

Saving Summer



Swimming and Snorkeling

Whether it's cooling off in a lake, swimming at the beach, or snorkeling over coral reefs, water-based recreation is a defining part of summer for millions of Americans. But climate change is rapidly altering oceans, lakes, rivers, and coastlines, threatening both aquatic ecosystems and the species that rely on them.

Ocean Acidification Threatens Coral Reefs

The ocean absorbs nearly 30 percent of the carbon dioxide released into the atmosphere, helping slow the pace of climate change. But as carbon pollution from burning fossil fuels, deforestation, and industrial activity increases, oceans are absorbing more carbon than they can naturally process. This causes ocean waters to become more acidic – a process known as ocean acidification.

Ocean acidification makes it harder for marine organisms like oysters, clams, corals, and some plankton species to build and maintain their shells and skeletons. In severe cases, shells and coral structures can begin to weaken or dissolve.

Coral reefs are especially vulnerable. Often called the “rainforests of the sea,” coral reefs support nearly 25 percent of all marine species despite covering less than 1 percent of the ocean floor. They provide habitat, breeding grounds, and food sources for thousands of species while also protecting coastlines from storm surge and erosion by absorbing wave energy.

For snorkelers and beachgoers, coral reef decline means the loss of some of the world's most vibrant marine ecosystems. In Hawai'i, reefs that once attracted millions of visitors each year are increasingly threatened by warming waters, coral bleaching, and ocean acidification.

Wildlife that depend on coral reefs – including fish, sea turtles, sharks, and countless invertebrate species – face shrinking habitat and declining biodiversity as reefs deteriorate.

Visit [NWF.org/Climate](https://www.nwf.org/Climate)

Saving Summer

Swimming and Snorkeling

Algal Blooms are Worsening

Freshwater algal blooms in lakes, ponds, rivers, and swimming holes are becoming more common, longer-lasting, and more dangerous as climate change accelerates across the United States. An algal bloom is the overgrowth of microscopic algae in water. Not all algal blooms are toxic, but harmful algal blooms can produce toxins dangerous to people, pets, wildlife, and aquatic ecosystems.

Climate change is creating the ideal conditions for these harmful blooms to thrive. Rising temperatures are warming lakes, rivers, and coastal waters earlier in the spring and keeping them warmer later into the fall. Cyanobacteria, or blue-green algae, grow especially well in warm, stagnant water, meaning longer and hotter summers are extending algal bloom seasons across much of the country.

Climate change is also intensifying droughts and extreme rainfall events, which together, worsen nutrient pollution in waterways. During drought, water levels drop and pollutants become more concentrated. When heavy rainstorms occur, runoff from farms, lawns, and developed areas washes large amounts of nitrogen and phosphorus into lakes and rivers. Melting snowpack also releases nutrients that were previously locked up in snow and ice. These nutrients act like fertilizer for algae growth.

When blooms die, they decompose and consume oxygen in the water, creating low-oxygen "dead zones" where fish and aquatic species cannot survive. These events can trigger fish kills, disrupt food chains, and damage freshwater ecosystems relied upon by birds, amphibians, and mammals.

For swimmers and summer recreation, harmful algal blooms can force beach and lake closures and create serious health risks. Exposure can cause stomach pain, rash, headache, coughing, watery eyes, nose irritation, and sore throat. Pets and wildlife are especially vulnerable and can become severely ill or die after exposure.

Save Our Summers

The choices we make today will determine whether future generations inherit the same summer we know or a season fundamentally transformed by a warming world.

We must by reduce pollution, conserve habitats, expand clean energy, and practice responsible recreation.

Visit [NWF.org/Climate](https://www.nwf.org/Climate)