



Florida's Ocean and Coastal Ecosystems: Take Action, Our Future Begins Today

Our ocean and coastal ecosystems are of the utmost importance. The ocean provides 95% of the living space here on Earth and holds 98% of the water on our planet. It is our life support system. It feeds billions of people around the world, it drives our climate, it absorbs carbon dioxide and it produces 80% of the oxygen we breathe. Every breath we take and every drop we drink depends on a healthy ocean. Every life on the Earth depends on the ocean and now, the ocean's life depends on us.

More than 80% of people live within 60 miles of the coast and 85% of all the pollution in the ocean comes from land-based activities. We are causing global changes to our atmosphere and the ocean. Since 1970 ocean temperatures have increased by 1 degree causing bleaching of coral reefs. The ocean absorbs roughly 80% of the climate heating, increasing the volume by thermal expansion, causing a rise in sea level. From 1963 to 2003, sea level rose 3 inches with projections of 5-20 inches by 2050 and 23-60 inches by 2100.

Human-generated CO₂ emissions are currently 66 million tons per day and our oceans only absorb 22 million tons daily. Carbon dioxide is saturating the ocean waters forming carbonic acid, a process called ocean acidification. The historical pH of the ocean was 8.16 and is now 8.05, that's a 25% increase in acidity. This dissolves the shells of plankton, corals, oysters, clams, shrimp, crabs and lobster.

We must take action for the future of Florida's ocean and coastal environments. Here are 8 things we **MUST DO NOW**;

1. Florida must stop all discharges of polluted freshwater from Lake Okeechobee to the St. Lucie River Estuary and Caloosahatchee River Estuary. These discharges have caused lesions on fish, killed oyster reefs and seagrass habitat, cause diseases on sea turtles and bottlenose dolphin and bring harmful algal blooms causing the Health Department to post warnings for "No Human Contact"!
2. Florida and the U.S. must restore America's Everglades to natural flows from Kissimmee to Florida Bay. Currently 1.7 BILLION GALLONS PER DAY of freshwater that used to flow south to the Everglades now goes to the Atlantic Ocean and Gulf of Mexico, polluting our coastal estuaries and ocean reef ecosystems while wasting this valuable freshwater resource and starving the Everglades.
3. Florida and the U.S. must establish and implement strong numeric nutrient water quality standards and criteria essential to preventing pollution and protecting the health of Florida's waters. An enforceable nitrogen and phosphorus standard should be included to protect downstream coastal estuaries and Florida's ocean ecosystems and must be enforced at the source of the pollution.
4. Florida must require any wastewater or RO residual water currently injected underground in Class I injection wells (UIC) to be treated to advanced nutrient-stripping levels. The State should require water re-use instead of allowing more Class I injection of water or "water disposal". The injection water near the coast is coming up in 60-90 feet of water offshore and causing harmful algal blooms on coral reef ecosystems.

5. Clean energy technologies and industry must be required to prohibit venting mercury, toxics, and other gasses into the air which pollute Florida's surface waters and groundwater. Sulfur stimulates Methylmercury production which is toxic and accumulates in fish and bio-food chain to become more toxic. Sulfur inputs by fertilizers, fungicides and soil additives must stop.
6. A comprehensive program to treat, regulate, and eliminate wastes from ships that use Florida's ports must be developed and implemented. The U.S. and Florida must require ballast water treatment as a condition of port entry to prevent biological and chemical pollution of Florida's waters.
7. Florida must require the utilities to discontinue the 6 ocean outfalls discharging 394 million gallons per day of secondary treated wastewater in to the Atlantic Ocean south of Delray Beach, polluting Florida's nearshore reefs and coastal habitats. This pollution is carried by Gulf Stream currents north along the southeast Florida coral reef track.
8. Florida and the U.S. must not allow offshore oil drilling in the Eastern Gulf of Mexico or off of Florida's East Coast region. The "undiscovered technically recoverable" oil and gas in these two regions totals 4.1 billion barrels or 1/10th of the Western & Central Gulf reserves and only amounts to a 1-year supply of the U.S. oil import. The risk is too high for Florida's coastal tourist industry which annually contributes more than \$56 billion and 900,000 jobs to the economy.

During the month of June, the oceans of our planet are celebrated worldwide and at the Florida Oceanographic Coastal Center. World Oceans Day, established in 1992 at the United Nations Earth Summit, is now promoted around the world, June 8, 2014. The Florida Oceanographic Society feels that together with our youth we must be the "next wave for change" to secure the future for our oceans and the planet. We must all work to increase awareness and inspire stewardship of our living ocean. Visit our web site at www.FloridaOcean.org to learn more how you can help.

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