

**COMMUNITIES  
LEADING  
on CLIMATE**

**MAINE  
WON'T  
WAIT**

# Welcome!

The program will begin at 9AM.

# Welcoming Remarks

**Hannah Pingree**

Director, Governor's Office of Policy Innovation and the Future

**Catherine Conlow**

Executive Director, Maine Municipal Association

**Ivan Fernandez**

Professor of Soil Science, University of Maine Climate Change Institute

**Susie Arnold**

Senior Ocean Scientist, Island Institute





# SCIENCE-INFORMING CLIMATE RESPONSES IN MAINE COMMUNITIES

Susie Arnold, PhD



Ivan Fernandez, PhD



Maine Climate Council  
Scientific and Technical Subcommittee  
May 11, 2023

# The State of Knowledge about Climate Change



WGI

WGII

AR6 Synthesis Report

RESOURCES ▾

DOWNLOAD ▾

ipcc

AR6 Climate Change 2023: The Physical Science Basis

AR6 Synthesis Report  
Climate Change 2023

The Cryosphere in a Changing Climate

Climate Change and Land

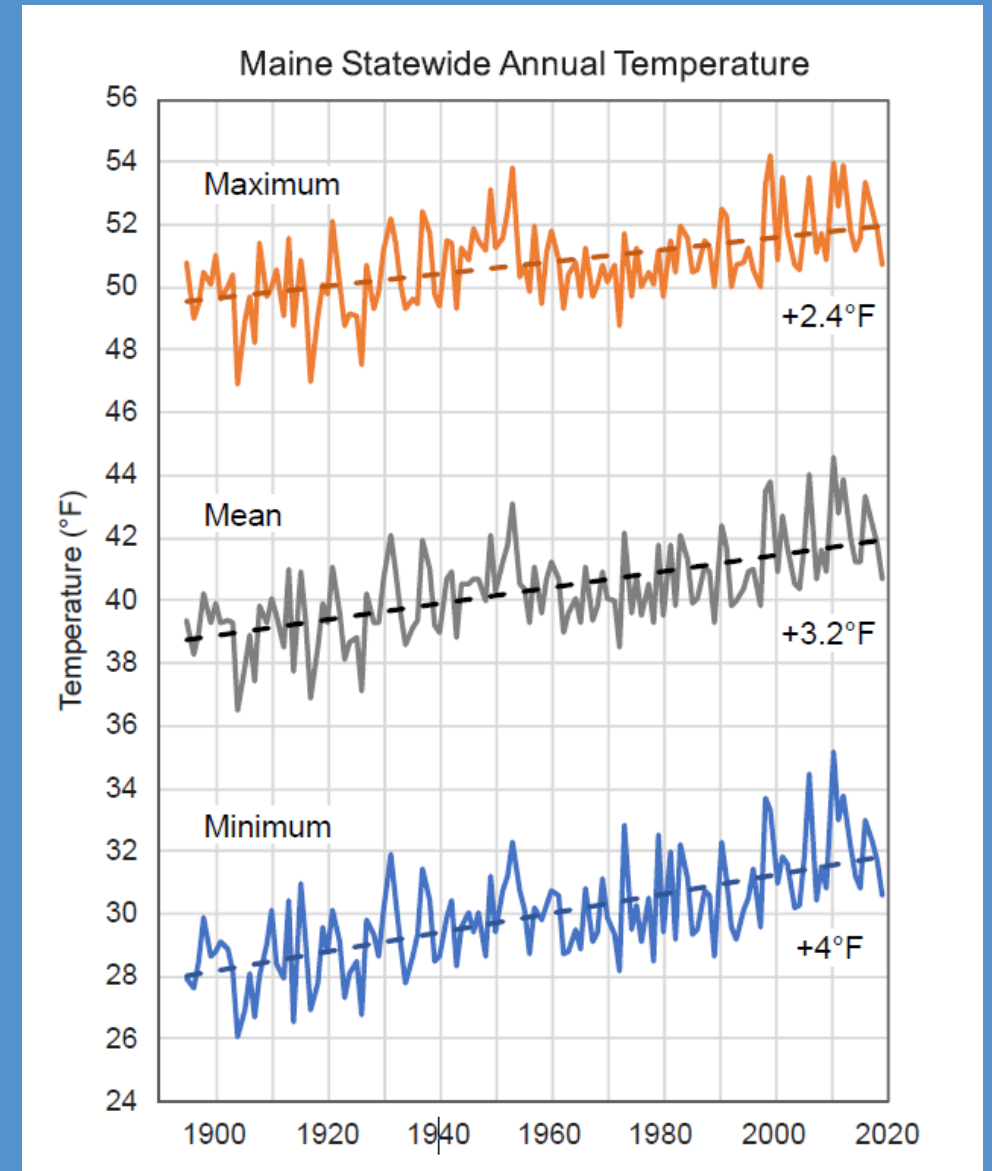
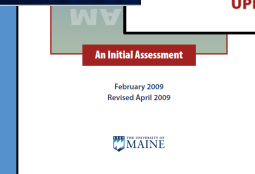
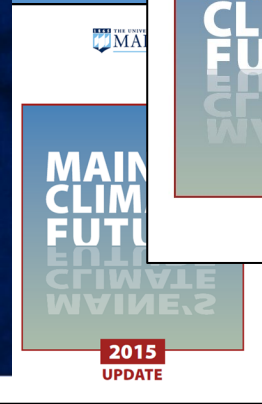
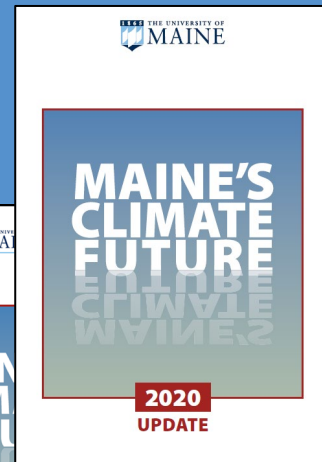
Global Warming of 1.5 °C

