State of the Cape
Environmental Issues Facing Us

Kristin Andres, Director of Education & Outreach
APCC’s grassroots beginnings...

1968 – Army Corps of Engineers plans to dredge Nauset Marsh to create a harbor

- Fact-based Advocacy
- Education & Outreach
- Scientific Study & Action
- Voice for the environment, the Cape’s health and quality of life

www.APCC.org
Climate Change
Water Quality
Habitat Loss
Habitat Loss
River Herring

- Numerous streams leading from ocean to freshwater ponds
- Integral to Native American life
- 1900 - A million fish in Coonamessett River alone
- 2005 – Moratorium on harvesting
APCC Herring Monitoring Program
Over 36% of Salt Marshes gone
APCC Restoration Coordination Center
Water Quality
Algal Blooms
Cyanobacteria Monitoring Program
Native Plant Initiative
Welcome to Our Rain Garden!

What is a Rain Garden?

A rain garden is a shallow depression that is planted with deep-rooted native plants.

APCC's Rain Garden is an example of a stormwater management technique that showcases native plants, their ecological values and their beauty.
Climate Change
Climate Change Science

Fundamentals of human-caused climate change

“Forcing” by human-added GHGs warmed the Earth

Annual Global Temperature: Difference From 1951-80 Average, in °F

2016 was the hottest year on record, 2017 2nd hottest, 2015 3rd hottest, 2018 4th hottest, 2014 5th hottest.
Increase from 1880-1900 to present has been 2.0°F (1.1°C).

Shaded bars are averages for each decade.

Earth has been warming more or less steadily for the last 100+ years, as the increasing forcing from the human-caused GHGs became more important than natural variability.

There is overwhelming scientific consensus that:

1) Temperatures have been increasing worldwide

Climate Change Science

Fundamentals of human-caused climate change

The T change has been non-uniform geographically

Annual J-D 2016
L-OTI (°C) Anomaly vs 1951-1980 0.98

NASA

Biggest warming is in Arctic and West Antarctic Ice Sheet.
Uneven T change → changes in atmospheric & ocean circulation.

And there is overwhelming scientific consensus that:

2) Rising temperatures are due to a worldwide increase in heat-trapping greenhouse gases (carbon dioxide, methane, others) in the atmosphere,

and

3) The increase in greenhouse gases is due to human activities (burning fossil fuels, clearing forests, agriculture and land uses).

Source: Dr. John Holdren, July 2019. [https://www.apcc.org/climatechange/index.html](https://www.apcc.org/climatechange/index.html)
• Sea Level Rise
• Storm Surge
• Deluge – Increased intensity and frequency of storms
• Flooding
• Erosion
• Elevated Groundwater
• Drought & Heat Wave
• Loss of Species
• Loss of Natural Resources
APCC is working to address climate change.

Two studies:
- USGS Sea Level Rise Study
- Salt Marsh Migration Report

We’re going solar!
Current Bills on APCC's radar:

S.497/H.818, An Act to Protect Pollinator Habitat (Joint Committee on Environment, Natural Resources and Agriculture)

H.3983, An Act to Create a 2050 Roadmap to a Clean and Thriving Commonwealth (House Ways and Means Committee)

S.10, An Act Providing for Climate Change Adaptation Infrastructure Investment in the Commonwealth (Joint Committee on Revenue)

H.3987 (changed to H. 3997), An Act Relative to Greenworks (Senate Bonding Committee)
Thank you