a span of 127 consecutive months through December 2011. Both the maximum ice extent (5.65 million square miles, March 7) and minimum extent (1.67 million square miles, September 9) were the second smallest of the satellite era.
- Ozone levels in Arctic drop:** In the upper atmosphere, temperatures in the tropical stratosphere were higher than average while temperatures in the polar stratosphere were lower than average during the early 2011 winter months. This led to the lowest ozone concentrations in the lower Arctic stratosphere since records began in 1979 with more than 80 percent of the ozone between 11 and 12 miles altitude destroyed by late March, increasing UV radiation levels at the surface.
- Sea surface temperature & ocean heat content rise:** Even with La Niña conditions occurring during most of the year, the 2011 global sea surface temperature was among the 12 highest years on record. Ocean heat content, measured from the surface to 2,300 feet deep, continued to rise since records began in 1993 and was record high.
- Ocean salinity trends continue:** Continuing a trend that began in 2004 and similar to 2010, oceans were saltier than average in areas of high evaporation, including the western and central tropical Pacific, and fresher than average in areas of high precipitation, including the eastern tropical South Pacific, suggesting that precipitation is increasing in already rainy areas and evaporation is intensifying in drier locations.



NOAA's State of the Climate in 2011 report was published today by the Bulletin of the American Meteorological Society. For more, visit [NOAA's State of the Climate 2011 webpage](#). [Download here](#). (Credit: NOAA).

The report also provides details on a number of extreme events experienced all over the globe, including the worst flooding in Thailand in almost 70 years, drought and deadly tornado outbreaks in the United States, devastating flooding in Brazil and the worst summer heat wave in central and southern Europe since 2003.

The *2011 State of the Climate* report is peer-reviewed and published annually as a special supplement to the *Bulletin of the American Meteorological Society*. The report is part of a suite of climate services NOAA provides government, business and community leaders so they can make informed decisions. It was edited by Jessica Blunden, Ph.D., and Deke Arndt of NOAA's National Climatic Data Center. The [full report](#) can be viewed online. The [report highlights](#) are available online.

Additionally, for the first time a complementary article has been published by AMS today examining the linkages between climate change and extreme events of 2011. The paper looks at six global extreme weather and climate events from last year.

Findings:

- Determining the causes of extreme events remains difficult. While scientists cannot trace specific events to climate change with absolute certainty, new and continued research help scientists understand how the probability of extreme events change in response to global warming.
- La Niña-related heat waves, like that experienced in Texas in 2011, are now 20 times more likely to occur during La Niña years today than La Niña years fifty years ago.
- The UK experienced a very warm November 2011 and a very cold December 2010. In analyzing these two very different events, UK scientists uncovered interesting changes in the odds. Cold Decembers are now half as likely to occur now versus fifty years ago, whereas warm Novembers are now 62 times more likely.
- Climate change cannot be shown to have played any role in the 2011 floods on the Chao Phraya River that flooded Bangkok, Thailand. Although the flooding was unprecedented, the amount of rain that fell in the river "catchment" area was not very unusual. Other factors, such as changes in reservoir policies and increased construction on the flood plain, were found most relevant in setting the scale of the disaster.

The paper, *Explaining Extreme Events of 2011 from a Climate Perspective*, was produced by NOAA and UK Met Offices scientists as well as numerous colleagues around the world. It was edited by Thomas Peterson, NOAA's National Climatic Data Center; Peter Stott, UK Met Office-Hadley Center; and Stephanie Herring, NOAA's Office of Program Planning and Integration. The [study](#) can be viewed online.

NOAA's mission is to understand and predict changes in the Earth's environment, from the depths of the ocean to the surface of the sun, and to conserve and manage our coastal and marine resources. Join us on [Facebook](#), [Twitter](#) and our other [social media channels](#).

NOAA announces Walter B. Jones awards for coastal and ocean management excellence

June 26, 2012

The late Peter M. Douglas, longtime head of the California Coastal Commission, leads the list of the 2012 Walter B. Jones and NOAA Excellence in Coastal and Ocean Management award winners announced today. Douglas received the Walter B. Jones Coastal Steward of the Year Award in honor of his many contributions to coastal management in California.

“I am especially pleased to honor this year’s award winners, especially Coastal Steward of the Year, the late Peter M. Douglas, who was a coastal management pioneer and former head of the California Coastal Commission,” said Margaret Davidson, acting director of NOAA’s Office of Ocean and Coastal Resource Management. “Peter was a legend in California’s coastal history and his legacy today is a model for others who follow.”

Douglas served California for 40 years including 26 years as executive director of the state’s coastal commission. He was a key force in the establishment of both the California Coastal Zone Act and Coastal Commission, as well as in drafting the original regulations implementing the federal act. Douglas passed away on April 1, and was made aware of the honor shortly before he died.

Given every two years, the Jones Awards recognize individuals and organizations for their dedication and outstanding contributions in helping the nation maintain healthy coastal and ocean resources, and balance the conservation of these resources with human needs. Winners are selected in three important award categories: Coastal Steward of the Year, Excellence in Local Government, and Excellence in Coastal and Marine Graduate Study.

The awards were created to honor the late 11-term congressman Walter B. Jones of North Carolina. As chairman of the House Merchant Marine and Fisheries Committee, Jones was a strong supporter of NOAA and its coastal zone management and Office of Ocean and Coastal Resource Management. He provided leadership on numerous legislative initiatives addressing coastal and ocean issues such as commercial shipping, oil spill clean-up and prevention, and flood insurance reform.

The winners of the 2012 Walter B. Jones Awards for Excellence in Coastal and Ocean Management are listed at: http://www.noaanews.noaa.gov/stories2012/20120626_walterjonesaward.html.

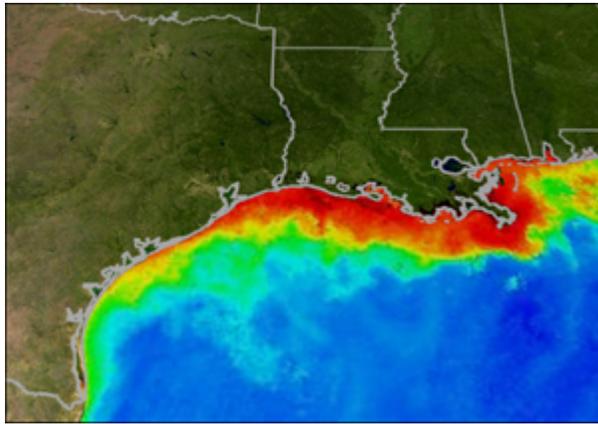
NOAA’s mission is to understand and predict changes in the Earth’s environment, from the depths of the ocean to the surface of the sun, and to conserve and manage our coastal and marine resources. Join us on [Facebook](#) , [Twitter](#) and our other [social media channels](#).

NOAA: Gulf of Mexico ‘dead zone’ predictions feature uncertainty

June 20, 2012

A team of NOAA-supported scientists is predicting that this year’s Gulf of Mexico hypoxic zone could range from a low of approximately 1,197 square miles to as much as 6,213 square miles. The wide range is the result of using two different forecast models. The forecast is based on Mississippi River nutrient inputs compiled annually by the U.S. Geological Survey (USGS).

The smaller dead zone forecast, covering an area slightly larger than the state of Rhode Island, comes from researchers from the University of Michigan. Their predicted size is based solely on the current



Less oxygen dissolved in the water is often referred to as a “dead zone” (in red above) because most marine life either dies, or, if they are mobile such as fish, leave the area. Habitats that would normally be teeming with life become, essentially, biological deserts. [Download image here.](#) (Credit: NOAA)

[Click to watch Dead Zone video.](#)

year’s spring nutrient inputs from the Mississippi River which are significantly lower than average due to drought conditions throughout much of the watershed.

The larger dead zone forecast, the equivalent of an area the size of the state of Connecticut, is from [Louisiana Universities Marine Consortium](#) and [Louisiana State University](#) scientists. The Louisiana forecast model includes prior year’s nutrient inputs which can remain in bottom sediments and be recycled the following year. Last year’s flood, followed by this year’s low flows, increased the influence of this “carryover effect” on the second model’s prediction.

[Hypoxia](#) is caused by excessive nutrient pollution from human activities coupled with other factors that deplete the oxygen required to support most marine life in bottom and near-bottom water.

During May 2012, streamflow in the Mississippi and Atchafalaya rivers were nearly half that of normal conditions. This resulted in a decrease in the amount of nitrogen transported by the rivers into the Gulf. According to [USGS](#) estimates, 58,100 metric tons of nitrogen (in the form of nitrite plus nitrate) were transported in May 2012 by the Mississippi and Atchafalaya Rivers to the northern Gulf. The amount of nitrogen transported to the Gulf in May 2012 was 56 percent lower than average May nitrogen loads estimated in the last 33 years.

The two smallest recorded dead zones to date are in 2000 when it measured 1,696 square miles and a 15 square miles dead zone in 1988. Last year’s dead zone measured 6,765 square miles. The largest hypoxic zone measured to date occurred in 2002 encompassing more than 8,400 square miles.

“This forecast is a good example of NOAA, USGS and university partnerships delivering ecological forecasts that quantify the linkages between the watershed and the coast,” said Jane Lubchenco, Ph.D., under secretary of commerce for oceans and atmosphere and NOAA administrator. “Regardless of the size of the dead zone, we should not lose sight of the ongoing need to reduce the flow of nutrients to the Mississippi River and thus the Gulf.”

“These forecasts are the product of decades of research, monitoring, and modeling on how decisions we make in the vast drainage basin of the Mississippi and its tributaries translates into the health of the coastal zone of the Gulf of Mexico,” said USGS Director Marcia McNutt, Ph.D. “Comparing the actual hypoxic zone against the predictions will help scientists better understand the multi-year memory of this complex land-sea system, and ultimately better inform options for improving ecosystem productivity.”

The actual size of the 2012 hypoxic zone will be released following a NOAA-supported monitoring survey led by the Louisiana Universities Marine Consortium between July 27 and August 3. Collecting these data is an annual requirement of the Mississippi River/Gulf of Mexico Watershed Nutrient Task Force Action Plan. Additional NOAA-supported surveys led by the National Marine Fisheries Service and Texas A&M University will also provide an indication of the progression of the dead zone during the year.

The average of impacted waters over the past five years is approximately 6,000 square miles, much larger than the 1,900 square miles which is the target goal set by the Gulf of Mexico/Mississippi River Watershed Nutrient Task Force.

The hypoxic zone, that form each spring and summer off the coast of Louisiana and Texas, threaten valuable commercial and recreational Gulf fisheries. In 2009, the dockside value of commercial fisheries in the Gulf was \$629 million. Nearly three million recreational fishers further contributed about \$10 billion to the Gulf economy, taking 22 million fishing trips

This year's forecast is just one example of NOAA's growing ecological forecasting capabilities, supported by both NOAA and USGS science, which allow for the protection of valuable resources using scientific, ecosystem-based approaches.

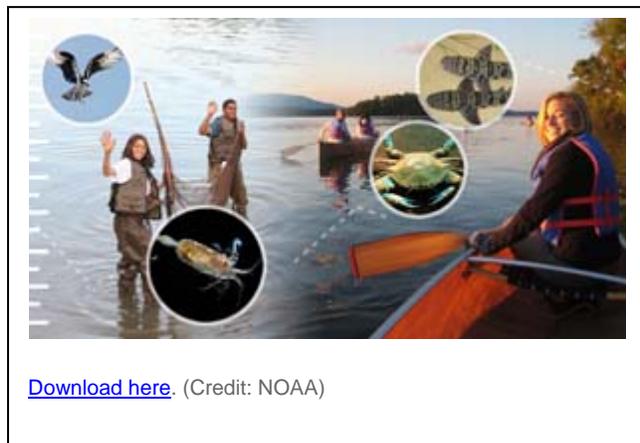
NOAA has been funding investigations and forecast development for the dead zone in the Gulf of Mexico since 1990 and currently oversees the two national hypoxia programs authorized by the Harmful Algal Bloom and Hypoxia Research and Control Act.

NOAA's mission is to understand and predict changes in the Earth's environment, from the depths of the ocean to the surface of the sun, and to conserve and manage our coastal and marine resources. Join us on [Facebook](#) , [Twitter](#) and our other [social media channels](#).

USGS provides science for a changing world. Visit [USGS.gov](#), and follow us on Twitter @USGS and our other social media channels at <http://usgs.gov/socialmedia>.

NOAA offers teachers new virtual estuaries science curriculum for middle school students

May 30, 2012



[Estuaries 101](#), the newest multi-media, online science curriculum for middle school students developed for teachers by NOAA, offers students a virtual field trip to one of 28 estuaries around the country.

The Estuaries 101 curriculum, now available [online](#), provides new interactive learning tools that teach fundamental concepts in science and develop scientific thinking skills while helping students discover and explore the nation's biologically rich estuaries.

Available free online through [NOAA's National Estuarine Research Reserve System](#) (NERRS) [Estuary Education website](#), the curriculum offers videos, access to user friendly real-time water quality and weather data, teacher activity downloads, and interactive maps to help students better visualize the inner workings of an estuary. The curriculum also meets National Science Education Standards for grades 5-8 and can be readily aligned to meet all state standards.

“What is special about this new curriculum is that it uses our nation’s estuaries as an interactive classroom. Students can explore and discover the estuary while learning how to analyze data and apply this knowledge to their lives,” said Atziri Ibanez, the system’s national education coordinator.

The curriculum is divided into six units based on six estuary literacy principles — earth science, physical science, life science, the need for research and monitoring, human interaction, and stewardship. Some of the fifteen activities in the curriculum focus on topics such as sharks in the estuary, oil spills, mangroves, and oysters. A number of activities also help students understand how climate change is affecting estuaries.

