Coastal Resiliency Bylaw Communications Framework

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TOWN OF BOURNE

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Introduction

Cape Cod communities have billions of dollars of private property, businesses, and critical public infrastructure located along the shorelines and within coastal hazard areas. Development and infrastructure in floodplains, often seen as vulnerabilities within a coastal hazard area, will benefit from pre-disaster planning and action to improve their functions and resiliency during storm events.

The Cape Cod Commission collaborated with a team that included the Urban Harbors Institute at UMass Boston; Noble, Wickersham, and Heart; and the Woods Hole Group through "Responding to Climate Change: Promoting Resilient Local Action," funded by a MA Executive Office of Energy and Environmental Affairs Planning Assistance Grant. Through this project, the team developed a model "Coastal Resiliency Bylaw" that identifies strategies to mitigate and adapt to coastal changes, working directly with four partner communities: Bourne, Sandwich, Brewster, and Eastham. The project developed natural resource protection, flood protection, and land use strategies that provide coastal and climate resiliency through mitigation and adaptation to protect the natural, built, and community systems of Cape Cod.

HOW TO USE THIS DOCUMENT

This communications framework, specifically tailored to the Town of Bourne, is a companion report to the model Coastal Resiliency Bylaw completed in June 2021. The development of the Coastal Resiliency Model Bylaw is intended to help communities address regulatory challenges as identified in the development of the regional Climate Action Plan (additional context below), and this communications framework will help towns communicate the need for updates to the regulatory context to meet our key challenges. The conversations around climate change and coastal development can be charged; this framework is meant to provide language and steps to structure them in a way that can be productive and increase shared understanding of each perspective's challenges.

Commission staff leveraged research on climate and coastal resiliency development strategies, MVP Planning efforts, and interviews with town planning staff and board members to develop a recommended communications framework for each community. The Town staff and board members should use this document during the public process to amend bylaws, educate voters, residents, and homeowners on key components of the bylaw changes and build collaborative opportunities around coastal resiliency communications.

This framework is organized into six sections: goals and objectives, audience segmentation, key message development, outreach strategies, timelining, and evaluation. It calls out target audiences, as well as the key messages and tools that each town can use to reach them, and strategies to

evaluate success. The framework also provides general information about communications best practices within each section.

DEFINING KEY TERMS

This section provides the definitions for key terms associated with coastal resilience and the model Coastal Resiliency Bylaw.

100 Year Storm: Storm having a 1% chance of being equaled or exceeded in a given year.[1]

Best Available Coastal Flooding Model: A model adopted by the Commonwealth and applicable to the Town with flood projections for the Target Year, or if the Commonwealth has not adopted an applicable model, then the Best Available Coastal Flooding model shall be the model adopted by the Town boards.

Buffer Zone: Area of land within 100 feet of coastal banks, inland banks, freshwater wetlands, coastal wetlands, tidal flats, beaches, dunes, marshes, and swamps. Work/activity in a buffer zone could have an impact on the nearby wetland, depending on the type and location of the work and the wetland. Thus, many activities done in a buffer zone are subject to regulation under the MA Wetlands Protection Act and require prior approval by a conservation commission, which may impose conditions or limits on activity done in a buffer zone so that the nearby wetland is protected.[1]

Coastal Flood Risk Area: Any land which is subject to any inundation caused by coastal storms up to and including that predicted to be caused by the 1% annual storm for the Target Year, as defined by the Best Available Coastal Flooding Model.

Coastal High Hazard Areas: Special Flood Hazard Areas (SFHAs) along the coasts that have additional hazards due to wind and wave action. These areas are identified on Flood Insurance Rate Maps (FIRMs) as zones V, V1-V30 and VE.[2]

Coastal Resilience: Coastal resilience means building the ability of a community to "bounce back" after hazardous events such as hurricanes, coastal storms, and flooding – rather than simply reacting to impacts.[3]

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[1] Massachusetts Association of Conservation Commissions. "Wetlands Protection Act Frequently Asked Questions." 2021. https://www.maccweb.org/page/ResWPAFAQS
[2] The Federal Emergency Management Agency (FEMA). "National Flood Insurance Program Terminology Index." 2021. https://www.fema.gov/flood-insurance/terminology-index
[3] National Ocean Service. "What Is Resilience?" 2021. https://oceanservice.noaa.gov/facts/resilience.html

Coastal Resiliency Zone (CRZ): Shall include the following resources areas: (a) any land subject to coastal storm flowage (LSCSF), as defined under the State Wetlands Bylaw and the DEP Regulations; (b) any coastal flood risk area, based upon the Best Available Coastal Flooding Model for the Target Year; and (c) the buffer zone of any Other Coastal Wetland Resource located in whole or in part within (a) or (b). The CRZ may include within its boundaries one or more of the following subareas: Velocity (V) Zone; Moderate Wave Action Area (MoWA); Highly Developed Area; and Special Transitional Area.

Covered Peril: An event an insurance company agrees to reimburse you for if you file a claim.

Elevated Building: A building that has no basement and that has its lowest elevated floor raised above ground level by foundation walls, shear walls, posts, piers, pilings, or columns.[2]

Erosion: The collapse, undermining or subsidence of land along the shore of a lake or other body of water. Erosion is a covered peril if it is caused by waves or currents of water exceeding their cyclical levels which result in flooding.[2]

Flood Insurance Rate Map (FIRM): Official map of a community on which FEMA has delineated the Special Flood Hazard Areas (SFHAs), the Base Flood Elevations (BFEs) and the risk premium zones applicable to the community.[2]

Flood Zones: Flood hazard areas identified on FEMA's Flood Insurance Rate Map are identified as a Special Flood Hazard Area (SFHA). SFHA are defined as the area that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year. The 1-percent annual chance flood is also referred to as the base flood or 100-year flood. SFHAs are labeled as Zone A, Zone AO, Zone AH, Zones A1-A30, Zone AE, Zone A99, Zone AR, Zone AR/AE, Zone AR/AO, Zone AR/A1-A30, Zone AR/A, Zone V, Zone VE, and Zones V1-V30.[2]

Floodplain: Any land area susceptible to being inundated by floodwaters from any source.[2]

Floodplain Management: (a) The operation of an overall program of corrective and preventive measures for reducing flood damage, including but not limited to, emergency preparedness plans, flood-control works and floodplain management regulations; (b) Floodplain management is a decision-making process that aims to achieve the wise use of the nation's floodplains. "Wise use" means both reduced flood losses and protection of the natural resources and function of floodplains.[2]

Floodway: The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height (typically one foot), the boundary of which is the area designated as floodway on the most recently available flood profile data prepared for the site. [2]

Land Subject to Coastal Storm Flowage (LSCSF): Land subject to any inundation caused by coastal storms up to and including that caused by the 100-year storm, surge of record or storm of record, whichever is greater. This is the limit of coastal flooding jurisdiction under the State Wetlands Act and the DEP Regulations (310 CMR 10.04). [4] Note that because LSCSF is tied to FEMA maps, which are based upon historical data, LSCSF does not take into account all known flooding risks that Cape Cod communities face due to climate change and sea-level rise.

Minimal Wave Action Area: (MiWA): A subarea of LSCSF, with wave heights less than 1.5 feet. [5]

Moderate Wave Action Area (MoWA): A subarea of LSCSF, with wave heights between 1.5 – 3 feet. Also known as the Coastal A Zone. [4]

National Flood Insurance Program (NFIP): The National Flood Insurance Program provides insurance to help reduce the socio-economic impact of floods. The National Flood Insurance Program (NFIP) is managed by FEMA and is delivered to the public by a network of approximately 60 insurance companies and the NFIP Direct. [2]

Sand Dunes: Naturally occurring accumulations of sand in ridges or mounds landward of the beach. Human alteration of sand dunes within V Zones is prohibited unless it can be demonstrated that such alteration will not increase potential flood damage.

Sand dunes are important first lines of defense against coastal storms and can do much to reduce losses to inland coastal development. It can be assumed that any removal or other alteration of a sand dune will render the dune more susceptible to erosion and increase potential damages to structures behind that dune. [2]

Setback: Setbacks may be used to keep development out of harm's way. Setback standards establish minimum distances that structures must be positioned (or set back) from river channels and coastal shorelines. Setbacks can be defined by vertical heights or horizontal distances. Setbacks are not required by the National Flood Insurance Program (NFIP). The Community Rating System (CRS) credits setbacks under Higher Regulatory Standards, Special Hazards Regulations. [2]

Storm Surge: The water, combined with normal tides, which is pushed toward the shore by strong winds during a storm. This rise in water level can cause severe flooding in coastal areas, particularly when the storm coincides with the normal high tides. The height of the storm surge is affected by

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[4]Massachusetts Office of Coastal Zone Management. "Land Subject to Coastal Storm Flowage." https://www.mass.gov/doc/presentation-on-current-impacts-to-land-subject-to-coastal-storm-flowage/download

[5] Massachusetts Office of Coastal Zone Management. "Interpreting Federal Emergency Management Agency Flood Maps and Studies in the Coastal Zone. 2017. https://www.mass.gov/doc/interpreting-federal-emergency-management-agency-flood-maps-and-studies-in-the-coastal-zone/download

many variables, including the storm intensity, storm track and speed, presence of waves, offshore depths, and shoreline configuration.[4]

Special Flood Hazard Area (SFHA): An area having special flood, mudflow or flood-related erosion hazards and shown on a Flood Hazard Boundary Map (FHBM) or a Flood Insurance Rate Map (FIRM) Zone A, AO, A1-A30, AE, A99, AH, AR, AR/A, AR/AE, AR/AH, AR/AO, AR/A1-A30, V1-V30, VE or V. The SFHA is the area where the National Flood Insurance Program's (NFIP's) floodplain management regulations must be enforced and the area where the mandatory purchase of flood insurance applies. For the purpose of determining Community Rating System (CRS) premium discounts, all AR and A99 zones are treated as non-SFHAs.[2]

Special Transitional Area: Subareas within the CRZ that are located immediately landward of coastal beaches, coastal dunes, barrier beaches, coastal banks, or salt marshes, and extending in a direction perpendicular from the nearest adjoining land under water to the interior boundary of the CRZ. Special Transitional Areas have been defined in order to provide for wetland migration.

Target Year: The year specified by the Conservation Commission for projections of sea level rise and flood risk. If the Best Available Coastal Flooding model is based on a single target year, then the Town boards shall adopt that year as the Target Year. If the model includes multiple target years, then the Town boards shall adopt, by Local Regulation, the Target Year for the Best Available Coastal Flooding model.

