

# **THE GOSNOLD CLIMATE ACTION PLAN 2024**

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## **GOAL #1: INFRASTRUCTURE**

By 2040, Gosnold's critical barrier beaches, roads, and infrastructure will be protected or relocated from impacts posed by climate change.

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## **GOAL #2: NATURAL RESOURCES**

By 2040, Gosnold's natural resources including land, water supply, and ecosystems will be protected from impacts posed by climate change.

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## **GOAL #3: EMERGENCY MANAGEMENT**

By 2040, Gosnold will have an effective emergency preparedness, response, and recovery system.

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## **GOAL #4: ENERGY TRANSFORMATION**

By 2030, Gosnold will have maximized its ability to transform to renewable energy.

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## **GOAL #5: SOLID WASTE MANAGEMENT**

By 2025, Gosnold will reduce waste generation by developing and implementing a comprehensive solid waste management program.

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## **GOAL #6: ECONOMIC RESILIENCE**

By 2040, Gosnold's economy will have the necessary diversification, resilience, and sustainability needed to meet the challenges and opportunities resulting from climate change.

# GOAL #1: INFRASTRUCTURE

We cannot forecast for certain how climate change will impact the town of Gosnold. What is certain is that much of our vital infrastructure will be vulnerable to sea level rise, flooding, and increased extreme storm events. On Cuttyhunk, the main channel that allows access to the island's protected harbor is already at risk, due to the erosion of the sunken barges that historically have provided a man-made barrier.

On the other side of the harbor, Church's beach, besides being a reliable tourist attraction, also functions as a crucial conduit for utility lines that connect residents living on the neck with the rest of the island.

For the rest of the island chain, the Uncatena dock is vulnerable to storms and increased sea level rise. Further, the middle causeway between Naushon and Nonamesset is at risk of over washing, as is the critical access between the Upper Wharf and downtown.

The following three objectives focus mainly on securing Cuttyhunk's infrastructure, and the proposed actions, many already in progress or soon to be launched, will address the town's vulnerabilities.

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## OBJECTIVE 1:

By 2025, critical waterfront infrastructure in Cuttyhunk Pond including the fish dock, marina, ferry dock, and fuel dock will be protected.

Funding Source: Town of Gosnold Mass. Dept of Env. Protection Seaport Economic Council

Target Date: 2025

### ACTION 1.1

By 2024, an engineering plan will be developed with permitting to elevate or otherwise protect critical waterfront infrastructure in Cuttyhunk Pond including the Fish Dock, Marina, Ferry Dock, and the Fuel Dock.

Lead: Foth Engineering

Partners: Gosnold ConComm, Gosnold Harbor Committee, MADEP

UPDATE: Two draft plans have been developed by Foth.

### ACTION 1.2

By 2026, this engineering plan will be implemented.

Lead: Foth Engineering

Partners: Contractors

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## OBJECTIVE 2:

By 2030, the channel into Cuttyhunk Pond will be protected.

Funding Source: MACZM Buzzards Bay Coalition U.S. Army Corps of Engineers

Target Date: 2030

### ACTION 2.1

Updated by SY 1/10/2024

By 2024, strategies for mitigating the impacts of completing the dike on Barges Beach will be developed.

Lead: Town of Gosnold

Partners: Woods Hole Group, MADEP, Massachusetts Department of Coastal Zone Management (MACZM), Buzzards Bay Coalition, Audubon Society

UPDATE: Gail Blout and Mike Milanoski met with BBC to discuss strategies for Barges Beach protection. The Woods Hole Group is updating the Green Resilience Plan. Gail Blout and Leo Roy are following up with WHG. Gail continues to keep in touch with the US Army Corps of Engineers.

### **ACTION 2.2**

By 2026, an engineering plan and permitting for completing the dike on Barges Beach will be developed.

Lead: Town of Gosnold

Partners: US Army Corps of Engineers, MADEP, MACZM, Buzzards Bay Coalition

### **ACTION 2.3**

By 2030, the dike on Barges Beach will be completed.

Lead: US Army Corps of Engineers

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## **OBJECTIVE 3:**

By 2026, the utilities crossing Church's beach will be protected.