NERRS is a network of 28 areas representing different biogeographic regions of the United States that are protected for long-term research, water-quality monitoring, education and coastal stewardship. Established by the Coastal Zone Management Act of 1972, the reserve system is a partnership program between NOAA and the coastal states and is part of the [NOAA Office of Ocean and Coastal Resource Management](#).

New model will help NOAA forecasters study the eyewall of hurricanes this season

May 30, 2012



Eyewall of Hurricane Katrina taken on Aug. 28, 2005, as seen from a NOAA P-3 hurricane hunter aircraft before the storm made landfall on the US Gulf Coast.

[Download here](#). (Credit: NOAA)

When the first hurricane emerges from the Atlantic Ocean or Gulf of Mexico this season, NOAA will use a new statistical model to help predict the start of the “eyewall replacement cycle,” a key indicator that a storm’s strength and size is about to change dramatically. This new tool adds to a suite of forecast products NOAA uses to warn coastal communities of imminent threats.

An eyewall is an organized band of clouds that immediately surround the center, or eye, of a hurricane. The most intense winds and rainfall occur near the eyewall. Within a hurricane, eyewall replacement cycles occur when a second concentric eyewall forms around the original and eventually overtakes it. This phenomenon especially happens in strong, long-lived hurricanes.

“Hurricanes usually strengthen and grow gradually over time, but eyewall replacement cycles can cause very sudden changes in size and intensity,” said Jim Kossin, a scientist with NOAA’s National Climatic Data Center, who led the effort to create the model.

The model predicts the start of the developing eyewall replacement cycle by measuring key aspects of the storm’s structure and environment and relating these to

the conditions observed during past replacement cycles. Kossin said skillful forecasting of these natural cycles is crucial to protecting life and property.

“As it was approaching New Orleans, Hurricane Katrina weakened but grew in size because of an eyewall replacement cycle and the huge wind field led to an enormous storm surge that devastated the Gulf Coast,” Kossin said.

The model uses data from NOAA’s Geostationary Operational Environmental Satellites (GOES) to identify hurricane structure patterns related to eyewall replacement cycles. Microwave images from NOAA’s polar orbiting satellites were incorporated extensively to create the model using past data.

“This is an important first step towards understanding how we can use the eyewall cycle to someday improve intensity forecasts,” said James Franklin, branch chief of the hurricane specialist unit at the National Hurricane Center.

This project is part of the NOAA Joint Hurricane Testbed, which is part of the Hurricane Forecast Improvement Project under the NOAA Weather-Ready Nation strategic plan.

NOAA increases Gulf of Mexico red snapper catch limit

Population rebounds as overfishing ends

May 29, 2012

Following an updated population assessment that shows overfishing of Gulf of Mexico red snapper has ended and the population is rebounding, NOAA is increasing the 2012 commercial and recreational fishing catch limits for the species from 7.53 million pounds to 8.08 million pounds. The new rule takes effect June 1.

“Fishermen should continue to see bigger fish and larger catches as the population rebounds,” said Sam Rauch, NOAA’s acting assistant administrator for fisheries. “I commend the Gulf of Mexico Fishery Management Council and fishermen for their hard work and dedication, as red snapper truly is our most challenging fishery to manage in the Gulf.”

However, as the population of red snapper grows and the fish get bigger, recreational fishermen catch their quota faster, resulting in a shorter season. The 2012 recreational season will last 40 days, from June 1 through July 10. Although this is shorter than the 48-day season in 2011, this year’s recreational season would have been even shorter without the new catch increase.

Fishermen have targeted red snapper in the Gulf of Mexico since the late 1800s, and fishing pressure in the mid-1900’s depleted the red snapper population. In response to the population decline, fishery managers took action, making adjustments to size limits and bag limits, and implementing a catch share program for the commercial sector. In 2007, strict commercial and recreational management measures were used to end overfishing of red snapper and rebuild this depleted population. Fishermen are now seeing the benefits of these measures, and these actions are leading to increased catches.

NOAA begins work on a [new population assessment for red snapper](#) in August. The assessment involves three workshops to gather data, assess the fish population and review the results. The workshops include fishermen as well as state, federal and academic scientists. After the review, scientists will present the results to fishery managers on the Gulf Council.

“The upcoming assessment will help us continue to gain a better understanding of the red snapper population in the Gulf of Mexico,” said Richard Merrick, chief science advisor for NOAA’s Fisheries Service.

NOAA predicts a near-normal 2012 Atlantic hurricane season

Anniversary of Hurricane Andrew underscores necessity to prepare every year

May 24, 2012



Irene in 2011 was a reminder that tropical systems can affect the Northeast and of the threat of inland flooding. Video: [Accurate Prediction for Irene. Download here.](#) (Credit: NOAA.)

Conditions in the atmosphere and the ocean favor a near-normal hurricane season in the Atlantic Basin this season, NOAA announced today from Miami at its Atlantic Oceanographic and Meteorological Laboratory, and home to the Hurricane Research Division.

For the entire six-month season, which begins June 1, NOAA's Climate Prediction Center says there's a 70 percent chance of nine to 15 named storms (with top winds of 39 mph or higher), of which four to eight will strengthen to a hurricane (with top winds of 74 mph or higher) and of those one to three will become major hurricanes (with top winds of 111 mph or higher, ranking Category 3, 4 or 5). Based on the period 1981-2010, an average season produces 12 named storms with six hurricanes, including three major hurricanes.

"NOAA's outlook predicts a less active season compared to recent years," said NOAA Administrator Jane Lubchenco, Ph.D. "But regardless of the outlook, it's vital for anyone living or vacationing in hurricane-prone locations to be prepared. We have a stark reminder this year with the 20th anniversary of Hurricane Andrew." Andrew, the Category 5 hurricane that devastated South Florida on August 24, 1992, was the first storm in a late-starting season that produced only six named storms.

Favoring storm development in 2012: the continuation of the overall conditions associated with the Atlantic high-activity era that began in 1995, in addition to near-average sea surface temperatures across much of the tropical Atlantic Ocean and Caribbean Sea, known as the Main Development Region. Two factors now in place that can limit storm development, if they persist, are: strong wind shear, which is hostile to hurricane formation in the Main Development Region, and cooler sea surface temperatures in the far eastern Atlantic.

"Another potentially competing climate factor would be El Niño if it develops by late summer to early fall. In that case, conditions could be less conducive for hurricane formation and intensification during the peak months (August-October) of the season, possibly shifting the activity toward the lower end of the predicted range," said Gerry Bell, Ph.D., lead seasonal hurricane forecaster at NOAA's Climate Prediction Center.

"NOAA's improvement in monitoring and predicting hurricanes has been remarkable over the decades since Andrew, in large part because of our sustained commitment to research and better technology. But more work remains to unlock the secrets of hurricanes, especially in the area of rapid intensification and weakening of storms," said Lubchenco. "We're stepping up to meet this challenge through our Hurricane Forecast Improvement Project, which has already demonstrated exciting early progress toward improving storm intensity forecasts."

Lubchenco added that more accurate forecasts about a storm's intensity at landfall and extending the forecast period beyond five days will help America become a more Weather-Ready Nation.

In a more immediate example of research supporting hurricane forecasting, NOAA this season is introducing enhancements to two of the computer models available to hurricane forecasters - the Hurricane Weather Research and Forecasting (HWRF) and the Geophysical Fluid Dynamics Laboratory (GFDL) models. The HWRF model has been upgraded with a higher resolution and improved atmospheric physics. This latest version has demonstrated a 20 to 25 percent improvement in track forecasts and a 15 percent improvement in intensity forecasts relative to the previous version while also showing improvement in the representation of storm structure and size. Improvements to the GFDL model for 2012 include physics upgrades that are expected to reduce or eliminate a high bias in the model's intensity forecasts.

The seasonal outlook does not predict how many storms will hit land. Forecasts for individual storms and their impacts are provided by NOAA's National Hurricane Center, which continuously monitors the tropics for storm development and tracking throughout the season using an array of tools including satellites, advance computer modeling, hurricane hunter aircraft, and land- and ocean-based observations sources such as radars and buoys.

Next week, May 27- June 2, is national [Hurricane Preparedness Week](#). To help prepare residents of hurricane-prone areas, video and audio public service announcements featuring NOAA hurricane experts and the FEMA administrator are available in both English and Spanish.

"Every hurricane season we ask families, communities, and businesses to ensure they are prepared and visit www.ready.gov/hurricanes," said Tim Manning, FEMA deputy administrator for protection and national preparedness. "Being prepared includes developing a family emergency plan, putting an emergency kit together or updating your existing kit, keeping important papers and valuables in a safe place, and getting involved to ensure your community is ready."

NOAA's outlook for the Eastern Pacific basin is for a near-normal hurricane season and the Central Pacific basin is expected to have a below-normal season. NOAA will issue an updated seasonal outlook for the Atlantic hurricane season in early August, just prior to the historical peak of the season.



August 24, 2012 will be the 20th anniversary of Hurricane Andrew's devastating landfall in South Florida.

Video: [Satellite loop of Hurricane Andrew](#).

[Download here](#). (Credit: NOAA.)

Rick Knabb, Ph.D., selected to lead NOAA's National Hurricane Center

May 18, 2012



Rick Knabb, Ph.D., the new director of NOAA's National Hurricane Center. [Download here](#). (Credit: NOAA.)

NOAA Administrator Jane Lubchenco, Ph.D., today announced Rick Knabb, Ph.D., as the next director of NOAA's National Hurricane Center in Miami. Knabb will start his duties on June 4.

"When hurricanes threaten our coastal communities, those in harm's way look to NOAA's National Hurricane Center for life-saving information," said Lubchenco. "Rick personifies that calm, clear and trusted voice that the nation has come to rely on. Rick will also lead our hurricane center team and work closely with federal, state and local emergency management authorities to ensure the public is prepared to weather the storm."

Knabb returns to NOAA after most recently serving as the on-air tropical weather expert for The Weather

Channel in Atlanta since May 2010. Prior to that, Knabb was deputy director of NOAA's Central Pacific Hurricane Center in Honolulu, and before that, he had a distinguished career at the National Hurricane Center in Miami as a senior hurricane specialist and the science and operations officer.

Knabb succeeds Bill Read who retires June 2. "I thank Bill Read for his tireless work throughout his distinguished career with the National Weather Service, including more than four years as director of the National Hurricane Center overseeing 63 tropical systems in the Atlantic Basin alone," added Lubchenco.

Born just outside of Chicago, Knabb grew up in Coral Springs, Fla., near Ft. Lauderdale, and in Katy, Texas in suburban Houston. He earned a bachelor's degree in Atmospheric Science from Purdue University and holds a master's degree and Ph.D. in Meteorology from Florida State University.

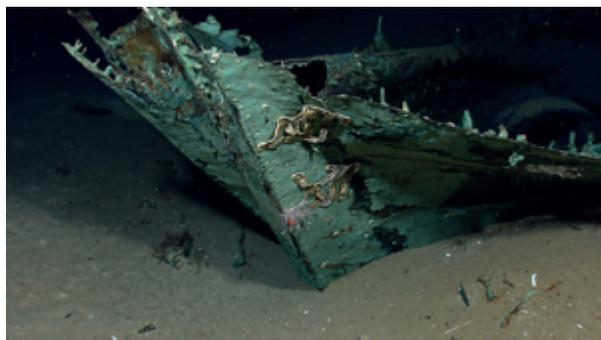
"I'm ready to reunite with the talented staff at the National Hurricane Center and to work with all of our partners to prepare everyone for the next hurricane," said Knabb. "Personal preparedness will be critically important, including for my own family and home."

The National Hurricane Center is a component of the National Weather Service's National Centers for Environmental Prediction. The Center's mission is to save lives, mitigate property loss, and improve economic efficiency by issuing the best watches, warnings, forecasts, and analyses of hazardous tropical weather and by increasing understanding of these hazards, enabling communities to be safe from tropical weather threats. The National Hurricane Center is co-located with the National Weather Service Miami-South Florida forecast office on the campus of Florida International University.

The National Weather Service is the primary source of weather data, forecasts and warnings for the United States and its territories. It operates the most advanced weather and flood warning and forecast system in the world, helping to protect lives and property and enhance the national economy. Working with partners, the National Weather Service is building a [Weather-Ready Nation](#) to support community resilience in the face of increasing vulnerability to extreme weather. Visit us online at weather.gov and on [Facebook](#).

NOAA, BOEM: Historic, 19th century shipwreck discovered in northern Gulf of Mexico

May 16, 2012



While most of the ship's wood has long since disintegrated, copper that sheathed the hull beneath the waterline as a protection against marine-boring organisms remains, leaving a copper shell retaining the form of the ship. The copper has turned green due to oxidation and chemical processes over more than a century on the seafloor. Oxidized copper sheathing and possible draft marks are visible on the bow of the ship.

[Download here.](#) (Credit: NOAA *Okeanos Explorer* Program.)

During a recent Gulf of Mexico expedition, NOAA, BOEM and partners discovered an historic wooden-hulled vessel which is believed to have sunk as long as 200 years ago. Scientists on board the NOAA Ship [Okeanos Explorer](#) used underwater robots with lights and high definition cameras to view remnants of the ship laden with anchors, navigational instruments, glass bottles, ceramic plates, cannons, and boxes of muskets.

Equipped with telepresence technology, *Okeanos Explorer* reached audiences around the world who participated in the expedition through live streaming Internet video. As members of the public ashore watched live video from the ocean bottom, they became “citizen explorers,” sharing in the discovery with maritime archaeologists, scientists and resource managers from a variety of federal, academic, and private organizations.

