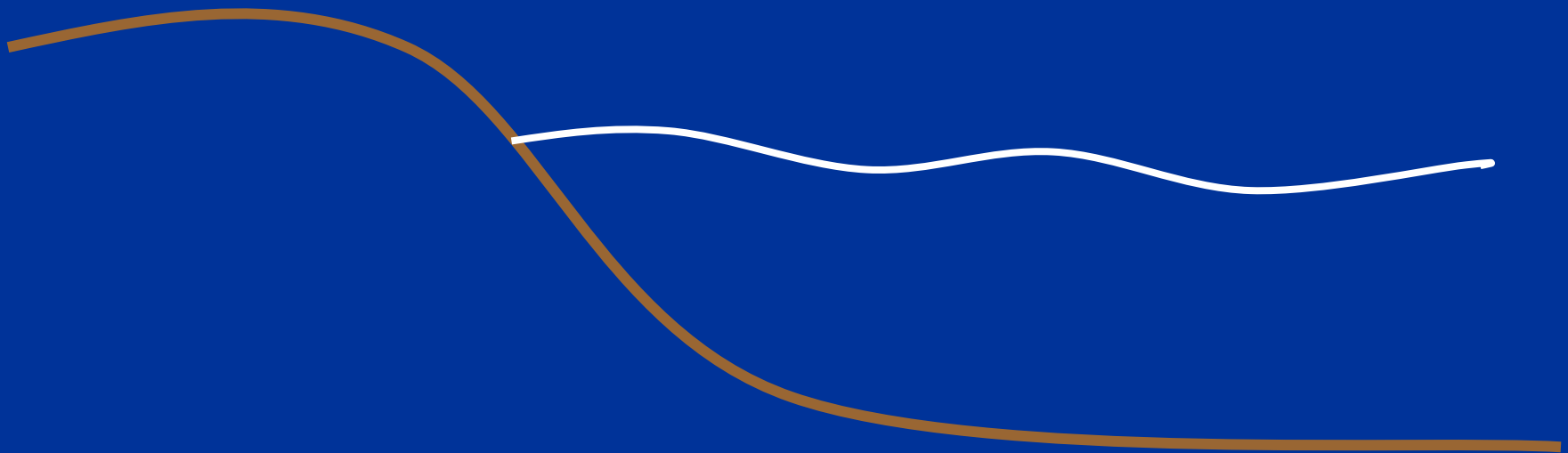


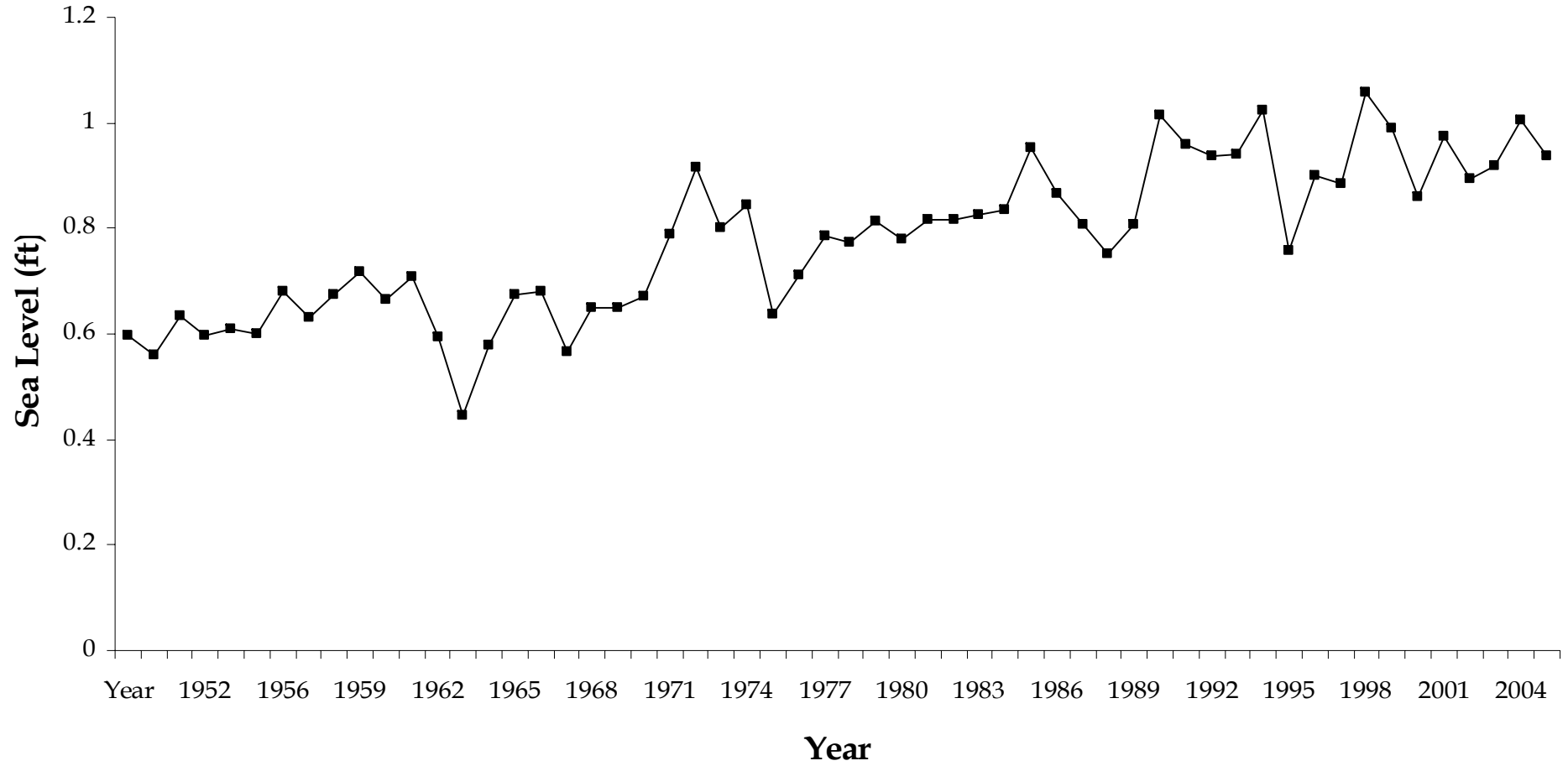
# SEA LEVEL RISE IN NORTH CAROLINA

IMPLICATIONS FOR COASTAL  
POLICY

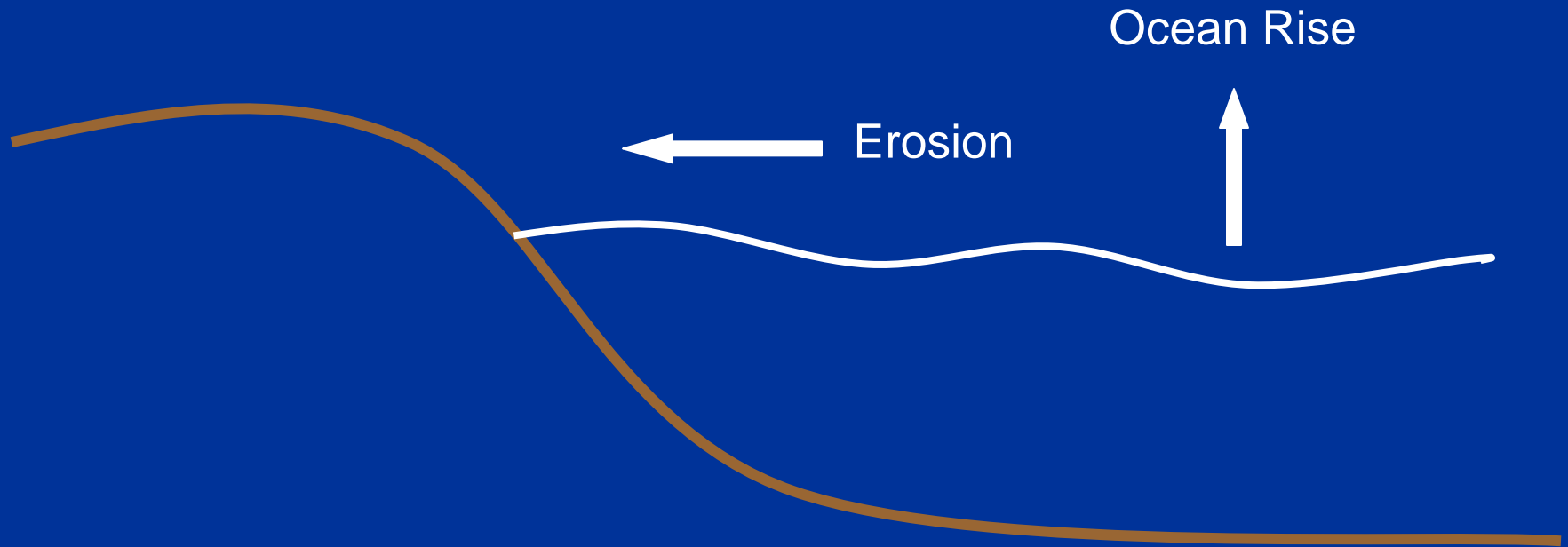
