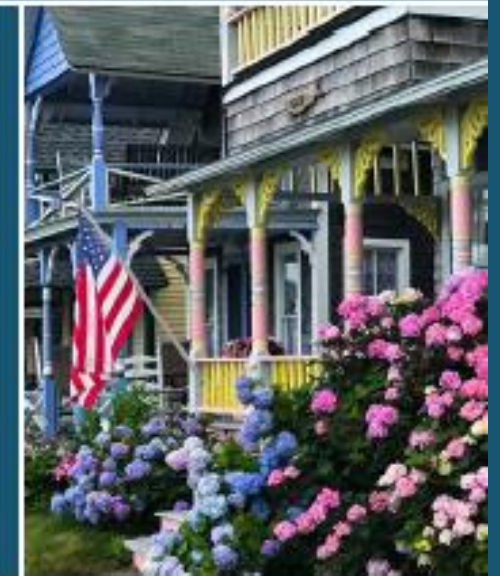
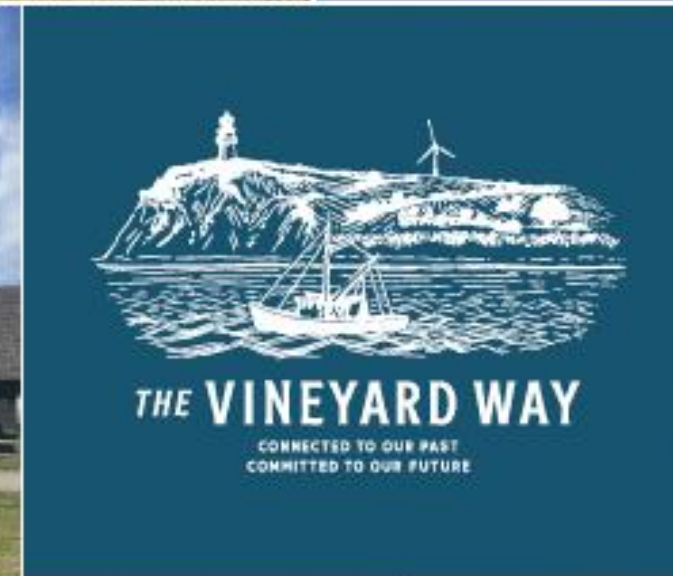


Climate Action Plan

THE VINEYARD WAY

CONNECTED TO OUR PAST
COMMITTED TO OUR FUTURE



CLIMATE RESILIENCE



MARTHAS VINEYARD
COMMISSION

October 2021 – August 2022

Climate Action Plan

Plan Overview

- Land Acknowledgement
- Executive Summary
- *What Motivates Us*
- *Engaging our Community*
- *Timeline of Key MV Climate Milestones*
- *Thematic Group Chapters*
- *Overarching Goals*
- *Moving Forward*
- Acknowledgements



What Motivates Us

Island Contributions to Climate Change

Climate Projections and Impacts

Emissions

The CATF found that the Island emitted approximately 270,000 metric tons (606 million pounds) of CO₂ in 2018, equivalent to the emissions of approximately 60,000 cars in one year. Emissions comprise the following figures:



44%

Transportation

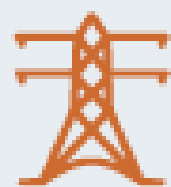
(cars, ferries, planes, boats)



28%

Heating and hot water

(oil and propane)



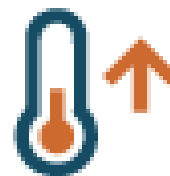
28%

Electricity

Hazard

Local Projections

Impacts



Rising Temperatures

Greenhouse gasses (e.g. carbon dioxide and methane) trap heat in the atmosphere, causing global temperatures to rise.

Annual average temperatures on Martha's Vineyard are projected to increase by 2.4–5.2°F by 2050, and 3.0–9.1°F by 2100.

Annually, we expect to see 2–10 more days with maximum temperatures over 90°F by mid-century, and 4–31 more days by 2100.

We expect 19–39 fewer days per year with minimum temperatures below 32°F by mid-century, and 23–63 fewer days by 2100.

