

Cape Cod Climate Action Plan: Transportation Stakeholder Meeting Summary

Virtual Meeting No. 1 | October 19, 2020 | 9am-12pm ET

MEETING IN BRIEF¹

On October 19, 2020, the Cape Cod Commission (Commission) held a meeting to engage stakeholders on the topic of Transportation on Cape Cod to contribute to the development of a Cape Cod Climate Action Plan.

The Commission is currently working with many stakeholders and partners to develop a Cape Cod Climate Action Plan, and this meeting was the first in a series of three planned Stakeholder Meetings as part of the public engagement process being held this fall.

The objectives of this first Transportation working group meeting were to:

- Orient the working group to the task and each other
- Discuss what is known about the sector's contributions to greenhouse gasses (GHG) and vulnerabilities to future climate impacts
- Develop criteria for use in selecting among potential strategies and actions

This series of meetings will help to inform a strategic framework and a broad collaborative process to address the region's contributions to and threats from climate change. After hearing presentations from Cape Cod Commission staff on the Climate Action Plan process, climate hazards and vulnerabilities, and the results of the recent GHG Emissions Inventory, working group participants discussed how mitigation and adaptation priorities intersect with other Cape Cod priorities, and which criteria should be applied to prioritize the resulting climate action strategies.

To view the full presentation slides, please click [here](#).

INTRODUCTION TO THE CAPE COD CLIMATE ACTION PLAN PROCESS

Cape Cod Commission staff provided a brief presentation on the Cape Cod Climate Initiative and the process to develop the Cape Cod Climate Action Plan. This presentation covered an overview of the Climate Action Plan process and timeline, components of the Climate Action Plan as they pertain to mitigation and adaptation, results of the recent Greenhouse Gas (GHG) Inventory, and varying community engagement pieces. In particular, CCC Executive Director, Kristy Senatori, impressed upon the group the scale of the current initiative and the work that has been done to date and, importantly, the work still to come. She emphasized that planning

¹For additional detail, please visit the Cape Climate Initiative website:
<https://www.capecodcommission.org/our-work/climate-change/>

for climate action is multifaceted and will need to rely on a dual approach of adaptation *and* mitigation.

Below are working group member questions and comments that followed Ms. Senatori's presentation. Working group member questions are bolded and answers from the Commission are italicized.

What is the overall timeline for this initiative?

We are on an accelerated timeline for this work due to its critical importance. We have a series of regional plans that are independent, and we intend to have a draft Climate Action Plan in the early part of 2021. We will then continue tracking our progress and working towards sustainable action with regards to climate planning.

In the completed literature review, did any plans specifically address ferry services? If no, is there still an opportunity to recommend some plans for your review? (Washington State's ferries were recommended as a case study.)

We did review climate plans for areas that were similar to ours, and I believe that we have looked at plans with ferry services. We will confirm that.

What is meant by "regional"?

The county level.

Can you share a list of participants?

Yes.

ADAPTATION – WHAT WE KNOW TODAY ABOUT HAZARDS AND VULNERABILITIES

Cape Cod Commission Transportation Program Manager, Steven Tupper, reviewed risks of existing climate hazards relative to Transportation. He explained at a high level, that over the next 80 years Cape Cod will experience increases in precipitation, rising temperatures, significant sea-level rise (SLR), and more extreme weather events. A series of maps displayed during the presentation helped illustrate the extent of flooding and SLR that could occur. Based on these predictions, he then highlighted the effects specific to Transportation, including (but not limited to):

- Flood events can be a nuisance, force detours, and create emergency response issues for isolated areas
- Flood events can undermine or wash out culverts and bridges
- MassDOT has estimated that 80% of state culverts are undersized
- Increased precipitation will require redesign of drainage infrastructure
- Damaged transportation networks can affect mobility, tourism, local economy
- Rising temperatures impact public transit system operations

Additional suggested effects from working group members included:

- It is important to consider impacts to reliability (e.g., if we have more storms and more severe storms, it will knock out ferry service for hours or days). Storms do not have to be hurricanes for their effects to be known.
- Effects with regards to employment should be named, as people rely on transportation to get to their jobs, and impacts to different aspects of the transportation sector will not be felt by all workers equally.
- There will be impacts on low-lying roads, and plans to raise them will need to be included in capital improvement plans.
- Sea level rise will impact pier accessibility for those reliant on ocean access.
- It will be important to include perspectives from the airline sector and potential effects for air transit.

Mr. Tupper then highlighted the following definition of adaptation: *adjustments in human and natural systems that moderate harm or take advantage of beneficial opportunities* and provided some adaptation examples:

- Elevate, modify, or abandon roadways and other infrastructure
- Relocate buildings and other infrastructure out of floodplains
- Redesign and replace undersized culverts and drainage infrastructure

Working group participants held a full-group discussion to address the following questions regarding adaptation actions:

- How do these hazards/vulnerabilities intersect with other Cape priorities (within this sector) (for better or worse)?
- What are the key areas of authority and influence in this sector on the Cape? What can Cape players influence regarding these hazards?

Below is a brief synthesis of the results of this conversation by question.