# Relative Sea Level Rise



## Average Yearly Sea Level, Key West Florida, 1950-2006



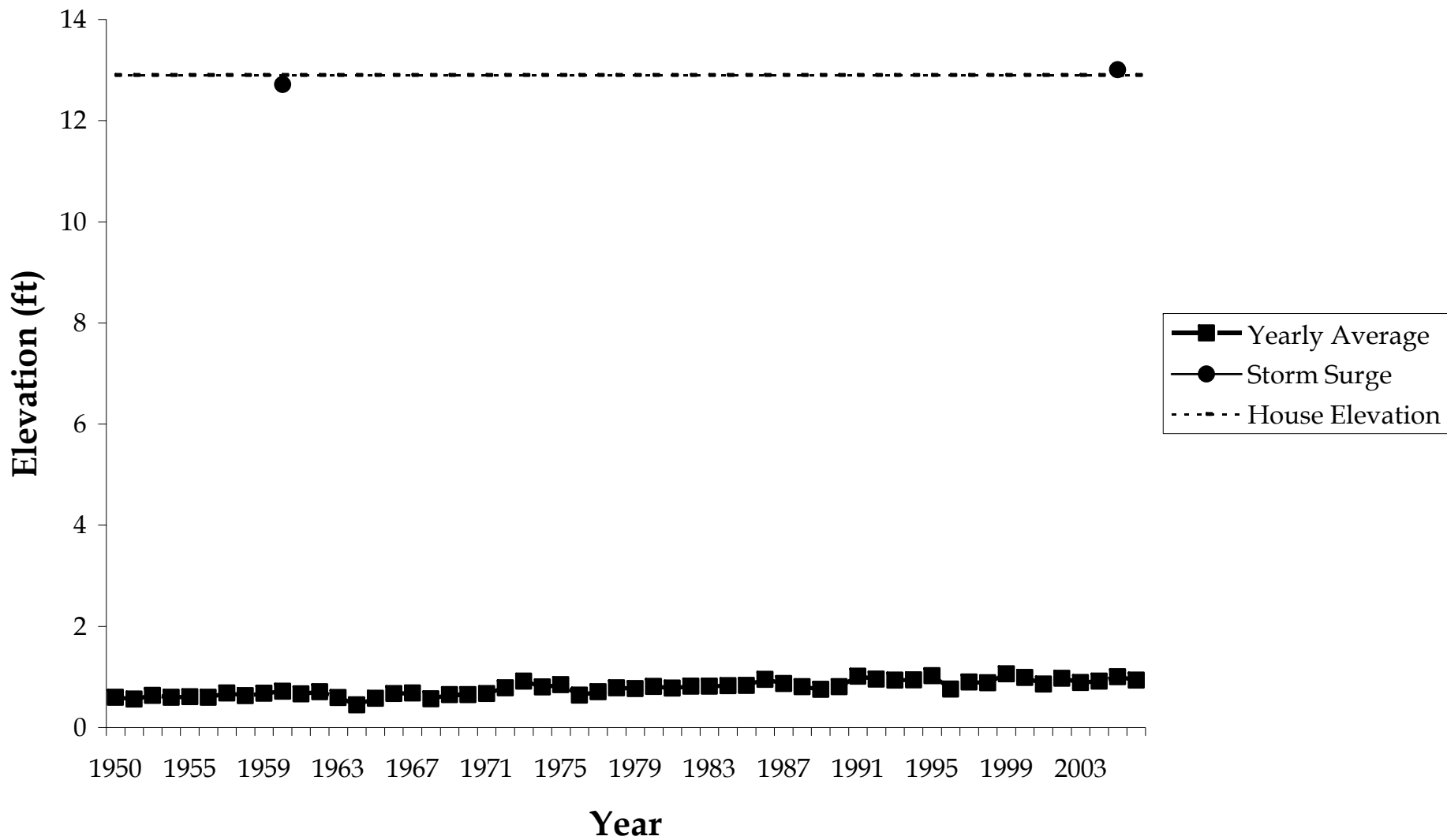
# Relative Sea Level Rise



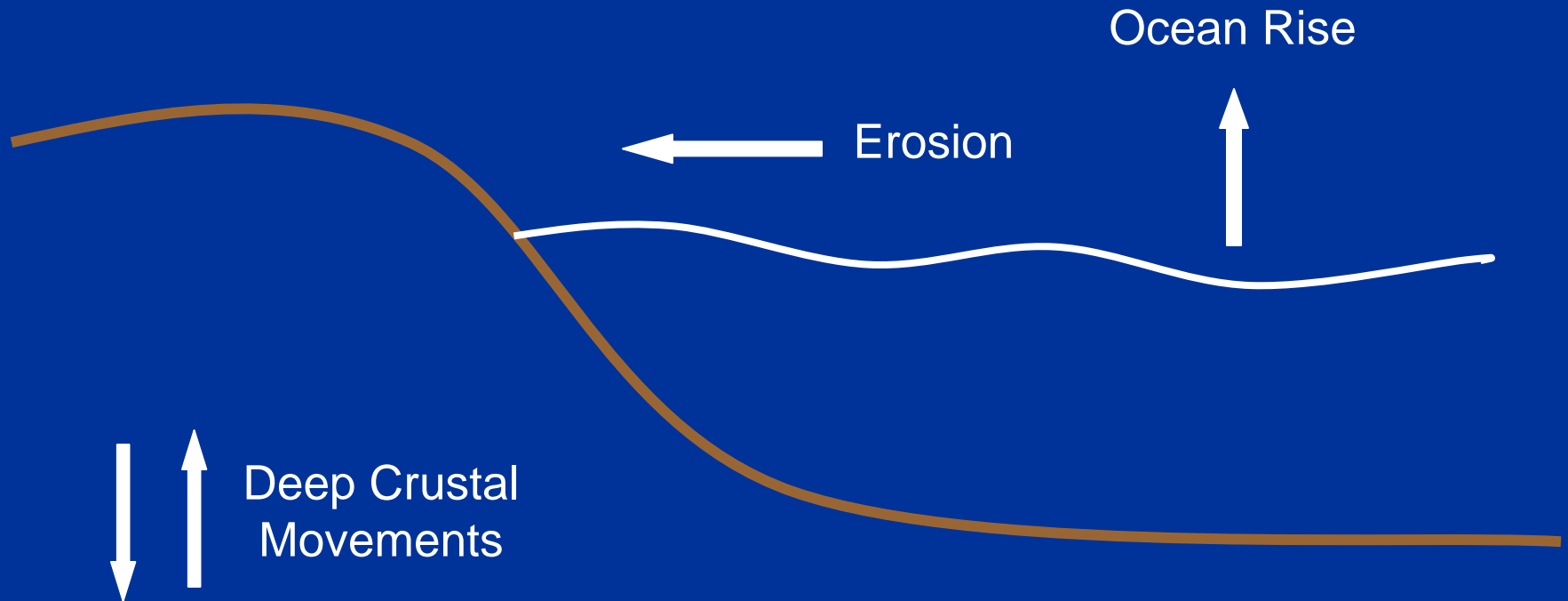
# Policies and Rules

- Oceanfront Construction
  - Building codes
- Setbacks & Shoreline Retreat
  - 30 year life span
- Beach Nourishment
  - High costs & collateral environmental impacts
- Beach Hardening and Sandbag Walls
  - Prohibited and limits on sandbag size & lifespan
- Storm Damage Attenuation
  - Berms, local zoning, and federal insurance policy