The NOAA-funded 56-day expedition that ended April 29 was exploring poorly known regions of the Gulf, mapping and imaging unknown or little-known features and habitats, developing and testing a method to measure the rate that gas rises from naturally-occurring seeps on the seafloor, and investigating potential shipwreck sites.

The shipwreck site was originally identified as an unknown sonar contact during a 2011 oil and gas survey for Shell Oil Company. The Department of Interior’s Bureau of Ocean Energy Management (BOEM) requested this and other potential shipwreck sites be investigated during NOAA’s Gulf of Mexico expedition. Surveys and archaeological assessments are required by BOEM to aid in its decision-making prior to issuing permits for bottom-disturbing activities related to oil and gas exploration and development.

“Artifacts in and around the wreck and the hull’s copper sheathing may date the vessel to the early to mid-19th century,” said Jack Irion, Ph.D., a maritime archaeologist with BOEM. “Some of the more datable objects include what appears to be a type of ceramic plate that was popular between 1800 and 1830, and a wide variety of glass bottles. A rare ship’s stove on the site is one of only a handful of surviving examples in the world and the second one found on a shipwreck in the Gulf of Mexico.”

Significant historical events occurring in the regions around the Gulf of Mexico during this time include the War of 1812, events leading to the Texas Revolution, and the Mexican-American War, he said.

“Shipwrecks help to fill in some of the unwritten pages of history,” said Frank Cantelas, a maritime archaeologist with [NOAA’s Office of Ocean Exploration and Research](#). “We explored four shipwrecks during this expedition and I believe this wreck was by far the most interesting and historic. The site is nearly 200 miles off the Gulf coast in over 4,000 feet of water in a relatively unexplored area.”

The expedition also discovered areas exhibiting rich biodiversity. At the base of the West Florida Escarpment, a steep undersea cliff, explorers found a “forest” of deep corals, several of which were new to scientists on the ship and ashore. For several days the expedition team also imaged deep-coral communities in the vicinity of the Macondo oil spill site. On another part of the expedition, team members designed and installed a device on the ship’s undersea robot system, or ROV (remotely-operated vehicle), to measure the rate that gas rises in the water column.



Video footage (mp3) captured by the *Little Hercules* remotely operated vehicle (ROV) and camera platform during the April 26 ROV dive from NOAA Ship *Okeanos Explorer* during the Gulf of Mexico Expedition 2012.

[Download here](#). (Credit: NOAA *Okeanos Explorer* Program.)

“Testing new methods and technologies is a priority,” said Tim Arcano, director of NOAA’s Office of Ocean Exploration and Research. “We plan for ocean exploration to foster both follow-on research, and develop new technologies to help ocean resource managers and others better understand, use, and protect our largely unknown ocean and its resources.”

Okeanos Explorer is equipped with: a state-of-the-art multibeam mapping sonar; the Institute for Exploration’s *Little Hercules* ROV, which made 29 dives; and telepresence technology that uses satellite and high-speed Internet pathways between ship and shore, allowing scientists ashore to participate in the mission in real-time, and general audiences to be “citizen explorers” as the mission unfolds, live.

Background information, web logs from scientists at sea and ashore, video clips, still images, and education lesson plans describing the expedition are available [online](#).

Partners in the 2012 Gulf of Mexico expedition included a number of NOAA offices, BOEM, Bureau of Safety and Environmental Enforcement, C&C Technologies, Florida Atlantic University, Geoscience Earth & Marine Services, Louisiana State University, Mississippi State University’s Science and Technology Center at Stennis, Naval History and Heritage Command, NOAA Northern Gulf Institute, Pennsylvania State University, Temple University, Tesla Offshore LLC, Institute for Exploration, University Corporation for Atmospheric Research Joint Office for Science Support, University of New Hampshire, University of North Carolina Wilmington, University of Rhode Island, University of Texas at Austin, and Woods Hole Oceanographic Institution.

BOEM manages the exploration and development of the nation's offshore energy and mineral resources. The bureau seeks to balance economic development, energy production, and environmental protection through oil and gas leasing, renewable energy development and environmental reviews and studies.

The NOAA Ocean Exploration Program is the only federal program dedicated to systematic exploration of the planet’s largely unknown ocean. NOAA Ship *Okeanos Explorer* is operated, managed and maintained by [NOAA’s Office of Marine and Aviation Operations](#) which includes commissioned officers of the NOAA Corps and civilian wage mariners. NOAA’s Office of Ocean Exploration and Research operates, manages and maintains the cutting-edge ocean exploration systems on the vessel and ashore.

New analysis shows eight percent of U.S. marine waters protected

Vast majority allows fishing, other activities

May 16, 2012



New analyses of U.S. data show that the majority of our nation's MPAs allow human uses, including fishing, swimming and kayaking. [Download here](#). (Credit: NOAA)

New [analysis](#) of updated data has shown that eight percent of U.S. waters are currently designated as marine protected areas (MPAs), with the vast majority of these areas open to fishing and other activities, according to NOAA. U.S. sites are cataloged in the recently updated [MPA Inventory](#), available online.

"These data show that the U.S. has a representative network of MPAs, both geographically and for different purposes, and eight percent is good progress," says Lauren Wenzel, acting director of the National Marine Protected Areas Center. "We need to make sure that we've protected examples of all of our diverse ecosystems and habitats and that existing MPAs are effectively managed."

The eight percent figure does not include MPAs specifically established to sustain fisheries production, which often have specific restrictions on fishing gear over large ocean areas. Other inventory analyses including these fishery MPAs, however, show that 92 percent of the area within U.S. MPAs allows some type of activity, and 85 percent is open to fishing.

The analysis also showed that more than two-thirds of all U.S. MPAs were created, at least in part, to conserve natural heritage values, such as biodiversity, ecosystems, or protected species. About a quarter of sites focus on sustainable production, such as those established to recover overfished stocks, protect species readily taken as bycatch, or preserve essential fish habitats, while the remaining approximately ten percent were established to conserve our nation's cultural heritage.

Data in the updated MPA Inventory are available in tabular and spatial form, and can be viewed through the MPA Center's interactive [MPA mapping tool](#). The mapping tool allows users to see all the MPAs in a specific location or region and to search for specific attributes, including conservation purpose, managing agency and level of protection, among others.

"The MPA inventory and mapping tool give both planners and the public an easy way to see the big picture of all the marine protected areas in our oceans and along our coasts. By including MPAs from all federal and state agencies, managers can better cooperate to protect shared resources, and the public can easily find their local MPAs and see the types of uses they allow," said David M. Kennedy, assistant NOAA administrator for the National Ocean Service.

Developed with extensive input from state and federal MPA programs and drawn from other publically available data, the MPA inventory contains information on more than 1,700 sites and is the only such comprehensive dataset in the nation. Information in the inventory is current as of March 2012. 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. They protect natural and cultural marine resources, and many allow a variety of activities such as fishing, recreation, and research.

Annual NOAA report shows a record number of rebuilt fisheries

May 14, 2012

A record six fish populations were declared rebuilt to healthy levels in 2011, bringing the number of rebuilt U.S. marine fish populations in the last 11 years to 27, according to a report to Congress out today from NOAA's Fisheries Service. This report documents historic progress toward ending overfishing and rebuilding our nation's fisheries, due to the commitment of fishermen, fishing communities, non-governmental organizations, scientists, and managers.

“With annual catch limits in place this year for all domestic fish populations and the continued commitment of fishermen to rebuild the stocks they rely on, we're making even greater progress in ending overfishing and rebuilding stocks around the nation,” said Samuel Rauch, acting assistant NOAA administrator for fisheries. “Healthy and abundant fish populations and marine ecosystems support seafood for Americans, create lasting jobs, and enhance saltwater recreational fishing opportunities.”

NOAA's *Status of U.S. Fisheries* report declares Bering Sea snow crab, Atlantic coast summer flounder, Gulf of Maine haddock, northern California coast Chinook salmon, Washington coast coho salmon, and Pacific coast widow rockfish fully rebuilt to healthy levels.

Two indicators of stock health increased slightly over 2010:

- 86 percent of the populations examined for fishing activity (222 of 258) were not subject to overfishing, or not fished at too high a level, compared to 84 percent in 2010
- 79 percent of assessed populations (174 of 219) are not overfished, or were above levels that require a rebuilding plan, compared to 77 percent in 2010.

These data continue a long-term trend in rebuilding U.S. fisheries to sustainable and more productive levels that NOAA began tracking in 2000.

Although it is sometimes assumed that a fish population is low or “overfished” due to too much fishing, other factors also influence the health and abundance of fish populations, including environmental changes, disease, and degraded fish habitat.

“Fishermen, fishing communities, and seafood and sportfishing businesses are investing in the solutions that are helping end overfishing and rebuild our nation's fish populations,” Rauch said. “These investments will continue to pay off and provide more economic opportunity and economic stability for the future.”

NOAA studies predict that fully rebuilt fisheries are expected to add an estimated \$31 billion to the economy and an additional 500,000 jobs. Commercial and recreational fishing currently generates \$183 billion per year to the U.S. economy and supports more than 1.5 million full and part-time jobs.

To read the full report, regional reports on fish populations and to see photos, go to the [NOAA Fisheries Service](#) home page. To read the full report, regional reports on fish populations and to see photos, go to [NOAA's Status of the Stocks](#) page.

NOAA and partner scientists discover way to detect low-level exposure to seafood toxin in marine animals

Discovery has potential human health benefits

May 2, 2012

NOAA scientists and their colleagues have discovered a biological marker in the blood of laboratory zebrafish and marine mammals that shows when they have been repeatedly exposed to low levels of domoic acid, which is potentially toxic at high levels. While little is known about how low-level exposure to domoic acid affects marine animals or humans, high-level exposure through eating contaminated seafood can be toxic, and can lead to amnesic shellfish poisoning, with symptoms such as seizures, short-term memory loss, and, in rare cases, death. Domoic acid is produced by particular species of marine algae and accumulates in marine animals such as clams and mussels.

The findings were reported in a study published in Public Library of Science journal (PLoS ONE), a peer-reviewed scientific journal. Up until now, the absence of a marker for such chronic exposure has been a barrier to accurately assessing possible effects to humans.

“This study paves the way for creating reliable blood tests for low-level domoic acid exposure, which could help scientists assess the effects of chronic exposure to both wildlife and people who eat seafood,” said Kathi Lefebvre, Ph.D., a NOAA fisheries biologist and the lead author of the study. “We don’t know yet if the same antibody response we found in the laboratory in zebrafish and naturally exposed California sea lions also occurs in humans. Our next step is to team up with human-health experts to answer that question.”

In the NOAA study, scientists injected zebrafish two to four times a month over nine months with low levels of domoic acid in the laboratory. Although the zebrafish appeared healthy after 18 weeks, scientists detected an antibody response for domoic acid in blood samples. Scientists found a similar antibody response in blood samples taken from wild sea lions from central California, confirming that natural exposure to the toxin produces a similar response in marine mammals.

The researchers also found that long-term, low-level exposure to domoic acid does not build tolerance or resistance to it, but instead makes zebrafish more sensitive to the neurotoxin. Domoic acid was first identified as a shellfish toxin in 1987, after more than 100 people were sickened from eating contaminated mussels harvested off the Canadian province of Prince Edward Island. In 1998, more than 400 California sea lions died on the U.S. west coast after consuming anchovies containing domoic acid. Since the early 1990s, regular monitoring of shellfish has protected people from amnesic shellfish poisoning caused by high levels of domoic acid.

Lefebvre will continue to work with co-authors, John D. Hansen, Ph.D, an immunologist with the U.S. Geological Survey-Western Fisheries Research Center, Donald R. Smith, Ph.D., a toxicologist at the University of California at Santa Cruz, and David J. Marcinek, Ph.D., a physiologist at the University of Washington, to look for health consequences of low-level exposure to domoic acid using the antibody marker.

The study, “A Novel Antibody-Based Biomarker for Chronic Algal Toxin Exposure and Sub-Acute Neurotoxicity,” was conducted by scientists with NOAA, the Marine Mammal Center, the U.S. Geological Survey-Western Fisheries Research Center, the University of Washington and the University of California Santa Cruz, and is available at <http://www.noaanews.noaa.gov/exit.html?http%3A%2F%2Fdx.plos.org%2F10.1371%2Fjournal.pone.0036213>. Funding for the study was provided by [NOAA’s Ecology and Oceanography of Harmful Algal Blooms program](#).

NOAA launches Weather-Ready Nation pilot project in Tampa

May 1, 2012



Brian LaMarre, meteorologist -in-charge of the Tampa weather forecast office, briefs audience on new NOAA Weather-Ready Nation community pilot project in Tampa, Fla., May 1, 2012. [High resolution](#) (Credit: NOAA)

[NOAA's National Weather Service](#) has improved its ability to support the Tampa Bay community and its ecologically valuable environments before, during and after severe weather and other disasters. As part of its [Weather-Ready Nation](#) initiative, the National Weather Service is launching this project to provide enhanced decision and ecosystem support services to help protect residents and visitors in the Tampa Bay area.

“With hurricane season just around the corner, timely and accurate weather support is more critical than ever,” said Bill Proenza, director of NOAA’s National Weather Service Southern Region. “This project will allow the Tampa forecast office to respond to emergency managers during a storm or when handling a hazardous material spill, while maintaining normal weather forecast operations for area residents.”

Tampa Bay’s diverse ecosystem and active cargo port offer a unique environment which contributed to its selection for the pilot project. Tampa is the largest open-water estuary in Florida, encompassing nearly 400 square miles, with a watershed that covers almost 2,200 square miles. It also supports more than 200 species of fish and the most diverse colonies of waterbirds in the United States.

