

Truro Climate Action Plan [Draft]

1. Introduction

Purpose and Scope

The **Truro Climate Action Plan** outlines strategies to address the impacts of climate change, enhance resilience, and ensure a sustainable future. Focused on Truro's unique coastal challenges, the plan targets reducing emissions, protecting natural resources, and fostering community engagement.

Vision Statement

The town is committed to sustainability, resilience, and preserving its natural beauty. By working together, the community aims to safeguard its environment, economy, and way of life for future generations.

Background and knowledge from context

Truro faces urgent climate challenges, including rising sea levels, coastal erosion, and extreme weather. These threaten the town's ecosystems, infrastructure, and tourism-based economy. Proactive action is essential to reduce risks and build a resilient, sustainable future.

2. Climate Change Impacts on Truro, MA

Truro, MA, situated along the vulnerable Cape Cod coastline, faces acute risks from climate change. The town's unique position, with its extensive sandy beaches, fragile dunes, and reliance on its natural environment for economic and social well-being, makes it particularly susceptible to the effects of rising sea levels, coastal erosion, and shifting climate patterns. These impacts threaten Truro's ecosystems, infrastructure, and way of life.

2.1 Coastal Risks in Truro

Truro stands on the frontlines of climate change, with its extensive coastline and critical infrastructure facing escalating risks from rising sea levels, intensified storms, and more frequent flooding events. Cape Cod is projected to experience sea level rise of **1.3 to 3.1 feet** by the middle of the century and **4.0 to 10.3 feet** by the end of the century, amplifying these

threats.¹ These changes jeopardize the town's natural beauty, its built environment, and the livelihoods of its residents.

Coastal Erosion and Risks

Truro's sandy shores and dunes, which serve as both natural barriers and key attractions for its tourism-driven economy, are particularly vulnerable to erosion. Rising sea levels are expected to accelerate this process, narrowing beaches and causing landward retreat of the shoreline. The potential loss of these iconic beaches could devastate the local economy, which heavily relies on tourism revenue. Property values and tax revenues may also suffer as erosion encroaches on homes and businesses near the coast.

Rising Sea Levels and Flooding

Tidal flooding and storm surges are becoming more frequent and severe, threatening both low-lying areas and critical infrastructure. Roads, homes, and essential facilities near the shoreline are increasingly at risk of inundation. Key examples include **Pump Station #6**, which faces potential submersion at just three feet of sea level rise, potentially leading to wastewater system failures and environmental contamination. Floodwaters can also carry debris and hazardous materials, causing physical damage to buildings and infrastructure while spreading contaminants that degrade soil and water quality, posing risks to both human health and ecosystems. The East Harbor outfall pipe, crucial for stormwater management, is similarly vulnerable at three feet of sea level rise, risking disruptions that could exacerbate flooding in adjacent areas and further amplify environmental harm.²

Transportation Vulnerabilities

Culverts throughout Truro, essential for managing stormwater and tidal flows, face significant threats from rising water levels. Structures like the **Highhead Road Culvert**, **Castle Hill Road Culvert**, and the **Mill Pond and Eagle Creek Culverts**³ are at risk as sea levels rise. These culverts play a critical role in maintaining the stability of roadways, and their failure could result in severe flooding and road washouts, isolating portions of the community.

As part of the Outer Cape, Truro is particularly vulnerable to broader flooding impacts across the region. With only a single road, Route 6, providing access to and from the town, disruptions caused by culvert flooding could further isolate Truro. **Route 6 culverts near Long Nook Road** and **South Pamet Road** are impacted at just one foot of sea level rise, highlighting this vulnerability.

¹<https://www.capecodcommission.org/resource-library/file/?url=/dept/commission/team/climate/Shared%20Documents/Climate%20Action%20Plan/Cape-Cod-Climate-Action-Plan.pdf>

² <https://www.capecodcommission.org/our-work/sea-level-rise/>

³ <https://www.capecodcommission.org/our-work/sea-level-rise/>

At six feet of sea level rise or storm tide, the **Orleans-Eastham Rotary on Route 6** would be submerged, effectively turning the Outer Cape into an island.⁴⁵ This critical transportation link would be cut off, isolating the Outer Cape from the rest of Cape Cod. Limited connectivity threatens emergency response capabilities and restricts access to essential goods, services, and economic activities, compounding the risks posed by climate change. Such an event could occur even sooner during severe storm events, emphasizing the urgent need for regional coordination to address these vulnerabilities.