Velocity (V) Zone: V Zones are portions of the SFHA where wave heights are greater than three feet. These areas are subject to more stringent building requirements than coastal A zones because the risk from coastal flooding is greater. [6]

Wetland: Wetlands are areas where water covers the soil or is present either at or near the surface of the soil all year or for varying periods of time during the year, including during the growing season. Water saturation (hydrology) largely determines how the soil develops and the types of plant and animal communities living in and on the soil. Wetlands may support both aquatic and terrestrial species. The prolonged presence of water creates conditions that favor the growth of specially adapted plants (hydrophytes) and promote the development of characteristic wetland (hydric) soils. [7]

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[6] FEMA. "Coastal Analysis and Mapping." 2021. Link: https://sites.google.com/site/region2coastal/coastal-mapping-basics
[7] United States Environmental Protection Agency. "Wetlands." 2018. https://www.epa.gov/wetlands/what-wetland

Wetland Migration: Coastal wetlands may react differently depending on which sea level rise scenarios take place: some wetlands may be lost, some may migrate landward, and others may be unaffected in their current location. [8]

TOWN PROFILE

Bourne is defined by its natural resources, most notably its quiet harbors and inlets for boating and swimming. Bordered on the west by Buzzards Bay, on the northeast by Cape Cod Bay and split by the Cape Cod Canal, access to the water contributes considerably to Town character. The Cape Cod Canal, lined by bicycle and pedestrian paths on either side, winds through town in a westerly direction and connects Buzzards Bay with Cape Cod Bay. While it separates the Town, it also provides unique recreational opportunities. The coastline to the northeast is regular and unprotected. The coastline to the west is very irregular with peninsulas, islands, inlets, and small bays. The Town has approximately 50 miles of shoreline when you take into consideration all of the bays and harbors. Bourne has 15 beaches and landings and is home to diverse fishing and shellfishing opportunities.

Sixty-five percent of Bourne is mapped as priority habitat. There are three Areas of Critical Environmental Concern (ACECs), including Herring River Watershed in Bournedale, which extends beyond the town line into Plymouth, and includes 11 ponds, and more than 250 acres of protected and important anadromous fish runs, Back River, which includes unaltered marshes, flats and wetlands and is designated an Estuary of National Significance by the U.S. Environmental Protection Agency, and Pocasset River, which includes marsh, floodplain, flats and wetlands that provide flood control, water quality benefits, and storm damage prevention, among other benefits. In addition to water resources, Bourne is home to several large tracts of forested land, including Bourne Town Forest and adjacent Four Ponds Conservation Area and aquifer protection lands in Pocasset, North Sagamore Woodlands, Carter Beale Conservation Area, Old Field Pond Preserve, Bournedale Forest, and Buzzards Bay Water District land, all north of the Canal, Monks Park and Briarwood and Little Bay Conservation Area in Monument Beach, and Red Brook forest in Cataumet.

The Town is proximate to the major cities of Boston and Providence, convenient for on- and off-Cape travel, and home to major State and Federal assets, including the Massachusetts Maritime Academy and Joint Base Cape Cod. Relative to other Cape Cod towns, Bourne has a greater year-round population, fewer seasonal homes, and lower home prices than other communities in the region. Its business landscape is dominated by retail, accommodations and food service, professional, scientific and technical services, and healthcare.

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[8] NOAA Office for Coastal Management. Link: https://coast.noaa.gov/applyit/wetlands/identify.html
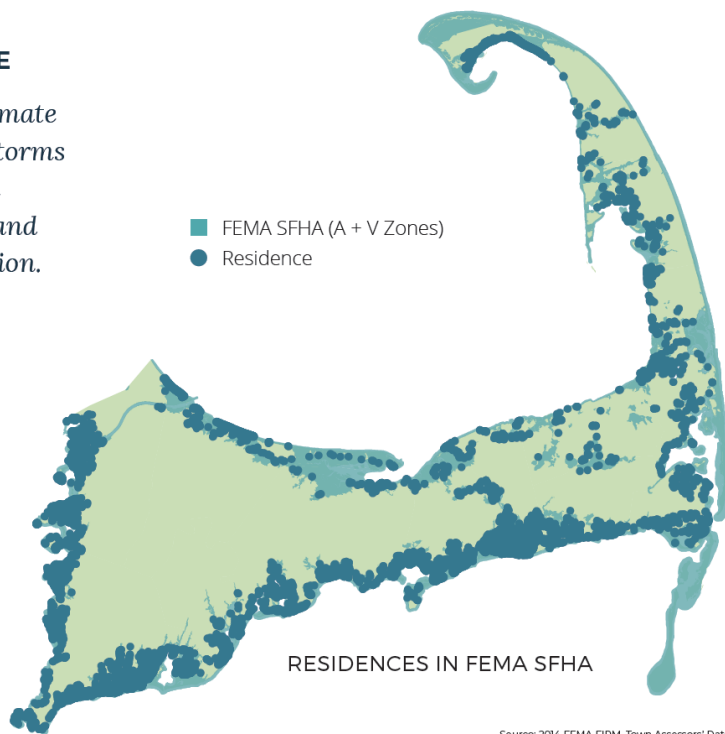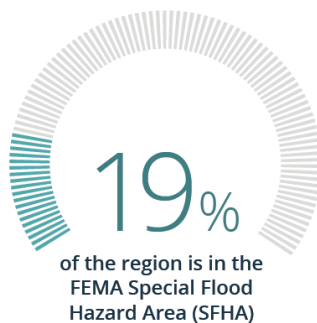
COASTAL AND CLIMATE HAZARDS ON CAPE COD

Storm surge, flooding, and sea level rise are key challenges facing the natural, built, and community systems of Cape Cod.

Scientists anticipate the climate change will bring stronger storms with more precipitation and threat of more frequent and more extensive flooding to the region. Even under existing conditions, flooding threatens more than 19% of the region's land area, with a combined asset value of tens of billions of dollars of private property, businesses, and critical public infrastructure.

CLIMATE CHANGE

Scientists anticipate that climate change will bring stronger storms with more precipitation and the threat of more frequent and extensive flooding to the region.

■ FEMA SFHA (A + V Zones)
● Residence

19%

of the region is in the
FEMA Special Flood
Hazard Area (SFHA)

RESIDENCES IN FEMA SFHA

Source: 2014 FEMA FIRM, Town Assessors' Data

Sea level rise poses a major threat to Cape Cod, which has 586 miles of vulnerable, tidal shoreline. Projected sea level rise will increase flooding, both elevating the height of storm and non-storm surges and flood levels, and exacerbating inundation and storm surge by sending floodwaters further inland. This will result in potential inoperable first response facilities, and substantial loss to property, economic prosperity, and habitat.

Development and infrastructure in floodplains, often seen as vulnerabilities within a coastal hazard area, would benefit from pre-disaster planning and action to improve their functions and resiliency during storm events. Wetland buffers should continue to be preserved from development, or supported through strategic undevelopment, in order to help store increased stormwater runoff as

the climate changes. These buffers will also allow wetlands to migrate as changes in sea level, groundwater height, and increased precipitation events occur.

Planning for Regional Climate Change Impacts

Climate hazards put vulnerable populations at risk and can cause loss of life, damage buildings and infrastructure, impair coastal environments, and otherwise impact a community's economic, social, and environmental wellbeing. The Cape Cod Commission has collaborated with Bourne and the other towns on Cape Cod on regional planning initiatives to address the impacts of climate change, including through regional plan development and the state's Municipal Vulnerability Preparedness (MVP) planning process and in developing their local Hazard Mitigation Plan in 2017.

Climate change was identified as a key challenge in the most recent Regional Policy Plan (RPP) update in 2018. The RPP outlines the growth policy and goals for the region, supporting the vision for the future of Cape Cod as a place of vibrant, sustainable, and healthy communities and a protected natural environment. Towns' local comprehensive plans must align with the RPP to be certified, ensuring alignment between regional and local planning processes.

The RPP Coastal Resiliency goal is to prevent or minimize human suffering and loss of life and property or environmental damage resulting from storms, flooding, erosion, and relative sea level rise. In order to accomplish this, the RPP encourages the region to minimize development in the floodplain; plan for sea level rise, erosion, and floods; and reduce the vulnerability of the built environment to coastal hazards. As such, one of the nine performance measures in the 2018 RPP is changes in Floodplain Development. A decrease in development within the floodplain, adapting development through new codes or regulations, or additional protected lands in strategic areas will help protect Cape Cod and increase its resiliency over the next several decades.

The Commission recently published a regional Climate Action Plan (CAP) as well that was developed with an extensive public outreach process, including representation from all fifteen towns, key industries, and major stakeholder groups. The CAP identifies strategies and actions that can reduce greenhouse gas emissions and enhance local resiliency to climate threats. It also describes inherent challenges of the regional development pattern: Cape Cod has an especially developed coastline, as residential areas grew up around its traditional maritime industries.

During development of the CAP, municipal working groups identified that regulatory challenges are a barrier to addressing climate priorities. In response, one of the CAP Priority Strategies is to draft and adopt floodplain bylaws to address development and redevelopment in vulnerable areas, intending to limit development in vulnerable areas, identify best practices for redeveloping in vulnerable areas, and identify appropriate strategies for conservation commissions and other town boards to take to remediate erosion and/or flooding that may impact vulnerable properties.

Ultimately, the implementation of the CAP, including its Priority Strategies, will support regional actors as they both adapt to the impacts and mitigate the Cape's contributions to climate change.

Bourne and the other 14 towns on Cape Cod are currently MVP-certified communities; each town went through the MVP Planning Process, bringing together a broad range of stakeholders to assess their vulnerabilities and prepare for climate change and build community resilience. In June 2018, the Town of Bourne published the summary of findings from their MVP program Community Resilience Building Workshop.[9] The workshop participants defined top local natural and climate-related hazards of concern; identified existing and future strengths and vulnerabilities; developed prioritized actions for the Community; and identified immediate opportunities to collaboratively advance actions to increase resilience.

Flooding and Coastal Development Challenges in Bourne

Staff from the Cape Cod Commission and Urban Harbors Institute reviewed local planning documents and interviewed town staff to better understand the challenges that the Town of Bourne is facing regarding coastal development and flooding.

Some of the key challenges identified by the town include:

- Bourne voted that its wetlands bylaws only cover the AE zone on or within 100 feet of other resource areas. Doing so excluded the historic Main Street commercial district of Buzzards Bay from falling within the flood zone.

- Bourne's own wetlands regulations are only specific for docks and piers. Town meeting was not interested in giving the Conservation Commission any more authority than they have under the state regulations.

- Approximately 40% of the town's real estate value is located in the floodplain, and is susceptible to storm flowage during strong storms.

- Limited understanding of the direct link between the health of Bourne's natural resources and the strength of its economy.

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[9] Town of Bourne Community Resilience Building Workshop Summary of Findings. June 2018. Link: https://www.mass.gov/doc/2017-2018-mvp-planning-grant-report-Bourne/download

Developing a Communications Plan for Bourne

Though often used interchangeably, communications campaigns are a part of communications plans – but are different than the plans themselves.

This communications framework provides information and resources that will support the development of both communications plans and campaigns, but the framework itself is designed to guide the development of communications plans that support adopting the Coastal Resiliency Bylaw. Communications campaigns will then be necessary to implement the broader communications plan. A communications plan is a roadmap to guide the campaign, which will require more detailed planning to implement.

The six-step process outlined below provides an outline for Bourne's plan. This chapter provides details and advice on each of these six steps to support the development of a communications plan and campaigns to support the bylaw amendments.

1. **Setting goals and objectives**: What are you hoping to achieve through communicating about the changes to the Coastal Resiliency Bylaw or other suggested changes to wetland regulations?

2. **Identifying key audiences and collaborators**: Who are you trying to reach, and what partners might help you to reach them?

3. **Developing key messages**: What are the primary messages you want to communicate? Can you organize them by audience segment, by sector, by issue, or other themes?

4. **Selecting outreach strategies**: What mediums are best for each audience and message?

5. **Determining milestones and timelines**: What external and internal factors might determine your timing, and how do you think about the timeline of the plan versus the timeline of each campaign?

