

Chilmark Climate Study Group

Summary of Findings

Executive Summary
August 2020

Jim Malkin, Chair

Rob Doyle

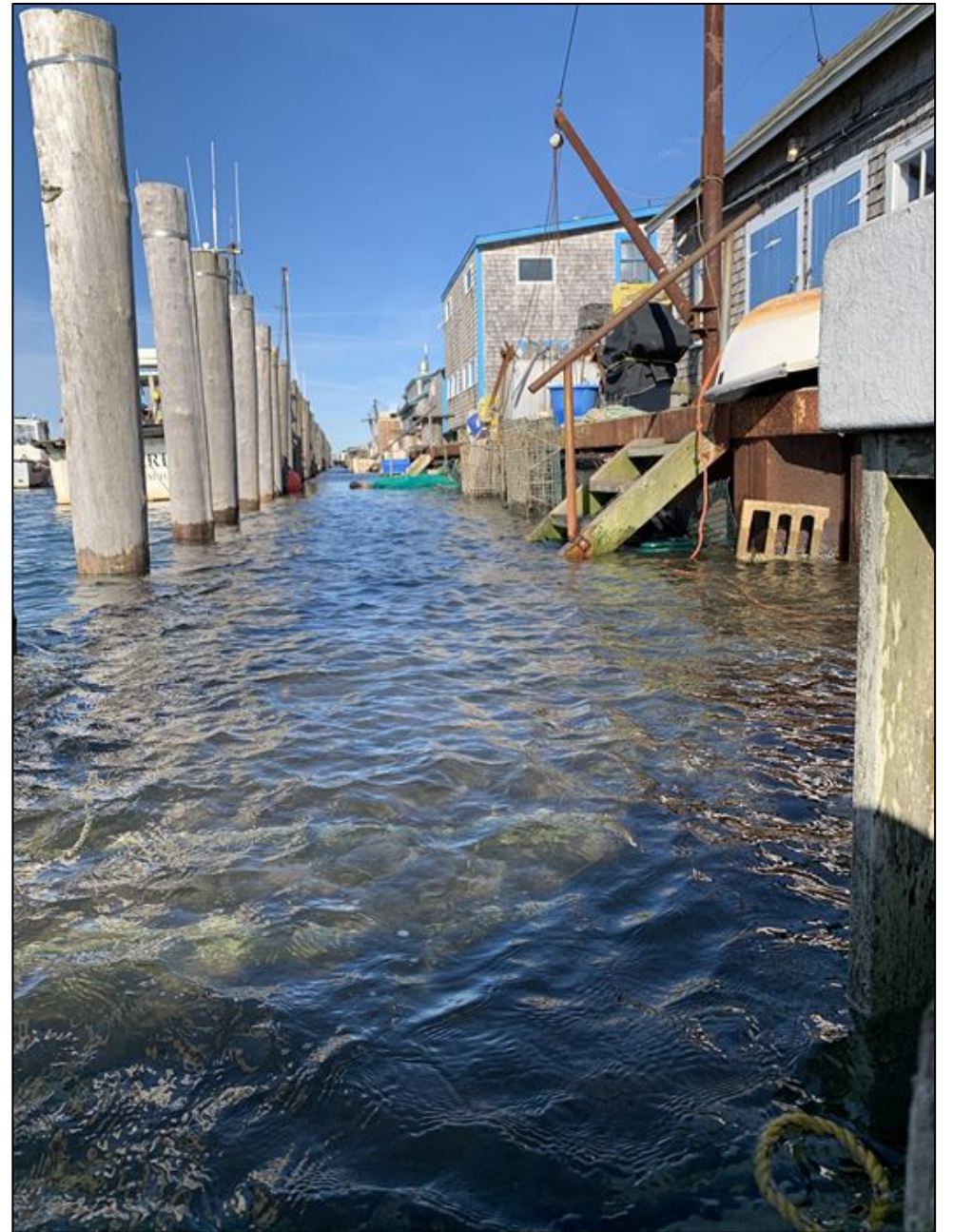
Lenny Jason

Don Leopold

Gary Mottau

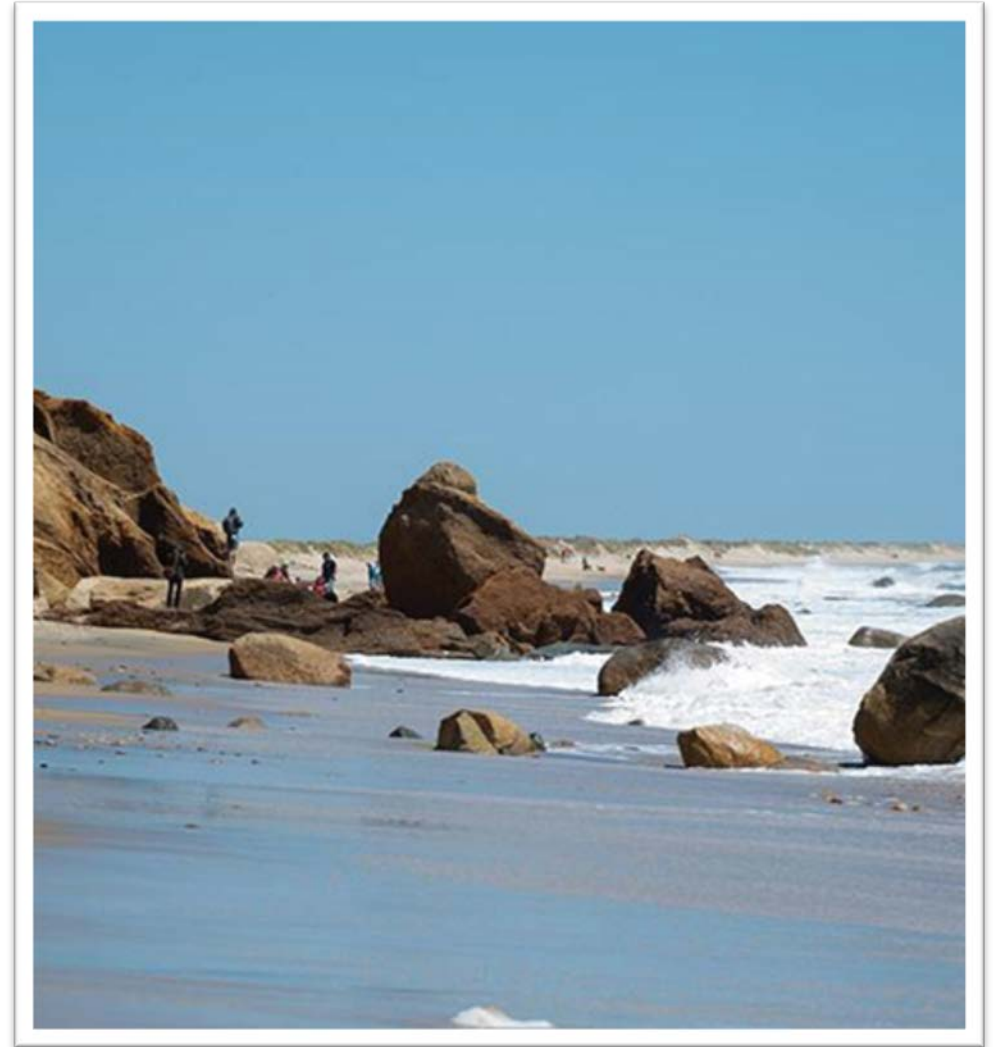
Peter Neilley

Jane Slater



Executive Summary

- Background: Charter and Process
- Key Findings
- Primary Impacts on Chilmark
- Chilmark Vulnerabilities
- Recommendations
- Appendix



Background: Charter and Process

Charter	Process
<ul style="list-style-type: none">• Identify changing climate related issues of material concern to the town.• Report its findings to the town for refinement and further consideration.• Focus on Chilmark-specific issues not adequately addressed by Island, state or national activities.• <i>Note: The charter specifically excluded identifying or debating the causes of climate change; proposing ways to mitigate it; and developing solutions to the issues ascertained.</i>	<ul style="list-style-type: none">• The committee met regularly over a 4-month period, focusing on:<ol style="list-style-type: none">1. General discussions of the nature of climate change and its expected impacts on Chilmark;2. Familiarization with prior and ongoing related works by the Town, Island, region and state;3. Understanding perspectives of 14 community stakeholder groups*; and4. Summarizing and presenting findings and results to the Town.