Economic Implications

Truro's economy relies heavily on its natural resources, particularly its beaches, harbor, and tourism attractions. As coastal erosion and flooding accelerate, the town faces mounting economic challenges. The loss of property tax revenue from eroded or inundated areas, combined with reduced tourism income, could significantly strain local budgets. The need for costly infrastructure repairs and retrofits will only compound these financial pressures.

Beyond beaches being eroded and flooding, The **Ballston Beach, Fisher Beach, and Ryder Beach** parking lots face flooding risks at one to three feet of sea level rise.⁶ These impacts will reduce accessibility and hurt the local economy.

Pamet Harbor, a hub for local boating and recreation, is also threatened. Its jetties, boat ramp, and parking lot are all projected to be inundated with just three feet of sea level rise. These disruptions could severely impact recreational and economic activities centered on the harbor, further straining Truro's economy.

Risks to the Population

Truro's population faces significant dangers from climate change, amplified by its geographic and demographic vulnerabilities. With only a single road (Route 6) connecting the town, extreme weather events could isolate residents from essential resources, including emergency shelters and medical care. Truro's older population, many with mobility impairments or chronic medical needs, is especially at risk during storms and flooding.

The town lacks an emergency shelter or healthcare facility, leaving residents reliant on shelters in Eastham or Provincetown, which may become inaccessible during major events. In addition to physical isolation, extreme weather events could disrupt electricity and communication networks, leaving residents without access to vital services, emergency updates, and essential utilities. Chronic climate impacts, such as heat waves and air pollution, further threaten the town's most vulnerable residents, compounding these risks.

2.2 Other Climate Challenges

⁴ CapeCodCoast.org

⁵ <https://www.capecodtimes.com/story/news/2015/12/18/cape-cod-towns-struggle-to/32859731007/>

⁶ <https://www.capecodcommission.org/our-work/sea-level-rise/>

Beyond coastal impacts, Truro is also experiencing other risks related to climate change:

- **Shifting Precipitation Patterns:**

Truro is expected to face more intense rainstorms in winter and spring, increasing the risk of inland flooding. Conversely, summer droughts may grow more frequent, straining water resources and affecting local agriculture and ecosystems.

- **Wildfire Risks:**

Drier summers and longer droughts increase the likelihood of wildfires, particularly in Truro's wooded and undeveloped areas, which form a large part of the town's landscape.

- **Human Health Concerns:**

Rising temperatures and changing ecosystems are likely to lead to an increase in heat-related illnesses, **mental health problems** and vector-borne diseases. Harmful algal blooms in surrounding water bodies may also pose risks to public health and recreation.

2.3 The Need for Urgent Action

The interconnectedness of these risks highlights the urgent need for Truro to take proactive steps to address the impacts of climate change. While adapting to these challenges will require investments, the costs of inaction will be far greater in terms of environmental degradation, economic loss, and reduced quality of life for residents. By protecting its coastal and inland environments, building resilience into its infrastructure, and fostering community awareness, Truro can position itself as a leader in climate action on Cape Cod.

Economic Implications for Truro, MA ⁷

Climate change poses significant economic risks to Truro, MA, with the town's reliance on its natural environment and coastal properties making it particularly vulnerable. Rising sea levels, coastal erosion, and more frequent flooding threaten not only Truro's built environment but also its economic foundation, including property values, tourism, and tax revenues.

Coastal Property Damages

The cumulative damage to Truro's properties from flooding and coastal erosion is projected to reach **\$254.65 million** by 2100. Damage costs are expected to accelerate significantly over time:

- **2021 to 2030:** \$7.67 million in damages, averaging \$0.77 million annually.
- **2031 to 2050:** \$21.78 million in damages, averaging \$1.09 million annually.
- **2051 to 2100:** \$225.2 million in damages, averaging \$4.5 million annually.

7

https://www.capecodcommission.org/resource-library/file?url=%2Fdept%2Fcommission%2Fteam%2FWebsite_Resources%2FCAP%2FEconomic+Impacts+of+Climate+Change+on+Cape+Cod+-+Technical+Report.pdf

These damages primarily reflect the loss of valuable coastal properties, increasing costs for property owners and local governments to repair or protect infrastructure.

Tax Revenue Loss ⁸

Truro is projected to lose **\$343.81 million** in total tax revenue by 2100, a direct consequence of property devaluation and flooding-related impacts:

- **2021 to 2030:** \$9.83 million in lost tax revenue.
- **2031 to 2050:** \$51.89 million in lost tax revenue.
- **2051 to 2100:** \$282.08 million in lost tax revenue.