6. **Defining and measuring success**: How will you know if your communications efforts have succeeded? How can you harness learnings to improve future communications plans and campaigns?

Setting Goals and Objectives

A communications plan should be organized around broad goals and specific objectives that outline what communicators intend to achieve through outreach. The goals describe what a plan will seek to achieve, and objectives define how the goals will be met. Once goals are in place, then set measurable and time-bound objectives that support them. Be sure to consider the human and financial resources available to ensure that the objectives are achievable within the specified time frame. Each goal may have one or multiple objectives that support it; specific objectives should include a concrete deliverable that is time-bound.

To determine these goals, the organization should assess the strengths and weaknesses of previous communications efforts, opportunities to influence key stakeholders and encourage behavioral change, and past challenges encountered in reaching audiences. Communications campaigns should generally inform or influence behaviors in large audiences by increasing knowledge and providing a call to action.

ENCOURAGING CHANGE THROUGH COMMUNICATIONS

Communications strategies should be used to inspire behavioral changes that can lead to a Cape— and a world—that is more resilient to sea level rise and flooding.

Influencing people to understand and act on coastal development issues can be development, in part because of the high cost of land and real estate in these locations. The path forward to large-scale adaptation, however, must be met with sustained communications to impacted stakeholders. Thoughtful and strategic communication has an essential role to play: storytelling can increase awareness, which is always the first step in influencing individual change, leading to larger scale change in Cape towns and the region. While the conversation around climate change may at times be weighed down by fear and pessimism, solution-oriented communication has the power to offer hope along with understanding.

PROPOSED GOALS/OBJECTIVES FOR BOURNE

The proposed goals and objectives for the town's communications framework were developed following discussions with town staff on significant challenges, reviewing local bylaws, and evaluating the challenges around development in vulnerable areas. The communications plan should be developed around broad goals and specific objectives; the goals describe what the plan will try to achieve, and objectives define how the goals will be met.

Goals:

- Increase stakeholders' understanding of local coastal resiliency issues and recognition of the need to address them through an appropriate regulatory framework designed to reduce impacts of flooding.

- Build public support for the Coastal Resiliency Bylaw and related regulatory recommendations.

- Increase cross-collaboration between boards, departments, agencies, and other stakeholder groups working to improve coastal resiliency in Bourne.

- Support community in addressing the challenges around development and redevelopment in and around coastal resource areas.

- Update local regulatory framework leveraging the model resiliency bylaw to ultimately reduce vulnerability and impacts of flooding/sea level rise to development and in turn increase resiliency to future change.

Objectives:

- Proactively reach out to stakeholders and key interest groups who may be affected by the Coastal Resiliency Bylaw to better understand the challenges they face and determine what support is needed to mitigate them.

- Engage Town board and committee members in stakeholder outreach when feasible, leveraging their expertise and direct implementation experience for presentations, newsletters, and/or speaking opportunities.

- Develop and share online communications materials on coastal resiliency issues and potential solutions.

- Host and attend speaking opportunities that address local and regional coastal resiliency issues and possible solutions, particularly for non-traditional audiences (see Vulnerable Populations section below for suggestions on integrating equity considerations into communications planning).

After adapting the model bylaw to local conditions and need, the Town should create additional goals and objectives to support implementation (see Setting Goals and Objectives section).

Audiences, Collaborators, & Messaging

This section combines steps two ("Identifying key audiences and collaborators") and three ("developing key messages") of developing a communications framework as described above.

Coastal resilience communications efforts can benefit from audience segmentation. Audience segmentation is the process of dividing a wider audience into specific groups of people that have similar needs, values, or characteristics [10]. Segmentation recognizes that different groups of people will respond to communication tactics and messages in different ways, and then works to maximize the impact of communications by tailoring strategies to match the needs of various groups as much as possible.

Breaking down the target audience into smaller clusters can help communications planning in several ways.

- **Relevant messaging**: By designing messages based on the values and needs of specific audiences, communications strategies are likely to be more effective and efficient.

- **Communications platforms:** Different groups tend to use different communications channels. By segmenting audiences using certain demographic factors such as age and education and determining their preferred platforms, communicators are more likely to connect with those specific groups.

- **Shared barriers:** Devising messages to combat specific barriers that are shared by members of a specific group increases the probability that communications efforts will be acted upon.

- **Calls to Action:** Many groups across the Cape will require specific and different calls to action. Planning for these differences from the beginning will make communications efforts smoother.

Targeted outreach messages and methods will be based on the needs and interests of stakeholder groups. These groups should broadly include:

- Town staff, committees, and boards directly involved in planning and zoning;

- Developers, homeowners, realtors, and local business owners who may be directly impacted by changes to coastal resiliency bylaw regulations;

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[10] MailChimp. "Audience Segmentation." Retrieved March 11, 2021. Link: https://mailchimp.com/marketing-glossary/audience-segmentation/.

- Potential collaborative and partner agencies and organizations; and

- Governance bodies responsible for deciding and enforcing related policies and regulations.

It may be helpful to prioritize stakeholder groups based on their level of influence and/or interest they may have in coastal development. Some individuals or groups may just need to be informed about the bylaw changes; others may warrant consultation or collaboration. Town staff can build and expand their audience by partnering with other agencies and organizations that may share similar goals and objectives, such as those supporting climate adaptation or natural resource protection. Expand existing relationships or invite the audience to engage with communications strategies, leveraging online platforms to help educate others.

Another important component in developing a communications framework is integrating equity considerations. Vulnerable populations are often disproportionately impacted by the effects of sea level rise, and typically have less access to the resources needed for recovery. These groups include but are not limited to communities of color, low-income neighborhoods, youth, older adults, people with impairments, people facing homelessness, and people with limited English proficiency.[11]

A communications strategy can be made more inclusive through integration of one or all of these concepts:

- **Transparency**: Communications should be clear and use straightforward language to make sure the information is accessible to all.

- **Diversify outreach platforms:** To reach the widest range of communities, it will be necessary to use a variety of communications channels while maintaining consistent messaging. Language, geographic location, age, access to broadband and other digital resources, and other demographic factors should all be considered when deciding on the outreach strategy. [12]

- **Leverage translation services:** Communicators trying to engage vulnerable populations may need to leverage translation services (or engage fluent language speakers for outreach events) in order to share messages effectively.

- **Engagement process:** In an effective engagement process, communications should flow both ways and be part of an ongoing process of building relationships rather than a one-time effort. Providing ways for audiences to reach out or provide feedback—whether through email, telephone, or social media, etc.—can benefit both sides. Strategies that

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[11] City of Boston. "Climate Action Plan." 2019. Link: https://www.boston.gov/sites/default/files/embed/file/2019-10/city_of_boston_2019_climate_action_plan_update_4.pdf.
[12] The American Planning Association provides resources to planners to support smart, inclusive, and equitable growth: https://www.planning.org/resources/equity/

encourage active involvement on the part of communities can build capacity and help to drive climate action forward through shared ownership.

- **"Active" communications strategies:** Taking a more active communications approach means proactively "meeting your audience where they are," rather than passively sharing information and expecting them to seek it out.

- **Relevant partnerships:** As part of community engagement, determine which local organizations and entities are most trusted by and connected with specific audiences and consider partnering with these groups on communications efforts. For example, faith-based organizations and social service organizations are often local hubs for community news and organizing. Communications can often be better received if coming from a familiar and trusted source within communities.

- **Empowerment through Engagement**: Engaging with vulnerable populations imparts key knowledge and information, while also enriching communications efforts by identifying implementation barriers. Effective engagement leads to empowered communities that understand why and how environmental and economic decisions are being made, and allows them to use their voice to have a say in their outcomes. Communicators can also empower community members to conduct surveys, facilitate meetings, and provide background information so that the communications efforts expand beyond its initial reach.

Effective communications strategies will specify stakeholder groups beyond the general public and integrate equity considerations in order to best meet the needs of these groups while acknowledging the limited time and resources of the town staff responsible for communications.

THEMATIC MESSAGING

After identifying stakeholder groups, town staff should identify important messages to be conveyed to each audience segment. These messages can be developed using a set of themes that are common to communications around behavior change in an environmental context, including increasing awareness and inspiring change.

Increasing Awareness

Increasing awareness of the causes, effects, and solutions to sea level rise and increased coastal storm flowage should be the most important goal of a communications strategy around a Coastal Resiliency Bylaw. External messaging should emphasize the urgency of the issue and highlight what can be done now to reduce future threats due to flooding and sea level rise.

Education reduces barriers to participation and increases the likelihood that proposed bylaw and zoning amendments are supported locally. Outreach may seek to educate stakeholders on the

issues themselves, or they could increase audience awareness of the specific ways they can support the new policies. No matter the specific audience or subtopic, educational messaging should provide context for communication that seeks to influence behavioral change.

Inspiring Change

One significant challenge of communications around the Coastal Resiliency Bylaw is its impact on individual homeowners, especially those who have made significant financial investments in their coastal property. Educating residents about the economic and environmental costs of not taking action, especially among residential and commercial property owners who may be impacted by the Coastal Resiliency Bylaw, should be an essential goal of the communications plan.

This communications plan can empower others to support local- and regional-scale change by providing people with information about how and why to engage in local decision making. Town staff should share messages about events such as Town Meeting, in addition to providing educational resources and encouraging individual behavior change. Key messages that encourage audiences to get involved in local policymaking and provide details about how to engage with government can be an effective way to increase community participation.

BEST PRACTICES IN ENVIRONMENTAL MESSAGING

Town staff can adapt some or all of these best practices when designing their communications plans and campaigns around the Coastal Resiliency Bylaw:

- **Use simple, clear, consistent language:** Avoid technical jargon in favor of language that is more accessible to a wide range of audiences. Be consistent with vocabulary across platforms and communications campaigns, and to unify messaging when using different communications channels.

- **Use compelling visuals:** Whenever possible, use visuals such as photos, videos, or infographics to make content more engaging and relevant. Show local images of Bourne or make the issue more tangible and meaningful. When possible, use real people and real situations to talk about the impact of sea level rise and storm surge on neighborhoods. There are resources towards the end of this document that provide information on places to find visuals if needed.

- **Highlight positive stories and testimonials:** Stories of people taking action and experiencing a positive result can convince others to participate and offer an important connection to the broader community as well as the potential benefits of proactive climate adaptation. These actions can seem less overwhelming when people feel connected to others making similar decisions.

- **Tailor messages to each target audience segment:** Consider specific audiences before crafting or adapting key messages. The more specific messages are, the more meaningful and impactful they will be.

- **Use data:** Statistics and other data can help people grasp and remember the message, and place climate change and coastal resilience information in context.