Funding Source: Town of Gosnold MEMA

Target Date: 2026

### **ACTION 3.1**

By 2024, an analysis of the risks posed by climate change to the utilities crossing Church's beach will be conducted.

Lead: Gosnold Water and Electric Departments

### **ACTION 3.2**

By 2026, protection and mitigation measures will be installed.

Lead: Town of Gosnold

## **SUCCESS INDICATORS**

Objective 1: Protecting Critical Waterfront Infrastructure

- o Plan, permitting, and construction completed.

Objective 2: Protecting Cuttyhunk Channel

- o Plan, permitting, and construction completed.

Objective 3: Protecting Church's Beach Utility Lines

- o Plan, permitting, and construction completed.

Updated by SY 1/10/2024

## **GOAL #2: INFRASTRUCTURE**

Just like the island's man-made infrastructure, Gosnold's natural resources are at risk. Cuttyhunk's water supply and the roads that access the water supply are all vulnerable to contamination, rainstorm washout, and wildfire.

Further, the issue of saltwater intrusion into the aquifer is a continued issue that the Town of Gosnold water department has already been focusing on, as the proposed actions demonstrate. Climate change will only put more stress on the natural ecosystems that generate tourism and support local businesses. In particular, the ponds and watersheds on the Western end of the island are vulnerable to sea level rise and extreme storm events. Likewise changes in sea level, temperature, and acidification will have impacts on eel grass and fisheries. So, mitigation efforts must be studied and planned for in earnest to respond effectively to potential disruptions.

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### **OBJECTIVE 1:**

By 2030, water supplies at risk from sea level rise and overdrawn will be identified and protected.

Funding Source: Town of Gosnold MADEP

Target Date: 2030

#### **ACTION 1.1**

By 2025, a hydrologic study of the Cuttyhunk water supplies will be conducted including identification of areas at risk of saltwater infiltration from both sea level rise and overdrawn. Impacts on water supply due to decreased rainfall and on septic leaching will also be assessed.

Lead: Town of Gosnold Water Department

Partners: MADEP, US Geological Survey (USGS), Contractor

UPDATE: SY contact with USGS which is conducting a hydrologic study of Martha's Vineyard, referred to MADEP. Proposal submitted to MEMA under Building Resilient Infrastructure and Communities (BRIC) program (1/8/2024).

#### **ACTION 1.2**

By 2027, mitigation measures will be designed and implemented to prevent saltwater infiltration into the Cuttyhunk water supply.

Lead: Town of Gosnold Water Department

Partners: MADEP, USGS, Contractor

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### **OBJECTIVE 2:**

By 2030, natural resources and ecosystems at risk from climate change will be identified with mitigation strategies.

Funding Source: MADEP

Target Date: 2030

### **ACTION 2.1**

By 2026, Survey West End Pond and Cuttyhunk Pond (harbor) for ecosystems at risk (e.g., eelgrass, shellfish) due to climate changes (e.g., sea level rise, temperature, and acidity); map habitats; identify mitigations; design, fund, and implement mitigations.

Lead: Town of Gosnold Conservation Commission

Partners: Audubon Society, MADEP, Cuttyhunk Shellfish Co.

## **SUCCESS INDICATORS**

Objective 1:

Protecting Cuttyhunk's Water Supply

- Mitigation measures installed.

Objective 2:

Protecting Cuttyhunk's Watersheds

- Mitigation strategies implemented with ongoing stewardship, healthy salt marsh and eel grass, shellfish harvests.

## **GOAL #3: EMERGENCY MANAGEMENT**

Shifting the focus from proactive studies and vulnerability assessments, Gosnold also needs a robust and well thought- through reactive emergency response plan to address inevitable crises that result from climate change.

Gosnold already has Memorandums of Understanding (MOUs) in place with the towns of New Bedford and Martha's Vineyard for Fire, EMS, and police emergencies. Further, there are already designated MassCare Center locations, and Cuttyhunk is an NFPA Federal Firewise Community.

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### **OBJECTIVE 1:**

By 2025, the Community Wildfire Protection Plan will be implemented including staffing, training, and specialized firefighting equipment.