In addition, the Port of Tampa is Florida’s largest seaport and one of the largest cargo ports in the country. More than four billion gallons of oil, fertilizer components and other hazardous materials pass through Tampa Bay each year. The Weather-Ready Nation project will take weather support services beyond the traditional domain of the National Weather Service and address impacts that cross both ecological and economic boundaries.

Three Emergency Response Specialists have been assigned to the National Weather Service office in Tampa for this pilot project. The specialists will be deployed in an emergency to provide critical onsite weather support during weather-sensitive events, including environmental incidents. They will collaborate with local port authorities, and local scientists studying environmental issues, to expand on impact-based decision support services that focus on environmental and public health issues. Initial projects the team will work on include: developing a Marine Route Forecast, enhancing current Harmful Algal Bloom forecasts, improving the local provision of storm surge warning information, and developing graphical smoke plume and visibility hazard forecasts.

“These collaborations and new products will serve to mitigate future risk and impact from hurricane storm surge, environmental and ecological effects in the Gulf of Mexico, and provide safety and high-impact weather information for marine navigation through the Port,” said Brian LaMarre, meteorologist-in-charge of the Tampa forecast office.

The [Tampa Bay forecast office](#) serves five million residents in 15 counties. In addition, the office produces forecasts and warnings for Tampa Bay and the coastal waters of the Gulf of Mexico, out to 60 nautical miles.

The National Weather Service is the primary source of weather data, forecasts and warnings for the United States and its territories. It operates the most advanced weather and flood warning and forecast

system in the world, helping to protect lives and property and enhance the national economy. Working with partners, the National Weather Service is building a [Weather-Ready Nation](#) to support community resilience in the face of increasing vulnerability to extreme weather. Visit us online at [weather.gov](#) and on [Facebook](#).

NOAA releases final management plan for Flower Garden Banks Sanctuary

April 27, 2012



A scuba diver swims amid a school of fish at the Flower Garden Banks National Marine Sanctuary. [High resolution](#) (Credit: NOAA)

A new rule prohibiting killing, injuring, touching or disturbing whale sharks and rays is part of the final management plan, regulations and environmental assessment for [NOAA's Flower Garden Banks National Marine Sanctuary](#), released by the agency today.

The plan also includes revised regulations regarding use of dive flags by SCUBA divers; clarifies and updates restrictions on the release of any material into sanctuary waters; and limits the use of chumming materials to conventional hook and line fishing.

“The final management plan is the result of a collaborative effort and the hard work of sanctuary staff and the sanctuary’s advisory

council,” said George Schmahl, sanctuary superintendent. “It includes detailed guidance for program priorities that we will use to manage this unique undersea resource for future generations to enjoy.”

Based on several years of scientific assessment and public input, the final management plan identifies actions to be undertaken by sanctuary staff within the next five to ten years to protect and conserve marine resources in the northwestern Gulf of Mexico. It includes six action plans, each addressing a specific priority identified during the initial public scoping process: sanctuary expansion, education and outreach, research and monitoring, resource protection, visitor use, and operations and administration.

The final management plan, regulations, and final environmental assessment take effect May 29, and can be viewed [online](#). Beginning in 2006, the management plan was developed through an extensive public process that included input from stakeholders and the sanctuary’s advisory council through workshops, public hearings and submission of comments. This is the first revision to the sanctuary’s original management plan published in 1991.

Periodic management plan review is required by Congress for each of the 13 national marine sanctuaries and one marine national monument administered under NOAA to ensure that they continue to conserve, protect and enhance their nationally significant living and cultural resources while allowing compatible commercial and recreational activities. Located 70 to 115 miles off the coasts of Texas and Louisiana, Flower Garden Banks National Marine Sanctuary is one of 14 marine protected areas managed by [NOAA's Office of National Marine Sanctuaries](#). Designated 20 years ago in 1992, the sanctuary is home to some of the healthiest coral reefs in the South Atlantic and Caribbean region. It currently includes three separate banks, encompassing 56 square miles, that are part of a larger system of reefs and banks along the continental shelf in the northwestern Gulf of Mexico.

Rise in Asian Tiger Shrimp sightings prompts scientific look at invasion concerns

April 26, 2012



Asian tiger shrimp. (Credit / with permission from: Ryan Werner.)

The recent rise in sightings of non-native Asian tiger shrimp off the U.S. Atlantic and Gulf of Mexico coasts has government scientists working to determine the cause of the increase and the possible consequences for native fish and seafood in those waters.

Researchers from the U.S. Geological Survey and National Oceanic and Atmospheric Administration are working with state agencies from North Carolina to Texas to look into how this transplanted species from Indo-Pacific, Asian and Australian waters reached U.S. waters, and what the increase in sightings means for native species.

“We can confirm there was nearly a tenfold jump in reports of Asian tiger shrimp in 2011,” explained Pam Fuller, the USGS biologist who runs the agency’s Nonindigenous Aquatic Species database. “And they are probably even more prevalent than reports suggest, because the more fisherman and other locals become accustomed to seeing them, the less likely they are to report them.”

NOAA scientists are launching a research effort to understand more about the biology of these shrimp and how they may affect the ecology of native fisheries and coastal ecosystems. As with all non-native species, there are concerns over the potential for novel avenues of disease transmission and competition with native shrimp stocks, especially given the high growth rates and spawning rates compared with other species.

“The Asian tiger shrimp represents yet another potential marine invader capable of altering fragile marine ecosystems,” said NOAA marine ecologist James Morris. “Our efforts will include assessments of the biology and ecology of this non-native species and attempts to predict impacts to economically and ecologically important species of the Atlantic and Gulf of Mexico.”

The cause of the rapid increase in sightings remains uncertain, Fuller added. The non-native shrimp species may have escaped from aquaculture facilities, although there are no longer any known Asian tiger shrimp farms presently in operation in the United States. It may have been transported in ballast water from ships or possibly arrived on ocean currents from wild populations in the Caribbean or other locations.

Fuller’s team at USGS has been tracking reports of Asian tiger shrimp since they first came to the attention of marine scientists and resource managers in 1988, when nearly 300 of them were collected off the coasts of South Carolina, Georgia and Florida within three months. Scientists tracked the cause back to an isolated incident that accidentally caused an estimated 2,000 animals to be released from an aquaculture facility operating at that time in South Carolina.

It was not until 18 years later that reports of the non-native shrimp resurfaced. In 2006, a commercial shrimp fisherman caught a single adult male in Mississippi Sound near Dauphin Island, Ala. Within

months, additional specimens were noted in North Carolina's Pamlico Sound, Louisiana's Vermilion Bay and other parts of Florida and the Carolinas. The species was later reported off the coasts of Georgia, Mississippi and Texas in 2008, 2009 and 2011, respectively.

Scientists have not yet officially deemed the Asian tiger shrimp "established" in U.S. waters, and no one is certain what triggered the recent round of sightings. With so many alternative theories about where these shrimp are coming from and only a handful of juveniles reported, it is hard for scientists to conclude whether they are breeding or simply being carried in by currents.

To look for answers, USGS and NOAA scientists are examining shrimp collected from the Gulf and Atlantic coasts to look for subtle differences in their DNA, information that could offer valuable clues to their origins. This is the first look at the genetics of wild caught Asian tiger shrimp populations found in this part of the U.S., and may shed light on whether there are multiple sources.

"We're going to start by searching for subtle differences in the DNA of Asian tiger shrimp found here – outside their native range – to see if we can learn more about how they got here," said USGS geneticist Margaret Hunter, "If we find differences, the next step will be to fine-tune the analysis to determine whether they are breeding here, have multiple populations, or are carried in from outside areas."

Anyone who sees one or more shrimp suspected to be an Asian tiger shrimp is asked to note the location and report the sighting to the USGS NAS database at <http://nas.er.usgs.gov/SightingReport.aspx>. If possible, freeze a specimen to help confirm the identity and contribute to a tissue repository maintained by NOAA.

The USGS serves the nation by providing reliable scientific information to describe and understand the Earth; minimize loss of life and property from natural disasters; manage water, biological, energy, and mineral resources; and enhance and protect our quality of life.

First-ever NOAA "Adopt a Drifter" in the Gulf of Mexico

Deployed by local high schools and the Dauphin Island Sea Lab on April 20, 2012

April 20, 2012

Established in 2004, the NOAA Adopt a Drifter Program has sponsored more than 50 co-adopted drifters in global oceans, but never in the Gulf of Mexico. On Friday, April 20, at 8:00am CST, students from three local high schools (Daphne High School, Murphy High School, Auburn High School) will board the Dauphin Island Sea Lab's *Alabama Discovery*, traveling approximately 4.5 hours offshore in the Gulf of Mexico to deploy the first-ever "Adopt a Drifter" for "America's Sea." They will be joined via distance technology by students at a partner high school in Vera Cruz, Mexico (Colegio Bilingüe Madison).

NOAA is coordinating six such deployments nationally as part of its Earth Day celebration. Drifter events are also underway in Boston, Maui, Miami, Santa Barbara and Seattle.



Mobile, Ala., high school students prepare to deploy a small, 44 lb. NOAA buoy into the Gulf of Mexico, April 20, 2012. With the help of the Dauphin Island Sea Lab, they joined students in Veracruz, Mexico, via telepresence technology to share the experience. Equipped with oceanographic sensors, NOAA "drifters" travel the world ocean and collect valuable climate information. [High resolution](#) (Credit: Dauphin Island Sea Lab)

A drifter is a drifting buoy that transmits its location and sea surface temperature data via satellite. Drifter data are used to track major ocean currents and eddies globally, ground truth data from satellites, build models of climate and weather patterns, predict the movement of pollutants if dumped or accidentally spilled into the sea, and assist with the forecast path of approaching hurricanes. A single drifter typically lasts for an average of 400 days.

NOAA's Adopt a Drifter Program allows teachers and students to track their adopted drifter and integrate its data and path into their classroom content and activities. An educational sticker or drawing from each school is adhered to the drifter before deployment and photos taken to document the activity. The teachers receive the WMO number of their drifting buoy in order to access data from the school's adopted drifter online. Participating teachers use existing lesson plans and develop new

plans to explore oceanographic concepts with their students, giving their students a real world application using the drifting buoy data. Students become more engaged with the study of ocean currents, the Gulf of Mexico, regional ocean surface temperature patterns because they have taken ownership by adopting the drifter.

Dr. Tina Miller-Way, Chair of Discovery Hall Programs for Education and Outreach at the Dauphin Island Sea Lab, said "I am very excited about this new opportunity for students and teachers. The Adopt a Drifter Program is a great tool for engaging students with all that happens in the Gulf - hurricanes, oil spills and dead zones. We have been trying to 'bridge' the Gulf and interact with our colleagues on the other side of the Gulf of Mexico and what better way than through the next generation. We will be streaming some of the deployment so students in Mexico can watch. After deployment, students will be sharing their explorations via a blog hosted by DISL. I cannot wait to see where it goes, what patterns we observe, what the students learn and hopefully a cross-Gulf feeling of stewardship among the students."

An exhibit about NOAA's Adopt a Drifter Program will be mounted in the Estuarium, the Dauphin Island Sea Lab's public aquarium. A replica of a drifter is included in the display.

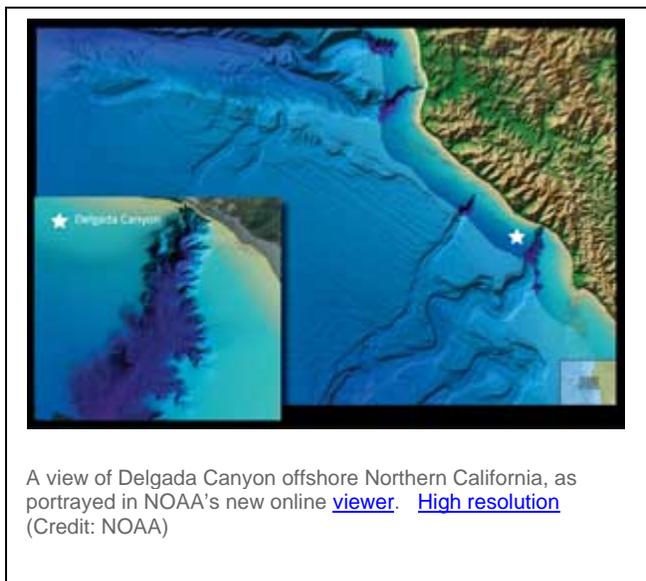
Dr. Kathryn D. Sullivan, assistant secretary of commerce for environmental observation and prediction, NOAA, stated, "A drifting buoy is like a 21st-century message in a bottle, except it is equipped with oceanographic and climate sensors that let it transmit scientific measurements by satellite, helping us understand the oceans. With better understanding, we can better predict the strength of approaching hurricanes, the distribution of fish and other marine species, and the fate of marine pollution and debris.

"Students in schools across the country can adopt a drifter, and follow its journey using the Internet. This relationship makes climate and ocean science more tangible, as students discover the workings of the earth through the lens of their buoy. International student partnerships also broaden cultural understanding and enable collaborative online tracking of drifters across the global sea."

More information on NOAA's Adopt a Drifter Program can be found at http://www.noaanews.noaa.gov/exist.html?http%3A%2F%2Fr20.rs6.net%2Ftn.jsp%3Fe%3D001ygKLWdKdXT4IFZ1g09-dGhh8BJ5XIX7g1qwxoKzQTFd6tpGgfU2UJZmv1UD_yIUimEeLrKDEy8pcF5pwERhJhgVV3DbDMqcJ-Uocwj1VeVuwTw0z-SJ9jNDKmxg1y5

NOAA releases new views of Earth's ocean floor

April 16, 2012



A view of Delgada Canyon offshore Northern California, as portrayed in NOAA's new online [viewer](#). [High resolution](#) (Credit: NOAA)

NOAA has made sea floor maps and other data on the world's coasts, continental shelves and deep ocean available for easy viewing [online](#). Anyone with Internet access can now explore undersea features and obtain detailed depictions of the sea floor and coasts, including deep canyons, ripples, landslides and likely fish habitat.