*See Appendix

Key Findings*

Expected Further Climate Changes by 2050	Primary Impacts on Chilmark by 2050
<ul style="list-style-type: none">• Avg temps rise by 2-4F• Mean sea levels rise about 6"• Storm severity increases slightly• Rainfall increases 3-8%• Drought periods 20-50% more likely	<ul style="list-style-type: none">• Menemsha docks flooded every 5 ½ days.• Chances of major hurricane increase 5-10%• Accelerated shoreline erosion, particularly on south shore (Menemsha/North Shore less certain).• Increased inundation of wetlands• Increased wildfire risk• Increased access/egress disruptions during and after storms or wildfire; particularly along major town roads.• Increased frequency of well and septic issues from more variable water tables• Increased disruptions to power & communications.

*See Appendix B and C for details

Recommendations

The Town should:

1. **Ensure Menemsha dock replacement** initiative started by the harbormaster reaches fruition.
2. **Improve emergency planning** particularly for secondary resources (e.g. contractor retainers, backup resources, citizen enablement, etc.) during and after a major weather or fire event. (fire tower should be manned 12 months a year/generators – fire dept? - to pump wells)
3. **Increase communication and education** of year-round, seasonal residents and tourists regarding general climate change actions (e.g. vegetation & forest management), emergency (e.g. hurricane) instructions/recommendations, and implications for home/land owners
4. **Understand long-term financial impacts** and resources (Town funding and tax base, availability of state/fed grants for solutions, shifts in town budgets for storm prep and response, etc.)
5. **Establish a Standing Climate Committee** to:
 - Continue study of second-level vulnerabilities (e.g. Hariph's & Menemsha Creek bridges, Menemsha fuel tanks, wetlands issues and solutions, flooding impacts, etc.) - use of M'sha wetlands for M'sha Harbor overflow
 - Create a plan and assign responsibilities for access to down island (Hospital/MVRHS etc) in catastrophe
 - Assist in implementation of these recommendations;
 - Assist in identifying and implementing solutions;
 - And to coordinate with MVC and other Island-wide climate change adaptation activities.

