

NEWS RELEASE



FOR IMMEDIATE RELEASE

June 9, 2012

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EDC's New Ocean Acidification Public Service Announcement Debuts at World Oceans Day

Santa Barbara, CA- In celebration of *World Oceans Day* the Environmental Defense Center (EDC) joined the Ty Warner Sea Center on June 9th to debut our new Ocean Acidification Public Service Announcement (PSA). This new 30-second animated PSA addresses the worldwide issue of ocean acidification (OA), which threatens to cause significant changes in the ocean environment. The PSA highlights how the changes in ocean chemistry are already affecting sea life, businesses, and the entire ocean food web.

"We wanted to alert the public to the immediacy and importance of the ocean acidification issue by developing a PSA that highlights the experiences of the shellfish hatcheries in the Pacific Northwest. They were the first to experience the devastating impacts of ocean acidification and much sooner than researchers had anticipated," said Kristi Birney, EDC's Marine Conservation Analyst. "Their story underscores the urgency of the situation and is a red flag, a warning sign, of what can happen in other coastal areas if we don't bring our carbon emissions under control."

The situation in the Pacific Northwest unfolded like this. Starting in 2005, Taylor Shellfish and Whisky Creek Shellfish Hatchery in Tillamook, Oregon experienced unexplainable oyster larvae die-offs. By 2008 oyster larval survival at these hatcheries was reduced by 60-80%. It was initially thought that a bacteria (*Vibrio tubiashii*) was to blame, but researchers and scientists determined that corrosive acidic water was the cause. Deep ocean water was being upwelled and delivered to the ocean surface, and then hatcheries were pumping this corrosive water into their operations. Sea water measuring pH levels as low as 7.5, as compared to the normal 8.2, entered the hatcheries and proved deadly by dissolving the shells of young vulnerable oyster larvae.

Shellfish like oysters, clams, and lobsters, and a variety of other sea life like plankton and corals, also need calcium carbonate minerals to build their shells and skeletons. Ocean water normally has plenty of these minerals, but as human based carbon dioxide (CO₂) emissions have increased, the oceans have absorbed more and more CO₂, resulting in ocean acidification, making minerals less available for marine wildlife. The Santa Barbara Channel with its rich marine wildlife has many species that could be affected by ocean acidification including commercially important sea urchins, lobsters, or crabs. Other species like coralline algae and plankton are ecologically important providing habitat and food for fish and other wildlife. EDC is partnering with other local and national community leaders to educate and inform the public

about the topic of ocean acidification and some of the consequences it can have for wildlife, human food security, and our seafood based economies.

“The threat of ocean acidification has galvanized this community and the Channel Islands National Marine Sanctuary to action. Over the last couple of years we have implemented a coordinated response across all west coast sanctuaries and their advisory councils,” said Chris Mobley, Superintendent of NOAA's Channel Islands National Marine Sanctuary (National Oceanic and Atmospheric Administration). Local efforts include commercial fishermen like Bruce Steele, raising awareness and bringing together the fishing community; UCSB's Gretchen Hoffman Lab, leading and carrying out cutting edge research; the Channel Islands National Marine Sanctuary's Education Team, leading a regionally coordinated educational approach; and EDC's effort to develop and distribute this new PSA.

EDC is working with a variety of partners, including the Channel Islands National Marine Sanctuary, the thirteen National Marine Sanctuary Advisory Councils, the National Marine Sanctuary Foundation, the Ty Warner Sea Center, and other aquariums to distribute and show the PSA both locally and nationally.

The PSA serves as a call to action. “Knowing that human based carbon dioxide (CO₂) emissions are the source of the problem, we hope our education effort will motivate people to act and become part of the solution,” said EDC's Kristi Birney. The PSA directs viewers to visit the acidocean.org website where they can learn how they can protect the ocean. At the website they can take the following actions: watch the [PSA](#), learn more about the [science](#), find [lesson plans and hands on activities](#), watch educational [workshops](#), and make an ocean [pledge](#) to reduce your carbon footprint and help save the ocean.

Since 1977, the Environmental Defense Center has worked to protect and enhance the local environment through education, advocacy, and legal action. For thirty-five years the Santa Barbara based environmental non-profit has empowered community-based organizations to advance environmental protection. Their program areas include protecting coast and ocean resources, open space and wildlife, and human and environmental health. EDC works primarily within Santa Barbara, Ventura, and San Luis Obispo counties.

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OCEAN ACIDIFICATION

EDC's NEW PUBLIC SERVICE ANNOUNCEMENT

The Environmental Defense Center's (EDC) new 30 second animated Public Service Announcement (PSA) addresses the worldwide issue of ocean acidification (OA), which threatens to cause significant changes in the ocean environment. The PSA highlights how the changes in ocean chemistry are already affecting local jobs, our food, and sea life as animals like oysters, clams, and corals have difficulty building their shells.

LEARN THE FACTS

- The ocean plays a key role regulating Earth's atmospheres by absorbing atmospheric carbon dioxide generated when we burn fossil fuels.
- Our output of carbon dioxide has rapidly increased since the Industrial Revolution, forcing the ocean to absorb more and more carbon dioxide over time. The ocean has become 30% more acidic since the 1850s.
- This increase in carbon dioxide has triggered a process called ocean acidification. When CO₂ dissolves in seawater, it lowers the pH of the ocean making it more acidic. It also reduces the amount of calcium carbonate (a building block of shells) available to animals such as oysters, clams and mussels.
- These changes are already affecting local jobs, our food, and sea life. In 2008, oyster farmers in Washington and Oregon lost millions of dollars when corrosive seawater killed their oyster larvae.
- Ocean acidification won't just impact oysters; it will affect corals and other important ocean wildlife.



EDC'S ACTIONS FOR PROTECTING THE OCEAN

- EDC is working in partnership with the Channel Islands National Marine Sanctuary, the thirteen National Marine Sanctuary Advisory Councils, the National Marine Sanctuary Foundation, the Ty Warner Sea Center, and other aquariums **to educate, distribute and show the PSA locally and nationally.**

WHAT YOU CAN DO TO HELP PROTECT THE OCEAN

- Visit the website acidocean.org and take the following actions :
 - Watch the [PSA](#)
 - Learn more about the [Science](#), [Lesson Plans and Hands on Activities](#), and [Workshops](#),
 - Make a [pledge](#) to reduce your carbon footprint and help save the ocean