The new online data viewer compiles sea floor data from the near shore to the deep blue, including the latest high-resolution bathymetric (sea bottom) data collected by [NOAA's Office of Coast Survey](#) primarily to support nautical charting.

"NOAA's ocean bottom data are critical to so many mission requirements, including coastal safety and resiliency, navigation, healthy oceans and more. They are also just plain *beautiful*," said Susan McLean, chief of [NOAA's Marine Geology and Geophysics Division](#) in Boulder, Colo.

McLean's division is part of [NOAA's National Geophysical Data Center](#), responsible for compiling, archiving and distributing Earth system data, including Earth observations from space, marine geology information and international natural hazard data and imagery. NGDC's sea floor data have long been free and open to the public in original science formatting, but that often required the use of specialized software to convert the data into maps and other products.

"For serious scientists, the new viewer allows an important preview capability that will help speed data access and analysis. But its real power is exposing a new audience to NOAA data," said LCDR Dan Price, bathymetric program manager at NGDC. "I showed the new viewer to my neighbors and they were blown away by the detail and features revealed."

The new interface makes exploration easy and intuitive, using a "color-shaded relief" technique to depict bathymetric data and derived maps and models. For example, a user can zoom into Delgada Canyon, one of a series of deep canyons off the northern California coast between Fort Bragg and Eureka. The sea floor descends steeply from shallow yellows into dark blues and purples. "These are critical data for modeling coastal flooding, from tsunami to hurricane storm surge," said Kelly Carignan, a digital elevation modeler at NGDC.

NOAA's latest sea floor data, Office of Coast Survey gridded bathymetry data, are archived and displayed in the new viewer through an open source file format known as BAG (Bathymetry Attributed Grid), developed by the [Open Navigation Surface Working Group](#). Not all NOAA sea floor data are accessible yet through the new viewer; some datasets still require specialized software for generating maps. To learn more and access the viewer, visit: <http://maps.ngdc.noaa.gov/viewers/bathymetry>.

Alabama Reserve protects 570 acres of critical coastal wetlands

The Alabama Department of Conservation and Natural Resources in partnership with NOAA, The Conservation Fund, and the Weeks Bay Foundation, recently acquired 570 contiguous acres of coastal wetland habitat adjacent to Weeks Bay Reserve. NOAA provided a \$500,000 federal grant through the NERR land acquisition program, matched with funding from Forever Wild, to purchase the property. Leveraging the federal investment, another 260 adjacent acres were purchased by Baldwin County. The acquired property, known locally as the “Meadows”, represents one of the largest contiguous areas of forested wetlands in coastal Alabama that remains undeveloped. In addition to its conservation value, people will benefit from protected water quality and buffering the effects of extreme storms. For more information, contact [Matt Chasse](#).

First Regional Operational Forecast System available for the Northern Gulf of Mexico

On April 3, the Center for Operational Oceanographic Products and Services unveiled the new [Northern Gulf of Mexico Operational Forecast System](#) (NGOFS) developed in a joint partnership with the Office of Coast Survey's Coast Survey Development Laboratory, the NWS' National Centers for Environmental Prediction and the University of Massachusetts-Dartmouth. NGOFS is NOAA's first regional ocean model, encompassing the shelf and coastal areas from Pensacola, Florida, to Corpus Christi, Texas. The model provides water level, currents, temperature and salinity nowcast and forecast guidance four times per day, as well as wind nowcast and forecast guidance derived from the NWS North American Mesoscale system. Spatial animations of the entire Northern Gulf of Mexico domain, as well as time series at 93 stations or points of interest are available for the five parameters - water level, winds, currents, temperature, and salinity. For more information, contact [Aijun Zhang](#).

New publication outlines how to incorporate sea level change at the local level

Local communities want to incorporate sea-level rise projections into their planning efforts, but there is no “one size fits all” approach. A new NOAA publication, [Incorporating Sea Level Change Scenarios at the Local Level](#), provides an eight-step approach that shows community planners how to understand and plan for sea level change. The publication can be downloaded or obtained in hard copy.

New viewer for NOAA's Historical Shoreline Surveys

NOS Special Projects has developed, in collaboration with the National Geodetic Survey and NOAA's Coastal Services Center, a new tool to view NOAA's collection of historical shoreline surveys. The [NOAA Historical Shoreline Survey Viewer](#) provides access to a large number of historical shoreline surveys conducted by NOAA and its predecessor organizations. About 7,800 surveys—the earliest dating back to 1841—are available for viewing in Google Earth. In addition to overlaying a scanned image of the survey in Google Earth, the viewer provides links to download the original scan and metadata, the resulting extracted vector shoreline, and a descriptive report compiled by the survey team. When compared to imagery available through Google Earth, the surveys provide invaluable historical information about how the shoreline has evolved through both natural and man-made changes over the last 170 years.

NOAA OCRM releases report on protecting the public interest through shorefront no-build areas

The Office of Ocean and Coastal Resource Management (OCRM) recently [released a new report](#) that summarizes where coastal states and territories employ shorefront no-build areas (e.g., through setbacks, rolling easements, or zoning) along ocean and Great Lake shorefronts to protect the public interest. The information was compiled by OCRM with input from state and territorial partners to help OCRM better understand and communicate how state and territorial coastal management programs manage ocean and Great Lake shorefront development. The report is also meant to be a resource for states and territories that are considering revising their shorefront development laws and regulations or adopting new ones. In recent months, two coastal states have requested this information.

The Social Coast: A new resource on the people side of coastal management

[The Social Coast](#), a new component of the NOAA Coastal Services Center's Digital Coast website, provides data, tools, training, and stories on one of the most important aspects of coastal management—the people. The Social Coast selects the relevant demographic and economic data sets available through the Digital Coast, provides examples of how and why to use them, and introduces techniques for engaging stakeholders, such as participatory mapping and visualizations. Social Coast data narrow in on the coastal components of a broad range of social science data sets from agencies that include the Bureau of Labor Statistics, Bureau of Economic Analysis, and the Census Bureau.

Critical Facilities Flood Exposure Tool expanded nationally

The [Critical Facilities Flood Exposure Tool](#), originally developed for Mississippi and Alabama, is now available for coastal areas nationwide. With this tool, coastal communities can “see” the critical facilities and roads that lie within their flood zones. This information is helpful for those who develop and implement risk mitigation strategies. The visual nature of the information also makes the output a strong component of any risk management outreach effort.

Extreme water levels available on the Web

Extremely high or low water levels at coastal locations are a public concern and an important factor in coastal hazard assessment, navigational safety, and ecosystem management. Exceedance Probability is the likelihood that water levels will exceed a given elevation based on historic values. The Center for Operational Oceanographic Products and Services (CO-OPS) recently launched a new, [web-based](#) Exceedance Probability Statistics product for determining extreme water levels for most water level stations on the East, Gulf, Pacific, and Alaskan Coasts with at least 30 years of data. When used in conjunction with real-time station data, exceedance probability statistics can be used to evaluate current conditions and determine when a rare event has occurred. This information may also be instrumental in planning for the possibility of dangerously high or low water events on a local level.

Prepare for coastal flooding with new NOAA website



Storm surge is the rise in water level caused by a severe storm's wind, waves, and pressure.

NOAA recently released a new website to help protect communities, people, and property from the devastation of coastal flooding. The [NOAA storm surge website](#) provides important information to help communities prepare for storm surge.

Coastal flooding is often the greatest threat to life and property during storms. Floods damage roads and bridges, destroy homes and businesses, and cause injuries and death to those in harm's way. Storm surge can flood large coastal areas, reaching cities and communities miles inland.

Experts from across NOAA work to reduce the damage caused by these

devastating events. NOAA meteorologists and oceanographers use coastal observations and computer models to predict when storm surge may occur and assess the damage it causes. Other experts assess vulnerability and help communicate critical information. This knowledge helps people not only prepare for, but also respond to, coastal flooding from a storm.

The storm surge website is one of several that NOAA maintains to promote public safety in the face of severe weather such as coastal storms and hurricanes. Other resources include [NOAA Storm Quick Look](#), which provides current water levels along the coast during severe storms including hurricanes, the [National Hurricane Center](#), which forecasts hazardous tropical weather, and NOAA's all-hazards website, [NOAA Watch](#).

New NOAA products shed light on the ocean and Great Lakes economy

The "[NOAA Report on the Ocean and Great Lakes Economy of the United States](#)" examines the critically important economic contributions of the oceans and Great Lakes. The report summarizes data from the NOAA Coastal Services Center's [Economics: National Ocean Watch](#) dataset which features time-series statistics on six economic sectors that depend on the oceans and Great Lakes. Included with the report is a variety of infographics, or visual representations of the data, at the national, regional, and state levels.

Using simulated images to communicate coastal issues

NOAA's Coastal Services Center has released a new publication entitled [Using Photorealistic Visualizations](#). The document introduces various types of visualizations, or simulated images, with a focus on the particularly powerful photorealistic visualization. In today's visual world, visualizations are often much more effective than words, charts, and graphs in conveying the impacts of coastal change and development. Included are real-life examples and things to consider when creating your own visualizations. The publication is the newest in a series on [social science tools and methods](#).

Updated MPA Inventory and Interactive Mapping Tool

The MPA Center has updated their interactive online mapping tool that allows users to access data for more than 1,700 MPAs in the United States. This tool includes simple functions to visualize MPA boundaries, review MPA classification information (e.g., level of protection, managing agency, fishing restrictions), and explore all MPAs in a given location. Data for the mapping tool are from the newly updated comprehensive MPA Inventory containing a range of information on each of the 1,729 protected areas established or managed by federal, state, or territorial agencies or programs. Updates to the Inventory have allowed for more accurate analyses. For more information, visit <http://www.mpa.gov/dataanalysis/mpainventory/>

MPA Center partners to create educational short film series

Through its partnership with the trilateral Commission for Environmental Cooperation, the MPA Center worked with representatives from the North American Marine Protected Areas Network (NAMPAN) and Coastal America's Coastal Ecosystem Learning Center (CELC) Network on the development and production of a series of short films about MPAs. The educational videos will promote public awareness of the value and importance of North America's more than 1,000 marine protected areas, and will be shown across North America at Learning Centers, federal parks, National Marine Sanctuaries, reserves, and other venues. To view and share the videos, visit: www.cec.org/mpa.

In the Gulf States

Shedding new light on coastal currents

Scientists at Dauphin Island Sea Lab detect surprisingly strong link between the Mobile Bay watershed inputs and water movement in the northern Gulf of Mexico.

April 9, 2012

As the 2010 Deepwater Horizon oil spill disaster clearly demonstrated, the lack of data has left us woefully unable to predict how pollutants are transported in the waters of the north-central Gulf of Mexico. Understanding how and where these kinds of materials move in the Gulf is critical to improving our ability to develop and target future emergency response efforts if similar disasters happen again.

Recent work, led by Dauphin Island Sea Lab (DISL) scientists, Drs. Kyeong Park and Brian Dzwonkowski, who recently published a series of scientific papers based on their analysis of seven years of data collected offshore of Dauphin Island, Alabama, is shedding new light on the ocean circulation in the north-central Gulf of Mexico. These data, collected as a part of DISL's Fisheries Oceanography in Coastal Alabama (FOCAL) program, were financially supported by the Alabama Department of Conservation and Natural Resources (ADCNR). The data were collected using a stationary instrumentation package for current velocity, temperature and water column stratification to provide a first step in filling a critical gap in our understanding of how ocean waters move off Alabama's coast.

Among the unexpected discoveries made by these two scientists was the recognition of what a critical role Mobile Bay watershed freshwater discharge plays in controlling coastal current patterns in the region. The most recent study, published in the March 2012 issue of *Journal Geophysical Research – Oceans* provides one of the first detailed descriptions of Gulf ocean circulation patterns during the Deepwater Horizon oil spill. A comparison of these data with those collected at another nearby site supports their conclusion that freshwater discharge events in May and June 2010 played very important roles in determining where oil came ashore in coastal Alabama.

Additionally, these analyses led the authors to conclude that the models used to make the initial predictions about oil movement in the inner coastal zone should have better represented the impacts of Mobile Bay watershed discharge on the movement of inshore waters. The analyses led the authors to further determine that the watershed discharge created a heavily layered water column analogous to what you would see if you mixed vinegar and oil together in a glass. The authors also found that the complex interplay between watershed discharge and local wind patterns creates near shore oceanographic patterns quite unique compared to the Atlantic or Pacific coasts of the U.S.

Dr. Park stated, “The data from this long-term mooring station reinforces the idea that Mobile Bay and the near-shore Gulf of Mexico are unique, with their own characteristics that require more locally-sensitive monitoring and modeling. ‘One-size-fits-all’ will not work here, and we were fortunate to have this station in order to provide this critical data specific to the Gulf of Mexico. Without data feeds for validation of forecast models, it will be challenging to try to accurately predict where oil will go should there be another disaster, like the Deepwater Horizon oil spill.”

Dr. Dzwonkowski added, “While coastal managers have gotten quite good at responding to disasters such as hurricanes, there has been no real progress for the planning that may be needed should there be another disaster like the Deepwater Horizon oil spill. Planning begins with science, and success is determined by the application of technologies developed with science.

“We are just getting to the point where our time series data at the FOCAL site are becoming long enough to characterize how local circulation patterns can be changed by dramatic climatic events such as El Niño. Having such long-term data on hand is critical to our ability to develop emergency response strategies in dealing with climate change issues,” he said.