Funding Source: MADEP, MEMA

Target Date: 2025

#### **ACTION 1.1**

By 2023, develop a schedule for plan implementation

Lead: Town of Gosnold Fire and Emergency Management

Partners: MEMA

UPDATE: Coordinated effort by Town, BBC, and DCR to burn 3-5 acres on Cuttyhunk in Spring 2023, MA Fish & Wildlife burned Penikese April 2023. Burns with BBC planned for Spring 2024.

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### **OBJECTIVE 2:**

By 2030, Gosnold will be prepared to address acute damage and disruption to critical supply chain infrastructure (piers, docks, wharves, ferries, harbors).

Funding Source: Town of Gosnold, MEMA

Target Date: 2030

#### **ACTION 2.1**

By 2026, develop and implement an emergency plan

Lead: Town of Gosnold Fire and Emergency Management

Partners: MEMA

## **SUCCESS INDICATORS**

Objective 1:

Protect Cuttyhunk from Wildfire

- o Trainings, controlled burns

Objective 2:

Create an Emergency Management Plan

- o Emergency plans and drills, post-event reviews

Updated by SY 1/10/2024

Updated by SY 1/10/2024

## **GOAL #4: ENERGY TRANSFORMATION**

The human-driven emissions of Greenhouse gases (GHGs) are the primary driver of climate change. While large, multi-national corporations continue to be the main sources of GHG emissions, the town of Gosnold can certainly do its part to minimize its impact. A first step is to create a baseline measurement of the town's total GHG emissions. With this data, the town can then make more informed decisions to advance towards a goal of net zero emissions, so that any GHGs put out by our community are cancelled out or compensated for. Another key step toward energy transformation is becoming certified as a Green Community. Some of the initiatives underway in the Green Community process are zoning and permitting to support renewable energy projects, energy audits of town buildings, energy reduction plan for town operations, and adopting the stretch building code.

Cuttyhunk currently has a large solar array that was installed in 2017. This project currently meets all of the demands of the island in the winter, but during the increased demand in the summer, particularly from the marina, a supplemental generator has been required. Naushon has a history of innovation in energy transformation starting with replacing light bulbs and appliances with more energy efficient types in the 1990s and installing a solar photovoltaic system in 2012.

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### **OBJECTIVE 1:**

By 2023, Gosnold will be a Green Community and begin development and implementation of Green Community objectives and a plan to be a net zero community.

Funding Source: Town of Gosnold, MADOER

Target Date: 2023

#### **ACTION 1.1**

By 2022, conduct an energy audit of Town buildings

Lead: Town of Gosnold

Partners: Contractor

UPDATE: Audit completed 2022.

#### **ACTION 1.2**

By 2023, complete and submit the MA Green Community application.

Lead: Town of Gosnold

Partners: MADOER

UPDATE: Application completed and submitted October 2023.

#### **ACTION 1.3**

By 2024, develop and implement Green Community objectives.

Lead: Town of Gosnold

Partners: MADOER

#### **ACTION 1.4**

Updated by SY 1/10/2024

By 2025, Cuttyhunk will conduct an evaluation of its carbon footprint and develop a plan to become a net zero community

Lead: Town of Gosnold

Partners: MADDOER, Graduate school intern, CCAN volunteer

## **SUCCESS INDICATORS**

Objective 1:

Gosnold and Green Energy

- o Green Community objectives, Carbon footprint, Plan for net zero

## **GOAL #5: SOLID WASTE MANAGEMENT**

The town of Gosnold has no local way to deal with the demands of its residents' solid waste and recycling, and currently employs barges to transport this waste to locations off-island, to much expense and environmental impact. As the climate changes, this will only become more expensive and burdensome, so a culture shift is needed to encourage the town's residents and visitors to lessen their impact.

One easy area to decrease consumption is with single-use plastic water bottles, an initiative we already have begun. Further, a municipal and/or residential composting system would greatly reduce the town's solid waste stream as would a better system for managing construction waste. Naushon has a decentralized system of trash compactors in each house and a central composting pile (on hold during COVID). Single stream recyclables are collected separately from the compacted trash. Both are transported by ferry to Woods Hole.

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### **OBJECTIVE 1:**

By 2023, Gosnold will develop and implement an educational campaign to discourage use of disposable water bottles.