- Higher demand on water resources
- Damage to crops and food plants; unpredictable growing seasons making global food supply less stable
- Increased vector-borne disease
- Heat stress, especially among elders
- Increased risk of wildfire
- Increased potential for invasive species

CAP Guiding Values*

1. Healthy Natural Resources
2. Equity & Inclusion
3. Community Collaboration
4. Resilience Building
5. Local Action

**developed through the kick-off meeting of over 100 people*

A Community-Based Process

Pre-Planning Activities

- 20 listening sessions with 15 stakeholder groups
- 3 new town Climate Committees formed
- 6 meetings with Select Boards to introduce the planning process



Youth Engagement

- 6 monthly student led climate cafes
- 10 school outreach events
- 64 students submitted art in the Vineyard Conservation Society climate change art contest

Planning Meetings

40

thematic working group meetings were held and over 108 participants (including representatives from Towns, the Tribal Community, NGOs, businesses, and students) developed goals, objectives, and actions

Planning Meetings

93

town government board/committee members attended 6 online workshops

Planning Meetings

13

participants attended an in-person tribal engagement event



Engaging our Community

General Communication & Outreach

- 25 stakeholder group presentations
- 40 Island newspaper stories and commentaries, magazine stories, and radio reports on climate change issues
- 19 monthly public events/presentations (focused on thematic working group



Climate Action Week

- 7 days with over 40 organizations that hosted events
- 1400 participants attended events
- 90 climate action pledges signed
- 31 electric vehicles (EVs) in the first-ever EV Fleet



Climate Action Plan: Six Thematic Areas

Land Use, Natural Resources and Biodiversity
Transportation, Infrastructure and Waste
Public Health and Safety
Economic Resilience
Food Security
Energy Transformation





Land Use, Natural Resources, and Biodiversity

Martha's Vineyard is home to globally rare ecosystems and a wide array of biodiversity. The actions in this focus area will strive to protect the Island's biodiversity and natural resources (e.g., forests, freshwater sources, beaches, marshes) and better manage how humans zone and use these resources.

Thematic Area Description and Climate Impacts



What are the Main Challenges Climate Change Places on Our Land Use, Natural Resources, and Biodiversity?

Coastal erosion and flooding is accelerating with sea level rise and stronger storm events, impacting habitat, biodiversity, land, buildings, and historic and cultural resources.

Salt marsh loss Without room to migrate inland, many salt marshes will turn into tidal flats as the sea rises, resulting in the loss of their many values.

Loss of open space biodiversity and extinction Due to habitat degradation, loss from weather extremes and sea level rise; changes in plant and animal cycles and ocean/air temperatures; increased invasive species.

Groundwater demand and degradation Increased demands for groundwater; more drought periods; increased pollutant runoff from more intense rainfall; and rise in groundwater level, flooding basements and impacting septic systems.

Degraded pond water quality is further stressed due to climate change impacts such as warmer and more acidic water and heavier rainfall.

What's Happening Now?



Martha's Vineyard has the last northeastern oak dominated forest in the U.S. Our native oaks support more biodiversity than any other comparable group of temperate forest trees.



70%

more carbon is absorbed by native plants than turf grass. Native plants are also easier to maintain and better absorb storm and rainwater.*



~10%

of our native flora has been lost in the past 25 years mainly due to the clearing of land and planting of non-native landscapes, which increase invasive species, pests, and diseases.*



7,400

new houses and 9,000 guest houses could be built on Martha's Vineyard based on current zoning and available land that could potentially double the population.†

Dukes and Nantucket Counties have the fastest population growth in the state.*



266+

of the Island's 3,500 acres of wetlands (largely salt marshes) could be lost by 2050 due to sea level rise.*

3-5 ft

is the average amount south shore beaches move inland each year, one of the fastest rates of erosion on the eastern seaboard.*

313

buildings permanently flooded by 2050 due to sea level rise.

What's Happening Now

Provides current baseline information related to the thematic area and factors that could influence resilience-building.



Equity + Land Use and the Environment

In the world of a changing climate, thoughtful land use has a huge role to play in addressing equity. Land use choices and regulations need to be understood both in terms of how we protect natural resources for the health of biodiversity and ecosystems as well as the health and safety of all members of the human community. The best planning sees these two goals not in opposition, but rather, as inextricably linked, since our most critical needs – air, food, water, shelter – are all provided for by a healthy natural environment.

Particularly on our Island, with its huge socioeconomic gulf, equitable access to basic resources is already under stress, and a growing population is living in prolonged states of insecurity – a problem which will deepen in the face of climate impacts. This plan aims to foster careful land use decision-making that is inclusive of the community and can help keep our most vulnerable residents out of harm's way, improve diverse access to food, space for recreation, overall wellness, and promotion of a healthy

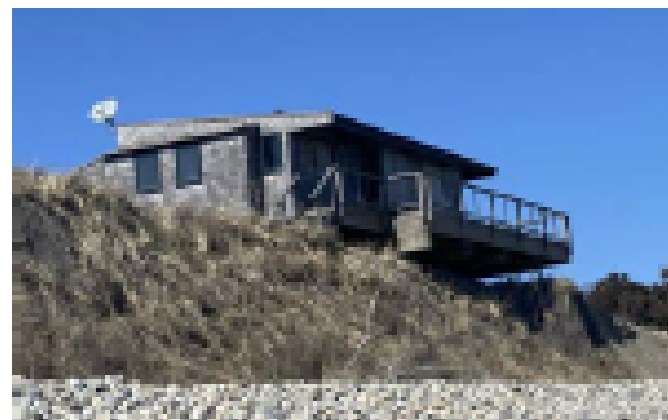
- The number of houses over 4,000 square feet has doubled in the last decade.
- Nearly every one of our 27 coastal ponds are currently classified as impaired, a designation which indicates poor health (that provide local food, jobs, and an inability to meet one or more of the standards set by the C

Equity and Questions to Consider

In The Face of These Challenges We Must Ask Ourselves

Should we allow people to build in areas we know will be unsafe in the future?