Working group participants worked to identify intersecting priorities between the hazards and vulnerabilities to Transportation that were presented and other existing Cape priorities. After identifying these priorities, working group participants were asked to consider which spheres of influence would be key to implementing any adaptation actions developed by the working group and how the Cape Cod community at large plays a role in this.

How do these hazards/vulnerabilities intersect with other Cape priorities (within this sector) (for better or worse)?

Several themes emerged with respect to the hazards and vulnerabilities presented that intersected with existing Cape priorities:

Costs to residents: A large portion of the group's conversation was firmly grounded in the reality of costs to residents, with one member summing the concern up with the question, "Who bears the cost [of adaptation] at what point?" Members emphasized the need for this initiative to quantify the cost of doing something versus doing nothing, noting that there had already

been two instances of highwater rescues on a major Cape thoroughfare, and taxpayer dollars were invested in vehicles that are lifted higher off the ground – tax revenue is already being allocated to preparations for a different climate future.

The unique challenge presented by ferries: Representatives from the ferry industry shared that there is less research available for creating a lower emitting ferry fleet, but Washington State is going through a process of retrofitting their boats, which the Cape is watching closely to pick up on best practices and lessons learned.

What are the key areas of authority and influence in this sector on the Cape? What can Cape players influence regarding these hazards?

When asked about key areas of authority and influence in the transportation sector on the Cape and what Cape players can influence regarding hazards to transportation, members highlighted the importance of “radical collaboration” between different levels of the government and others focused on climate adaptation. One participant emphasized the need for the Cape Cod Climate Initiative to break down the independent silos addressing the various climate hazards on the Cape and look for opportunities to secure large amounts of capital to address issues in a larger-impact way. Another participant noted that, especially given the impacts of COVID on the transportation sector, the Cape should be looking at models from other places, like a ride-sharing model in Austin, Texas, to help make the best planning decisions with the least impactful tradeoffs to residents.

MITIGATION – WHAT WE KNOW TODAY ABOUT REGIONAL GREENHOUSE GAS EMISSIONS

Mr. Tupper reviewed the results of the Cape Cod Greenhouse Gas (GHG) Inventory, focusing specifically on the results relevant to Transportation. The Inventory, which used 2017 as a baseline year to calculate a comprehensive accounting of total GHG emissions for all man-made sources on the Cape, measured the different gases emitted and broke down emission sources into 6 sectors, 19 sub-sectors, and 60-sub-sector categories, with transportation and stationary energy being the largest emitting sectors, accounting for 94.7% of all emissions. Within Transportation, on-road transportation was the highest emitting subsector category, followed by off-road transportation, public transportation, air and rail transit. He then noted that this inventory would be replicable in the future to continue to target mitigation actions at the high emitting sectors.

Below are working group member questions and comments that followed the first portion of Mr. Tupper’s presentation. Working group member questions are bolded and answers from the Commission are italicized.

Do the numbers on the screen represent the emissions per capita for personal on-road vehicle emissions?

The numbers shown here are aggregate, but we can show the results per vehicle in other analyses. The numbers here represent vehicle miles traveled.

Mr. Tupper then highlighted the following definition of mitigation: *limiting or preventing greenhouse gas emissions and enhancing activities that remove these gases from the atmosphere* and provided some examples of mitigation actions:

- Support work from home
- Facilitate EV adoption
- Promote biking and transit
- Waste management transportation
- Promote walkable villages

Working group members then addressed the following questions regarding adaptation actions:

- What other Cape priorities intersect (for better or worse) with efforts to decrease our emissions from this sector?
- What are the key areas of authority and influence in this sector on the Cape? What can Cape players influence regarding Cape sources of emissions?

Below is a brief synthesis of the results of this conversation by question. Working group members worked as a whole to identify intersections between reducing emissions from Transportation and other existing Cape priorities. Working group participants were then asked to consider which spheres of influence would be key to implementing mitigation actions and how the Cape Cod community at large plays a role in this.

What other Cape priorities intersect (for better or worse) with efforts to decrease our emissions from this sector?

Working group members emphasized the importance of integration and leverage when working to decrease emissions from Transportation on the Cape. Mitigation actions in the Transportation sector were seen as intersecting with the following Cape priorities:

- **Improvements to existing transportation systems:** When discussing mitigation, conversation turned to Electric Vehicles (EVs) and how to make those a viable option for residents, with one participant noting that not everyone on the Cape could afford an EV, and there is still a gap in public transportation services that could be improved. Representatives from public transit noted that they are always looking to make improvements in their multi-modal services and collaborate to most efficiently move people to where they need to be. It was noted that, while the cost of entry for a personal transit EV is relatively high, the cost of ownership is fairly low, and more affordable hybrids may be an option for residents. Public transit is also looking to transition its fleet to EVs as well and is pursuing the funding to make it a reality, as resource constraints are a constant concern.
- **Offshore wind development and renewables:** Building out the renewable energy infrastructure and creating new methods for the transfer of renewable energy would be essential for facilitating the adoption of EVs on the Cape.