Lost revenue could severely constrain Truro's ability to fund critical services, including emergency response, infrastructure repairs, and climate adaptation projects.

Specific Economic Impacts

- **Isolated Homes:**
Flooding of isolated homes contributes to lost tax revenue of **\$10.09 million** by 2100. These properties, disconnected from critical infrastructure, face heightened risks and may become uninhabitable over time.
- **Properties Near Flooded Roads:**
Properties within a quarter-mile of flooded roads are expected to generate **\$53.34 million** in lost tax revenue by 2100, as these areas become less accessible and desirable. This represents a significant economic impact on local mobility and property values.

Tourism and Climate Change in Truro, MA

Tourism is a vital economic driver for Truro, much like the rest of Cape Cod. The town's reliance on its beaches and natural beauty makes it particularly susceptible to the impacts of climate change. While specific data for Truro is not always available, insights from Cape Cod as a whole provide a clear indication of the risks climate change poses to the town's tourism economy.

Beaches: A Critical Asset at Risk

Truro's beaches, part of the Cape Cod National Seashore, are among its most valuable tourism assets. Cape-wide data highlights the economic importance of these beaches, with their current annual recreational value estimated at over **\$246.5 million** ⁹. However, sea level rise and intensified storms are projected to cause significant beach narrowing, which could diminish the appeal and accessibility of Truro's shoreline.

⁸ Note, not sure if this includes tax revenue beyond housing damage.

⁹

<https://www.capecodcommission.org/resource-library/file/?url=/dept/commission/team/climate/Shared%20Documents/Climate%20Action%20Plan/Cape-Cod-Climate-Action-Plan.pdf>

The Cape Cod National Seashore is expected to suffer a loss of **\$9.7 billion**¹⁰ in recreational value between 2021 and 2100 due to sea level rise. While this figure encompasses all of Cape Cod, the implications for Truro are clear: narrower beaches and increased crowding could deter visitors, reducing the economic benefits of beach tourism.

Broader Economic Impacts on Truro's Tourism Economy

Tourism spending supports a wide range of businesses in Truro, from local shops and restaurants to accommodations and recreational services. A decline in beach visitation caused by climate change could lead to:

- **Decreased revenue for local businesses** that depend on seasonal visitors.
- **Lower property values** for waterfront and vacation homes, reducing tax revenue for the town.
- **Reduced job opportunities** in tourism-related industries, which are a cornerstone of Truro's economy.

Natural Ecosystems and Scenic Beauty

Beyond beaches, Truro's natural resources—including dunes, marshes, and coastal ecosystems—play a key role in attracting tourists. Cape-wide studies warn that climate change could degrade these ecosystems, reducing their appeal to visitors. For example:

- **Rising seas and storm surges** may damage Truro's marshlands, critical for wildlife viewing and outdoor recreation.
- **Loss of scenic beauty** due to erosion and habitat destruction could diminish Truro's reputation as a tranquil coastal destination.

Fishing and the Blue Economy

Truro's role in Cape Cod's blue economy, including fishing and shellfishing, is vulnerable to climate change impacts. Rising ocean temperatures, acidification, and extreme weather threaten key fisheries and shellfish populations, jeopardizing livelihoods. Cape-wide, fishing and aquaculture supported \$14.9 million in wages and \$34.2 million in regional GDP in 2017¹¹, underlining the potential economic loss if fisheries like Atlantic cod and American lobster decline. Sea level rise may further disrupt docks and coastal access, compounding these challenges. Adaptation efforts are crucial to safeguarding Truro's link to this vital economic sector.¹²

¹⁰ Cape Code Climate Action Plan

¹¹

https://www.capecodcommission.org/resource-library/file?url=%2Fdept%2Fcommission%2Fteam%2FWebsite_Resources%2FCAP%2FEconomic+Impacts+of+Climate+Change+on+Cape+Cod+-+Technical+Report.pdf

¹² Editor Note: I genuinely do not know direct economic impact to Truro in this context, as these numbers are more broader Cape cod as a whole

Economic Takeaways

The economic costs of inaction are stark. Damages to property, infrastructure, and tax revenue represent substantial risks to Truro's financial stability. Proactive investment in coastal resilience, infrastructure upgrades, and sustainable economic diversification is essential to mitigate these long-term impacts and preserve Truro's economic viability.

