



EMERALD KEEPERS

Make Coronado Emerald Green, Ocean Blue

A MESSAGE FROM EMERALD KEEPERS

Last week we celebrated the 50th anniversary of Earth Day! Concurrently, news of cleaner water, improved air quality, and increased biodiversity with the world staying at home provides hope for our planet. This week Emerald Keepers focuses on three Coronado marine ecosystems: tidepools, beaches, and bay. An ecosystem is defined as a biological community of interacting organisms and their physical environment. Biological (living) elements of an ecosystem are flora (plants) and fauna (animals); physical elements include sunlight, rain, and soil. One measure of the health of our planet is the health of ecosystems. Understanding this helps us protect our ecosystems. Thank you, Emerald Keepers, for adopting sustainable practices to protect our oceans.

NADO at HOME

Think about the three marine ecosystems discussed today: tidepools, beaches, and bay. List as many ways as you can to protect each of ecosystem. Even though Earth Day has passed, please make every day Earth Day by taking the Emerald Keepers 50th Anniversary Earth Day Coronado Challenge!



EMERALD KEEPERS 50TH ANNIVERSARY EARTH DAY CORONADO CHALLENGE



Earn a hand-crafted repurposed Emerald Keepers sign by: 1) signing the Emerald Keepers pledge, and 2)

committing to 30 of the 50 best practices to be more sustainable, both found on our website EmeraldKeepers.org. To receive your yard sign or door/window hanging, email EmeraldKeepers@gmail.com with your name, phone

EMERALD KEEPERS POSTER CONTEST



AVILA SCHMIDT
Grade 7
GRAND PRIZE

THREE CORONADO MARINE ECOSYSTEMS



TIDEPOOLS

A unique ecosystem, tidepools are shallow pools of seawater that form on rocky intertidal shorelines. At high tide species are fully submerged; at low tide they are partially or fully exposed.

DID YOU KNOW?

Tidepools are considered microcosms—or mini worlds—filled with marine life all competing for space, water, and food. Close observation of tidepools can be captivating as sea creatures scurry about within the pool—hiding, eating, and exploring.

HUMAN IMPACT

With 80 percent of the world's population living within 60 miles of a coast, trampling of tidepools, removal of animals, pollution, and coastal runoff are just a few ways mankind negatively impacts tidepools.

JOIN EMERALD KEEPERS

Most California coastal tidepools are protected by the state and federal law. Removal of animals and shells is prohibited. Accessible tidepools provide wonderful opportunities to learn about ecosystems and the marine environment. When visiting tidepools, remember to approach gently, wait patiently, and take only pictures



Photo by Brian Lippe

BEACHES

Beaches—our most recognizable marine ecosystem—are narrow strips of land bordering oceans, lakes, or rivers. Beaches are created by strong wave or current action depositing sandy material.

DID YOU KNOW?

Beach sand typically consists of either geological or biological sand. Geological sand is created by erosion of rocks. Biological sand consists of tiny pieces of shells, coral skeletons, and marine plants and animals. Sand can be transported long distances by wind and/or waves before being deposited on land. This dynamic movement is fundamental to marine

life such as crabs, plants, worms, birds, clams, and many invertebrate animals.

HUMAN IMPACT

A favorite tourist and locals' destination, beaches are important to coastal economies. Sadly, overfishing and boating; pollution vcaused by littering and agricultural runoff; removal of living organisms; and coastal development adversely affect beach ecosystems all over the world.

JOIN EMERALD KEEPER

Avoid trampling on or removing vegetation from beaches or dunes; the latter is a source of food and shelter for many animals. Properly dispose of ALL trash and leave the beach cleaner than when you arrived. Do not feed wildlife. Join a volunteer beach cleanup group. Use ocean friendly sunscreens and consider supporting research that seeks to protect our oceans and beaches.



Photo by Brian Lippe

BAY

As in all ecosystems, bay organisms are interconnected and dependent upon one another for survival. Maintaining the delicate balance of bay ecosystems is critical to the health of both marine life throughout the bay and humans. San Diego Bay—12 miles in length and 1 to 2 miles wide — is an irreplaceable gem that must be protected by all.

DID YOU KNOW?

According to the Port of San Diego, there are over 300 species of marine and coastal birds, over 640 species of marine invertebrates and over 100 species of marine fish. Eleven of these are threatened or endangered. At least 4 species of marine mammals inhabit the bay. The bay encompasses approximately 2000 acres of eelgrass beds, 823 acres of salt marsh, and 978 acres of tidal flats.

HUMAN IMPACT

As human contact increases, biodiversity—the variety of organisms present —suffers. Ship traffic, dredging, invasive species, industrial activity, human pollution (especially plastics), and climate change all adversely impact biodiversity of the bay.

JOIN EMERALD KEEPERS

Pick up three pieces of trash every day to prevent plastics and other debris from entering the bay and ocean. Practice proper boating care and maintenance to avoid toxic spills and run-off. Never dump anything into storm drains. Become involved in promoting legislation to protect our Bay.

For more information visit EMERALDKEEPERS.ORG