# Maine Climate Science Assessment

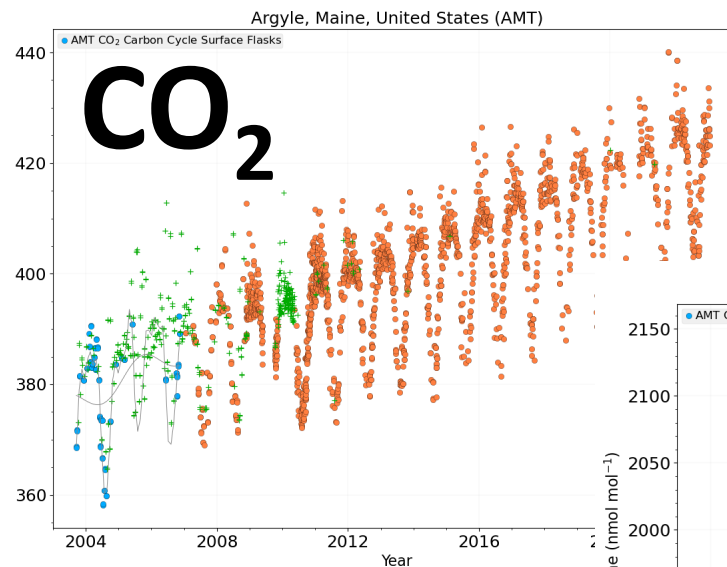
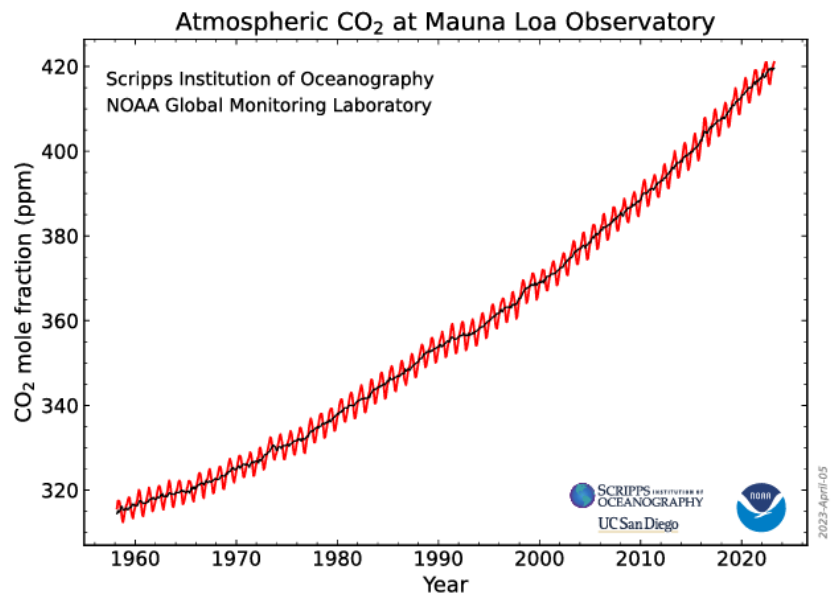
## Scientific Assessment of Climate Change and Its Effects in Maine



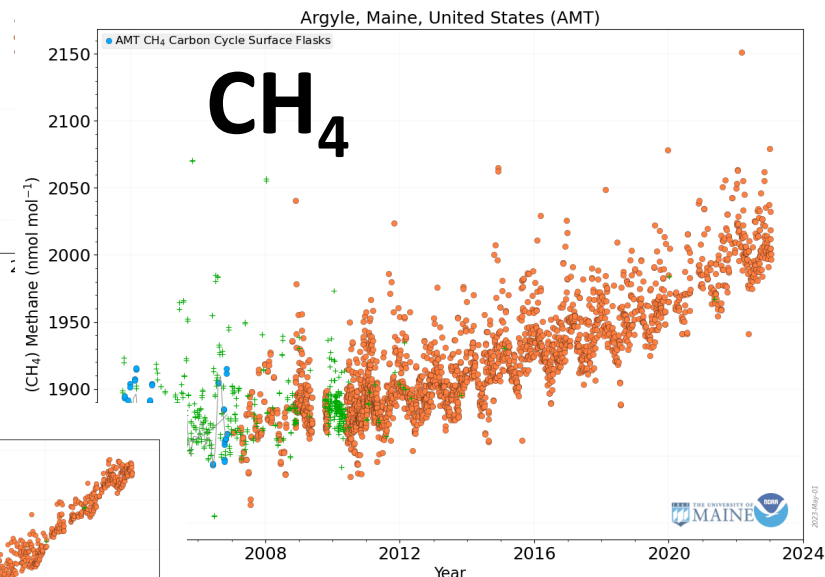
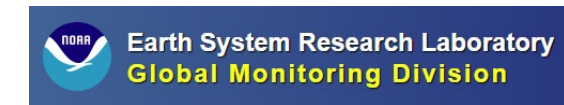
MAINE CLIMATE COUNCIL  
SCIENTIFIC AND TECHNICAL SUBCOMMITTEE