Scientists are hopeful that these new findings and the need for such data for environmental planning will encourage the state and other agencies to continue funding this much needed observation station.

Paper citation: Dzwonkowski, B. and K. Park. 2012. Subtidal circulation on the Alabama shelf during the Deepwater Horizon oil spill. *Journal of Geophysical Research*, 117, C03027, doi:10.1029/2011JC007664

Florida DEP launches final phase of online beach access guide

~Finding your ideal Florida beach just got easier~

June 1, 2012

TALLAHASSEE - The Florida Department of Environmental Protection’s (DEP) Florida Coastal Management Program today announced the launch of the third and final phase of its coastal access guide. The interactive website now allows users to locate beach access points and additional information such as restrooms, picnic tables and lifeguard availability statewide.

The most recent phase completes the guide and covers 10 coastal counties, from Hernando to Monroe, on Southwest Florida’s coast. The first phase, launched in February, included data for the panhandle region, encompassing 13 Gulf Coast counties spanning from Escambia to Citrus. The second phase went live in

May and included information about the 12 coastal counties along the Atlantic Ocean from Nassau to Miami-Dade. “Summer is a great time to get out and enjoy Florida's coastlines, and our completed Beach Access Guide allows Floridians and visitors to find that perfect beach,” said Danny Clayton, Program Administrator of DEP’s Florida Coastal Management Program. “The online guide provides information on beach access points and amenities, maps and area information and everything needed connect with Florida’s most defining natural resource – our coast.”

The guide also provides a list of amenities at each access point, a list of state parks, paddling trails, and points of interest along with a county overview. To use the beach guide, please visit www.dep.state.fl.us/cmp/beachaccess/default.htm.

About the Florida Coastal Management Program

The Florida Coastal Management Program seeks to protect and sustain Florida’s natural, cultural, historical and economic coastal resources and communities. Program activities are implemented in partnership with network agencies through program support projects, special initiatives, grant programs and the coordinated reviews of federal activities for consistency with the statutory authorities in the Florida Coastal Management Program.

La. coastal zone inland boundary changed by Act 588

June 12, 2012

BATON ROUGE- The process began in 2009, as law makers authorized a comprehensive evaluation of the state’s coastal boundaries, and today, with the signing of Act 588, Louisiana’s coastal zone boundary is officially redrawn. Over the course of time and mostly natural conditions, the inland boundary of the state’s coastal zone has increased by about 12.6 percent.

The original coastal zone boundary was established in 1978. In 1979, 1980, and as recent as 2010, state laws have refined the boundaries to better manage and protect Louisiana’s valuable coastal resources. Governor Bobby Jindal signed HB 656 by Houma Rep. Gordon Dove, who introduced the proposal for redrawing the boundary in this legislative session as chairman of the House Natural Resources and Environment Committee.

Rep. Dove said, “Our coastal boundaries must be protected, and managing our resources so that we don’t have continued land loss— truly is a priority for our coastal communities. We all recognized the need to make changes after more than 25 years, so we did, and it is just as important now to continue to be good stewards where we live, work and play.”

State Department of Natural Resources Secretary Scott Angelle said the department’s Office of Coastal Management (OCM) is updating its website with pertinent information about the boundary changes, and with maps of the revised boundaries. The new coastal boundary defines the area covered by regulatory programs administered by the OCM to manage and protect Louisiana’s coastal resources. Angelle also noted that the OCM is working closely with the U.S. Army Corps of Engineers’ regulatory office to ensure that these additional areas in the coastal zone are covered by the Programmatic General Permit, known as PGP, and the joint permit application system administered by those agencies in the Louisiana coastal zone.

Of the 20 parishes in the coastal zone, the coastal area in 8 parishes is now expanded, 2 parishes have had a reduction in their coastal area, and 10 coastal parishes remain unchanged.

Terrebonne Parish President Michel Claudet stated, “Expanding the Louisiana Coastal Zone is a great step by the State in ensuring our coast is protected and sustained to the extent it needs to be. We look

forward to working with DNR to ensure the permitting process is not another cumbersome level of bureaucracy, but a process that can encourage development, while protecting our vanishing wetlands.”

The boundary changes can be seen online on the department’s website at <http://dnr.louisiana.gov/index.cfm?md=pagebuilder&tmp=home&pid=928>.

The changes resulted in increased coastal zone acreage in the parishes of Calcasieu, Cameron, Iberia, St. Martin, St. Mary, Terrebonne, Lafourche, and Assumption. Tangipahoa and Livingston parishes had a decrease in coastal zone acreage. There were no boundary changes in Vermilion, St. John, St. James, St. Charles, Jefferson, Plaquemines, Orleans, St. Bernard, St. Tammany and Ascension parishes.

In 2009, the La. Senate directed the Coastal Protection and Restoration Authority (CPRA) to conduct a science-based study of the inland coastal zone, realizing that after nearly three decades since the establishment of the inland boundary, there had been deterioration of the state’s coast, devastating impacts from many hurricanes, adoption of a Coastal Master Plan, new information on sea-level rise, establishment of other coastal programs and boundaries, and unprecedented funding levels being applied to integrated coastal protection and restoration.

[That study](#) was presented to the Legislature in 2011, by the CPRA and became the basis for the coastal zone boundary changes authorized in Act 588. The study used up- to-date information for southern Louisiana parishes including storm surge, geology, elevation, vegetation types, soils and subsidence, and predicted sea level rise to come up with recommendations for the coastal zone boundary change. “It was a science-based approach that rendered us valuable guidance to help in the fight for coastal sustainability,” Angelle said.

Along with the online and web-based maps and information, DNR Office of Coastal Management is working to schedule meetings in the coastal communities in areas where the boundary changes have occurred. At those meetings, OCM will inform citizens about those changes and related permitting requirements, discuss actions underway to assist them in the coastal use permit application process and answer any questions they may have. Two meetings are scheduled so far, in Thibodaux on June 20, and in Houma on June 21. [The listing of upcoming meetings are also available on the website.](#)

Louisiana Sea Grant releases socioeconomic study on the recreational for-hire fishing industry in the U.S. Gulf of Mexico

April 20, 2012

A recent study by Louisiana Sea Grant is providing an insightful glimpse into the business and policy workings of the recreational for-hire (RFH) fishing sector in the U.S. Gulf of Mexico.

The report, titled “Economic and Attitudinal Perspectives of the Recreational For-Hire Fishing Industry in the U.S. Gulf of Mexico,” is based on a 2010 survey of RFH operations in Texas, Louisiana, Mississippi, Alabama and West Florida.

A total of 689 captains participated in the survey, providing information on trip and vessel characteristics, financial data, fishing effort, hurricane impacts and opinions on policy issues relevant to their industry. The report compiles and analyzes this data at the state and Gulf level for three vessel classes: head boats, charter boats and guide boats.

“We found that RFH licenses have been generally trending upward for the past decade and that the average business is profitable,” said Rex Caffey, project leader and professor of natural resource economics at Louisiana State University and Louisiana Sea Grant. “Some interesting differences emerge, however, when you look at the data by vessel class.”

One of the more notable findings is the high number of guide boats operating in Gulf coastal waters. Though relatively small in length – averaging only 22 feet compared to 33 feet for charter boats and 55 feet for head boats – guide boats were found to account for 70 percent of the 3,315 for-hire operators in the region and more than half of the industry’s estimated \$215 million in annual dockside revenue.

Differences by vessel class were also evident in regard to current and pending management policies. Head boat operations were found to be more tolerant of regulations requiring federal observers, mandatory reporting, limited entry and electronic vessel monitoring. Catch share management, however, was generally opposed by operators of all vessel classes.

Taken together, these attitudinal and economic findings provide the insight needed to improve state and federal management of the RFH sector.

This project was conducted by Louisiana Sea Grant College Program and the Louisiana State University Center for Natural Resource Economics & Policy. Support for the project was provided by National Sea Grant Office, the National Oceanic and Atmospheric Administration and the Louisiana Department of Wildlife and Fisheries. For additional information, please email RFHSurvey@lsu.edu.

Louisiana Coastal Master Plan receives unanimous approval

On May 22, 2012, the Louisiana Legislature unanimously approved the 2012 Coastal Master Plan. As the final plan worked its way through committee hearings and both the State Senate and House of Representatives, the Master Plan received unanimous approval from the Senate Natural Resources Committee, the Senate Transportation, Highways & Public Works Committee, the Louisiana State Senate (34-0), the House Natural Resources and Environment Committee, the House Transportation, Highways, & Public Works Committee, and the Louisiana House of Representatives (94-0). As such, the State of Louisiana has formally adopted the Master Plan to serve as the blueprint for all future coastal protection and restoration efforts in Louisiana.

The CPRA’s [2012 Coastal Master Plan](#) is based on a two year analysis involving some of the state’s best scientists as well as national and international specialists. The state used this analysis to select 109 high performing projects that could deliver measurable benefits to our communities and coastal ecosystem over the coming decades. The plan shows that if these projects were fully funded, at a price tag of \$50 billion, we could substantially increase flood protection for communities and create a sustainable coast. Learn more about the projects included in the Master Plan by [clicking here](#).

Sea Grant funds project to demolish outdated Bayou St. John water control structure

NEW ORLEANS – In an effort to improve water flow and recreational fisheries along Bayou St. John, the Gulf of Mexico (GOM) Sea Grant programs through a partnership with the National Oceanic and Atmospheric Administration (NOAA) Restoration Center are funding the removal of a non-functional water control structure on the bayou. The \$234,000 project will be executed by the Orleans Levee District (OLD), and the NOAA Restoration Center/GOM Sea Grant partnership is contributing \$95,000 toward the cost.

A recent study concluded the old water control structure is unnecessary. The cement structure, built in 1962, was originally designed with open butterfly valves to control water flow from Lake Pontchartrain.

But years of valve maintenance problems rendered the control structure superfluous. In 1992, additional floodgates were built to replace the old structure.

“Because the new, much higher sector gate structure is the primary protection for storm surge entering the bayou, the original purpose of the 1962 structure to protect against storm surge is no longer necessary,” said Gerard Gillen, OLD executive director.

The primary benefit of removing the old control structure will be to restore historic hydrologic flow into the bayou, allowing for the re-establishment of Bayou St. John’s aquatic vegetation and the growth of native marine life. Officials also hope that the revitalized bayou will attract more recreational activity along the City Park lagoons that feed off the bayou.

“This is an excellent opportunity to improve access to Bayou St. John for fish and for the human residents of the surrounding communities,” said Mel Landry, a NOAA marine habitat resource specialist located in Baton Rouge.

If all goes as planned, the project will be completed by the end of June. Members of the public are invited to a meeting to discuss these improvements on April 17 at 5:30 p.m. in the New Orleans City Park Pavilion. Representatives from Louisiana Sea Grant, Orleans Levee District, Louisiana Department of Wildlife and Fisheries and NOAA will be available to discuss and answer questions.

The Gulf of Mexico Sea Grant programs consist of the Louisiana Sea Grant College Program, Texas Sea Grant College Program, Mississippi-Alabama Sea Grant Consortium, and Florida Sea Grant. Since its establishment in 1968, Louisiana Sea Grant has worked to promote stewardship of the state’s coastal resources through a combination of research, education and outreach programs critical to the cultural, economic and environmental health of Louisiana’s coastal zone. Louisiana Sea Grant, based at LSU, is part of the National Sea Grant Program, a network of 32 university-based programs in each of the U.S. coastal and Great Lakes states and Puerto Rico.

MDMR enhances Deer Island North Reef

BILOXI, Miss. – The Mississippi Department of Marine Resources’ (MDMR) Artificial Reef Bureau and Shellfish Bureau have completed an enhancement project on the nearshore reef, Deer Island North, which is located just north of the eastern end of Deer Island. The enhancement project, which took place in May, added 1,500 cubic yards of limestone to the reef extending the eastern tip by approximately three acres.

“Enhancing this reef provides additional fish habitat, which will benefit Mississippi fishermen,” said Kerwin Cuevas, MDMR Artificial Reef Bureau Director. “Additionally—at some point a few years down the road—this could potentially be utilized as an oyster tonging reef for commercial harvest.”

MDMR Shellfish Bureau Director Scott Gordon said “the area around Deer Island is a high-use area. This site was selected after taking input from the local community into consideration.”

The Deer Island North fishing reef is one of 67 nearshore reefs spread along Hancock, Harrison and Jackson county shorelines. For more information about the Artificial Reef or Shellfish bureaus, or to download a map of nearshore and offshore reefs, visit dmr.ms.gov and click on the Marine Fisheries tab.

The Mississippi Department of Marine Resources is dedicated to enhancing, protecting and conserving marine interests of the state by managing all marine life, public trust wetlands, adjacent uplands and waterfront areas to provide for the optimal commercial, recreational, educational and economic uses of these resources consistent with environmental concerns and social changes. Visit the DMR online at www.dmr.ms.gov.

More than 7,300 volunteers haul 137 tons of trash off Texas beaches

Less trash than usual found at annual Adopt-A-Beach Spring Cleanup

May 01, 2012

AUSTIN — Texas beaches may just be getting cleaner, according to reports from Adopt-A-Beach coordinators across the coast.

The 26 th Annual Texas General Land Office Adopt-A-Beach Spring Cleanup drew 7,369 volunteers to the Texas coast Saturday. But the good weather and the strong turnout didn't result in more trash than usual, just 137 tons. In fact, many volunteer coordinators reported the beaches were pretty clean when they arrived with their volunteer crews.

"What I hope this means is that folks are starting to get the message that trashing Texas beaches isn't cool," said Jerry Patterson, Commissioner of the General Land Office. "The only way to really address this problem is at the source."