- **Consider ecosystem services framework:** Ecosystem services are ways that nature contributes to humanity's wellbeing. While we may not be able to put a dollar value on all the ways the environment enriches our lives, an ecosystem service framework can help structure the ways we think about these benefits. The UN's Millennium Ecosystem Assessment identified four major categories of services:

  o **Provisioning Services:** Nature directly provides us products that keep us alive, such as fruits, vegetables, trees, fish, and water. Provisioning services are benefits to people that can be extracted from nature.

  o **Regulating Services:** Ecosystems provide many of the basic services that make life possible, including cleaning air, filtering water, and pollination.

  o **Cultural Services:** Humans are inextricably linked to nature, and its existence alone provides non-material benefits that contribute to culture, knowledge, and social development. Ecosystems play a role in cultures around the world, including spiritual inspiration, creativity, and recreation.

  o **Supporting Services**: Nature also provides services that facilitate life, including the water cycle, photosynthesis, and soil creation. Supporting services allow the Earth to sustain basic life forms. [13]

POTENTIAL STAKEHOLDERS FOR THE TOWN OF BOURNE

The following is a list of anticipated stakeholders for the Town that may be affected by or somehow contribute to Coastal Resiliency Bylaw updates or other related regulatory changes. Each stakeholder group section includes an outline of their current structure and role in town, any engagement opportunities around the Coastal Resiliency Bylaw, and key messages that should be shared with them. More specific information on opportunities and messaging will arise once the details of the regulatory update are confirmed.

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[13] National Wildlife Federation. "Ecosystem Services." 2021. Link: https://www.nwf.org/Educational-Resources/Wildlife-Guide/Understanding-Conservation/Ecosystem-Services

This stakeholder list also integrates the best practices and thematic topics from the previous section in order to begin shaping the communications strategy. Town staff should add to this list as needed to ensure all viewpoints are heard throughout the process.

Bourne Conservation Commission

CURRENT STRUCTURE AND ROLE IN BOURNE

The Conservation Commission enforces the Town's Wetlands Bylaw, the Massachusetts Wetlands Protection Act, and other related regulations. The Town's Conservation Agent has been highly engaged in local and regional coastal resiliency efforts to date.

The Conservation Commission will be responsible for promulgating, implementing, and enforcing the Coastal Resiliency Bylaw.

OPPORTUNITIES

The Conservation Commission and Agent should be engaged in the development of the regulations. Members should be strong advocates for the updated regulations and the benefits of reduced impacts from flooding, and there may be opportunities during the implementation of the Communications Framework for them to speak on the bylaw's behalf.

The Conservation Agent is anticipated to play a role in setting and implementing the communications strategy and should seek to build partnerships to increase existing outreach, especially to any stakeholder groups that may challenge the need for stronger regulations.

KEY MESSAGES

Conservation Commission members and the Conservation Agent will need a rich understanding of the Coastal Resiliency Bylaw contents, its implementation, and its enforcement.

Bourne Department of Natural Resources

CURRENT STRUCTURE AND ROLE IN BOURNE

Bourne's Department of Natural Resource (DNR) enforces Federal, State and Town laws, bylaws, rules and regulations pertaining to animal control, boats, conservation, fish & game, herring, shellfish, waterways and wetlands; and to manage, protect, enhance, and educate the public regarding them. The DNR also assists and works with other Federal, State, County and Town agencies with law enforcement, public safety and emergency response, as needed. The DNR has a National Resources Officer who holds all titles with and is empowered to carry out and enforce all aspects associated with the DNR.

OPPORTUNITIES

Department staff may be responsible for implementing some of the strategies in the updated regulations, and could be an asset to the implementation of a communications plan.

DNR staff should seek to build partnerships that can increase their existing reach, especially to the stakeholder groups that may challenge the need for stronger regulations.

KEY MESSAGES

DNR staff may play a key role in setting and implementing the communications strategy.

Bourne Board of Selectmen

CURRENT STRUCTURE AND ROLE IN BOURNE

The Board of Selectmen is the chief policy-making body and executive board of the Town. The Board is staffed by the Town Administrator and Town Assistant Administrator.

OPPORTUNITIES

The Board of Selectmen should be engaged early in the regulatory and communications processes. The Board can help Town staff anticipate bylaw implementation challenges and constituent concerns, so they can proactively respond. They will be important advocates of the Coastal Resiliency Bylaw and related regulatory updates, potentially at public meetings and in the press.

KEY COMMUNICATIONS MESSAGES

Town staff should present clear and simplified information covering (a) the contents of the bylaw, and (b) why this regulation was chosen. Town staff should ensure Board members understand the problems, causes, and urgency of coastal resiliency challenges, including the consequences of not taking any action.

Bourne Planning and Zoning

CURRENT STRUCTURE AND ROLE IN BOURNE

The Planning Board and its staff are responsible for reviewing commercial projects, subdivisions of land, site plans from commercial development, special permits, and updating the zoning bylaws and subdivision regulations. There are eleven Board members, and the Board is staffed by a Town Planner and Assistant Town Planner.

The Town recently updated their Local Comprehensive Plan (LCP), approved by the Cape Cod Commission in December 2019, which includes a section on Coastal Resiliency.

OPPORTUNITIES

The Planning Board and Department should continue to implement the coastal resiliency policies and actions named in the LCP, including actively seeking ways to reduce loss of life, property, infrastructure, and the impacts on environmental and cultural resource in Bourne from natural hazards. The Planning Board can help staff anticipate challenges to the bylaw, so they can proactively respond to constituents' questions and concerns.

Planning staff should remain highly engaged in local and regional coastal resiliency efforts. Staff should expand communications and educational efforts where possible, especially around the need for changes to regulations in the floodplain and anticipated climate change impacts to residential and commercial development in town.

Town staff should engage the Planning Board in discussion if any zoning changes are proposed to address coastal resiliency issues.

KEY MESSAGES
Staff may meet with the Planning Board to discuss the proposed bylaw in general, clearly describing its contents, potential costs, and long-term benefits. Board members will need guidance around implementation and enforcement of the regulations, as appropriate. They should also ensure members understand the problems and underlying causes of coastal resiliency challenges, including the consequences of not taking any action.

Bourne Zoning Board of Appeals

CURRENT STRUCTURE AND ROLE IN BOURNE
The Zoning Board of Appeals (ZBA) is governed by Massachusetts General Laws Chapter 40A. It is comprised of five regular members and three associate members.

The ZBA hears and decides applications for special permits, variances, and appeals of the decision of the Building Inspector. They are also the special permit granting authority for affordable housing projects under Chapter 40B.

OPPORTUNITIES
Town staff should engage the ZBA in discussion if any zoning changes are proposed to address coastal resiliency issues.

KEY MESSAGES
Town staff may meet with the ZBA to discuss the proposed bylaw in general, its contents, and its costs and benefits. They should ensure members understand the problems and causes of coastal resiliency challenges, including the consequences of not taking any action.

The ZBA members can help Town staff anticipate challenges to the bylaw and constituents' concerns, so they can proactively respond to them.

Bourne Building and Inspection Department

CURRENT STRUCTURE AND ROLE IN BOURNE
The Building and Inspection Department enforces all building codes, acts and regulations. They inspect all phases of construction, including electrical, mechanical, and structural installations. The

Inspector is also the Zoning Enforcement Officer and handles complaints, enforcement of bylaws, project conditions, signs, etc.

OPPORTUNITIES

The Department actively helps to responsibly manage local development in the floodplain.

There are opportunities to proactively share online communications materials on the Department's website, such as floodplain information and maps, elevation instructions, and other relevant resources. The Department will be an important source of information as they work directly with impacted property owners.

KEY MESSAGES

Town staff should continue to deliver or expand their proactive communications and education efforts where possible, especially around the need for changes to regulations in the floodplain and anticipated climate change impacts to residential and commercial development in town.

Public Safety

CURRENT STRUCTURE AND ROLE IN BOURNE

One of the roles of the Town's Police Department is to respond to emergency situations, and to anticipate and respond to events that threaten public order and the preservation of life and property.

Bourne Fire/Rescue and Emergency Services is a professional public safety department responsible for providing all-hazards prevention and mitigation, rescue, fire suppression, education as well as emergency medical care and transport to the citizens and visitors of the Town of Bourne.

Both departments serve as first responders to emergency situations and directly address natural disasters such as nor-easters, hurricanes, and flooding by mitigating impacts to people and property.

OPPORTUNITIES

Both departments participated in the development of the town's hazard mitigation plan and have been engaged in the state's MVP planning process. The departments are intimately familiar with the past and potential impacts that coastal storms and flooding can have on property, and it is in their best interest to continue supporting planning efforts that will reduce future damage to property and impacts to residents and visitors.

The Town recently had to relocate the police department outside the floodplain, providing a helpful case study to support the need for coastal resiliency action.

KEY MESSAGES

Town staff should integrate messaging on how efforts to increase coastal resiliency are rooted in public safety concerns with other stakeholder groups.

Bourne Shore and Harbor Committee

CURRENT STRUCTURE AND ROLE IN BOURNE

The Town's Shore and Harbor Committee, formerly the Greater Beach Committee, was formed as an advisory committee that would ensure the waterways and related facilities in Bourne were being used in the best interests of the town. They are committed to maintaining and improving access to the waters of Buzzards Bay for recreation, fishing, and public safety.

OPPORTUNITIES

Committee members should be strong advocates for the updated Coastal Resiliency Bylaw and the benefits of reduced impacts from flooding. The intentions behind the bylaw update align with the Committee's long-term efforts, though their initiatives more closely relate to the waterways themselves (such as dredging and boat ramps).

KEY COMMUNICATIONS MESSAGES

Town staff may meet with the Shore and Harbor Committee to discuss the proposed bylaw in general, its contents, and its costs and benefits. They should ensure members understand the underlying problems and causes of coastal resiliency challenges, including any potential consequences of not addressing this issue in the short-term.

Bourne Residents

CURRENT STRUCTURE AND ROLE IN BOURNE

Bourne has approximately 19,800 year-round residents. Bourne has the second highest percentage of year-round residents in Cape Cod (after Sandwich), with fewer seasonal homes and a higher proportion of residents commuting off-Cape for work.

OPPORTUNITIES

Conducting outreach to Bourne residents will be a significant component to a communications plan for the Coastal Resiliency Bylaw. Not all coastal resiliency regulations may end up needing a Town Meeting vote, but since residents may be greatly affected by changes to these regulations, they should be proactively updated on the development and implementation of the updated bylaw.

Town staff should employ both online and in-person approaches to increase accessibility of information. Presentations and webinars should walk residents through any proposed bylaw changes and respond to questions and concerns, and residents should be given the opportunity to provide meaningful feedback on the regulatory changes whenever possible. Town staff can also give

presentations to civic groups (e.g., Kiwanis or Rotary) or similar organizations to expand their reach to a broader network of stakeholders.

Subsets of the resident population may require additional outreach and engagement based on how they could be impacted by the Coastal Resiliency Bylaw. Homeowners' Associations in Bourne could also be useful conduits to reach larger groups of residents, especially if they are primarily coastal property owners. Additionally, towns should actively conduct outreach to historically underserved populations in the community that may be disproportionately impacted by climate change (see Outreach and Equity later in this document).

KEY COMMUNICATIONS MESSAGES

Presentation/webinar content should be comprehensive but high-level. Outreach targeted to Bourne residents should include:

- General overview of the Coastal Resiliency Bylaw, including what research and expertise was leveraged to develop it;

- Information on the economic and environmental impacts of sea level rise, flooding, storm surge, and coastal storm flowage; [14]

- Expected long-term economic costs and benefits of implementing the updated regulations;

- Potential consequences of taking no action to address these issues, especially highlighting the urgency of addressing climate change now;

- Regional and state planning context that influences why the Bylaw is being adopted;

- Opportunities for residents to learn more about the Bylaw and how it may affect their property or community.