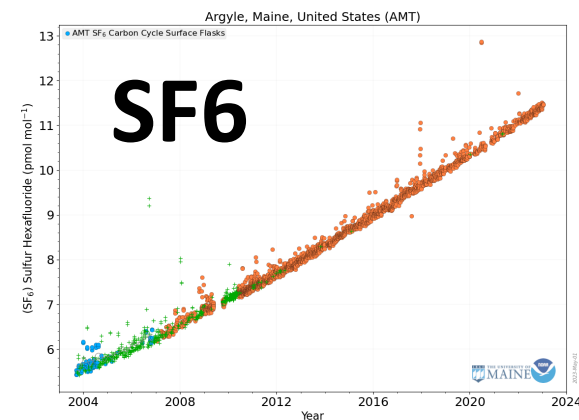
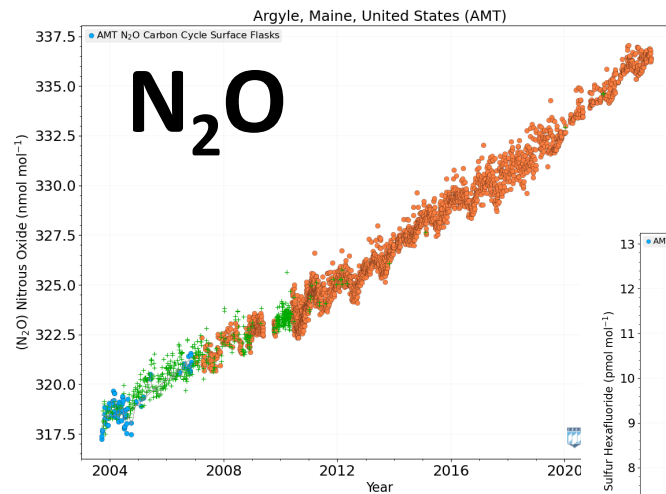
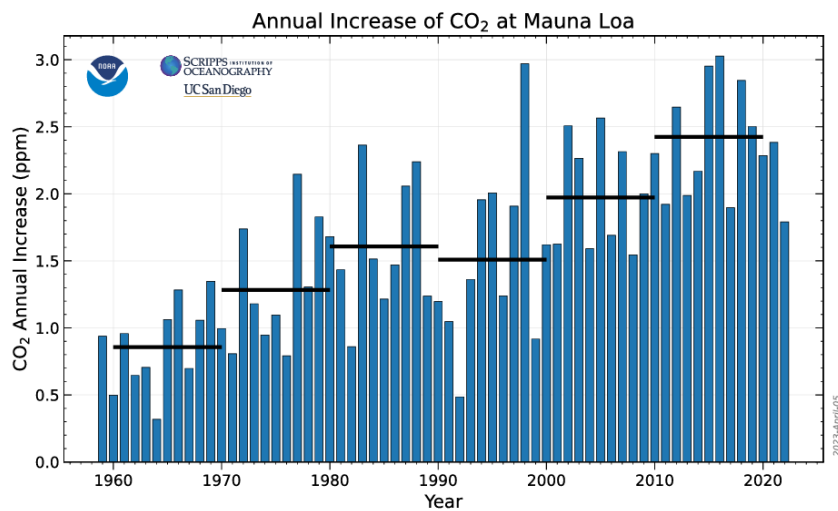
# "The Keeling Curve"



