



# EMERALD KEEPERS

For an Emerald Green, Ocean Blue Coronado

## TIME FOR TAKE-OUT

Please support our Emerald Green, Ocean Blue Restaurants during this difficult time.

- Bluewater Grill
- Coronado Yacht Club
- Feast & Fareway
- Leroy's Kitchen + Lounge
- Little Frenchie Bar a Vin
- MooTime
- Nicky Rottens Bar & Burger Joint (temporarily closed)
- Night and Day Cafe
- Poké 1-2-3
- Stake Chophouse & Bar
- Tartine
- Tent City
- Village Pizzeria



## HOLIDAY SHOPPING

Looking for a that perfect holiday gift for friends and family? Visit Emerald Keepers' store for sustainable products at [EmeraldKeepers.org/store](http://EmeraldKeepers.org/store).



- Bamboo utensil set with a metal straw and cleaner in an Emerald Keepers case made from recycled water bottles. \$15



- Hot/cold reusable Emerald Keepers bottle. \$30



# PH & OCEAN ACIDIFICATION

*This is the third in a three-part series on water quality.*

Ocean acidification is a phenomenon that occurs when there is a reduction in the pH, increasing the acidity of seawater over a period of time. pH is a measurement of how acidic or basic the water is and is an important indicator of chemical changes and water quality.

### pH BASICS (no pun intended)

The pH scale ranges from 0-14, with 7 being neutral. A pH of less than 7 indicates acidity and a pH greater than 7 indicates basicity. The following are examples of pH: milk, 6.5-6.8 (acidic); pure water, 7 (neutral); sea water, about 8.1 (basic).

### TELL ME MORE

A change or reduction in pH could be an indicator of increasing pollution or environmental changes to our oceans and coastal areas. This occurs when there is an uptake in the absorption of large amounts of carbon dioxide (CO<sub>2</sub>) from the atmosphere. For more than 200 years, CO<sub>2</sub> concentration has increased due in large part to human activity, including burning



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of fossil fuels and changes in land use. According to the Environmental Protection Agency, the acidity of the oceans now, on average, are 25% higher than they were during preindustrial times.

### A CARBON SINK

According to the United States Geological Survey, current oceans absorb about one-third of man-made CO<sub>2</sub> emissions from the atmosphere, resulting in lower, more

acidic pH levels. Lower levels adversely affect marine ecosystems, coastal resources and local, regional and national economies. The ocean is a carbon sink; in other words, it absorbs CO<sub>2</sub>. Without ocean uptake of CO<sub>2</sub>, the atmospheric levels of CO<sub>2</sub> would be 30% greater.

### OCEAN ACIDIFICATION AND COASTAL ACIDIFICATION

The negative impact of global ocean acidification on marine life is the calcification of corals and phytoplankton, which then negatively affects the fish that depend on these organisms for their food and habitats. Coastal acidification takes place when there are changes in water chemistry from excess nutrients from runoff such as fertilizers and other pollution that increase CO<sub>2</sub> in the water.

### WHAT WE CAN DO

To help reduce CO<sub>2</sub> levels in Coronado, consider: reducing the use of fertilizers; learning to compost; visiting a farmers market for local produce; walking, biking, or driving fuel-efficient vehicles; using energy-efficient appliances and lighting; and picking up trash on our streets, parks, beaches, and bay.

For more information visit [EMERALDKEEPERS.ORG](http://EMERALDKEEPERS.ORG)

Emerald Keepers is a 501(c)(3) non-profit corporation.