Do we want to be a community that enables expansive development at the expense of our native habitat and wildlife?



Facing rapidly growing development pressure on a finite island, how do we address limits to growth and balance human needs and the environment?



How Will We Measure Our Success Toward These Goals?



GOAL #1

By 2040, land use decision-making prioritizes public safety and ecosystem values potentially impacted by climate change.



Number of new or updated land use policies adopted that protect human safety, natural resources, and biodiversity from climate change threats



GOAL #2

By 2040, natural resources and biodiversity are cooperatively managed and protected to maintain and promote habitat health, connectivity, and resiliency.



Number of habitat corridors created or protected



Number of adaptation strategies implemented to protect coastal pond and aquifer water quality



GOAL #3

By 2040, we will have protected our coastal ponds and sole source aquifer against increasing pressures of climate change and population growth.



Number of acres of salt marsh restored or migration areas protected



Number of coastal ponds with verified water quality improvement

Individual and Town Actions to Support Goals

*Join Us
in Taking
Action*



Individual Actions:

- Reduce the size of your lawn, plant more native plants, and conserve water
- Follow the Island-wide fertilizer regulations; don't use synthetic chemicals on lawns and gardens
- Support conservation and proposed regulations that protect biodiversity, habitat, and climate resilience
- Consider installing a denitrifying septic system to protect the health of our ponds
- Read *The Island Blue Pages, A Guide to Protecting Martha's Vineyard Waters*: <https://www.mvcommission.org/islandbluepages>



Town Actions:

- Update floodplain and wetlands bylaws and regulations to address climate conditions
- Support undevelopment of at-risk properties (i.e., managed retreat)
- Adopt guidelines for the planting and maintenance of native plants on public lands

Objectives, Co-Benefits, Actions, Leads, and Cost

GOAL #1

By 2040, land use decision-making prioritizes public safety and ecosystem values potentially impacted by climate change.

Objective 1:

By 2024, identify and map coastal and inland land vulnerable to flooding, land vulnerable to extreme wildfire risks, associated ecosystems, and land suitable for undevelopment that significantly contribute to climate resilience and public safety. (Some actions support Overarching Goal 1)

Co-Benefits/ Collaboration:



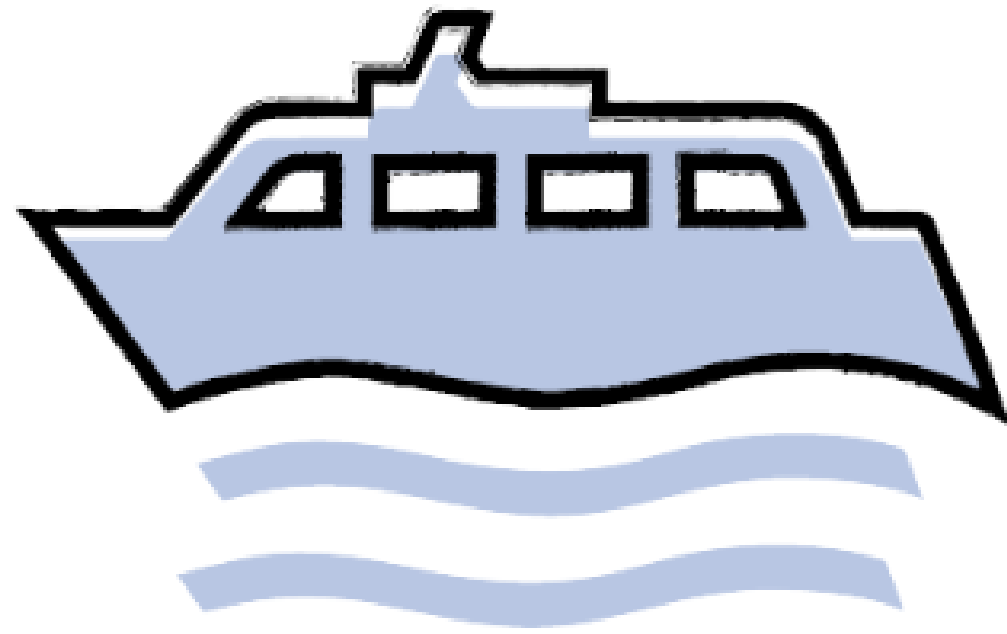
Actions	Lead	Due Date	Cost
Action 1.1 All existing, relevant mapping is collected and synthesized.	Martha's Vineyard Commission	2023	0
Action 1.2 Required new mapping is identified, created, and added to the overall synthesis.	Martha's Vineyard Commission	2023-24	\$