# ESRL GMD Tall Towers Site Argyle, Maine (AMT)

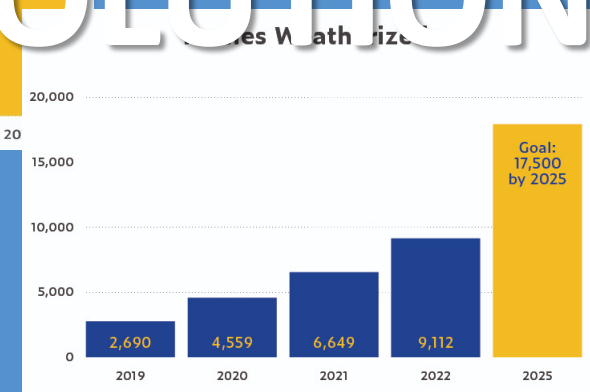
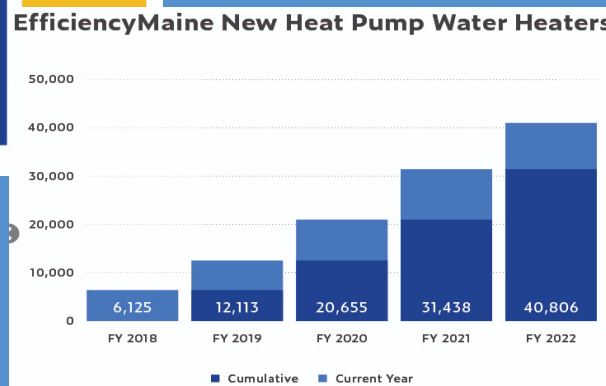
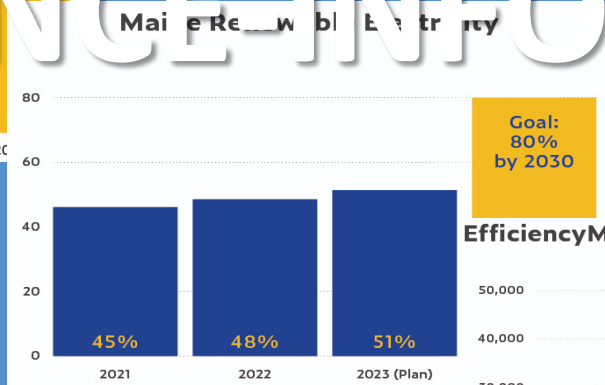
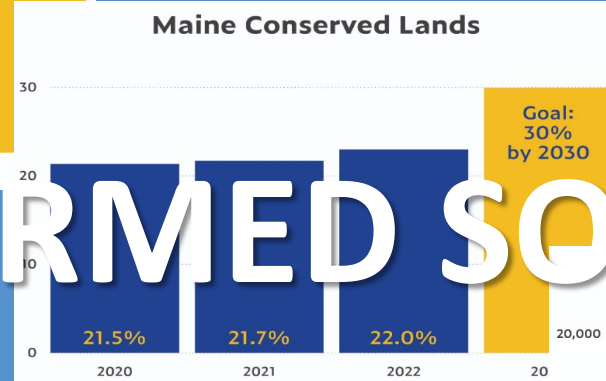
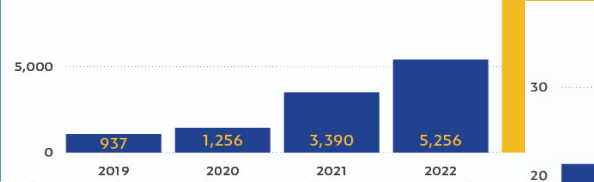
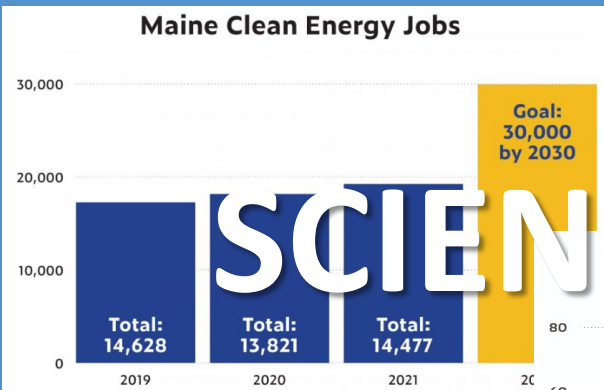
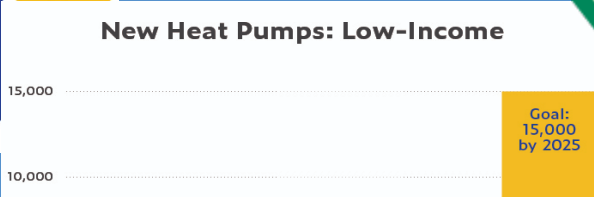
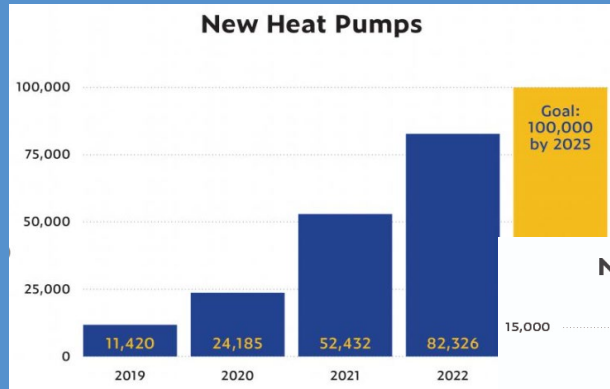


# Accelerating Change



# Maine Won't Wait Dashboard

MAINE WON'T WAIT



SCIENCE-INFORMED SOLUTIONS



## *Resilience & Sustainability Award*

*“Driven by clear goals and metrics combined with **scientific analysis**, the plan coordinates statewide action that is already seeing results. **Maine Won't Wait** demonstrates the importance of planning in ensuring programming and policy decisions move the needle toward a more resilient future.”*