Chambers of Commerce

CURRENT STRUCTURE AND ROLE IN BOURNE

The Town is part of two Chambers of Commerce:

The Cape Cod Canal Region Chamber of Commerce represents Bourne, Sandwich, and Wareham. It markets Bourne broadly to tourists and refers thousands of tourists to local businesses.

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[14] The Commission engaged a team of consultants as part of the development of the regional Climate Action Plan who drafted the Economic Impacts of Climate Change on Cape Cod. The report will be a helpful resource for articulating these economic costs and benefits of climate impacts, including sea level rise and flooding.

The regional Cape Cod Chamber of Commerce represents all 15 towns on the Cape. It hosts networking and tourism-oriented events, advocates for and markets local businesses, and serves as a resource center for new and potential businesses.

OPPORTUNITIES
There are opportunities through both Chambers to engage the local business community.

The Town could give educational presentations or webinars to Chamber members, and proactively address some of the anticipated challenges around implementation of the Coastal Resiliency Bylaw. Additionally, Town staff could develop and share educational resources for the Chambers who can expand outreach within the local business community.

KEY MESSAGES
Outreach to the Chambers should provide a general overview of the Coastal Resiliency Bylaw, associated costs and benefits, and opportunities to provide feedback or find more information. The Town should communicate to the Chambers how the commercial sector may be directly impacted by these changes, and how they can benefit from the mitigation of damage due to flooding and sea level rise in the long term.

The Chambers can help Town staff anticipate local business owners' concerns about the bylaw in order to proactively respond to any potential challenges to the new regulations.

Local Businesses

CURRENT STRUCTURE AND ROLE IN BOURNE
After Sandwich, Bourne has the second highest percent share of year-round residents on Cape Cod. Because of this, residential neighborhoods are well established in Town and local businesses are primarily year-round. Downtown Buzzards Bay is "a thriving hub of community activities, both new and old businesses," and blue economy businesses continue to locate or expand in the town's industrial zones.[15]

OPPORTUNITIES
The Town of Bourne's historic main street is located entirely in the flood zone. Recent models have calculated that a Category 3 hurricane could flood nearly all of Buzzards Bay and the coastal neighborhoods south of the Cape Cod Canal.[16]

While severe weather and sea level rise may drastically impact the viability of commercial businesses downtown, these businesses may also be financially impacted by the Coastal Resiliency

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[15] Bourne Local Comprehensive Plan. "A Vision for Bourne." 2019. Link: https://townofbournelcp.wordpress.com/a-vision-for-bourne/
[16] Ibid.

Bylaw regulations (depending on the proposed contents). Proactive and direct outreach to the business owners most likely to be affected should be a priority for the communicators.

Outreach to local businesses may require more time and effort because of their decentralized nature. The local Chambers of Commerce or other business associations may be able to assist the Town with outreach to local businesses, either through their membership directory, e-mail lists, sharing flyers/mailers, or by hosting Town staff for meetings or webinars.

KEY COMMUNICATIONS MESSAGES
Local business owners will need a general overview of the Coastal Resiliency Bylaw, an explanation for why Bourne is acting now, and the costs and benefits of the changes as well as the resiliency impacts of taking no action. This should include describing the indirect benefits of increasing resiliency for Bourne, and how both coastal and inland commercial properties will benefit in the long-term from implementing the bylaw.

Local Developers

CURRENT STRUCTURE AND ROLE IN BOURNE
Developers play a key role in the use and shape of our coast. They are responsible for the development or redevelopment of residential and commercial property. There is a regional non-profit, the Home Builders & Remodelers Association of Cape Cod, that supports homeownership on Cape Cod and its trade membership through legislative, educational, business, and civic endeavors.

OPPORTUNITIES
The regulatory landscape provides guidance to developers on how and where to invest their resources, and the Coastal Resiliency Bylaw may affect the costs of development for properties located in at-risk areas.

Like other local businesses, developers may be financially impacted by the Coastal Resiliency Bylaw regulations, depending on the proposed contents. Town staff should consider and articulate the economic impacts that increased resiliency will have for the town, especially in terms of critical issues such as tourism and housing. Proactive and direct outreach to the developers most likely to be affected should be a priority for communicators.

KEY MESSAGES
Outreach directed towards developers should give a general overview of the Coastal Resiliency Bylaw and the current and anticipated impacts of sea level rise and coastal storm flowage. Educational materials should articulate any anticipated impacts to development, especially in terms of how decisions on one property might impact other properties positively or negatively, and the importance of healthy natural resources to continue drawing people to the town.

Realtor Groups

CURRENT STRUCTURE AND ROLE IN BOURNE

Real Estate, like economic development, is an important element of the land use planning decisions made on Cape Cod. There is a regional group, the Cape Cod & Islands Association of Realtors, Inc., that serves as "the voice of real estate" for Cape Cod, Martha's Vineyard, and Nantucket. It's a 501(c)6 organization that is governed by a 13-member Board of Directors elected from its membership.

OPPORTUNITIES

Real estate is closely linked to Cape Cod's ability to further coastal resilience. Realtors are often the first point of contact with potential property buyers and can share information about flood risk and coastal resilience efforts.

There is also an opportunity to engage realtors and realtor groups in promoting the region's Community Rating System (CRS). Barnstable County has the first regionally-managed CRS program, which is a voluntary incentive program of the National Flood Insurance Program (NFIP) that rewards communities that take action beyond the federal minimum requirements to reduce the risk of flooding. As towns improve coastal resiliency and earn points in the CRS, NFIP policyholders – namely, coastal property owners with a mortgage – earn discounts on their flood insurance. [17] Increased local support for flood resiliency leads to financial benefits to the homeowners they work with directly, and the realtors can be effective in advocating for these regulatory changes.

KEY COMMUNICATIONS MESSAGES

Outreach efforts to realtor groups should include presentations and webinars that focus on the nature of the problem, the importance of immediate action and information sharing, and a broad overview of the revised bylaws, including ways in which the bylaw addresses coastal resilience issues. Realtor groups can help Town staff anticipate and proactively respond to homeowners' questions and concerns and potential challenges to the bylaw.

Local Land Conservation Groups

CURRENT STRUCTURE AND ROLE IN BOURNE

Land conservation groups are local, regional, state, or national level organizations that purchase land in order to protect it from development, or to maintain its ecosystem for recreation or mitigation of the effects of climate change. At the state level, Mass Audubon protects over 38,000 acres in Massachusetts and is the largest private conservation landowner in the Commonwealth.

On Cape Cod, the Compact of Cape Cod Conservation Trusts is a nonprofit regional support organization for six local land trusts, providing technical expertise to preserve critical lands that

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[17] Woods Hole SeaGrant. "Community Rating System (CRS). 2021. Link: https://seagrant.whoi.edu/regional-topics/storms-erosion-flooding/community-rating-system/

protect Cape Cod's public water supply, protect scenic views, protect wildlife habitat, and more. At the local level, the Bourne Conservation Trust buys parcels of land in order to keep them in their natural state and make most areas available for public use. Since their inception in 1980, they have purchased or received as donation over 200 acres in town.

OPPORTUNITIES
Land conservation groups may play an important role in coastal resiliency efforts, as they may hold land in coastal resource areas, or may choose to strategically acquire land in these areas to maintain its resiliency benefits.

KEY COMMUNICATIONS MESSAGES
Land conservation groups should be engaged as a resource for the Communications Framework, and can help articulate the benefits of preserving wetlands and other coastal habitats to reduce the impacts of climate change and flooding.

MA Department of Environmental Protection

CURRENT STRUCTURE AND ROLE IN BOURNE
The Massachusetts Department of Environmental Protection (MassDEP) is the state agency responsible for ensuring clean air and water, as well as regulating activities in wetlands. MassDEP intends to release LSCSF performance standards in the coming months.

OPPORTUNITIES
There is an opportunity for alignment with local and state regulations on the LSCSF. This would build legitimacy for the local process and could provide additional resources that could be leveraged in outreach and education.

KEY COMMUNICATIONS MESSAGES
MassDEP staff should be apprised of key information through online communications, and Town staff should remain responsive to requests for information and presentations.

MA Office of Coastal Zone Management

CURRENT STRUCTURE AND ROLE
The Massachusetts Office of Coastal Zone Management (CZM) is the lead policy, planning, and technical assistance agency on coastal and ocean issues within the Executive Office of Energy and Environmental Affairs (EEA) and implements the state's coastal program under the federal Coastal Zone Management Act.

CZM works with coastal communities on harbor planning efforts to help ensure that waterfront areas grow in an environmentally sound and economically prosperous manner. One option for harbor planning is to develop a state-approved Municipal Harbor Plan (MHP), which is required to

modify that state Waterways Regulation (also known as Chapter 91). Less formal harbor planning approaches are possible, however, when modifications of Chapter 91 regulations are not needed. [18]

OPPORTUNITIES

There is an opportunity for alignment with local and state regulations on coastal resiliency. This would build legitimacy for the local process and could provide additional resources that could be leveraged in outreach and education.

Town staff can reach out to CZM for technical assistance support when developing the Coastal Resiliency Bylaw.

KEY COMMUNICATIONS MESSAGES

Town staff should meet with CZM technical experts to discuss and understand collaborative opportunities around the Coastal Resiliency Bylaw. Throughout the implementation of the communications strategy, CZM staff should be apprised of key information through online communications and Town staff should remain responsive to requests for information and presentations.

MA Emergency Management Agency

CURRENT STRUCTURE AND ROLE

Massachusetts Emergency Management Agency (MEMA) ensures the state is prepared to withstand, respond to, and recover from all types of emergencies and disasters.

OPPORTUNITIES

MEMA is a key player in building coastal resiliency and should serve as a resource for Town staff implementing the Communications Framework.

KEY COMMUNICATIONS MESSAGES

MEMA staff should be apprised of key information through online communications, and Town staff should remain responsive to requests for information and presentations.

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[18] MA CZM. "Local Harbor Planning Efforts Other Than State-Approved Municipal Harbor Plans." 2021. Link: https://www.mass.gov/service-details/local-harbor-planning-efforts-other-than-state-approved-municipal-harbor-plans

RECOMMENDED TALKING POINTS

Fact-based talking points allow Bourne staff and municipal officials that interface with stakeholders to present a "united front" and ensure consistent message delivery to constituents. The talking points do not need to be communicated verbatim but should consistently inform outreach and engagement with all stakeholders.

This list can serve as the basis for educational outreach to residents, media, and interested citizens; and can be used to anticipate and respond to common concerns and questions, and to help frame decisions that the Board of Selectmen and Town Meeting members will be asked to make relative to the coastal bylaw amendments.

These talking points will need to be expanded once the final Coastal Resiliency Bylaw is drafted by the Town and should be refined and shared throughout the implementation of the Communications Plan.

What is the Coastal Resiliency Bylaw?

The Coastal Resiliency Bylaw is a recommended regulation change designed specifically for Cape Cod communities that includes general and specific strategies to support the mitigation of and adaptation to coastal changes caused by ongoing climate change.

How are these efforts related to the State's ongoing efforts on coastal resiliency?

The State of Massachusetts is also currently working on proposed regulations to increase coastal resiliency and protect Land Subject to Coastal Storm Flowage (LSCSF). The State's new regulations would provide a baseline for all Massachusetts Towns to follow.