Land Use, Natural Resources, and Biodiversity

Actions include

- discontinuing or managing development in vulnerable areas (e.g., flood zones);
- preservation of salt marshes for their many community values;
- setting maximum disturbance limits for new development and standards for the use of native plantings; and
- protecting coastal pond water quality and our drinking water through increased collaboration and enhanced regulations.





Transportation, Infrastructure, and Waste

Actions include:

- planning for the protection or relocation of critical vulnerable roads that includes nature-based strategies,
- collaboration with the Steamship Authority to build resilient port infrastructure,
- assessing supply chain vulnerabilities, and
- reducing solid waste.

Public Health and Safety

Actions include

- bilingual community outreach to the public and health care providers on health-related climate impacts;
- development of an Island-wide emergency preparedness, response and recovery plan; and
- implementation of the regional Community Wildfire Protection Plan.





Economic Resilience

Actions for a resilient economic future include

- diversifying the economy,
- training residents for climate-related jobs, and
- ensuring the transition of vulnerable businesses (fossil fuel-related businesses and those in at-risk locations).

Food Security

Actions include

- developing standards for climate-friendly farming practices;
- ensuring that a consistent food supply will be in place for the food insecure and during emergencies;
- increasing access to lands for the Indigenous community;
- increased aquaculture production; and support for careers in commercial fishing.





Energy Transformation

Actions include:

- increasing efficient electric home heating, the use of electric vehicles, and solar energy;
- microgrids and battery storage at critical facilities;
- advocacy for the transition of ferries to electric power;
- collaboration with Eversource for sufficient electric grid capacity
- energy transition assistance for low-and-moderate income residents is a priority.



Overarching Goals

- Framework for Land Use Decision Making
- Sustainable Source of Adaptation Funding
- Capacity Building for Climate Action

CAP Implementation

- **Each action has a lead organization**
- **Due date, estimated cost, measures of success**
- **Martha's Vineyard Commission oversees implementation**
- **Biannual update meetings with thematic working group liaisons**
- **Implementation spreadsheet**
- **Implementation updates on CAP website**
- **CAP Community Coordinating Committee: MVC and members of town climate and energy committees meet monthly**

Community Awareness/Building Support

CAP Presentation Roadshow:

- Select Boards
- Public meetings
- Community groups
- MV Coastal Conference

WMVY Radio - Panel Discussion Series Walking Through the Climate Action Plan

- Consumption and Waste
- Managed Retreat
- Public Health
- The Local Economy
- Renewable Energy

Communications:

- Newspapers
- Island Climate Action Network
- Social media
- CAP website
- Earth Day Festival
- Student Climate Cafes
- Blue Dot magazine

Climate Action Fair

Climate Action Fair 2023

Reduce, Repair, Renew



CAP Actions Underway

- Supply chain study (MVC)
 - Native landscaping (BioDiversity Works, VCS)
 - Aquaculture capacity (Cottage City Oysters)
 - DRI Flood Risk Area Policy (MVC)
 - Carrying Capacity study (MVC)
 - Biochar research (MVC)
 - Sengekontacket salt marsh study (MVC)
 - Waste reduction (MV Food Waste, VCCC)
 - Eversource working group (MVC)
 - Energy coaches (Vineyard Power)
 - Microgrid site ID (MVC)
 - Ferries Now! (MVC)
 - Sustainable climate adaptation financing (MVC)
 - Year-round population count (MVYPS)
 - Capacity Building (MVC, VCS)
-
- Health Care Survey (Dukes County Health Council)
 - Quarterly Public Health Outreach (Dukes County Health Council)
 - Bilingual health care outreach (Island Health Care)
 - Vulnerable Populations Task Force (Emergency Managers)
 - More local food to Island (Island Grown Initiative)
 - SNAP/HIP at Farmers Market (Morning Glory Farm)
 - Climate-friendly farming (MV Ag Society)
 - Local Seafood to those in need (Vineyard Seafood Collaborative)



Climate Action Fund

The Martha's Vineyard
Community Foundation (MVCF)
PO Box 243, West Tisbury, MA 02575
Liz Durkee, MVC Climate Change Planner
durkee@mvcommission.org

**Martha's Vineyard Community Foundation
Climate Action Fund**

Thank you for your time!

The Vineyard Climate Action Plan
can be found at:

www.thevineyardway.org

THE **VINEYARD WAY**

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