

## The Problem with Marine Debris

Millions of Californians enjoy the state's coastline and waterways everyday. However, many of those people are unaware how their daily activities, from driving a car, to not properly disposing of their garbage, or even throwing a cigarette butt on the ground, can impact the plants and animals off our shores. This debris can harm or kill beach organisms. Pollution also makes using the beach less enjoyable for humans. Solving our water pollution problems requires everyone's involvement.

### **How Does Trash Become Marine Debris?**

Look around the next time you walk down the street. When it rains, trash on sidewalks and streets that accumulates in the gutter is swept into your city's storm drain system. Most storm drain systems discharge directly into the ocean. Trash is also carried from inland areas to the ocean by wind, streams, and rivers, is dumped directly in the ocean by recreational and commercial boaters and is left on the beach by beach goers.

### **Trashing California's Beaches**

Californians love their coast and ocean — nine out of ten will visit the beach at least once this year and coastal tourism is a \$9.9 billion industry. When they arrive at the beach, they are finding a lot more than sand and surf. Last summer, Orange County collected enough garbage from six miles of beach to fill ten garbage trucks full of trash every week, costing taxpayers \$350,000. Other California counties spend even more. In 1975, the National Academy of Sciences estimated that ocean-based sources, such as cargo ships and cruise liners, dumped 14 billion pounds of garbage into the ocean. In 1988, the U.S. signed onto MARPOL Annex V, joining 64 other countries that signed the international protocol regulating ocean dumping that made dump plastic into the ocean illegal. Laws like MARPOL have reduced the amount of trash on our beaches and in our ocean. Even so, it is estimated that there is over 46,000 pieces of plastic debris floating on every square mile of ocean today. Roughly 60 to 80 percent of that debris comes from land based sources. And debris in the marine environment means hazards for animals and humans.

### **How Marine Debris Harms Wildlife**

**Entanglement** :Common items like fishing line, strapping bands and six-pack rings can hamper the mobility of marine animals. Once entangled, animals have trouble eating, breathing or swimming, all of which can have fatal results. Plastics take hundreds of years to breakdown and may continue to trap and kill animals year after year.

**Ingestion:** Birds, fish and mammals often mistake plastic for food. Some birds even feed it to their young. With plastic filling their stomachs, animals have a false feeling of being full, and may die of starvation. Sea turtles mistake plastic bags for jellyfish, one of their favorite foods. Even gray whales have been found dead with plastic bags and sheeting in their stomachs.

### **How Marine Debris Harms People**

Beachgoers can cut themselves on glass and metal left on the beach. Marine debris also endangers the safety and livelihood of fishermen and recreational boaters. Nets and monofilament fishing line can obstruct propellers and plastic sheeting and bags can block cooling intakes. Such damage is hazardous and costly in terms of repair and lost fishing time. In one Oregon port, a survey revealed that 58 percent of fishermen had experienced equipment damage due to marine debris. Their average repair cost was \$2,725.

### **Be Part of the Solution**

The debris that we collect from our beaches is a symptom of a much larger water pollution problem that is caused by everyday people doing every day things. Rain scours oil from parking lots, fertilizer from lawns, pet droppings from sidewalks and other contaminants from "nonpoint" sources and transports this toxic stew down storm drains and over land into the ocean. These toxins are poisoning marine life and our water sources. We can all be part of the solution by recycling used motor oil and repairing car leaks, picking up after our pets and switching to non-toxic products and improve other everyday practices to help keep our waterways clear and clean.

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