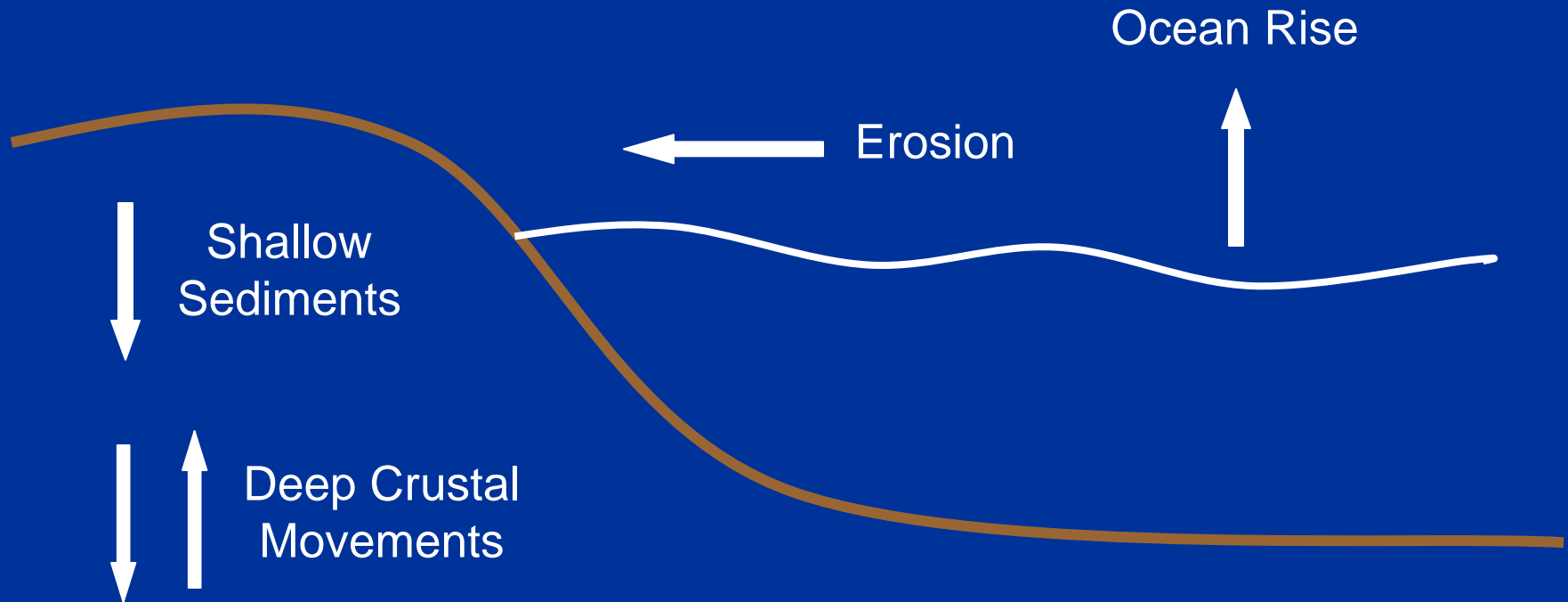
# Storm Surge and Sea Level Rise, Key West Florida 1950-2006



