



Climate Change and the Oceans

Climate change is among the greatest threats facing the oceans today. Because our mission is to inspire conservation of the oceans, we communicate with our visitors and other audiences about the impacts of climate change on the oceans. We encourage action by individuals and policymakers to mitigate those impacts. And we are taking steps to further minimize our own carbon footprint.

Over the years, we have undertaken many programs to reduce our carbon footprint—by encouraging alternatives so our staff doesn't have to commute to work alone in a car, and by upgrading the operational efficiency of our physical plant to reduce energy consumption.

Climate Change Working Group

In 2008, we formed a Climate Change Working Group whose goal was to develop recommendations for an Aquarium-wide integrated climate change initiative. These recommendations will be implemented in 2010 and beyond. The initiative is focused on raising awareness about the connection between oceans and climate change through effective communication that inspires optimism and action among our audiences as well as achieving climate change policy reform and reducing our greenhouse gas emissions.

Climate Change Exhibit

We opened a special exhibition in March 2010—Hot Pink Flamingos: Stories of Hope in a Changing Sea—that connects our visitors with the ocean and climate change through engaging live exhibits of compelling animals and interpretive graphics and activities. The exhibition reflects our visitors' current understanding and relationship to climate change, communicates that there is hope—that people can make a difference by working together and taking action—and identifies specific actions they can take to address climate change.

Leadership in Communicating about Climate Change and the Oceans

In December 2008, we hosted a summit of leaders from more than 40 aquariums in North America and beyond. The intent was to elevate our collective focus on the relationship between climate change and the oceans, and to develop collaborative strategies for communicating climate change and inspiring solution-oriented actions among our institutions and audiences. In this effort, we partnered with the New England Aquarium and the National Aquarium in Baltimore to provide cutting-edge information to help our colleagues develop action plans to engage their audiences and achieve conservation goals.

As a result of the 2008 Monterey summit of aquarium leaders, we are partnering again with the New England Aquarium and the National Aquarium in Baltimore to develop a national leadership initiative that will build capacity within aquariums and related informal science education institutions around the topic of climate change. The initiative includes creating an online community and interactive website, online seminars, materials to support exhibit interpretation, training for staff and volunteers, and an evaluation of our efforts. In late 2009 we received a major grant from NOAA to fund this work over the next three years. NOAA is providing additional funding for climate change communications work at our Aquarium, including a new auditorium program to complement Hot Pink Flamingos, programming for community special events, and enhanced website content.

Carbon Emissions: Assessment and Reduction Strategy

In June 2008, we began an assessment of the Aquarium's greenhouse gas emissions using the measurement protocol prescribed by the California Climate Action Registry. In the first phase, we collected data on our carbon emissions using 2007 as a baseline year. Our carbon assessment provides valuable information about our current emissions and sets a basis on which we will develop a long-term emissions reduction strategy that will include other greenhouse gases. Analysis continues on our emissions and the contributions to our carbon footprint by our food service and merchandise contractors.

Since we opened our doors in 1984 we've worked to reduce our environmental impact in many ways. Carbon reduction strategies that are already in place include:

- **Energy Load-Shedding.** The Aquarium is a participant in California's statewide Demand Response Program. During times of peak power demand, unplanned generation outages or transmission problems and occasional adverse weather events, we are able to reduce energy consumption voluntarily by staggering pump cycles and implementing other temporary load-shedding measures, thereby helping to alleviate electrical emergencies such as blackouts and brownouts. During one event in 2006, our actions enabled us to shed 348 kW, or 26 percent of our load. Our average load reduction across all energy events during 2006 was 11 percent, earning us Pacific Gas and Electric's Golden Orb leadership award for finding ways to shed peak demand while still providing the same

high level of care for our marine exhibits. We also participated in the global Earth Hour load-shedding events in 2008 and 2009—and reduced our energy demands for one hour as part of a coordinated international effort.

- **Lighting.** Our staff electricians are always on the lookout for energy saving opportunities. Over the past several years they have installed motion sensors and other lighting controls wherever feasible. They have consistently worked to upgrade our lighting fixtures to the most efficient fixtures available. In the last quarter of 2008, a lighting retrofit project in our office spaces resulted in a lighting energy load reduction of 47 percent (saving 121,612 kWh annually) and an 85 percent return on investment within 14 months. They are currently finishing up a fixture retrofit of about 75 perimeter lighting fixtures from mercury vapor metal halides to compact fluorescent and LED lamps. Although the energy savings in this case are not as significant, the reduction of mercury in our facility is substantial.
- **Alternative Transportation Program.** More than a third of our full-time employees carpool, ride the bus, walk, vanpool, telecommute or bicycle to work. Incentives include free bus passes, prime parking for carpools and vanpools and bicycle loan programs.



EMPLOYEE BICYCLES OUTSIDE
THE MONTEREY BAY AQUARIUM