Funding Source: Private Donations Gosnold Community Fund Gosnold Harbor Committee

Target Date: 2023

#### **ACTION 1.1**

By 2023, CCAN purchases and distributes without charge reusable branded water bottles

Lead: CCAN

UPDATE: CCAN distributed over 300 reusable water bottles Summer 2023 and will continue to make them available in 2024. CCAN works with larger island activities (Plein Air Festival, Art and Writers workshops, CYC parties and CHS parties) to provide reusable water bottles in place of single use plastic water bottles.

#### **ACTION 1.2**

By 2024, plans for new public restrooms at the Fish Dock on Cuttyhunk will include reusable water bottle refilling stations.

Lead: Town of Gosnold

Partners: CCAN

UPDATE: Restroom project on hold pending funding.

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### **OBJECTIVE 2:**

By 2024, Cuttyhunk residents and visitors will be educated to “Bring Less, Use Less, Leave Less” and will incorporate this philosophy into their daily decisions concerning Cuttyhunk.

Funding Source: CCAN

Target Date: 2024

#### **ACTION 2.1**

Updated by SY 1/10/2024

By 2024, CCAN will encourage businesses and residents to sign a Cuttyhunk CCAN pledge to make individual efforts to reduce waste production and make business decisions more environmentally friendly. CCAN will incentivize businesses to switch to non-plastic and non-Styrofoam materials and will announce a Cuttyhunk Green Business of the Week.

Lead: CCAN

Partners: Cuttyhunk residents and businesses.

UPDATE: Lisa Lambert and Nancy Wilder spoke to most businesses and intend to revisit conversations in the spring, 2024. Businesses asked to consider discontinue use of styrofoam containers and substitute paper water containers for plastic. Businesses were offered the opportunity to apply to CCAN for reimbursement if the cost of substituting supplies was excessive. CCAN to add conservation and environmental suggestions to informational handout given to Cuttyhunk visitors, boaters, renters, and residents.

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### OBJECTIVE 3:

Develop a more cost effective and environmentally sensitive system for managing solid waste on Cuttyhunk that will encourage residents and businesses to reduce and pay for what they produce.

Funding Source:

Town of Gosnold, MACZM, USDA

Target Date: 2025

#### **ACTION 3.1**

By 2025, develop a new waste transfer station on Cuttyhunk with improved management systems, procedures, and fees to encourage reduction in solid waste generation including improved recycling and a swap table.

Lead: Town of Gosnold Solid Waste

#### **ACTION 3.2**

By 2025, implement a community-wide composting program.

Lead: CCAN

Partners: Town of Gosnold Solid Waste, Community

## **SUCCESS INDICATORS**

Objective 1:

Reduce Plastic Water Bottle Use

- Observed decrease in bottle disposal.

Objective 2:

Encourage A Cultural Shift Around Solid Waste Impact

- Informal survey of attitudes and observation of behaviors.

Objective 3:

Updated by SY 1/10/2024

## Re-design and Re-imagine Solid Waste Removal System

- o A reduction in number of barge trips for solid waste transport to the mainland by 25% by 2025.

## **GOAL #6: ECONOMIC RESILIENCE**

As a town, Gosnold relies mainly on tourism during a season stretching from late Spring to early Fall. While increased temperatures may prolong the length of this warm weather, it will certainly also disrupt many facets of what makes the town so attractive to visitors. Further, the many businesses on island can also do their part to help the town reduce its GHGs and other environmental impacts.

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### **OBJECTIVE 1:**

By 2025, businesses on Cuttyhunk Island will understand their vulnerabilities to climate change and the challenges and opportunities that will enable them to transition to more sustainable business models.

Funding Source: CCAN

Target Date: 2025

### **ACTION 1.1**

By 2025, meet with Cuttyhunk business owners to discuss vulnerabilities, challenges, and opportunities. Develop revised business models and emergency plans.

Lead: Select Board

Partners: Business owners

UPDATE: Need volunteer to survey business owners.

## **SUCCESS INDICATORS**

Objective 1:

- o Educate business owners about the impact and their role in mitigating climate change
- Informal survey of business owners, Business emergency plans