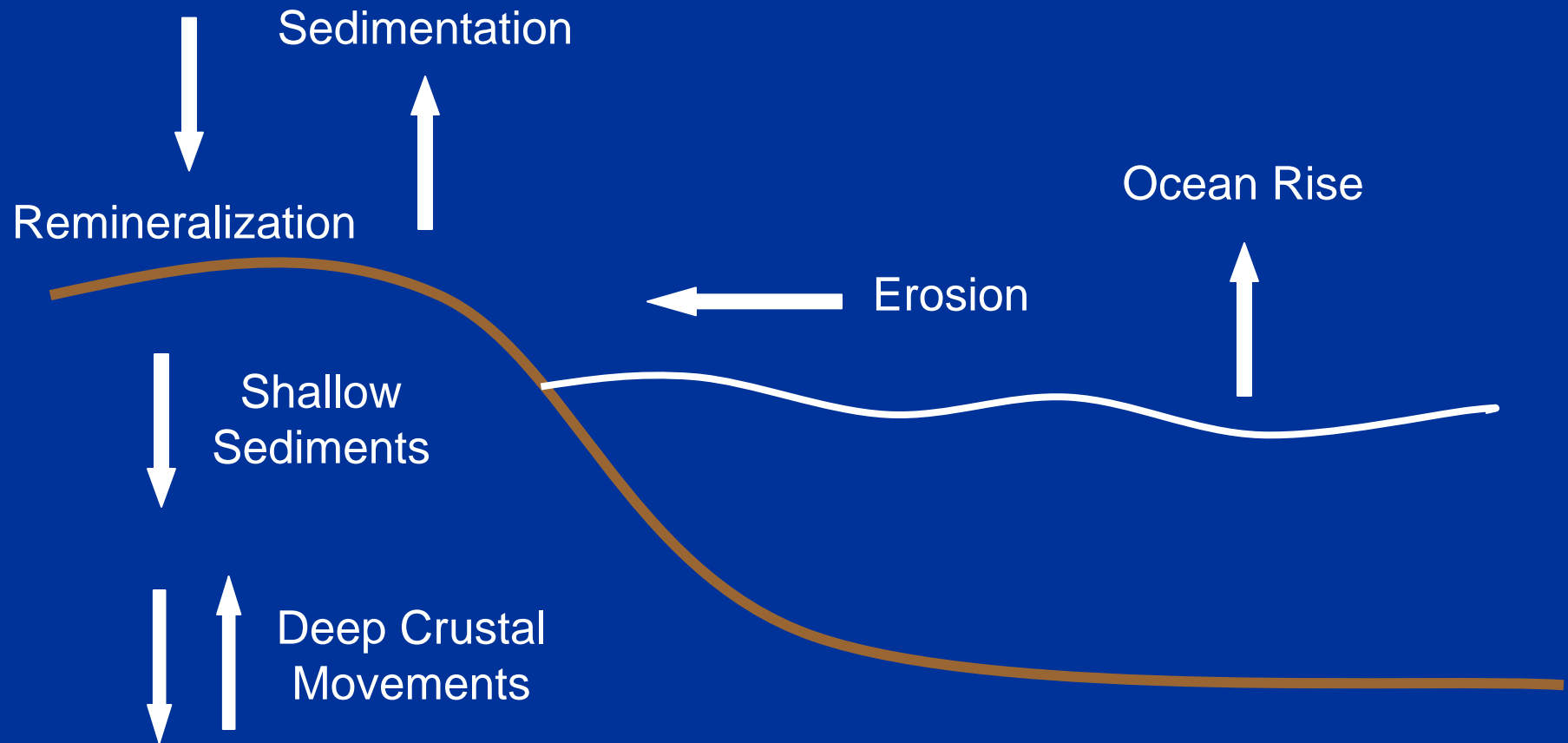
# Relative Sea Level Rise



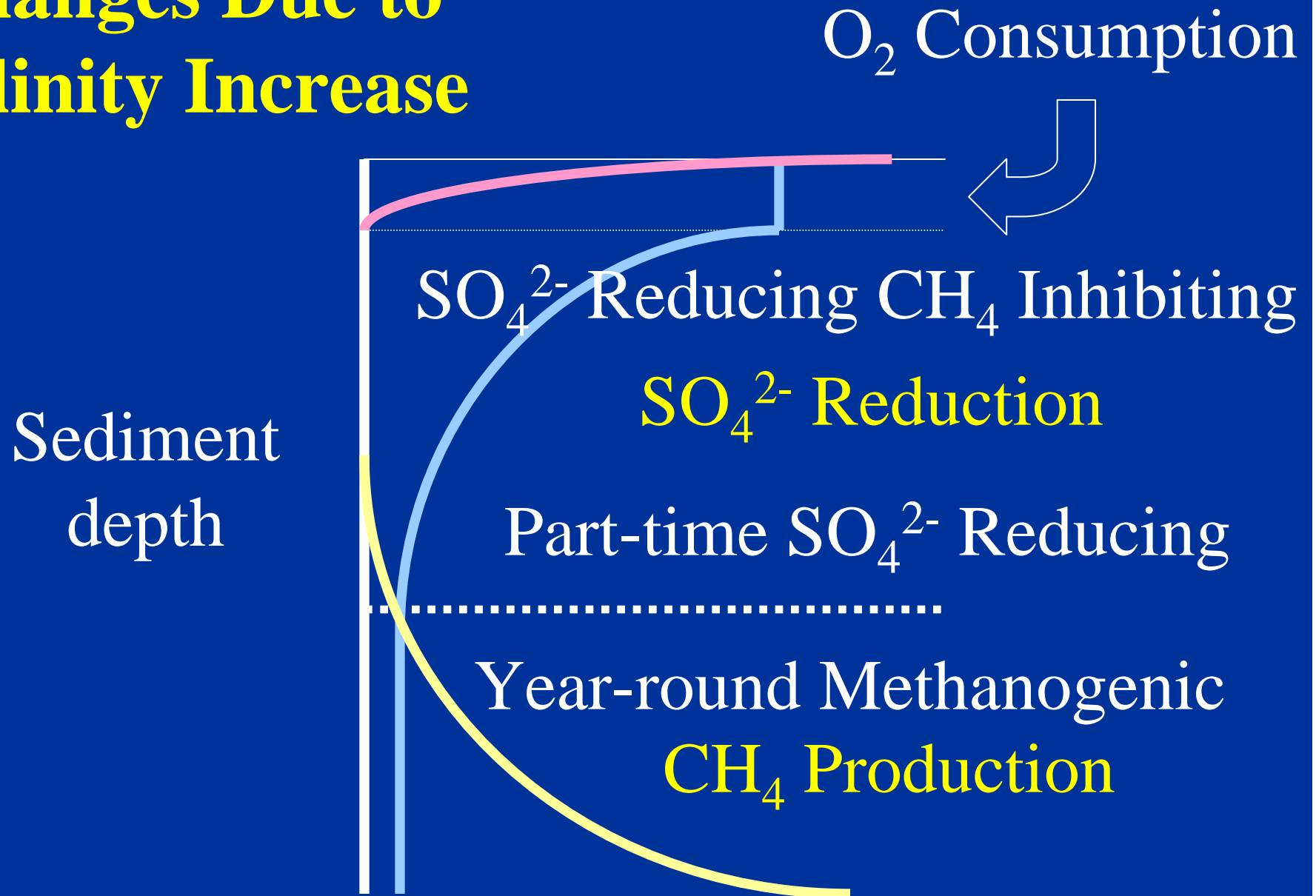
# Relative Sea Level Rise

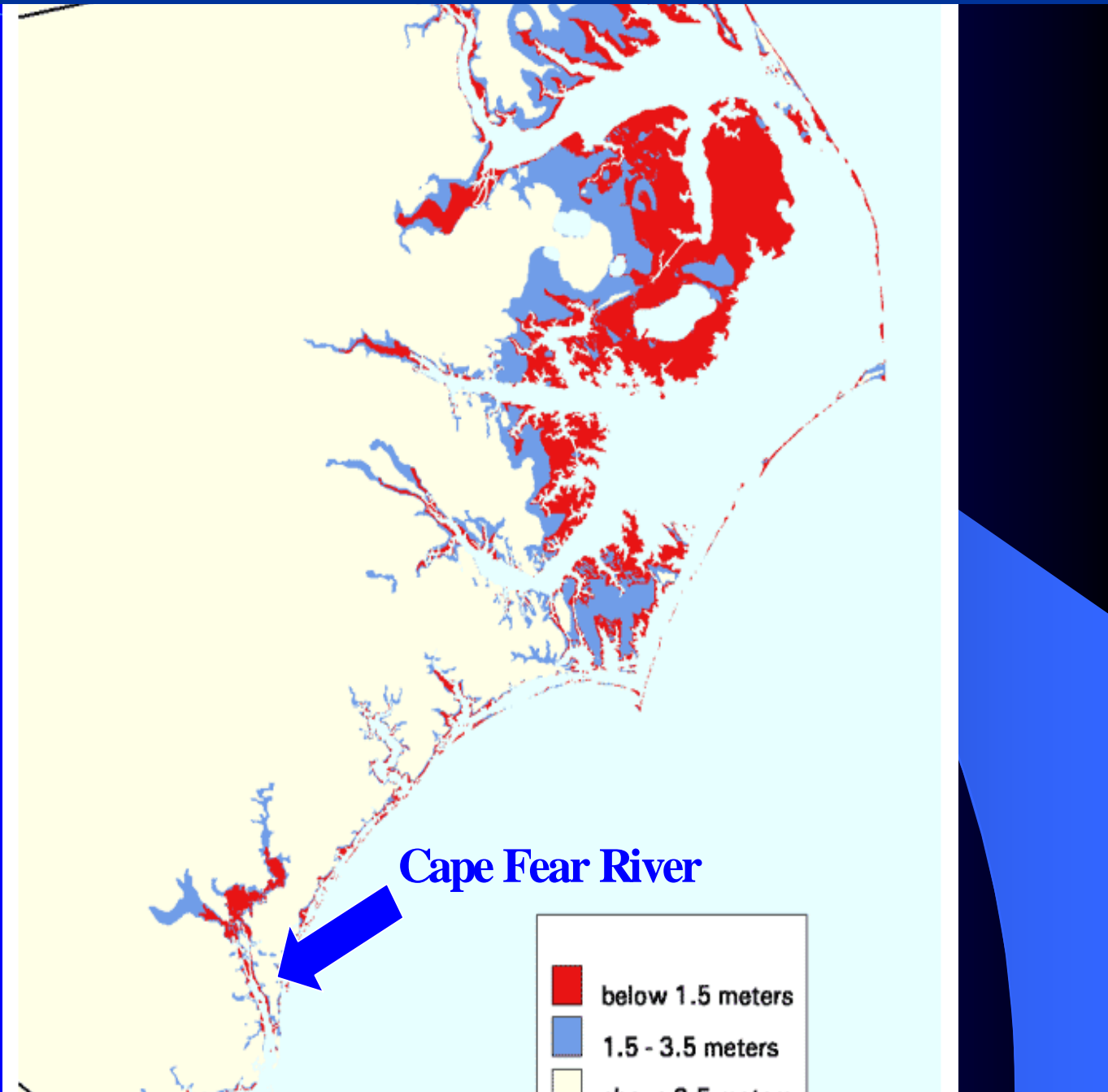


# Relative Sea Level Rise



# Changes Due to Salinity Increase





**Cape Fear River**

# INNER COAST POLICY ISSUES

- Shoreline Erosion
  - Bulkheads and Wetland Issues
    - Non-coastal & 404 Wetlands
- Infrastructure
  - Roads, sewers, etc

# LAND USE PLANS

- Mandated under CAMA
- Few integrate Sea Level Rise other than preparation for hurricanes
- Subject to change
- Do not have to be followed except in AECs where CAMA permits are required

# PUBLIC AWARENESS

- Education
- Hazard Notification
- Disasters
- Insurance

# OTHER ISSUES

- Dams trap sediments preventing sand from reaching beaches and accelerating Relative Sea Level Rise.
- Higher water tables limit effectiveness of septic systems and lead to water quality issues and potential human health problems
- Insurance Dilemma
- Cumulative Impacts

# HURRICANE RESPONSE

- Human safety and health primary concern
- Reconstruction driven by emotion, not by planned shoreline retreat or response to sea level rise



# QUESTIONS?

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