3. Mitigation Strategies

Mitigation Strategies for Truro, MA

Truro's 2021 Greenhouse Gas (GHG) inventory provides valuable insights into the town's emissions profile, highlighting transportation, residential energy use, and electricity as the largest contributors. A smaller but important portion of emissions originates from municipal operations. Addressing these areas will help Truro achieve its climate goals.

Reduce Transportation Emissions (45% of Total Emissions)

Transportation Mitigation Strategies for Truro, MA

Transportation accounts for 45% of Truro's greenhouse gas (GHG) emissions, making it the largest contributor. Mitigation efforts should focus on adopting electric vehicles (EVs), upgrading the municipal fleet, and supporting regional transit improvements.

Electric Vehicle (EV) Adoption

Promoting EV use among residents and visitors is a key strategy to reduce transportation emissions.

Public Charging Infrastructure

The Energy Committee is currently exploring and implementing charging solutions to support the growing number of EV users:

- **Install Charging Stations at Public Locations:**
Charging stations at public buildings, such as the library are under active consideration to serve residents, visitors, and employees.
 - In 2021 Truro's first EV station was installed at Truro Town Hall.
 - These sites are being planned for future EV stations:
 - Truro Library
 - (Get the rest)
- **Collaborate with Local Businesses:**
The Energy Committee is working with local businesses to identify opportunities to install EV chargers, creating a network of accessible charging options throughout Truro.

- Partner with state and federal programs to subsidize infrastructure costs.
 - EV Stations at the following Business are currently (find out details)
 - Truro Vineyards
 - ...

Community Incentives and Education:

- Promote state rebates and tax credits for EV purchases.
- Educate residents on the cost savings and environmental benefits of switching to EVs.

Municipal Fleet Electrification

To be written **It's my understanding that as municipal vehicles are retired, they are being replaced by e-v's or hybrids whenever possible—DPW should have this info.**

Support for Regional Public Transit

While Truro may not directly control public transit, supporting regional transit improvements can further reduce emissions.

- **Advocacy for Electrification:**
 - Collaborate with the Cape Cod Regional Transit Authority (CCRTA) to advocate for electric buses.
 - Support regional funding applications for infrastructure upgrades.
- **Encourage Public Transit Use:**
 - Promote awareness of existing transit options to reduce reliance on private vehicles.

By prioritizing EV adoption, transitioning the municipal fleet, and advocating for regional transit improvements, Truro can make significant progress in reducing transportation emissions while supporting sustainable practices across the region.

Improve Building Usage of Energy (31% of Total Emissions)

Transition to Clean Residential Energy (25% of Total Emissions)

In Truro, residential heating with propane and heating oil contributes significantly to greenhouse gas emissions. Addressing this challenge involves focusing on energy efficiency, electrification, and renewable energy adoption while taking advantage of existing and future state and federal incentives:

- **Energy Efficiency Retrofits:**
Encourage residents to upgrade insulation, install energy-efficient windows, and adopt modern HVAC systems. Programs like Mass Save offer rebates and no-cost energy assessments, making these improvements more accessible.
- **Electrify Heating Systems:**
Promote the adoption of heat pumps for efficient year-round heating and cooling. Federal tax credits and upcoming rebates through the Inflation Reduction Act (IRA) can help offset installation costs.
- **Adopt Solar Energy:**
Support the adoption of rooftop solar installations and participation in community solar projects. Federal incentives, such as the Residential Clean Energy Credit, make these renewable energy options more affordable for homeowners.
- **Enhance Building Codes:**
Update local building codes to require higher energy efficiency standards for new construction and major renovations. Emphasize the use of energy-efficient materials, electrification-ready infrastructure, and renewable energy integration. Work with state programs to provide guidance and resources for builders and homeowners to meet these new standards.

○

By leveraging these existing and future programs, along with strengthened building codes, Truro can reduce residential emissions, improve energy efficiency, and support the transition to clean energy with minimal financial burden on its residents.

Improve Municipal Operations Emissions (4% of total Emissions)

CAC Note: Energy Committee should definitely approve or write this section. Text below is a placeholder.

Reducing greenhouse gas emissions and improving energy efficiency in municipal operations is a critical step in addressing climate change in Truro, MA. This effort focuses on both new municipal construction and retrofitting existing municipal buildings to create a more sustainable future for the town and its residents.

