Beyond the Horizon

Creating a Network of Special Ocean Places
to Strengthen the Ecology, Economy and Culture of the Gulf of Mexico

This document proposes a new relationship with the Gulf of Mexico. One that balances using products from the Gulf that are essential to our economic prosperity with protecting important places that are essential to the Gulf's ecological health. This new relationship seeks to create a network of special places that preserves marine species, and preserves our human connections to the Gulf of Mexico.
An Unraveling of the Fabric

The explosion of the Deepwater Horizon was more than an oil spill. It was a national tragedy that showed how lives, communities and ecosystems can be harmed if we fail to responsibly use and adequately protect our ocean’s resources. The environmental disaster and social disruptions that followed demonstrate that the Gulf’s ecological and human environments are interwoven. The blowout tore deeply into this biological and social fabric, but the inherent resiliency of that fabric will ultimately mend the Gulf’s ecosystem and economy. As mechanisms are created to prevent such disasters in the future, we must also bolster the Gulf’s resiliency. Installing safeguards in our relationship with the Gulf of Mexico should include restoring the structure of the ecosystem and strengthening the connections that bind it.

The Gulf’s Cry for Help

The blowout was a cry for help from the Gulf of Mexico. The Gulf’s ecology, economy and culture bled from that broken well along with the oil. It caused an unprecedented response from citizens, industries, scientists and agencies to mitigate damage from the oil and to stop its flow into the Gulf. It highlighted that we have inadequately protected the Gulf’s environment, its communities and its wildlife from harm or prevented such disasters from occurring in the first place. We must respond to this need with the same urgency and joint resolve that was mobilized for the oil-spill. We need to now stop the losses and protect our investment in the Gulf of Mexico, and the Gulf of Mexico’s investment in us.
What the Gulf of Mexico has Given Us

**Prosperity**

The Gulf of Mexico region and its natural resources provide jobs for more than 20 million people. The largest industries in the region are oil and gas, tourism, fishing and shipping. These industries generate $234 billion each year, with more than half coming from oil and gas production. The Gulf’s petroleum industry gives the US half of its oil production and refining capacity, employs 100,000 people and pays $12 billion in wages. Tourism is the Gulf’s second largest industry, creating 620,000 jobs that earn $9 billion in wages. The fishing industry lands 1.3 billion pounds of seafood a year from the Gulf that is worth $662 million. Sixty-six percent of the ocean-transported cargo that is shipped to and from the US passes through the Gulf’s six major ports.

**Community**

Fourteen million people call the Gulf Coast home and its climate, lifestyle and jobs have made population growth in the region twice the national average. The history and diversity of these residents have created a human landscape with a unique culture that is defined by its relationship with the Gulf of Mexico.

**Biodiversity**

The Gulf of Mexico supports a diversity of ocean life. The diverse marine environments of the Gulf of Mexico, including its numerous coastal estuaries and wetlands, barrier islands and beaches, oyster beds, coral reefs and deepwater habitats, contain 15,400 documented species -- 1500 of which are endemic to the Gulf. Iconic animals such as whale sharks, manta rays, turtles, bluefin tuna, sperm whales and tarpon are abundant. Underwater mountains and canyons attract and concentrate invertebrate and fish life into biological metropolises. These rich biological communities are essential to the Gulf’s economy, giving their products and offspring to sustain the region’s biological resources that we use and enjoy.

For All It Has Given Us, What Have We Given Back?
The Loop Current

The southern coastline of the U.S., the eastern shores of Latin America, and the islands of the Caribbean are linked by the great flow of currents that sustain the region’s marine life. These currents travel west and north through the Caribbean to converge in the channel between the Yucatán Peninsula and Cuba. This conveyor of warm, tropical water delivers a rich cargo of plankton from the Caribbean into the Gulf of Mexico. The united flow is called the Loop Current. It streams north into the central Gulf before making a clockwise loop to flow back south along the west Florida continental shelf. After passing the Dry Tortugas, the Loop Current turns sharply to the northeast to nourish the Florida Keys and to become the southern end of the mighty Gulf Stream. The Loop Current also spawns eddies that travel west, bringing parcels of Caribbean water into the western Gulf. Wind and tidal driven currents redistribute these parcels and the biota they contain. This flow of water is what sustains and renews the underwater communities of the Gulf of Mexico, and interconnects the life and conditions throughout the region.