Adopt-A-Beach volunteers' past success can be seen in the mix of trash collected Saturday: cigarette butts, soda cans, beer bottles and beach toys. This mix of trash has changed over the years that Adopt-A-Beach volunteers have walked the beaches. When the program started in 1986, the bulk of trash on Texas beaches washed ashore from international ships that simply dumped it overboard. Since then, data collected by Adopt-A-Beach volunteers has helped to pass an international shipping treaty that bans such sloppy practices and requires all oceangoing vessels to dispose of their trash responsibly while in port. Among the more amazing items volunteers found Saturday were an oil filter with 10 quarts of oil, a bowling ball, a bottle with two Cuban ID cards inside, a hazmat mask, paper and plastic trash from Venezuela, Columbia and Haiti, an aluminum hand held grenade launcher, muriatic acid, a plastic container from Russia and false teeth.

Matagorda Beach yielded a message in a bottle launched from Mexico in January. The note, written in English and Spanish, contained an email address and a request to contact the author when the bottle was found.

The Adopt-A-Beach program is one of the most successful all-volunteer efforts in the nation. In the past 26 years, 430,000 Adopt-A-Beach volunteers have picked up more than 8,300 tons of trash from the Texas Gulf Coast.

HNTB Corporation was the lead sponsor for the 26th Annual Adopt-A-Beach Spring Cleanup. Other sponsors included Halliburton, the Harris and Eliza Kempner Foundation, the Newfield Foundation, NOAA Marine Debris Program and Keep Texas Beautiful.

To learn more about items collected at the cleanup, and for information on the health of the Texas coast, visit the Adopt-A-Beach program website at www.texasadoptabeach.org, or contact the Texas General Land Office at 1-877-TXCOAST (1-877-892-6278).

Other News

Major step forward for Gulf Coast restoration

June 29, 2012

Today Congress took a major step in our efforts to restore the Gulf Coast and support the important communities that rely on it every day. Earlier today, Congress enacted the Resources and Ecosystems Sustainability, Tourist Opportunities and Revived Economies of the Gulf Coast States Act (RESTORE Act).

This Administration recognizes that a strong and vibrant ecosystem is the key to the Gulf's future - that's why the President established the Gulf Coast Ecosystem Restoration Task Force in 2010. As Chair of the Gulf Coast Ecosystem Restoration Task Force and a New Orleans native, I can tell you that a healthy ecosystem is vital to the economy and the way of life for the Gulf Coast. There's a lot at stake in this region: the economies of the five Gulf States supported more than 19 million jobs and nearly \$2.5 trillion of the U.S. GDP in 2008. In addition, millions of people visit the Gulf Coast each year – to vacation, to sail, to swim, to fish, and to enjoy this great waterbody. In 2008, national and international tourists spent about \$145 billion in the 5 coastal states and around 1.7 million people were employed in travel and tourism.

During the oil spill, we essentially “lost” the Gulf for a period of time, and natural resources in the Gulf were extensively damaged. We lost the use of valuable fishing grounds, incredible recreational opportunities and all of the other benefits of a thriving, vibrant ecosystem. That loss helped show folks who aren't from the Gulf Coast just how important it is to our nation.

But our goal and commitment is not simply to address the damage caused by the spill - it is to ensure the long term improvement and restoration of the Gulf Coast and its unique ecosystems.

The RESTORE Act is a critical part of that effort. The bill ensures that 80 percent of Deepwater Horizon civil and administrative penalties under the Clean Water Act will go to Gulf Coast restoration, and sets up a framework that can ensure coordination between the Gulf States and the Federal government. This approach was first recommended by Navy Secretary Ray Mabus in his September 2010 recovery plan and subsequently embraced by President Obama.

The Administration will work to ensure coordination between the states and Federal government to ensure that BP and the other responsible parties fully pay for the damage caused by the Deepwater Horizon oil spill and that dedicated Clean Water Act penalties are utilized in a way that serves the goal of long-term ecosystem restoration economic health of the Gulf.

This is an important moment for the Gulf Coast and we commend Congress for doing its part to ensure that the communities and ecosystems of the Gulf Coast recover stronger than before Deepwater Horizon. I know how deeply the spill impacted the lives of everyone in the Gulf – passing the RESTORE Act and continuing work on Gulf Coast restoration is, simply put, the right thing to do.

Community-based Restoration Partnership



Funding for the 2012 cycle of the Gulf of Mexico Foundation's [Community-based Restoration Partnership](#) (CRP) is now available. [Download Guidelines \(PDF\)](#).

The CRP has reached a milestone by providing grants for now more than 75 different projects in coastal areas throughout the Gulf of Mexico and the Caribbean Sea. Restoring a total of about 15,000 acres over the past decade, these CRP projects have improved a wide variety of habitat types, including coastal dunes, coral reefs, oyster reefs, marshes,

seagrass beds, mangrove forests and artificial reefs.

Funding from [NOAA](#) and the [EPA](#) make it possible for the GMF to provide more than \$3 million to project leaders. Other partners have contributed an additional \$5.5 million in funding, as well as 50,000 volunteer hours.

Deepwater Horizon Natural Resource Trustees announce major progress in Gulf restoration effort



April 18, 2012—An estimated \$60 million in early restoration projects soon will begin along the Gulf Coast following the nation's largest oil spill, the *Deepwater Horizon* Natural Resource Damage Assessment (NRDA) Trustee Council announced today.

With finalization of the [“Deepwater Horizon Phase I Early Restoration Plan & Environmental Assessment” \(ERP/EA\)](#) (pdf, 12.1 MB), eight restoration projects will be implemented. The projects provide for marsh creation, coastal dune habitat improvements, nearshore artificial reef creation, and oyster cultch restoration, as well as the construction and enhancement of boat ramps to compensate for lost human use of resources.

The ERP/EA is the first early restoration plan under the unprecedented April 2011 agreement with BP to fund \$1 billion in early restoration projects. The funding enables the trustees to begin restoration before the completion of damage assessment activities.

The trustees are working to move the next phase of early restoration forward. The selection process for future early restoration projects will proceed along the same lines as the first. After reaching preliminary agreement with BP on proposed projects, the trustees will seek public comments before finalizing any future plan.

“Having carefully planned the projects in Phase I and extensively discussed them with the public, we are confident that the projects will achieve our goal of beginning to heal the Gulf's ecosystem and people's enjoyment of it,” said Alabama representative Cooper Shattuck, chair of the NRDA Trustee Council's Executive Committee.

The Phase I projects, including two each in Louisiana, Mississippi, Alabama and Florida, were the focus of 12 public meetings held throughout the Gulf states and in Washington, D.C., during the months of January and February 2012.

In addition to speaking at meetings, hundreds of citizens filed comments by mail and online. Following the meetings, more than 500 people and organizations submitted comments, which were gathered and carefully evaluated. The comments, as well as trustee responses to them, are included in the Phase I plan, which can be reviewed at www.gulfspillrestoration.noaa.gov and www.doi.gov/deepwaterhorizon. The NOAA Gulf Spill Restoration site also provides additional information about restoration planning and a [status update on the ongoing damage assessment](#) (pdf, 5 MB).

“We are deeply grateful to everyone who took the time to participate in the process and hope for their continued engagement as we move ahead,” said Department of the Interior trustee Rachel Jacobson, Acting Assistant Secretary of Fish and Wildlife and Parks. “The public’s comments strengthen our belief in these projects, and offer some great ideas for the future.”

“The early restoration projects will drive both ecological and economic renewal,” said NOAA trustee Monica Medina, Principal Deputy Undersecretary of Commerce for Oceans and Atmosphere. “Through these and future projects, the trustees intend to build a regional restoration economy.”

“These projects allow us to begin implementing restoration of Louisiana’s natural resources quickly, rather than waiting years for the completion of the full assessment,” said Louisiana trustee Garret Graves, chairman of the Coastal Protection and Restoration Authority of Louisiana. “But we continue to be focused on pursuing additional projects with BP. Nearly two years after the start of the oil spill, we hope that BP moves quickly to approve future restoration for the Gulf Coast.”

“The Phase I projects mark an important first step in assuring Mississippi’s recovery from the Deepwater Horizon spill, but they are only a first step. We will continue to press for additional projects to restore coastal marshes, damaged shorelines and sensitive areas of ocean habitat and estuaries vital to the sustainability of marine ecosystems,” said Mississippi trustee Trudy D. Fisher, Executive Director of the Mississippi Department of Environmental Quality. “The health and sustainability of the Gulf of Mexico are vital links to a strong economy and the livelihood of our coastal residents.”

“Florida’s focus on early restoration has been to ensure environmental impacts are addressed as well as to make up for the loss of access to our natural resources by residents and visitors alike,” said Florida trustee representative Mimi A. Drew, special advisor to the Florida Department of Environmental Protection Secretary Herschel T. Vinyard, Jr. “Public confidence in a healthy, high-quality environment in Florida is vital to ensuring a healthy economy.”

“Natural systems are interconnected, and these Phase I projects will contribute to making the Gulf system whole,” said Carter Smith, Texas Parks and Wildlife Department executive director, representing the Texas trustees. “As we mark this milestone, we’re looking forward to advancing Texas-specific project proposals for the next early restoration phase.”

USGS Joins BOEM and NOAA to study deep sea reefs found on oil rigs in Gulf of Mexico

From July 12-23, USGS DISCOVERE team is collaborating with NOAA's Office of Ocean Exploration and Research (OER) and BOEM on an interagency research cruise. The goals are to document the occurrence, depth range, population connectivity, and growth rates of deep-sea corals ecosystems, particularly those based on *Lophelia pertusa* attached to oil rigs and platforms in the Gulf of Mexico.

There are three main USGS investigations led by Drs. Cheryl Morrison (USGS Leetown Science Center), Christina Kellogg (USGS St. Petersburg Coastal and Marine Science Center), and Amanda Demopoulos (USGS Southeast Ecological Science Center). Dr. Katharine Coykendall, a USGS postdoctoral researcher working with Morrison will be onboard collecting *L. pertusa* samples from the rigs and platforms to analyze their genetics as a means to understand for Gulf-wide connectivity patterns and the role of human-made structures in enhancing genetic connectivity between eastern and western regions of the Gulf. By adding a new rig site, Kellogg's work will expand scientific understanding of the microbial diversity found on *Lophelia*. She will also use selective media to target elusive strains of microbes and will process samples of the bacterial community for pyrosequencing. Janessy Frometa (Jacobs Technology for SESC) and Jennie McClain-Counts (USGS Southeast Ecological Science Center) from the Demopoulos Lab will be on board collecting sediments near these structures to understand how rigs and platforms may function as artificial reefs for deep-sea benthic invertebrate communities.

This cruise represents the final field endeavor for the Gulf of Mexico USGS DISCOVERE-*Lophelia* II study: <http://fl.biology.usgs.gov/DISCOVERE/index.html>. The work will further the science on deep coral reefs, but also has practical management applications by supporting the new Bureau of Safety and Environmental Enforcement (BSSE) decisions about decommissioning of oil rigs. USGS is planning to work with BOEM on a press release at the outset of the cruise. Other possible activities, such as a ship-to-shore teleconference mid-cruise, are being considered by BOEM.

Southeast Climate Science Center announces FY12 project funding

The Department of Interior Southeast Climate Science Center (SECSC) is pleased to announce the [award of 2012 climate science research funds](#) that are supportive of the science goals and objectives described in the [SECSC Science Plan](#). Successful proposals were reviewed through a rigorous and standardized two-stage process. Thirty-four brief statements of interest were reviewed in a pre-proposal process and thirteen full proposals were reviewed by a Review Team that included scientists from the Landscape Conservation Cooperatives within the SECSC boundaries, as well as scientists from the Fish and Wildlife Service, NOAA, the Forest Service, the National Park Service, and the U.S. Geological Survey. The nine successful proposals include scientists from North Carolina State University (NCSU), the host institution of the SECSC, and from six USGS science centers or cooperative research units. Click here for additional details about these projects and other SECSC research activities.

Global Land Survey 2010

With over 3 million images in the USGS Landsat archive, choosing the best scenes can be daunting. The USGS and NASA have collaborated on global land datasets that represent examples of the best Landsat scenes from circa 1990, 2000, and 2005. NASA and the USGS have again partnered to develop the Global Land Survey 2010 (GLS2010), a new global land dataset with core acquisition dates of 2009–2011. The dataset includes Landsat 5 Thematic Mapper (TM), Landsat 7 Enhanced Thematic Mapper Plus (ETM+), and Earth Observing Mission 1 (EO-1) images. GLS2010, and all other decadal datasets, can be downloaded at no cost at [GloVis](#) or [EarthExplorer](#).

Science developed to support the Gulf of Mexico Ecosystem Regional Restoration Strategy



The Gulf Coast Ecosystem Restoration Task Force Science Coordination Team was assembled at the outset of the Task Force's Strategy development effort to bring together the observations and recommendations of state and agency scientists knowledgeable on Gulf restoration issues.

It's work was managed by an interagency group of scientists assigned to assist in Strategy development. Given the compressed schedule for Strategy completion, much of their work ran parallel to other work involved in developing a consensus Task Force strategy document, but their efforts were very valuable in the Strategy formation process. The Task Force felt that this useful [Gulf of Mexico Ecosystem Science Assessment and Needs](#) document should be made available to the public through this website.

Other Sources of Information for the Gulf of Mexico Region

The following websites provide information about activities, announcements, and events in the Gulf of Mexico region.

[Restore the Gulf](#)

RestoretheGulf.gov is the official federal portal for the Deepwater BP oil spill response and recovery. This site provides the public with information on the response, current operations, news and updates, how to file a claim and obtain other assistance, and links to federal, state and local partners.