- **Recreational opportunities:** Promoting creative alternatives to cars, like recreational, rentable vehicles with low emissions, for traversing the Cape could have positive benefits for Transportation energy reduction and could also help boost the recreation and tourism sectors.

What are the key areas of authority and influence in this sector on the Cape? What can Cape players influence regarding Cape sources of emissions?

Working group members identified multiple areas and actors of authority and influence that could impact emissions reductions in the Transportation sector. Key suggestions from working group members include:

- **Reimagining the energy grid:** Participants suggested that ensuring Cape access to new renewable energy project outputs, supplementing grid with individual battery storage, and disrupting to existing utility structures could help support transitioning the Transportation sector to EVs.
- **Bundling strategies:** Participants noted the importance of comprehensive strategies to achieve maximum GHG reduction (e.g., not just transitioning buses to an EV fleet but also looking at solar carports and increasing sidewalk access to reduce the emissions in the public transit subsector). It was suggested that investments in bike and pedestrian infrastructure, like rail trails and creative ride-sharing options, could help connect residents to recreational and employment opportunities that don't rely on access via a personal car or public transit. (Some limitations for bike-sharing pilots were also shared.)
- **Collaboration to achieve funding:** Participants shared ideas about pursuing public/private partnerships with corporations to help increase funding streams as well as ideas about collaborating with local and state policy makers to push for new funding streams.

DEVELOPING AND PRIORITIZING CRITERIA FOR CLIMATE ACTION STRATEGIES

Mr. Tupper provided examples of actions that would simultaneously have adaptation and mitigation benefits. He noted that one way to prioritize actions would be to look at those at the nexus of adaptation and mitigation for Transportation, such as:

- Restoring tidal flow to salt marshes
- Developing safe routes to school
- Promoting smart growth/ land use

Working group members were then asked to brainstorm about criteria that would be important in the prioritization of climate actions to include in the regional plan.

More specifically, participants were asked to think about and discuss:

- What are important values that should drive the prioritization of actions to mitigate our impact and plan for resilience?
- What are key principles and considerations when making choices on what and where to focus actions in a context of multiple needs and limited resources?

Working group members shared that equity, implementability, fundability, and impact and alignment were criteria that should help prioritize actions to mitigate the Cape's GHG emissions and plan for resilience. Below is a brief synthesis of the framing for each criteria and the key considerations raised by working group members.

Please see Appendix B for the record of all submitted criteria by working group members into the polling platform.

Equity: How will the action serve disadvantaged people? How will the action consider and/or protect the most vulnerable members of our population?

- It could prove difficult to measure how well an action serves disadvantaged populations, but tools like a zip code analysis of economic status in the region or maps of the six identified federal opportunity zones on the Cape could help the Commission leverage triple bottom-line accounting to ensure that actions will benefit vulnerable populations.
- It was noted that summer workers should be considered as a population group to serve, as their transportation needs will tie into those of local businesses.

Implementability: How will the Commission get buy-in for the action? How will the action's benefits be quantified? How will implementers receive credit for actions undertaken?

Fundability: How will the action be funded?

Impact and Alignment: What is the magnitude of the action's GHG emissions reduction impact? How will the action align with other priorities and actions to reduce GHG emissions? How will the action collaborate, integrate, or leverage opportunities to maximize its impact? How will the action be positioned to have long-term impact or to build upon other short-term actions for cumulative impacts?

Working group members also highlighted the need for the Climate Action Plan to be inspirational, innovative, and demonstrate leadership in the climate adaptation and mitigation space, at the local, regional, and global scale.

PUBLIC COMMENT

No public comment was made.

WRAP UP AND CLOSING

Cape Cod Commission Staff thanked the working group members for their time and participation, reminding them to visit the Cape Cod Climate Initiative Website (<https://www.capecodcommission.org/our-work/climate-change/>) for further details.

CBI noted that it would send out a meeting summary to reflect back what was shared during the call and asked the working group to spend a bit of time reviewing materials that would be shared ahead of the next meeting on November 18, 2020.

APPENDIX A: LIST OF PARTICIPANTS

First Name	Last Name
Guy	Busa
Tom	Cahir
Paul	Cleary
Sean	Driscoll
Grove	Harris
Lauren	McKean
Jason	Stoots

APPENDIX B: COMPLETE LIST OF PARTICIPANT CRITERIA SUBMITTED IN POLL

- GHG Emissions Reductions
- Act now without losing site of the long term.
- inspirational - signify serious transformation, Cape brand
- Disadvantaged people served.
- Protect the most vulnerable members of our population.
- effective- get buy in, quantify benefits and help people count their contribution
- Reduces a major transportation network vulnerability
- "Radical Collaboration, Integration, Leverage
- Triple Bottom Line, Public Private Partnerships
- Cluster Infrastructure opportunities"
- "long-term, biggest impact.
- shorter-term, easy to implement at local or individual level. these would be cumulative and thereby become larger impact."
- ethical- consider the vulnerable stakeholders
- Comprehensive renewables projects - solar generation with battery storage to power electric vehicles
- Connectivity, climate action leadership, funding resource availability.