The Town has previously participated in hazard mitigation planning efforts and has received funding to participate in the state's Municipal Vulnerability Preparedness (MVP) program, which laid the groundwork for understanding and addressing Bourne's coastal resiliency challenges.

The Coastal Resiliency Bylaw was developed specifically by the Town of Bourne to increase measures of protection from flooding and sea level rise, critical issues facing the town given its coastal location.

Why do we need coastal bylaw amendments?

The adoption of the Coastal Resiliency Bylaw will offer residents of Bourne increased protection from threats such as sea level rise and storm surge, as well as protection for natural resources. The proposed bylaw will ensure and promote more resilient development and land use practices across the Town. Cape Cod communities have billions of dollars of private property, businesses, and critical public infrastructure located along the shoreline and within coastal hazard area. Development and

infrastructure in floodplains, often seen as vulnerabilities within a coastal hazard area, will benefit from pre-disaster planning and action to improve their functions and resiliency during storm events.

How do natural assets mitigate climate change?

Natural habitats and assets can increase resilience in areas vulnerable to storm surge and sea level rise. Increasingly, wetland buffers preserved from development, and strategic undevelopment, will help to store increased stormwater runoff as the climate changes and will allow wetlands to migrate as changes in sea level, groundwater height, and increased precipitation events occur.

What is the Public Trust Doctrine?

The Public Trust Doctrine is a principle that governs the use of tidelands, and dates back centuries to ancient Roman Law. It applies to all coastal states, and asserts that all rights to tidelands and the water itself are held by the state "in trust" for the benefit of the public, and navigable waters are preserved in perpetuity for public use and enjoyment. [19]

In Massachusetts, however, certain tidelands belong to coastal landowners, which shifts the line between public and private property to the low water mark (unless legal documentation can prove otherwise). However, the state did specifically reserve for the public the right to continue to use private tidelands for three purposes – fishing, fowling, and navigation. [20]

Why are we acting now?

By passing the proposed Coastal Resilience Bylaw, the Town of Bourne will have a greater opportunity to rebound quickly from weather and climate-related events, including adapting to sea level rise. The ability to prevent and respond more quickly to the impacts of sea level rise and storm surge can reduce negative human health, environmental, and economic impacts. [21]

The current risk to development along Cape Cod's shoreline is significant, and there has been ongoing damage to homes, businesses, and infrastructure from increasingly strong coastal storms that are growing in frequency. LSCSF buffers the effects of coastal storm, but the effects of development along the coast reduce the ability of our natural resources to act as this buffer. Each time damage occurs, it is a reoccurring public cost to address that damage. Our goal is to protect LSCSF and restore it where possible to strengthen our collective ability to withstand stronger coastal storms and increasing sea level rise.

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[19] For Love of Water (FLOW). "What is the Public Trust?" Link: https://forloveofwater.org/public-trust-solutions/what-is-public-trust/
[20] Massachusetts Office of Coastal Zone Management (CZM). "Public Rights Along the Shoreline." 2005. https://www.mass.gov/service-details/public-rights-along-the-shoreline
[21] National Ocean Service, "What is Resilience?" Link: https://oceanservice.noaa.gov/facts/resilience.html

The federal government mandates that the Town maintains zoning compliance with the National Flood Insurance Program regulations; in Bourne, that falls under the jurisdiction of the Building Department, who regulates structures through the building code; the Conservation Commission, as they regulate resource areas; and the Zoning Board. (The Conservation Commission would cover non-building structures, such as fences.)

If proposed changes fall under the Wetlands Protection Act structure, local updates to the Coastal Resiliency Bylaw are proactive. The Commonwealth will offer proposed regulations for towns to choose from in the coming months, but the updates are not mandated as the zoning regulations are.

What happens if we do nothing?

If Cape Cod towns do not act to pass regulations that promote coastal resilience, then we can expect increased damage to homes, businesses, and infrastructure from sea level rise and storm surges that will be more difficult and expensive to repair. Inaction can also lead to increased negative impacts on the health of local residents and visitors, as well as the environment and natural resources. [22]

Once the town creates the final Coastal Resiliency Bylaw, they should agree on responses to the following questions:

- What are the major components of the bylaw?

- What are the costs and benefits of the bylaw?

- How will this affect my property? (Providing map-based resources is especially helpful to homeowners trying to understand hyperlocal impacts)

- Why and how was this bylaw created?

- How and where can I provide feedback on the bylaw?

- How does this (these) bylaw(s) relate to state regulations?

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[22] National Ocean Service, "What is Resilience?" Link: https://oceanservice.noaa.gov/facts/resilience.html

Bourne Outreach Strategies

This section provides information to help communicators decide on outreach strategies, including details about some of the most widely used communications channels, and potential benefits and drawbacks of each. The outreach strategies chosen should be informed by the goals and the audiences the communicator is trying to reach. Almost all messages can be adapted to fit any outreach strategy, but each communications channel has its own pros and cons related to its typical audience demographics and the human and financial resources it can take to leverage. It is important to keep a focus on the targeted audiences and prioritize the channels they most frequently use, and to ensure that the core of the messaging remains consistent across platforms.

DIGITAL VS. IN PERSON OUTREACH

Communicators should consider using both digital and analog platforms to reach the widest swath of constituents possible and account for equity and accessibility considerations. During the COVID-19 pandemic, virtual events and digital engagement have become a much more significant part of everyday life for many. However, it remains important to consider those who may not have reliable internet or phone access, and to find ways to reach them through efforts such as direct mail, flyers posted in the public realm, and more.

Although virtual events may initially appear easier to organize than in-person events, they can still present unexpected challenges and take a surprising amount of staff resources to conduct effectively. Here are a few pieces of advice to consider when planning a virtual event:

- **Large audiences:** Any time an organization plans to host more than 100 people on a digital platform, it may be worthwhile to invest in professional assistance to ensure the event runs smoothly, and to help people with technical difficulties. For smaller events, it is advisable to have an in-house IT person on hand to manage the technical aspects of the event, plus additional staff members who have been trained to field questions and assist audience members.

- **Interaction:** If the event involves interactive elements, such as polls, breakout rooms, or other elements, it will be necessary to plan and practice managing these tools in advance and have adequate tech support at the event.

- **Aesthetic:** Be sure that presenters have appropriate background setups, are well-lit, in a quiet place, and have the tools necessary to produce high-quality sound.

OUTREACH AND EQUITY

Communications is a key part of ensuring equity in any initiative. Various audiences use different communications platforms and tools, and some audiences may have constraints related to engagement. Language, geographic location, age, disability status, access to broadband and other digital resources, and other demographic factors should all be considered when deciding on outreach strategies. To find the best way to reach a given audience, it can also be helpful to ask people who are already embedded in that community for input.

In addition to considering the message's platform, below are communications strategies to prioritize equity:

- **Expand translation efforts:** Translate materials and messaging into the primary languages of target audiences.

- **Enhance in-person outreach efforts:** Engage and incentivize community representatives in outreach to populations in especially vulnerable neighborhoods; hold meetings and events outside to increase visibility and accessibility of events.

- **Digital vs. analog materials:** Distribute communications in both digital and analog formats. Social media may work well for many groups, but handouts or posted flyers may be more accessible to some individuals. As always, consider safety protocols if communicating during a pandemic.

- **Media list:** Build a list of local media publications that includes those that are reaching diverse communities and include them in the outreach. This may include smaller blogs and social media influencers.

- **Repetition:** Be more repetitive with communications about events and initiatives, especially as a deadline is approaching. People with different schedules and varying access to digital technology may not see communications the first or even second time they are sent or posted.

- **Communication tone:** Be clear and concise with language. Resiliency can be an intimidating topic for many, and it can be helpful to make it more approachable.

- **Diversity of form:** In addition to using a variety of platforms, it can also be helpful to use a range of mediums. Create materials that use a mix of words and visuals to reach different audiences.

- **Reducing barriers to engagement:** Ensure that materials can be accessible to those who are deaf and/or visually impaired. Provide childcare opportunities for attendees and their families. Refreshments can often be a helpful incentive for attendance as well.

PLATFORMS FOR ENGAGEMENT

The following is a list of potential communications channels for engaging with stakeholders. Platforms should be selected based on the messaging and materials being shared, the intended audience, and with consideration of available resources for implementation.

Centralize Resources on a Website

Communicators can share a page on their existing websites dedicated to their coastal resiliency efforts and updates to the Bylaw specifically. The webpage can provide links to relevant materials; language based on the recommended talking points; access to educational resources and related media, including newsletter sign ups; recommendations for individual action and other ways to get involved, such as events.

E-Newsletter

Communicators can raise awareness of coastal resiliency issues and Coastal Resiliency Bylaw updates through email newsletters, linking to local events and relevant news articles, sharing website updates and recorded interviews, and providing access to educational materials. Links to the newsletter can be shared on the website, and sign-up forms can be shared through social media or by bringing sign-up sheets to any in-person meetings.

Social Media

Social media is one of the most popular low-cost, high-impact communications approaches available. Communicators can engage with stakeholders on platforms such as Facebook, Twitter, Instagram, YouTube, Whatsapp, TikTok, Pinterest, Snapchat, Reddit, and more. This section provides more detail on the top social media platforms being used today.

Facebook

Facebook remains the most popular social media site, with nearly 70% of all Americans indicating that they use Facebook. About three-quarters of users log in daily [23], making Facebook a convenient option for connecting to many people at once.

Suggested content for climate change-related information to share on Facebook includes:

- Relevant event information;

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[23] Pew Research Center, 2019. https://www.pewresearch.org/fact-tank/2019/04/10/share-of-u-s-adults-using-social-media-including-facebook-is-mostly-unchanged-since-2018/

- Recordings of Board of Selectmen meetings and interviews with Town staff or board members supporting these efforts, or other short videos on related topics;
- Public service announcements;
- Educational materials and news articles; and
- Sign-up opportunities for e-newsletters.

The goal for Facebook should be to encourage followers to engage with the content, through liking, commenting, or reposting it to their personal page or within interested groups. This engagement grows the potential audience and amplifies the message. The key to gaining a following on Facebook is to post content consistently, at least once a week. It is also important to include photos and videos whenever possible, as visuals are shown to increase engagement.

Communicators that engage with people on Facebook need to be cautioned against users that are deliberately disruptive, however. Having set responses in place (e.g., the **Talking Points**) is helpful, but some users are set on acting provocatively regardless of the response. Organizations should pre-emptively set guidelines around social media use for both Page Managers and Followers (e.g., no discriminatory or hate speech) that can be enforced if the need arises. Above all, avoid public, emotional arguments with users and adhere to fact-based information in social media engagement.

Twitter

Twitter is known for its short-content format ("tweets", up to 280 characters per post) and is often considered a source for breaking, up-to-the-minute news updates. [24]

Organizations, businesses, and towns may have an official "Twitter handle" or username. On these social media pages, recommended information includes ways to participate in climate planning and adaptation, linking relevant news articles and educational information, and sharing engaging visuals that connect coastal resiliency and Cape Cod. Twitter and Facebook accounts can also be linked such that content shared on Facebook can be automatically shared to Twitter.

Twitter followers generally engage more readily with posts that have associated multimedia – links, photos, infographics, or videos.