# Annual Sea Levels Referenced to 2000, NOAA Station 8418150, PORTLAND 1912-2023

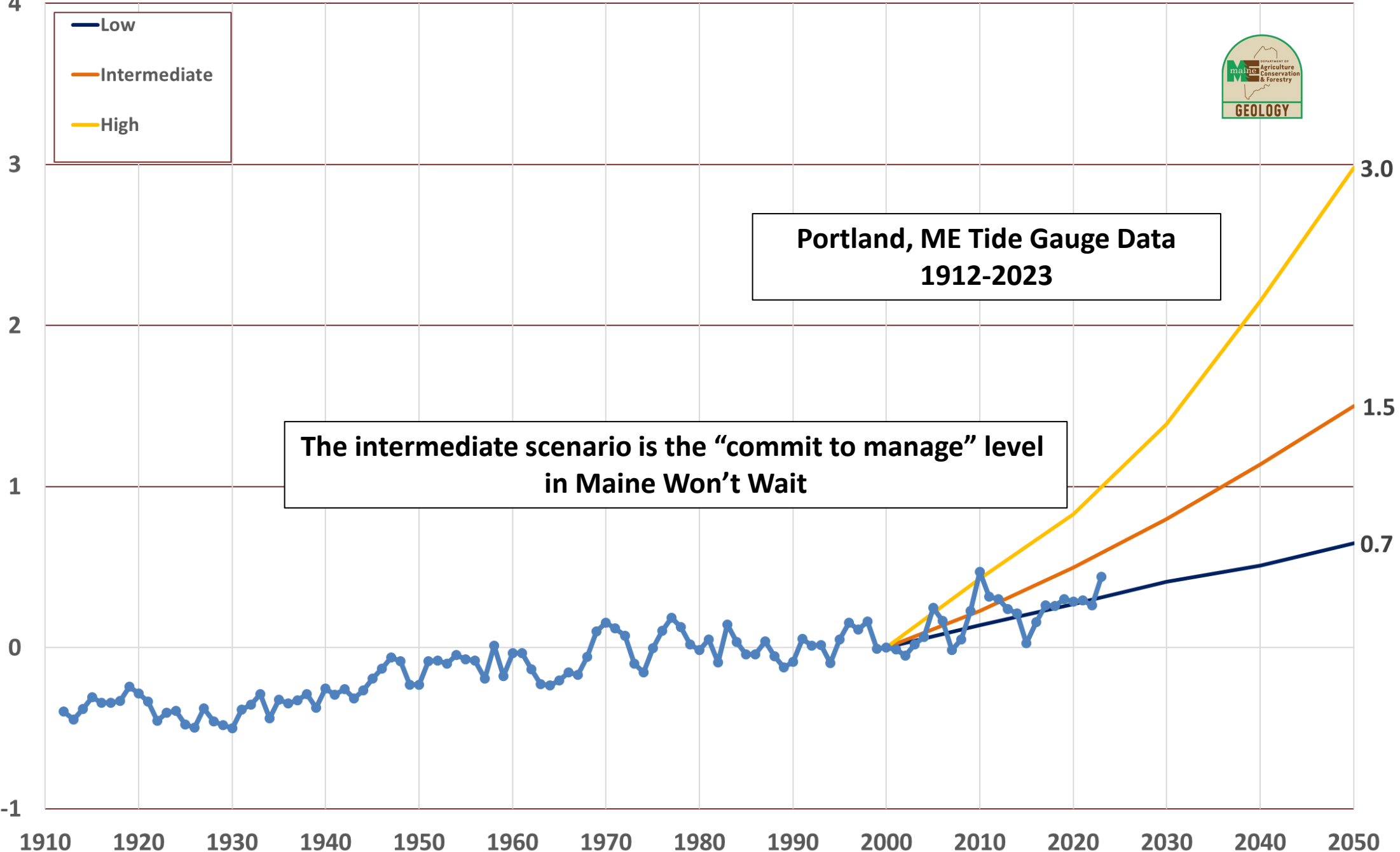


- Low
- Intermediate
- High

Portland, ME Tide Gauge Data  
1912-2023

The intermediate scenario is the “commit to manage” level  
in Maine Won’t Wait

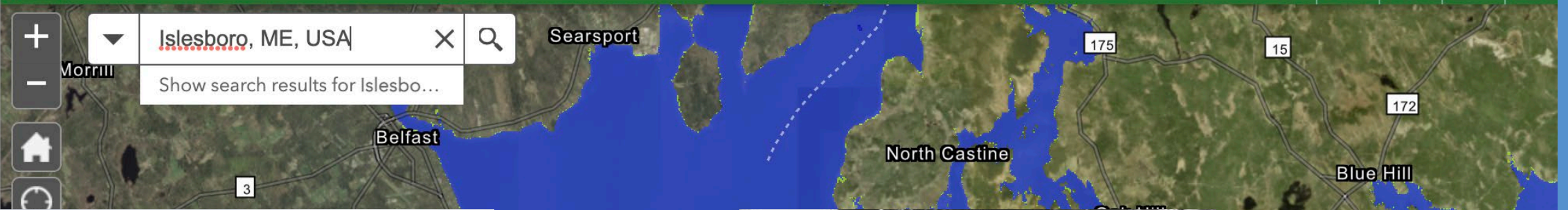
Relative Sea Level Rise (feet) from 2000





