# PROGRAM BASICS

## CLIMATE READY ESTUARIES





The Climate Ready Estuaries program is a partnership between EPA and the National Estuary Programs (NEPs) to address climate change in coastal areas. This effort is building additional capacity in coastal communities as they prepare to adapt to the effects of climate change.

Climate Ready Estuaries is supporting NEPs and coastal communities in becoming "climate ready" by providing tools and assistance to:

Assess climate change vulnerabilities

Develop and implement adaptation strategies

Engage and educate stakeholders

Share lessons learned with other coastal managers

## **Tools and Resources** for Estuaries

Assess Vulnerability, Plan, Take Action!

A Coastal Toolkit of information products, data, tools, workshops, and technical assistance is available to all NEPs and other coastal managers. This Toolkit, available on the CRE Website (www.epa.gov/cre), provides information and resources related to:



Monitoring climate change



Finding data



Tools for assessing risk and vulnerability



Adaptation planning



Smart growth in the context of climate change



Sustainable financing options



## **Protecting Critical Resources**

Estuaries are places where rivers meet the sea. They are highly productive and unique ecosystems. Millions of people live, work, and play in estuaries, and they are home to many industries critical to our nation's prosperity. However, estuaries are projected to be particularly vulnerable to many climate change effects. Examples of specific impacts that may occur in estuaries and other coastal areas include:

- Inundation of and damage to wetlands and marshes.
- Loss of coastal property and infrastructure from inundation and more severe coastal storms.
- Salt-water intrusion further upstream and into groundwater and drinking water.
- · Changes to water availability and quality.
- Changes in habitat, fisheries, and other plant and animal distributions.
- More acidic ocean and coastal waters, due to higher concentrations of carbon dioxide in the atmosphere, affecting coral and other marine species.

#### Get Ready!

Coastal resource managers can reduce these risks, reduce future costs, and improve resiliency by acting now to identify areas that are particularly vulnerable, establish monitoring that will warn of impending changes, and develop and implement adaptation plans before some of the worst impacts occur.





## **CRE** is Underway!

EPA is providing targeted assistance to NEPs to identify climate change vulnerabilities, develop adaptation plans, and begin to implement selected actions within these plans. Each year, EPA will work with a separate group of NEPs and other coastal communities. Upon completion of these adaptation plans, EPA will recognize the different coastal communities as "climate ready," support efforts to implement climate adaptation, and help market their needs to public and private interests. The results and lessons learned from working with each NEP will influence future efforts.

EPA has selected six NEPs to serve as pilots in 2008-09:

- Albemarle-Pamlico NEP
- Charlotte Harbor NFP
- Massachusetts Bays Program
- New Hampshire Estuaries Project
- Partnership for the Delaware Estuary
- San Francisco Estuary Project

### **Climate Ready Estuaries Website**

Visit the Climate Ready Estuaries website to find information on climate change impacts in your region, access to tools and resources to assist in monitoring change, and information to help managers develop adaptation plans for estuaries and coastal communities.

#### **Basic Information**

What are the projected climate change impacts to coastal systems? What can be done to address these impacts? Why should coastal resource managers focus their climate change efforts on adaptation?

#### Where You Live

Where are the National Estuaries and what efforts are underway in your region regarding climate change impacts assessment and adaptation?

#### **Explore Climate Ready Estuaries**

Learn how the program is working with coastal managers to advance coastal adaptation to climate change.

#### Coastal Toolkit

What tools and information will help you get started? This section provides information and guidance on assessing climate change vulnerabilities, finding data, and developing adaptation plans.

www.epa.gov/cre



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### **Program Contacts**

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