Instagram

Instagram is an image-driven social media app where users are focused on sharing high-quality photos and videos. There are two main components to Instagram – the Instagram Feed and Instagram Stories. The Instagram Feed is the primary focus of the app, and is the space where users

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[24] American Press Institute, 2015. https://www.americanpressinstitute.org/publications/reports/survey-research/how-people-use-twitter-in-general/

scroll to see photos and videos posted by accounts they follow. Instagram Stories are designed to be quick, casual videos that disappear within 24 hours—however, it is also possible to save a selection of Stories to the Instagram profile page for long-term access. Users typically access Stories of the accounts that they follow at the top of their Instagram Feed.

While much of the same content posted on Facebook and Twitter can be repurposed for Instagram, it is important to remember that the aesthetics are the most important component of Instagram posts. It is recommended to use filters and other tools to enhance images and video. Instagram users typically only post 1-2 images or videos to their account per day, but additional content can be included using the Stories function. Instagram can also be linked to Facebook, Twitter, and other platforms for helpful cross-promotion across platforms.

Snapchat

Snapchat is a mobile-only app that allows users to share photos and videos that automatically disappear within 24 hours. Like Instagram, Snapchat is most focused on visual content, and tends to be used by a younger demographic (about 82% of users are under age 34). Compared to more traditional platforms such as Facebook, Twitter, and LinkedIn, Snapchat was designed to be a more casual social media app, and users may respond better to content that is delivered in a more informal tone. This platform may be an especially useful tool for promoting events, challenges, fundraisers, or other interactive aspects of a campaign.

TikTok

TikTok is an app based on sharing short videos that usually include music, filters, and other effects. Somewhat similar to Instagram and Snapchat, TikTok is the newest social media platform on this list and has gained widespread popularity with younger audiences aged 16-24 in particular (Globalwebindex, 2019). TikTok's audience is continuing to grow rapidly around the world, and the app was the most downloaded on Apple's App Store worldwide for Q1 2019 with more than 33 million installs, followed by YouTube, Instagram, WhatsApp, and Facebook Messenger. Like Snapchat, the tone used on this platform is typically less formal than on older social media sites.

Reddit

Reddit is an online forum on which users discuss an enormous range of topics. Reddit is divided into sub-communities, or subreddits, based on topic area. Any user can create or contribute to a subreddit, and a user may also choose to 'join' a subreddit to follow updates regularly. There is currently a subreddit dedicated to Cape Cod (r/CapeCod) which has over 7,000 subscribed members.

One popular way that many organizations and brands interact with the reddit community is to host an "Ask Me Anything" (AMA) session on the platform, which functions as a crowdsourced interview. The AMA channel is one of the most visited on Reddit and hosting an AMA session provides an opportunity to reach a large audience by answering questions about topic expertise or services in real time. These sessions take place at a specific time on the AMA subreddit (r/IAMA), and anyone can host one at any time. One key to a successful AMA is to publicize the event to the intended audiences beforehand. There are also detailed instructions and tips on how to conduct an Ask Me Anything provided by Reddit.

Note: Hashtags

Hashtags are keywords or phrases that make it easy for users to find relevant content by placing content into searchable, relevant categories. Hashtags can be used across social media sites, and posts can use more than one hashtag.

Communicators could choose a hashtag to associate with their coastal resiliency efforts, so that all relevant content can be linked and easily found by clicking on the hashtag. There are no set rules to creating one, but useful ones are generally short, unique to the topic, and easy to remember.

Note: Managing Social Media

Many municipalities have limited time and resources to devote to social media management, so a set of protocols, ground rules and expectations around its use should be set early on. Some basic rules to determine early on for governing social media use include whether one person or multiple people will be responsible for sharing content.

It may also be helpful to set specific social media goals before launching campaigns on these websites. In addition to being clear about the broader goals of using social media, such as increasing awareness of climate change in new communities, it can also be helpful to set numerical goals for social media use, such as a target number of posts generated per day or per week. It is also important to actively follow and engage with other users to increase posts' reach. Setting goals for the number of users to follow and posts to like or re-post on a daily or weekly basis can help with this.

Importantly, social media manager(s) should always ensure that 'official' accounts are used to share content, not personal accounts. For municipalities, an archive of each post must be maintained; social media communications fall under the State and local public records laws.

Social media can be planned and scheduled in advance through tools like Hootsuite and Buffer, which can help social media managers be more efficient and deliberate in their postings. (Note: subscriptions to some of these sites may require a paid account, depending on needed features.)

Preparing posts ahead of time can also help managers break complex topics into manageable components.

Media Outreach

Communicators should regularly engage with the local and regional media outlets to share newsworthy information related to coastal resilience on Cape Cod. Newsworthy information may include local success stories of adaptation, relevant legislation, as well as visible and less visible impacts that sea level rise is having on Cape Cod, and more.

Some of the main media outlets on Cape Cod include:

- **Local newspapers:** Cape Cod Times (Doug Fraser), The Cape Codder, Cape Cod Chronicle

- **Local broadcasters**: WFCC, WQRC, Cape Country 104, Ocean 103, CapeCod.com, WCAI – Cape Cod NPR Radio, iHeart Radio – WXTK, WCOD, WCIB

- **Public Access Television**: Cape Cod Media Center, Bourne Community Television

- **Local magazines and online publications**: Cape and Plymouth Business Communicators

Interactive Maps

One way to share place-based information is to develop and share interactive map-based webpages and applications, such as Esri Story Maps. Story Maps can have various levels of complexity. Communicators and other users are able to add geo-tagged links, pictures, and videos to a map that people can access independently online, or that organizations can use in a presentation. Stakeholders can also be invited to contribute pictures and text to the Story Map, which can be a constructive way to collaborate with and collect feedback from the community.

As part of its Resilient Cape Cod effort, Commission staff created and crowdsourced information for a Story Map that catalogues climate change impacts in the region. This simple application collected over 50 entries from community members engaged in the Resilient Cape Cod project. Stakeholders, friends, family, and staff all contributed photos that reflected coastal hazards across the region. The Story Map remains active and has been shared as a resource illustrating the impacts of erosion, flooding, and sea level rise. In this way the Story Map combines map-based data with impactful visuals. It was also integrated as part of a more complex Story Map that included case studies of coastal impacts, 3D map elements and applications previously developed by the Commission.
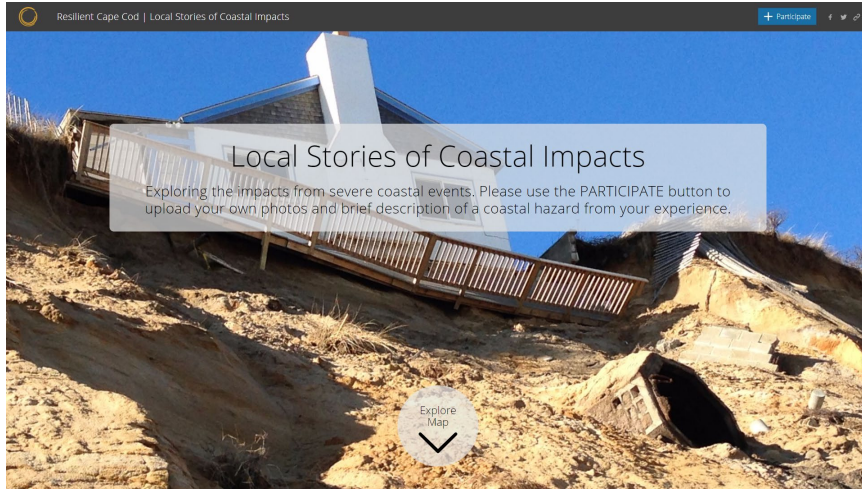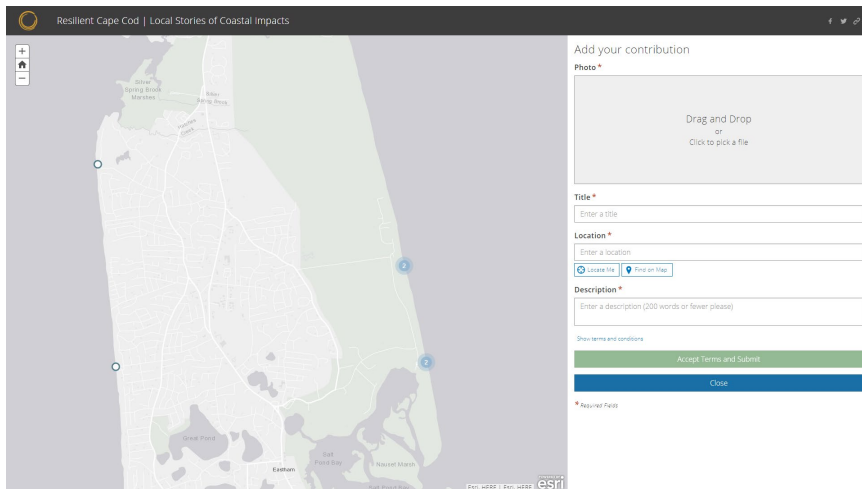
The local Stories of Coastal Impacts Story Map allowed users to upload their own images of coastal hazards.
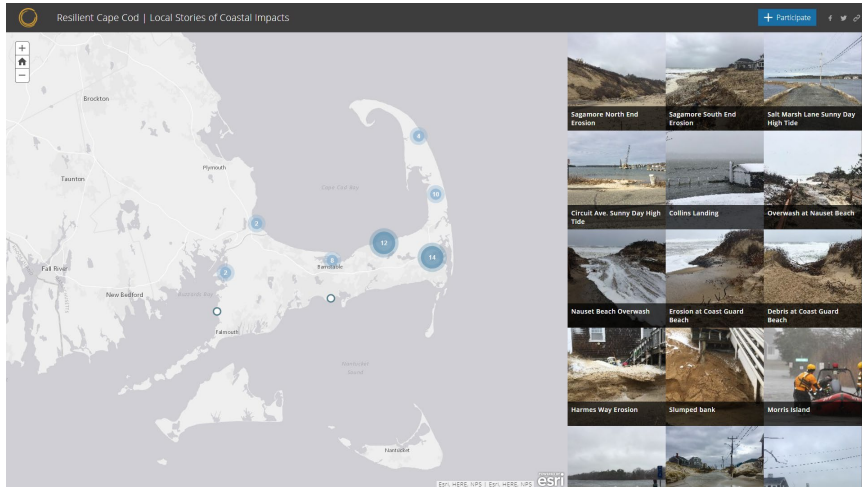
The Story Map allows viewers to zoom to any area and filter the images based on location.

A simple interface allows users to upload their photos and type a location or drop a pin on a map to add coordinates.

To create a Story Map, an organization will first need to create an ArcGIS Online account to develop and share the project. Then, choose an application template that fits the project needs (for example, some use scroll-through text with few pictures, others share pictures with shorter captions). Each template provides a tutorial and best-use description that explain how to add content.

The following links provide additional resources and guidance on creating ESRI Story Maps:

- About Story Maps: https://www.esri.com/en-us/arcgis/products/arcgis-storymaps/overview

- Story Map resources: https://www.esri.com/en-us/arcgis/products/arcgis-storymaps/resources

- Story Map templates: https://storymaps.arcgis.com/en/app-list/

- Story Map Best Practices: https://blogs.esri.com/esri/arcgis/2016/10/11/10-essential-steps-story-map-success

- and https://www.esri.com/arcgis-blog/products/story-maps/sharing-collaboration/best-practices-for-embedding-apps-and-web-content-in-story-maps/

Recorded Interviews and Podcasts

Communicators can interview coastal resilience experts and leaders for distribution through multiple channels, including YouTube, podcasts, or the town's website. If in-house capacity is unavailable, leverage community media centers and local cable access television channels in the production of recorded interviews, which can be cross posted to websites, social media, newsletters, and to other media outlets.