# Sea Level Rise/Storm Surge Scenarios

Maine Geological Survey



# COMMUNITY ACTION GRANTS

## Spring and Fall 2022

Islesboro

\$50,000

The Narrows and Beyond: Resilience  
Planner Pilot

Core samples  
of marsh



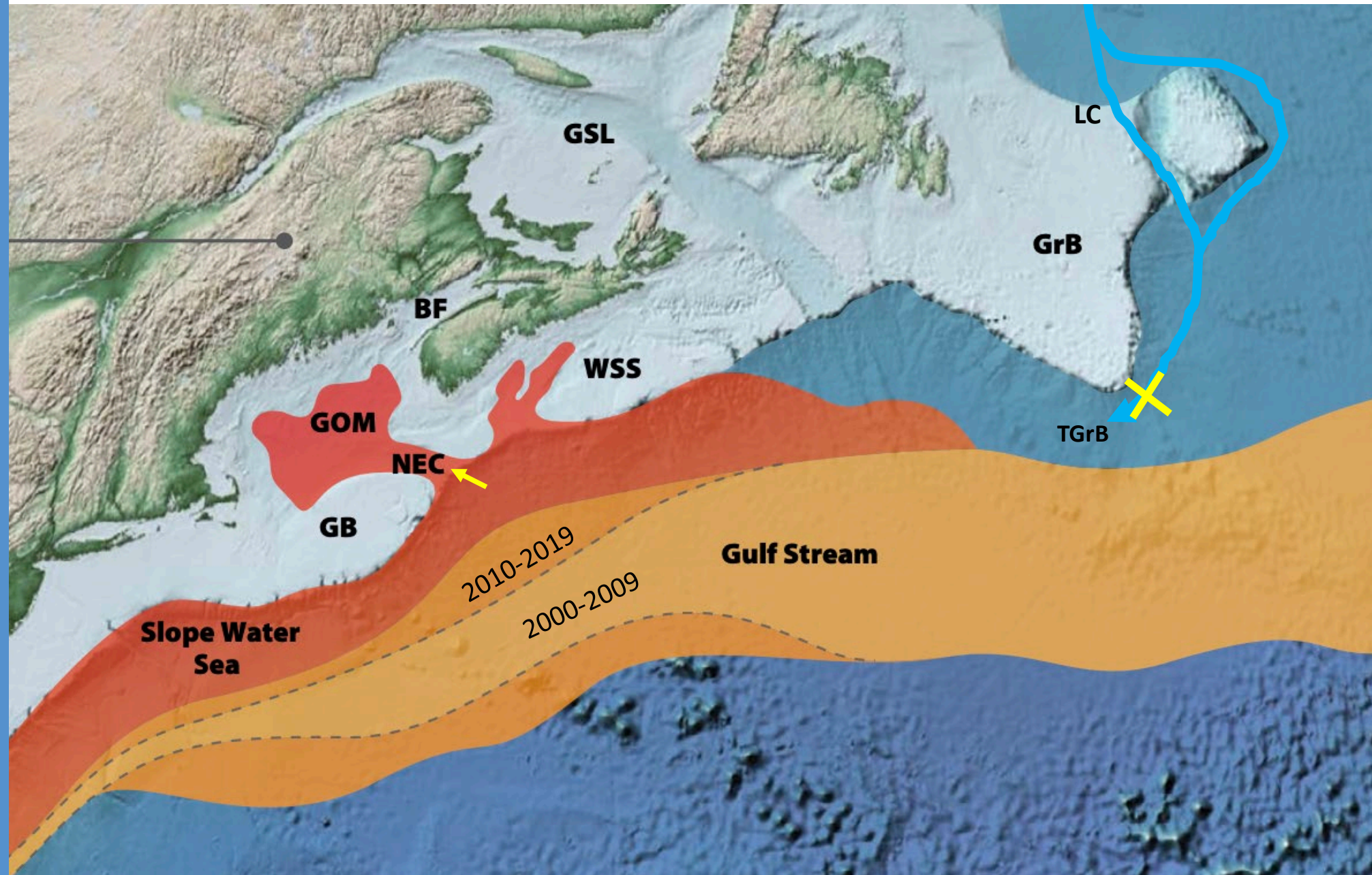
