

EFFECTS OF CLIMATE CHANGE IN CAPE COD



Climate change threatens the Cape's fresh water sources. *As sea level rises, freshwater ponds and private wells closer to sea will be contaminated by salt water, commonly referred to as "salt water intrusion". This happens here on the Cape because our freshwater, our aquifer, floats on top of salt water and as the salt water rises in the aquifer, the layer of freshwater our wells draw from is diminished.*

Climate change threatens Cape fresh water ponds. *Many native fauna and flora will not survive because they cannot cope with sodium. Herring will not have freshwater in which to mate and lay their eggs. Herring are an important food source for humans but also for larger fish such as bass. The cranberry industry, with bogs directly connected to freshwater source, may also be destroyed by salt water intrusion.*

Climate change threatens infrastructures. *A sea rise of 2 feet will cause frequent flooding in low lying areas, closing many shore roads and threatening passage from town to town at areas such as Eastham/Orleans rotary which replaced a channel connecting Bay to Ocean (called Jeremiah's Gutter), and on route 6 in Truro, where the ocean at Ballston Beach is trying to cut through to the bay along the Pamet River.*

Climate change threatens rare Cape ecosystems and the fishing economy. *In a Cape Cod Times article, Richard Delaney of the Center for Coastal Studies stated, "Gulf of Maine temperatures have been rising the last 35 years and at nearly the fastest rate on the planet the last ten years. The Cape Cod National Seashore has measured the loss of high salt marsh area, and 35-percent of Nauset Marsh, 42-percent of the Herring River Marsh and 28-percent of Hatches Harbor is gone. The high marsh is being inundated too often and is dying off." Meanwhile, fish habitats are shifting; cod are moving north and east into deeper, cooler water.*

Newly formed activist groups and environmental and scientific organizations must join forces against climate misinformation. From dangerous pipelines in the Dakotas to coal mining in Appalachia and offshore oil drilling in the Arctic, Trump's agenda is unsustainable. While we work politically at all levels, we can make voluntary commitments to solarize buildings, increase car-pooling and availability of public transport, use LED lighting, promote modest-size homebuilding, insulate homes and work buildings, grow local food – and plant trees! Community resources and action groups are listed on the other side of this sheet. Join, learn, and contribute! Sustain and celebrate CAPE COD!

SOME NUMBERS AND FACTS ABOUT CLIMATE CHANGE

97 percent: The percentage of scientists who agree that warming trends over the past century are very likely caused by human activity.

1950: Year when atmospheric CO2 levels broke records from the previous 400,000 years, sharply rising and continuing to grow.

6.7 inches: Rise in global sea levels over the last century. The rate of rise has doubled in the last decade.

16: Number of record-breaking hottest years since 2000. 2016 was the hottest year yet.

1.5 degrees: The average worldwide temperature increase in Fahrenheit compared to a century ago.

400 parts per million: Average concentration since 2016 of CO2 in the atmosphere, compared to 275 PPM for past 400,000 years.

21: Average annual number of wildfires in Central and Eastern Washington — up from an average of six per year in the 1970s.

19th century: When the heat-trapping nature of CO2 was first demonstrated.

30 percent: The increase in acidity of the world's oceans.

\$180 billion: Estimated economic losses to the United States by end of the century if no action is taken on climate change.

Sources: NASA, Environmental Protection Agency

CAPE COD ENVIRONMENTAL AND SCIENTIFIC ORGANIZATIONS

Center for Coastal Studies	coastalstudies.org/
Cape Cod National Seashore	www.nps.gov/caco/
Woods Hole Oceanographic Institution	www.whoi.edu/
Cape Cod Climate Change Collaborative	capecodclimatechangecollaborative.org
Association to Preserve Cape Cod	www.apcc.org
CC Commercial Fishermen's Alliance	capecodfishermen.org/
Cape Cod Downwinders	capedownwinderscooperative.org
GreenCAPE (pesticide education)	www.greencape.org
Protect Our Cape Cod Aquifer (POCCA)	poccapcapedod.org
Friends of Pleasant Bay	fopbdemo.wildapricot.org/
Wellfleet Bay Wildlife Sanctuary (Mass. Audubon)	www.massaudubon.org/get-outdoors/wildlife-sanctuaries/wellfleet-bay
Cape Cod Museum of Natural History	http://www.ccmnh.org/
CARE for the Cape & Islands	http://careforthecapeandislands.org/
Compact of CC Conservation Trusts	http://thecompact.net/
350MA for a Better Future	http://350mass.betterfutureproject.org
Sustainable Cape (sustainable farming)	www.sustainablecape.org/
Food Forest Initiative (food/trees/carbon sequestration)	(FB group) randburkert@gmail.com

SPONSORING ACTIVIST GROUPS

Indivisible Outer Cape -- <http://indivisibleoutercape.org>

Lower Cape Indivisible -- <http://lowercapeindivisible.com>

Indivisible MidCape -- <http://www.indivisiblemidcape.com>