New Municipal Construction

- **Adopt and Enforce the Stretch Building Code:** Truro should ensure that new municipal construction meets high standards of energy efficiency through the adoption of the stretch building code.
- **Integrate Best Building Practices:** Town codes and regulations should encourage advanced insulation, weatherization, and the use of efficient HVAC systems to minimize energy demand.
- **Implement Sustainable Procurement Policies:** Municipal procurement should prioritize low-energy-demand buildings and solar-ready designs for all new structures.

Retrofit Existing Municipal Buildings

- **Conduct Energy Assessments:** Utilize no-cost energy assessments provided by the Cape Light Compact to identify areas for improvement in existing municipal buildings.
- **Upgrade Systems for Efficiency:** Implement smart temperature controls, enhance weatherization, improve insulation, and retro-commission HVAC systems to reduce energy consumption.

By focusing on municipal buildings, Truro can lead by example, demonstrating how energy efficiency and thoughtful retrofitting can significantly contribute to local emissions reduction goals while lowering operational costs and creating a more sustainable community.

- Events:
 - 2013 Municipal buildings excluding Truro Central School converted to LED lighting
 - 2018: Truro Central School converts to LED lighting

Improve Commercial Emissions (2% of Total Emissions)

Actions:

- 2022 - Climate Action Committee works with Cape Light Compact to sign up 17 Truro businesses for an energy audit

Lower Electricity Production Emissions (22% of Total Emissions)

With the rise of electric vehicles (EVs) and electrified buildings that rely on electricity for HVAC and other needs, ensuring that Truro's electricity comes from renewable sources is essential. To support this transition, the town can focus on several key strategies:

Expand Solar Energy:

Promote the development of both public and private solar arrays to increase locally generated clean energy. Encourage residents, businesses, and municipal properties to invest in solar installations.

Public Solar Initiatives

- In 2010 6.8 kw Solar PV array installed on Central Elementary School
- There was another panel installed at some point. Get the details
- 2017 Truro invests in a solar farm in Canton that supplies 100% of municipal electricity

Private Solar

- Get the details on solar installed

Procure Green Energy:

Whenever possible, ensure that electricity used in Truro is sourced from renewable providers, leveraging programs that allow towns to opt into clean energy procurement.

Invest in Battery Storage and Microgrids:

Implement energy storage solutions and microgrids to enhance the reliability of renewable energy, reduce dependency on fossil fuels, and provide resilience during outages. These investments benefit both mitigation by reducing emissions and adaptation by improving energy security in extreme weather events.

By prioritizing renewable energy and modern energy infrastructure, Truro can ensure that its increasing electricity demand is met sustainably while supporting the town's climate goals.

Support Offshore Wind:

Truro can support state-wide offshore wind initiatives by educating residents on their benefits, including clean energy production, job creation, and reduced emissions. Hosting community forums and sharing factual information can address misconceptions and build local support, reducing opposition that might delay these critical projects. By fostering understanding, Truro can play a key role in advancing renewable energy solutions for the region.

Address Waste Emissions

While waste emissions are a smaller contributor, reducing landfill use can make a difference:

- **Expand Recycling and Composting Programs:**
 - Promote waste diversion for residents and businesses.
- **Implement Zero-Waste Practices:**
 - Encourage reusable materials and minimize disposable items in town operations.
- **Actions**
 - 2019 Composting becomes available to residents at the Transfer Station

Natural Resources and Sequestration

6. Broader Initiatives

- **Land Use and Natural Carbon Sequestration:**

- Protect forests, wetlands, and open spaces to absorb carbon emissions.
- Restore degraded natural areas to enhance their sequestration capacity.
- **Education and Engagement:**
 - Conduct outreach programs to engage the community in sustainable practices.

4. Adaptation Strategies

- MODEL BYLAW DEVELOPMENT - page 92 of cape cod action plan
- MULTI-HAZARD MITIGATION PLANNING - page 94 of cape cod action plan\
- MUNICIPAL VULNERABILITY - PREPAREDNESS PROGRAM - climate resiliency projects - page 94
- OUTER CAPE INTERMUNICIPAL SHORELINE FRAMEWORK - page 95
-

Possible Adaptations to Consider

Alex Limpaecher Note: I think the real work is really prioritizing this. It's easy to list based on the cape cod plan climate action plan. See Chapter 7. Maybe that can be an outcome of the climate summit

Infrastructure Enhancements

- Assess and adapt vulnerable roadways by elevating, relocating, or abandoning low-lying road segments.
- Replace outdated culverts to improve tidal flow, reduce road flooding, and restore tidal marshes.
- Protect power lines and consider undergrounding in vulnerable areas to enhance resilience during storms.
- Expand and improve communication systems to maintain connectivity during emergencies.