Tide tracker installation  
with UMaine



SLR art installation

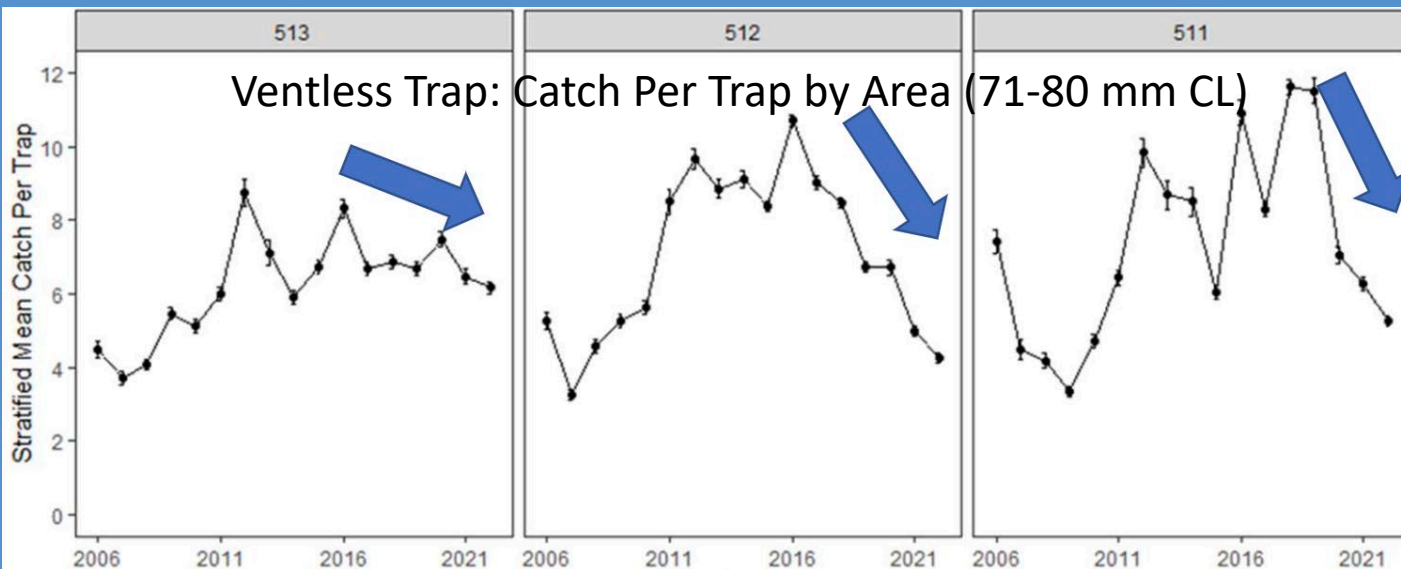
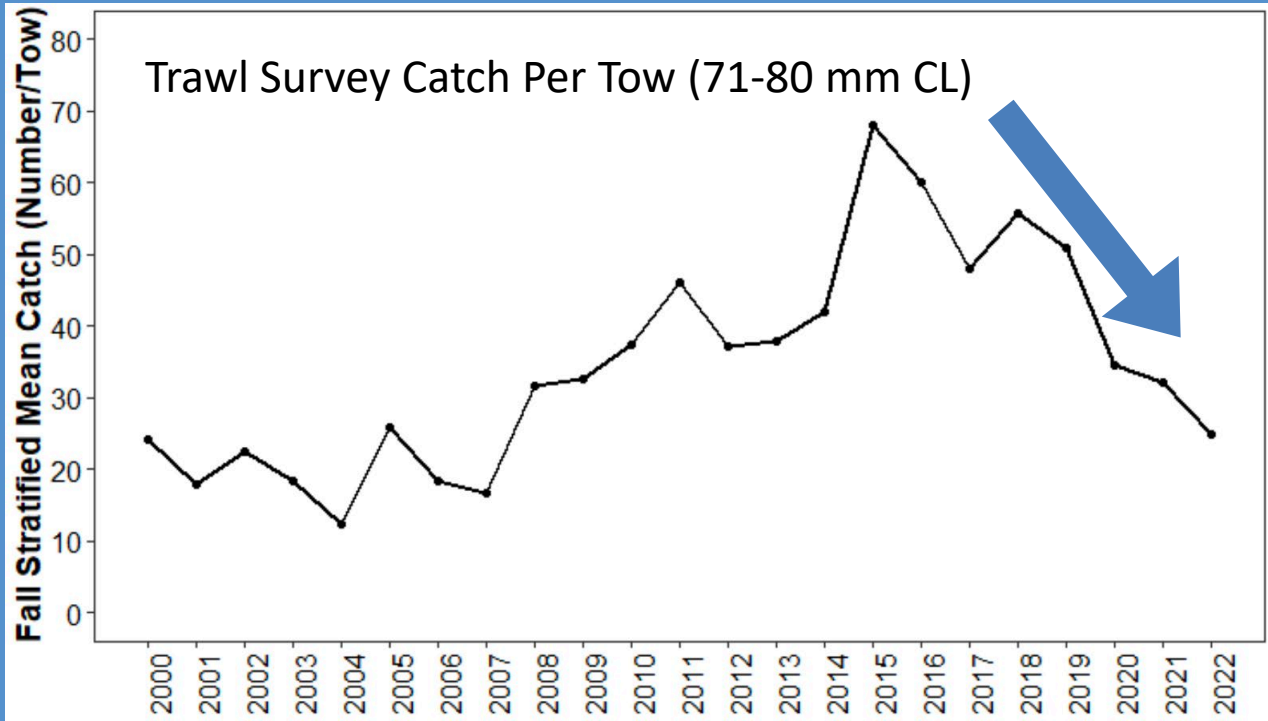


# Changes in Ocean Circulation = warmer water entering the Gulf of Maine



(modified from Meyer-Gutbrod et al. 2021)