Appendix

- Stakeholders
- 2050 Planning Horizon
- 2050 Chilmark Vulnerabilities

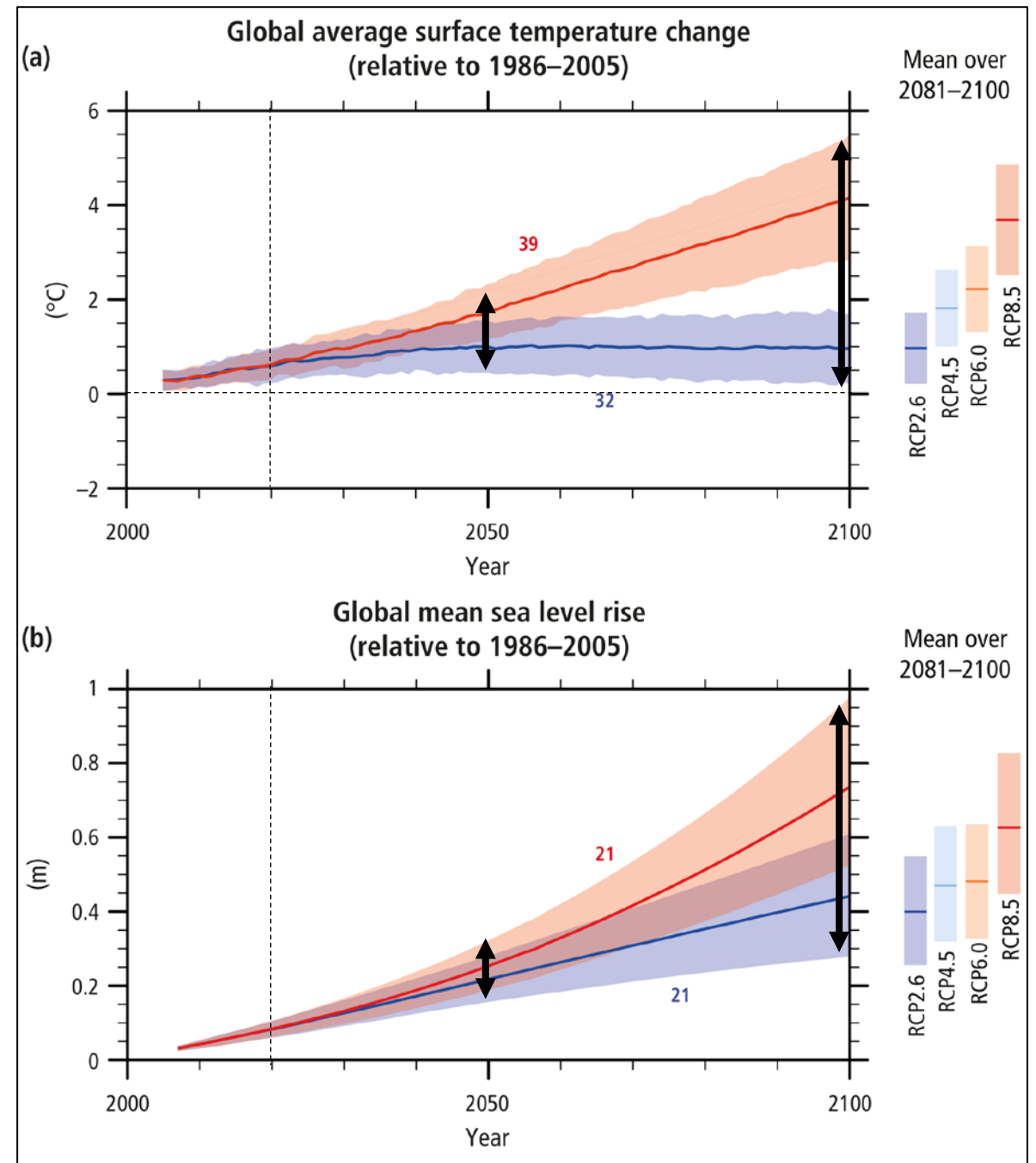
Appendix A: Stakeholders

- The Martha's Vineyard Commission
- Chilmark Planning Board
- Chilmark Highway Dept.
- Chilmark Fire Dept.
- Menemsha Harbormaster
- Mass Dept. of Transportation
- Town of Aquinnah
- Town of West Tisbury
- Board of Health¹
- Chilmark Conservation Comm.
- Chilmark Police Chief
- Tri-town Chief.
- Sheriff's Meadow.
- MV Land Bank
- US Coast Guard Menemsha

¹ Identified but did not meet with

Appendix B: 2050 Planning Horizon

- Climate change is likely to go on for centuries.
- **However, we chose to focus on issues we face in the next 30 years (by 2050):**
 - *Uncertainty in magnitude of climate change and its impacts increases substantially after 2050*
 - *A 30-yr planning horizon felt appropriate and more tangible for the town's initial foray into the subject*



Appendix C: Identified Chilmark Vulnerabilities by 2050

Area of Vulnerability	Federal Action	State Action	Island Action	Chilmark Action
• Wildfire				
• Menemsha Docks				
• Menemsha Other (Fuel tanks, rebuild plan, Basin Rd/Creek Bridge, wetlands)				
• State Rd / Hariphs Bridge				
• Emergency Egress (North, Middle, South Rds)				
• Emergency communications (intra- and inter-town)				
• Outreach & Education (public education & preparation)				
• Local Emergency Planning				
• Well and Septic Robustness				
• Coastal erosion / Wetland impacts				
• Food security and access				
• Disease and Health				