Land Use Planning and Development

- Strategically relocate structures and infrastructure from high-risk coastal areas (managed retreat).
- Develop and enforce climate-resilient building codes, including floodproofing and elevation standards.
- Revise zoning regulations to limit development in floodplains and areas prone to coastal erosion.

- Draft and adopt floodplain bylaws to address development and redevelopment in vulnerable areas

Community Resilience and Preparedness

- Establish resilience hubs to provide essential services during emergencies.
- Strengthen emergency planning systems, including evacuation routes and communication protocols.

Vulnerabilities and actions

- Above ground Power lines
 - Underground then
- Low lying roads, particularly on shore road (hazardous materials)
 - Planning committee's bylaws
- Culverts floodable
 - Retrofit - could use some investigation
- Flooding that cuts off the outer cape
 - MVP grant - shelters and micro grids
 - What is being done about the section of route 6 roundabout
 - Truro low lying roads?
 - Evacuation plan?
- Brush fires
 - ?
- Heat waves
 - MVP grant shelters?
- Environmental flooding such as dunes and salt marshes?
- Communications?

Tapping into Larger Grant and Program Opportunities

For a small town like Truro, funding climate initiatives solely at the local level can be a significant challenge. To achieve sustainability goals, it is essential to tap into larger regional, state, and federal grant and program opportunities. These resources provide the financial support and technical assistance necessary to implement impactful projects that might otherwise be out of reach.

- **Leverage State Programs:**
Programs such as **Green Communities** and the **Mass Save Program** offer grants and technical assistance to towns like Truro for energy efficiency upgrades, renewable energy adoption, and climate resilience projects. These programs can help fund

initiatives such as solar installations, modernizing municipal buildings, and purchasing electric or fuel-efficient vehicles.

- **Access Federal Funding:**

Federal resources like the **Inflation Reduction Act (IRA)** provide tax credits and rebates for heat pumps, solar energy, and battery storage, benefiting residents and municipal projects alike. Additionally, federal grants for renewable energy infrastructure and climate resilience can offset costs for major initiatives.

- **Collaborate Regionally:**

Partnering with neighboring towns and regional organizations enables Truro to participate in larger-scale projects, such as offshore wind development or shared microgrids, which require significant investment but offer substantial benefits.

- **Explore Climate-Specific Grants:**

Programs like the **Municipal Vulnerability Preparedness (MVP) Program** provide funding specifically for climate adaptation and resilience. Truro's participation in such initiatives can support projects that strengthen the town's ability to respond to climate impacts.

By tapping into these larger funding opportunities, Truro can implement critical projects to reduce emissions, improve energy efficiency, and enhance climate resilience without overburdening local resources. Collaboration with state and federal programs ensures that the town can achieve its sustainability goals effectively and affordably.

5. Community Engagement and Education

Recourse of note: See [Cape Cod Communication Strategy](#)

- **Public Awareness Campaigns**

Host workshops on sustainable practices, such as energy efficiency and landscaping for resilience.

- **Stakeholder Collaboration**

Partner with local businesses, non-profits, and academic institutions to drive action.

- **Youth and School Programs**

Integrate climate education into school curriculums and create youth-driven initiatives.

6. Monitoring and Evaluation

- **Progress Tracking**

Establish metrics for success (e.g., emissions reductions, homes retrofitted, wetlands restored).

- **Regular Reporting**

Provide annual updates to the community.

Adjust strategies as needed based on new data or community feedback.

- **Feedback Mechanisms**

Create opportunities for residents to provide input on the plan's implementation and progress.

Appendix

Flood Dangers in Truro

<https://www.capecodcommission.org/our-work/sea-level-rise/>

- Pump Station #6 - Waste Water Pump Station - 3 feet
- East Harbor outfall pipe - 2 feet
- Culverts
 - Highhead Road Culvert - Bridge/Tidal Restriction | Highhead Road Culvert - 1 feet
 - culvert on Castle Hill Road, Little Pamet - 3 feet
 - Route 6 culvert near Long Nook Road - 1 feet
 - culvert under Route 6 near South Pamet Road - 1 feet
 - Mill Pond Culvert - 6 feet
 - Eagle Creek culvert - 6 feet
- Beach Parking Lot flooding
 - Ballston Beach Parking Lot - 2 feet
 - Fisher Beach Parking Lot - 3 feet
 - Ryder Beach - 3 feet
- Pamet Harbor
 - Pamet Harbor Jetties North/South - 2 feet
 - Pamet Harbor - 2 feet
 - Pamet Harbor Boat Ramp - 2 feet
 - Pamet Harbor Parking Lot - 6 feet
 -