# Sublegal Lobster Survey Results Over Time- Downward Trends

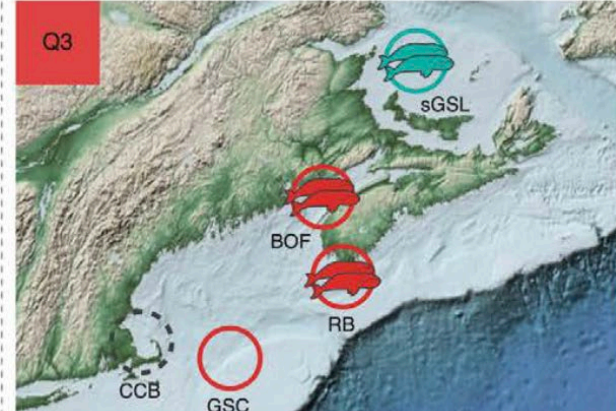
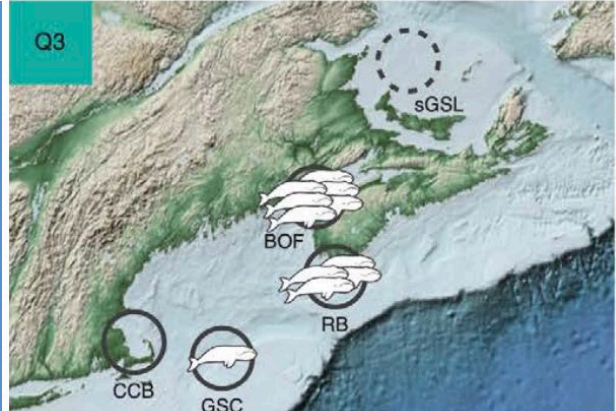
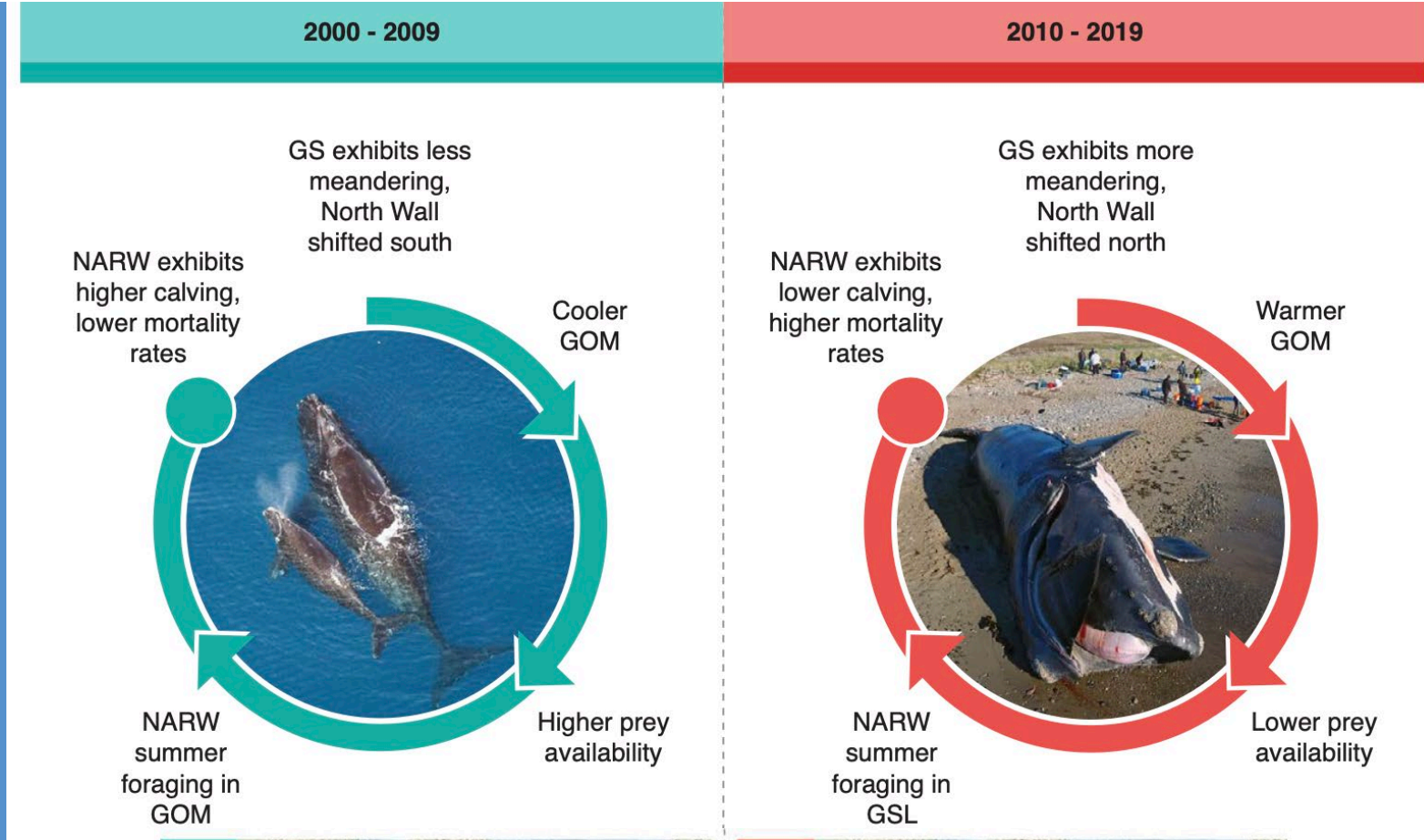


(data from Maine DMR)

# 30 Towns with the Highest Percentage of Lobster Licenses per capita



# Impacts of Changing Ocean Conditions on the North Atlantic Right Whale



(Meyer-Gutbrod et al. 2021)

**WE ALL HAVE A ROLE TO PLAY!**



**Thank you**