[NOAA Gulf Spill Restoration](#)

NOAA and [other federal and state agencies](#) are leading efforts to assess impacts to, and determine appropriate restoration for, Gulf resources injured by the Deepwater BP oil spill. We are in the process of identifying the types of restoration activities that will be appropriate to restore the natural resources impacted by the spill. This is a key step in the ongoing [Natural Resource Damage Assessment](#) for the spill. Through the process, you will have the chance to give us your feedback on what projects are important to restore the affected resources after the spill. You can make your voice heard by [submitting a project idea](#). You can also [view projects](#) that have been submitted for consideration.

The restoration planning process involves many steps and includes input from scientists, experts, and the public. Restoration can take many years and requires the work of many dedicated people. NOAA will continue this work until the Gulf of Mexico is restored to its pre-spill condition. Over the years, NOAA has been involved with 380 restoration projects in the Gulf. NOAA's restoration scientists and specialists in the Gulf states have been providing technical assistance, coordination, and funding for restoration to many local organizations. Learn more about NOAA's restoration projects in the Gulf using our interactive [Restoration Atlas](#).

[Gulf Coast Ecosystem Restoration Task Force](#)

The Gulf Coast Ecosystem Restoration Task Force was created by President Obama through an [Executive Order](#) (PDF) on October 5, 2010, and is the result of a recommendation made in [Secretary Mabus' report](#) (PDF) on long term recovery following the Deepwater Horizon Oil Spill. By October 5, 2011, the Task Force is charged with development of a restoration strategy that proposes a Gulf Coast ecosystem restoration agenda. The task force is directed to:

- Define ecosystem restoration goals and describe milestones towards reaching those goals;
- Consider existing research and ecosystem restoration planning efforts;
- Identify major policy areas where coordinated actions between government agencies is needed; and
- Evaluate existing research and monitoring programs and gaps in data collection

The Task Force is an advisory body comprised of lead officials from the five Gulf states appointed by the President upon recommendation of each Governor, and 11 Federal agencies and White House offices. The Environmental Protection Agency's [Administrator, Lisa P. Jackson](#), serves as Chair of the Task Force and the Chair of the Coastal Protection and Restoration Authority of Louisiana, [Garret Graves](#), serves as Vice-chair. [John Hankinson](#) serves as Executive Director.

[Gulf of Mexico Alliance](#)

[The Gulf of Mexico Alliance](#) is a partnership of the states of Alabama, Florida, Louisiana, Mississippi, and Texas, with the goal of significantly increasing regional collaboration to enhance the ecological and economic health of the Gulf of Mexico. See [Gulf of Mexico Alliance News and Events](#).

Other Gulf of Mexico Alliance Related Links

Partnerships throughout the Gulf-region are developing between universities, governments, businesses, and others. Local non-profits are becoming more and more a part of the decision-making process in the gulf. Some of the partnerships and organizations listed below provide opportunities for collaboration with the Alliance.

[Alliance Environmental Education Network Website](#)

[Support the Gulf](#)

[Alliance Diversity Website](#)

[Gulf of Mexico Research Initiative](#)

The mission of the Gulf of Mexico Research Initiative (GRI) is to improve society's ability to understand and mitigate the impacts of hydrocarbon pollution and stressors of the marine environment, with an emphasis on conditions found in the Gulf of Mexico. In addition, the knowledge accrued will be applied not only to resolve, but also to improve the long-term environmental health of the Gulf of Mexico.

Landscape Conservation Cooperatives for the Gulf of Mexico Region

The following websites provide information about activities, announcements, and events for the [Landscape Conservation Cooperatives](#) in the Gulf of Mexico region. Landscape Conservation Cooperatives are applied conservation science partnerships among federal agencies, regional organizations, states, tribes, NGOs, universities and other entities within a geographic area. They are designed to inform resource management decisions in an integrated fashion across landscapes at a broader scale than any individual partner's responsibility. The partnerships will consider landscape-scale stressors, including climate change, habitat fragmentation, invasive species, and water scarcity as it attempts to provide a vision for a landscape capable of sustaining healthy populations of fish, wildlife, plants and cultural resources.

Gulf LCCs Regional Updates:

- *Enhancing Science-Management Partnerships for Climate Adaptation:* NOAA, the four Gulf LCCs, and the U.S. Geological Survey held the **Gulf of Mexico Climate Data and Scenarios Workshop** in Baton Rouge, LA., from May 21-23. The workshop, developed in response to the 2010 memorandum of understanding on climate science and services between the Departments of Interior and Commerce, brought together over 40 climate scientists, data and modeling experts, and resource managers from Interior, Commerce, state agencies, and academic partners. The goal of the workshop was to identify opportunities to enhance the Gulf of Mexico region's capacity to provide climate data, models, and approaches to adapt to climate change. As an outcome of the workshop, participants will work together to assess climate change vulnerability and to better coordinate science, services, and partnerships for shared priorities for climate adaptation.

Peninsular Florida Landscape Conservation Cooperative



The [Peninsular Florida Landscape Conservation Cooperative](#) (PF LCC) is part of a national network of Landscape Conservation Cooperatives (LCCs). The PFLCC will complement Florida's Wildlife Action Plan and other landscape level conservation strategies to restore, manage, and conserve the biodiversity of the region in the face of both climate change and intense development pressure associated with a rapidly growing human population.

Updates:

- PF LCC and North Carolina State University held the **"Landscape and Climate Science and Scenarios Workshop"** on June 13-14th. The goal of the workshop was to examine the current state-of-the-science as it relates to potential global change impacts in the PFLCC and to develop recommendations that will guide PFLCC research priorities. The workshop will generate a report that will summarize the major landscape level science projects, key results, and user discussions, and provide guidance as to future science needs. The report will be provided to the steering committee for the development of the upcoming strategic plan and will be used to inform a subsequent management-focused workshop.
- The PF LCC Steering Committee will meet on August 21st.

South Atlantic Landscape Conservation Cooperative



The [South Atlantic Landscape Conservation Cooperative](#) (SALCC) is part of a national network of Landscape Conservation Cooperatives. The SALCC crosses six states, from southern Virginia to northern Florida. The South Atlantic Landscape Conservation Cooperative is the leading forum in which the conservation community develops a shared vision of landscape sustainability, cooperates in its implementation, and collaborates in its refinement. The mission of the SALCC is to create a shared blueprint for landscape conservation actions that sustain natural and cultural resources. The SALCC publishes a monthly [newsletter](#) to share more information about the Cooperative.

Updates:

- SALCC's new weekly news round-up, **Newsday Tuesday**, provides five bits of information with a link for more information. It is put together as a mechanism for the SALCC, the Forest Service Southern Research Station's Eastern Forest Environmental Threat Assessment Center, the Southeast Climate Science Center and beyond to quickly and painlessly share news, publications, tools and other information that is relevant to climate research. If you have any questions or comments, news or information you'd like to share, or if you'd like to receive Newsday Tuesday in your email once a week, please email ginger@southatlanticlcc.org.
- SALCC **Third Thursday Web Forum** is a new way to share information about what is going on in your SALCC. Each month we will host a Web Forum in which we will cover one mission-relevant topic. Every forum will have the same agenda: 10 min of updates, 20 min of mission-relevant presentation, and 30 min of questions/discussions. For more information go to <http://www.southatlanticlcc.org/events/salcc-third-thursday-web-forum-3>.
- On May 4th, SALCC released a **2012 request for proposals** targeting immediately limiting science gaps identified in the 2012 Science Assessment. The SALCC partners are completing the review and selection process for proposals that were submitted by the June 20th deadline. Selected projects will be posted to <http://www.southatlanticlcc.org>.
- The final version of the **urban growth projection dataset** is now available! This urban growth probability extents throughout the 21st century for the Southeast Regional Assessment Project, which encompasses the states of Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Virginia and parts of the states of Arkansas, Illinois, Indiana, Louisiana, Maryland, Missouri, Ohio and West Virginia. ArcGIS GRID files can be downloaded with metadata at: http://data.southatlanticlcc.org/SERAP_urban_2010-2100.zip. This zip file includes grids for each decade starting at 2010 and ending in 2100.

Gulf Coastal Plains and Ozarks Landscape Conservation Cooperative



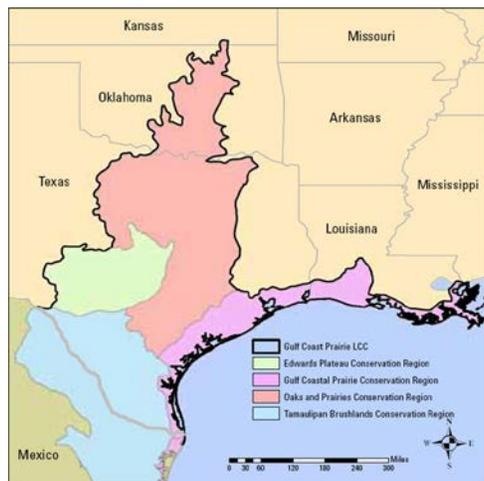
[The Gulf Coastal Plains and Ozarks Landscape Conservation Cooperative](#) (GCPO LCC) describes both a unique geographic region as well as a new kind of conservation partnership. It is part of a national network of Landscape Conservation Cooperatives (LCCs). LCCs are partnerships among federal agencies, regional organizations, states, tribes, NGOs, universities and others, all of whom leverage resources to define a common

vision for sustaining natural resources within a region. The GCPO LCC conducts research, develops tools that improve natural resource management, and conducts outreach. The goal is to focus coordinated action in support of shared conservation priorities across large connected areas, or landscapes. The GCPO LCC publishes a newsletter, the [GCPO Monitor](#), to share more information about the Cooperative.

Updates:

- In March, the GCPOLCC solicited volunteers for the **Adaptation Science Management Team** (ASMT) – a group of 40 individuals representing unique resource and geographic perspectives operating at the nexus of science and management. This group has been taking shape since the nominations closed in late March, with initial review by the Steering Committee at its April meeting and subsequent approval of the final roster during its early June conference call. A 2-day meeting on September 18-20th will be held for the entire ASMT to develop a shared vision of how to integrate priorities across resource perspectives within each sub-geography of the LCC and incorporate future change into our current conservation planning.
- The GCPOLCC's new **Southeast Communications Network** is up and running! The Network is a concept to promote landscape scale communications, in sync with the many collaborative landscape conservation initiatives. If you handle communications for any conservation partners, partnerships, or managed areas in the Southeast, please join the Southeast Communications Network. For more information, please email elliott.gregg@gmail.com.
- The GCPOLCC forms a new **Ecosystem Services Team**. The Ecosystem Services Team will serve as a forum for coordination and communication among LCC partners in matters pertaining to ecosystem goods and services that are relevant to the GCPO LCC mission. The team was approved at the April 2012 meeting of the GCPO LCC Steering Committee. Ecosystems within the Gulf Coastal Plains and Ozarks geography provide many important goods and services. Unfortunately, the value of many of these ecosystem goods and services are poorly quantified and not fully included into land use planning and management decisions. Greg Wathen's [blog about ecosystem services](#) identifies potential areas in which the LCC could play an important role in developing the science and tools to measure, quantify and value ecosystem services.
- If you are interested in landscape conservation for the Gulf Coast region, I hope you will join the [Gulf of Mexico Coastal and Marine Conservation Group](#) by becoming a member of the [GCPO LCC website](#).

Gulf Coast Prairie Landscape Conservation Cooperative



The [Gulf Coast Prairie Landscape Conservation Cooperative](#) (GCP LCC) is part of a national network of Landscape Conservation Cooperatives. The Gulf Coast Prairie encompasses portions of five states (Texas, Oklahoma, Louisiana, Mississippi, and Kansas) and four terrestrial ecoregions (Oaks and Prairies, Gulf Coast Prairie, Tamaulipan Brushlands, and Edwards Plateau). Eventually, it is envisioned to include portions of three Mexican states that share similar habitats (Tamaulipas, Nuevo Leon, and Coahuila). The GCP LCC consists of partnerships based on science, and brings information to on-the-ground strategic conservation efforts. The GCP LCC offers leadership to strengthen the effectiveness of conservation of wildlife populations and their habitats by providing the best available scientific information to inform management decisions.

Updates:

- The **GCPLCC Science Forum Meeting Summary** is now available at <http://gulfcostprairiegcc.org/science/science-forum/>. The Science Forum was held on February 21-22 and brought together invited agency and organization scientists, researchers, and managers from across the GCP LCC. Working within three breakout groups, participants identified high priority science needs for the GCP LCC in the following geographic contexts: aquatic, coastal, and terrestrial. See Section XI of the Meeting Summary for a list of the high priority science needs.
- The Gulf Coast Prairie LCC is committed to delivering a coordinated approach to meeting conservation needs across the Gulf Coast Prairie LCC landscape using the Strategic Habitat Conservation philosophy. Descriptions of **2012 projects** are available online at <http://gulfcostprairiegcc.org/science/> and include: “Managing Instream Flows”; “Mottled Duck Habitat Decision Support Tools”; and “Conservation Design Considering Sea Level Rise Impacts”.
- The **GCPLCC Steering Committee** met on June 26-28th. During the meeting, a new Chair, Allison Shipp (USGS), and a new Vice Chair, Mike Carlross (LA Dept. of Wildlife and Fisheries) were selected. The Steering Committee also reviewed priority science needs, developed an approach to select priority focal species for the LCC, and approved the selection of members for a GCPLCC Science Team.
- Additionally, the Steering Committee endorsed the National LCC proposal to define a consistent approach to include **marine areas** in the cooperative network and recommended that the Gulf LCCs work through the Gulf Coast Landscape Conservation Liaison to develop a consistent approach to engage in Gulf of Mexico marine conservation.

Did you find this edition useful? Please send suggestions, comments, and new items for publication to



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<http://coastalmanagement.noaa.gov/news/gomexnews.html>