Minutes from Climate Action Committee Meeting December 4, 2024

Members and others attending: Lili Flanders, Chair, CAC, Alex Limpaecher and Mark Gebhardt, Members CAC, Georgia Neil (CAC volunteer), Emily Beebe (Health and Conservation Agent), Courtney Warren (Assistant Health and Conservation Agent). Bob Higgins-Steele (Co-chair, Truro Energy Committee). No remote attendees.

1. **Assign Note Taker:** Mark Gebhardt
2. **Public Comment:** no attendance from the public
3. **Discuss Whole Government Approach, Climate Summit, and future collaboration and joint goals with Energy Committee Members**

Bob Higgins-Steele led a discussion of a report he submitted to the CAC from the Energy Committee (EC). We discussed the Whole Government Approach (WGA) to climate change, which recognizes that effective climate leadership requires the integration of climate mitigation and adaptation into daily operations, decision-making, and planning for our municipality. There is more information on the WGA on page 59 of the

Reference: https://www.truro-ma.gov/sites/g/files/vyhlif9766/f/uploads/april_19_2024_local_comprehensive_plan_2.pdf

Truro Town Government is committed to this and all boards will focus on three aspects: Governance, Education and Resilience. The discussion was around the goals and actions approved by CAC on 5/26/2022 and the EC on 9/11/2023 and are included in the document provided to the CAC for this meeting. It was noted that the State of Massachusetts also takes a Whole Government Approach

The Local Comprehensive Plan (which discusses WGA; see web reference above) was discussed. The LCP is, “a planning tool used to guide the growth and direction of Truro while balancing a wide variety of needs, including protection of environmental resources, economic growth, quality of life and community character”. It is non-binding. There was the belief that the WGA should be binding, but it will take some cultural change. One concern that has been raised by the Town Manager, Staff and the Select Board since the CAP was presented to the Select Board in August of 2023 (by Carol Harris, former Chair of the CAC) is that current staff cannot take on more tasks than they already have, but they do take into consideration climate issues in all of their decisions. Furthermore, the new Climate Coordinator will aid this effort greatly.

We all agreed that a Climate Summit should be held in 2025 (incidentally, such a summit was approved by the SB in 2023, when Carol made her presentation of the CAP.) We decided that this ideally will be held in May or June of 2025 and led by our new climate coordinator.

We will plan a hybrid meeting in early 2025 with more members of the EC (some members live off-Cape in the winter).

Future goals of the collaboration with the EC were briefly discussed and will be dealt with in more depth at future combined meetings. The need for a Climate Stabilization Fund was discussed with the example of how a town in Denmark used clean energy sources for funding.

4. **Review and approve minutes from 11/6/24 meeting:** Minor wording changes were added/edited and the revised minutes were approved unanimously.

VOTE: 3/3 members in attendance.

5. **Discuss/set meeting schedule for Jan-June, 2025:** We voted unanimously to have 2 full meetings/month and make the 1 hour “catch up” (used primarily for discussion of programming) a full meeting. We may need to expand the second monthly meeting to 2 hours, depending on workload.

VOTE: 3/3 approved.

Dates agreed on are generally the first and third Wednesdays of the month, but to accommodate for holidays the dates chosen are: to Jan 15 and 29, Feb 5 and 19, March 5 and 26, April 2 and 16 (Town meeting is April 29), May 7 and 21, June 4, 18.

6. **Discuss and decide if we should add Climate Summit to 2024/2025 goals:** See above. This was unanimously approved. **VOTE 3/3 approve.**

7. **Summary of 11/20 discussion of Climate Action Plan document; further review/discussion.** Alex submitted a updated/improved version of the CAP where he was able to add significant areas of data and is continuing to update this. It was briefly discussed and will be looked at in more detail at our next meeting when members have had more time to digest his substantial contributions to the plan/document. He was heartily thanked for his efforts.

Alex will be collecting data on greenhouse gasses. Eric Mays – prior CAC member. He knew how to get numbers.

8. **Discuss and decide on future library presentations:**

January – Lili will ask Stephanie Ellis from Wild Care to see if she can do her presentation on pesticides and rodent control and how that affects wildlife. We discussed if this was in line with climate change and agreed that it was.