Strengthening the Connections

The health of the Gulf of Mexico relies on the health of its physical and biological connections throughout the region. The Gulf’s currents not only nourish and sustain life, they can also be vectors for the threats that extinguish life. The conditions at any place in the Gulf’s interconnected system of marine habitats are influenced by the conditions upstream, and influence the condition of places downstream. To protect a particular place or species in the Gulf of Mexico, its ecological connections to other parts of the region need to be considered. Our success in restoring and maintaining the health of the Gulf of Mexico will rely on our ability to strengthen these ecosystem connections.
The Gulf’s Special Places

Powerhouses of Biodiversity

The sea floor communities of the Gulf of Mexico, from its shallow bays to its abyssal plains, were formed over 150 million years of biological and geological history. This natural history created numerous banks, escarpments and hard grounds that now ring the margins of the Gulf. Encrusting algae, corals, sponges, and mollusks colonize these key places. They attracted other resident and migratory species to build some of the most spectacular concentrations of marine life on the planet.

In shallow waters along the Mexican Yucatán and Veracruz coasts, vibrant living coral reefs grow on old limestone platforms and terraces. Off south Texas are ledges and limestone mounds built 18,000 years ago by Pleistocene reefs. There are numerous shallow offshore banks in the northwest Gulf formed by upward-migrating domes of 160-million-year-old salt. Some of the healthiest coral reefs in the Western Hemisphere grow on these banks. Off the coasts of Mississippi and Alabama are ancient shorelines that support unique deepwater communities. To the east is the vast West Florida Shelf, with large expanses of reef and delta deposits formed 50 thousand years ago. They are home to the most northern outposts of tropical marine life in the continental US.

In deep water, unique habitats are formed by seeps of brine and methane, mud volcanoes and deep coral communities. Undoubtedly, the unexplored terrain of the Gulf of Mexico harbors numerous other oases of ocean life. These unique special places fuel the Gulf’s biodiversity and sustain our use of it.

Lifelines of the Ecosystem

Not all the Gulf’s special places are special for the same reason, but they are interconnected. What happens to one, can impact the others. If part of the network is damaged, it has the capacity to heal itself through the constant interchange of essential living elements on the currents that flow throughout the Gulf. Most of the special places have little or no protection at this time. If we protect them, we will also help protect the critical lifelines between them.

Photos: G. Schmahl, E. Hickerson, W. Tunnell, T. Taylor, L. Horne
Giving Back: What We Can do for the Gulf of Mexico

We are at a pivotal moment in our relationship with the Gulf of Mexico. Our Gulf balance sheet is running a large deficit. We must repay the Gulf for what it has given us or it may stop giving. How we repay that debt will determine what we leave for future generations.

Explore the Gulf’s Frontiers

Let’s discover fully what the Gulf has to offer. Let’s explore its frontiers and apply what we learn to preserving its integrity and resilience. Let’s identify its special places and help them function in unison to restore depleted species and repair damaged habitats. Let’s create a stronger Gulf of Mexico that is better prepared to withstand future challenges that we and the changing environment will inevitably bring it.

Balance Use with Protection

We have the tools to maintain the integrity of the Gulf’s environment and also to ensure that society has access to its natural resources. Let’s engage the users of the Gulf and the best in marine science, education and management to implement a strategy that balances use of the Gulf with effective protections of its resources. Let’s have an open, public process to determine how to use these tools.

Build a Network

Utilizing our knowledge and special relationships, let’s engage in a public process that will establish a protected network of special places. NOAA’s Office of National Marine Sanctuaries has the tools and long-standing experience to conduct this process and manage the network. The goal of this network would serve to restore the fabric that makes up the rich cultural, economic and ecological characteristics of the Gulf.

Work Together

Our greatest legacy for the future will be in the bridges we build across our institutional and political boundaries. The Gulf of Mexico unites us as a nation and unites us to Mexico, Belize and all our Caribbean neighbors. Rebuilding the Gulf’s ecosystem will be a national and international endeavor. Let’s work together to protect the rich ecological and human wealth the Gulf has given us. We are the caretakers of its ecology, economy and culture. Let’s make our care for the Gulf of Mexico be as good as the care it has given to us.

Please join us for a public forum on May 12-13, 2011 www.mote.org/beyondhorizon

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