Lili will contact Board of Health and the Conservation Commission to see about HRP's on the warrant. Other possible topics include:

March/April – articles on the warrant, (flood plains)

Coastal resilience – mitigation and adaptation (Wellfleet and Provincetown)

Revisit home solar installation and heat pumps in a user-friendly way for Truro home owners.

June – meet the Climate Action Coordinator

9. Discuss budget needs. Tabled.

10. Update on divestment, Pesticide & Fertilizer HRPs. And ongoing projects.

Georgia had a discussion with Alex in the finance office about where the town invests its money. There are two buckets: 1. Retirement funds for employees which is operated by Barnstable County. 2. Other monies from taxes, etc., that are invested. She is going to inquire about where these funds are invested as a first step to learning if the town is investing in green companies/entities. We will also look for meetings of OPEB (Office of Post Employment Benefits) Trust meeting and ask about green investments. Lili will also bring this up with the TM at a coffee meeting and at the Committee Chair's meeting.

11. Update on Climate Coordinator hire. The new climate coordinator has been selected. Chris Palmer has been offered the position and is currently negotiating the terms.

12. Adjourn: 12:00PM

Documents:

1. **24-12-04-CAC Agenda**
2. **24-12-04-packet DRAFT MINUTES 11-6-24**
3. **Energy Committee Packet EC and CAC meeting 12_4_24**
4. **Truro Climate Action Plan – DRAFT modification by Alex**

Respectively submitted,

Mark C. Gebhardt

Vice Chair, Climate Action Committee.

Protect our People, Waters and Land
Pesticide Reduction & Fertilizer Reduction, Home Rule Petitions (HRPs)
TRURO Request to Town Citizens

Our natural environment—the beauty of our land and waters—is what brings people here and makes us want to stay in this special place. It is our most valuable resource and economic asset. The health of our environment directly affects every full and parttime resident, property owner, visitor, and business in Truro.

The ask is for the Pesticide Reduction HRP & Fertilizer Reduction HRP to be on the Truro Town Warrant, Spring 2025, for citizens to vote on.

The purpose of these Home Rule Petitions (HRPs) is to reduce outdoor toxic pesticide and fertilizer use in the Town of Truro, in order to protect the public from the hazards of these agents, promote a healthy environment for all, and safeguard our economy. **It is *not* a ban of pesticides and fertilizers, but a reduction of the most harmful.**

Pesticides were created with the intention to kill pests. Examples are: herbicides, insecticides, fungicides and rodenticides. Anything ending in ‘cide’ is made to kill its intended target.

Fertilizers were developed to aid the growth of plants. That is a good thing for our food supply and for the beauty of our gardens, but most fertilizers contain heavy metals, like nitrogen and phosphorous, which can pollute the waters we love to swim in and contaminate the water we drink.

The problem with outdoor pesticide and fertilizer use is that these agents are not always fully absorbed by the targeted pest or plant. **Pesticides** can travel through the air, water and soil, often spreading thousands of feet from the application site and harming insects, birds and other animals, including humans. Irrigation and storm water can cause **fertilizers** to run off our properties, into nearby bodies of water. **Fertilizer** also permeates the ground, making its way into our aquifers, wells and drinking water, exposing us to dangerous levels of nitrogen, among other harmful chemicals.

As individuals and as a community, we can make the biggest impact by reducing our use of pesticides and fertilizers.

A Home Rule Petition is a request (petition) from a city/town to the State Legislature. It asks to let the Town of Truro have the power to make its own decision to reduce the use of pesticides and application of fertilizer, a right the State took away in 2014.

An HRP costs taxpayers and the Town nothing, but the benefits could be lifesaving.

Protecting our waters and land has had a long history of support in Truro and other Cape Cod towns. Orleans voted in favor of a fertilizer reduction HRP in 2022, and a pesticide reduction HRP in 2023. Eastham and Wellfleet also voted in favor of a pesticide reduction HRP in 2024. Many people and organizations have worked very hard and made significant efforts over the last several decades to move this issue forward.

The Truro Climate Action Committee, [hopefully: the Board of Health, the Conservation Committee and the Select Board] all support this petition. We hope you will, too.

Truro might be the smallest town on the Cape, but when it comes to voting in the interest of our land and waters, we're mighty!

Vote YES on Articles _____ and _____ at Truro Town Meeting, 2025.

[quotes from organizations that support the HRPs]