Public Presentations

Engaging presentations can educate stakeholders about the impacts of sea level rise, planning, adaptation, and mitigation. Public presentations are an important part of increasing transparency, raising awareness, and growing grassroots support for coastal resilience efforts. During times when in-person gathering is not feasible, virtual presentations and webinars are a great way to connect with audiences virtually. Promote public presentations through available social media channels, website, a press release, and e-newsletters.

Digital and Printed Handouts

Short, one- or two-page overviews can answer frequently asked questions, point stakeholders to more information (e.g., on the website or the e-newsletter), and invite them to attend relevant events. These materials could also describe the problem and proposed solutions, and how they can

participate (through voting). When printed and distributed at popular places in town, these handouts can be a way to reach people who may have limited access to or skill with digital tools.

Online Surveys

Municipalities can conduct online surveys to gauge stakeholder reactions and feedback. They can be conducted formally, gathering a statistically significant subset of the population, or informally, which can give quick snapshots of knowledge levels and opinions. Informal surveys should not be extrapolated to larger groups or used in policy-making contexts. [25]

Surveys can be used ad hoc and as needed to collect information from stakeholders (e.g., during or after a presentation), or they can be used to identify issues, objections, and support for action. There are many options for creating surveys online; two common websites are Survey Monkey and Google Forms (see Resources below). Town staff should ensure that hard copies of the survey are also available to the public at community centers such as libraries and town hall to make it accessible to all residents.

Public Art

Public art installations can be a powerful tool to help communities visualize the impacts of sea level rise and storm surges. When placed in popular public spaces, public art can also be an effective way to reach audiences that may otherwise not have received or engaged with digital or other written content about the importance of coastal resilience. Public art comes in many forms and can be either temporary or permanent, and projects can be adjusted to fit various budgets.

A public art installation created by University of Massachusetts Amherst artist and landscape architect Carolina Aragón visualized predictions for future flood levels along the Boston Harborwalk. The project used low-cost materials such as lobster traps and aluminum and involved collaborations with UMass Amherst students.

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[25] Statistical significance is an important indicator that would indicate whether one has captured results that characterize the broader population, or if the "result is likely due to chance or to some factor of interest." More information: https://hbr.org/2016/02/a-refresher-on-statistical-significance

DECIDING ON A COMMUNICATIONS PLATFORM

The following table summarizes the communications platforms that Bourne is already using in some form – whether to engage the public with coastal resiliency efforts or other municipal content. This table highlights the ways that these platforms may be further leveraged to support the implementation of the coastal bylaw amendments.

TABLE 1: Existing Platforms for Engaging on Coastal Resiliency in Bourne

Platform	Current Content	Notes
Website: Flood Zone Information; a subpage of the Planning Board. Website: Conservation Links, a subpage of the Conservation Commission. Website: Department of Natural Resources.	The planning board subpage has flood zone FAQs; coastal FAQS; information on relevant regulations. The Conservation Commission's website has information on purchasing coastal real estate, and information on stormwater. The Natural Resources website does not currently have any information related to coastal resilience.	All three websites could be leveraged more to highlight coastal resilience content, such as content developed by the Conservation Commission and GIS maps. Consider cross linking between the Planning Board's website, the Conservation Commission's website, and the Natural Resources website to provide visitors with easier access to all coast related content. Also consider making these websites easier to navigate to from the Town of Bourne's homepage to make content more accessible.
Facebook: Bourne Department of Natural Resources.	This Facebook page currently focuses on sharing notices about missing pets.	Consider creating and linking to a Facebook page focused on coastal resilience, or integrating coastal resilience content into the Natural Resources Facebook page more often.
GIS Map	Various layers including Conservation, Regulatory	Consider highlighting the FEMA flood zones on this map.

Platform	Current Content	Notes
	Areas, and Water Related layers.	
Other: Department of Natural Resources Yahoo! Group	Visitors to the Department of Natural Resources website are invited to join the Yahoo! Group.	Currently the Yahoo! Group links to Yahoo!'s homepage instead of a Bourne-specific group. Consider updating this link and using it as a platform to share coastal resilience content.

The following table summarizes the benefits and considerations of various communications platforms, some of which Bourne is not yet using to engage the public. This table highlights considerations that may influence whether a municipality chooses to integrate it into their communications efforts.

TABLE 2: Benefits and Considerations for Suggested Communications Platforms

Platform	Benefits	Considerations
Website	▪ A one-stop resource ▪ Can support access to other resources, such as social media, newsletters, etc.	▪ Requires human and financial resources to keep updated
E-newsletter	▪ Highly targeted ▪ Low cost ▪ Easy to track metrics such as open rates and click throughs	▪ Requires a quality mailing list ▪ Requires human resources to create high quality, informative, consistent content
Social Media	▪ Low cost ▪ Easy to track metrics through engagement, shares, follows, etc. ▪ Organic growth and advertising	▪ Requires human resources to frequently monitor and update channels ▪ Requires high-level of planning to be effective ▪ Must be open to feedback and interaction
Media Outreach	▪ Media publications lend influence and credibility ▪ Easy to tack metrics through circulation numbers	▪ The final message is in the publication's control

Platform	Benefits	Considerations
		▪ There is no guaranteed outcome for time and work input
Interactive Maps	▪ Allows community collaboration and feedback ▪ Visual and spatial content may be more engaging for some audiences	▪ Requires human resources to create and manage maps ▪ Requires wider strategy to drive audiences to interact
Recorded Interviews and Podcasts	▪ Ability to control message ▪ Accessible to visually impaired people ▪ Opportunity to communicate with more emotion	▪ Requires wider strategy to drive audiences to listen ▪ Requires skilled human resources to create and edit content
Public Presentations	▪ Opportunities for small group and one-on-one engagement	▪ Requires wider strategy to drive audiences attend ▪ Requires skilled human resources to create and present content
Digital and Printed Handouts	▪ Low cost ▪ Simple to create ▪ Effective way to summarize and spread information about other efforts ▪ Can reach people who are harder to reach	▪ For printed handouts, consider sustainability and whether print is necessary to increase reach
Online Surveys	▪ Allows for community engagement and feedback ▪ Can be used for research and evaluation that informs future communications efforts	▪ Requires wider strategy to drive people to the survey ▪ Depending on goals, can require highly skilled human resources, or can be more informal
Public Art	▪ Can reach people who are harder to reach ▪ Can be more engaging for some audiences	▪ Requires diverse skillsets ▪ Can require moderate to high financial investment

STRATEGY TIMEFRAME

An effective communications strategy will include major milestones that connect to Bourne's goals and help to guide the strategic timing of communications work. These milestones can include external considerations, such as the timing of a Town Meeting or the date the bylaw goes into effect, or they can be generated internally to connect with specific coastal resilience campaign goals, such as the launch of a partnership or an event. Here are some suggestions for key milestones to include in a timeline:

- Town Meetings or Town Council Meetings

- Date of bylaw adoption

- Stakeholder engagement events or initiatives

- Local coastal resilience initiatives and activities produced by others

- Key partnerships to accelerate action on adaptation to sea level rise

A communications strategy should also be flexible enough to respond to unexpected coastal resilience related natural events, such as a storm. Communicating with stakeholders about coastal resilience when the idea is connected to its real-world implications will highlight the importance of the bylaw.

In addition to milestones, a communications plan should also include a timeline that outlines when to implement and complete each tactic. Setting key milestones first can help to build out more detailed timelines to support each milestone.

Furthermore, considerations for available resources must be made. For example, will the communications strategy be implemented by full-time staff? Or will it be a volunteer effort? Is it the main focus of one person's work, or is it dispersed among a team? Depending on the answers to these questions, consider condensing or extending a timeline to create realistic expectations.

Finally, be sure to explicitly include timelines for conducting follow up communications. Audiences typically require repeated outreach for a message or request to set in. In some cases, and if resources allow, contacting stakeholders one-by-one may significantly increase the effectiveness of Bourne's outreach efforts. For example, before an event, reaching out to people who have RSVP'd— or those who have yet to RSVP—can help to increase attendance. Though it is also important not to inundate people with communication, strategic follow-up efforts at key points during campaigns can build stronger relationships, leading to sustained support.

12-Month Suggested Communications Work Plan

The following work plan assumes that the drafting of the Coastal Resiliency Bylaw is complete, and Town staff is working towards the adoption of the bylaw. Activities within each grouping are not chronological.

8-12 MONTHS PRIOR TO BYLAW ADOPTION

STRATEGY
Establish the internal team who will be conducting the public outreach around the Coastal Resiliency Bylaw. Reach out to potential collaborators to enlist their help on the communications strategy.

Establish goals and objectives of the communications campaign. Set the timeline of the communications strategy, including identifying any key milestones that should be considered throughout the outreach process and determining measures of success.

Review and confirm suggested talking points to encourage "one voice" from the Town on the bylaw.

Prioritize list of stakeholders that need to be pro-actively engaged around these bylaw changes, and expand the list as needed. Determine engagement structure: should meetings be one-on-one? Will a presentation be needed? Consider ways to take stakeholder feedback in future meetings.

MEETINGS:
Host internal staff meeting to set goals, review talking points, and establish a media point person.

RESOURCE DEVELOPMENT:
Establish or update a dedicated webpage on the Town website related to the updated coastal resiliency bylaw: content can include opportunities for engagement; links to the bylaw; educational resources around coastal resiliency; news updates related to climate change planning or impacts; e-newsletter sign ups and social media links.

Research the Town's opportunities to engage with residents through existing social media pages and online newsletters. If the communications point person or team decides to pursue social media outreach, draft an outreach strategy in order to create content in advance and schedule posts if possible.

Develop presentation materials, including gathering pictures and researching relevant planning documents that can be leveraged in online and in-person meetings on the Coastal Resiliency Bylaw.

4-8 MONTHS PRIOR TO BYLAW ADOPTION

STRATEGY
Determine key messages for the prioritized list of the stakeholders, leveraging the suggested messaging in the Audiences section above, and determine which platforms for engagement are best for sharing those messages.

Continue implementation of outreach plan, sharing key messages with the prioritized stakeholder list in person or through online channels.

Halfway through the outreach plan completion, review the measures of success established at the beginning of the communications strategy process. Update and adapt the communications strategy as needed if evaluation indicates that progress is not being made as expected.

MEETINGS:
Begin engaging with priority stakeholders on expected changes to the Coastal Resiliency Bylaw. Ensure stakeholders are being both actively and passively informed about the content of the new bylaw.

Especially early in the process, the focus should be on the stakeholders who will be most impacted by the bylaw adoption, as well as those who are most likely to challenge its adoption. Host meetings directly with stakeholder groups in order to provide opportunities for two-way dialogues around the challenges facing the town and residents.

Present information to Town Planning Board to share bylaw updates and explain potential impacts to their operations. Update the Bourne Board of Selectmen on bylaw updates, especially highlighting why the Town is acting now and the cost of not implementing changes.

RESOURCE DEVELOPMENT:
Continue adding content to the Town's website, newsletters, and social media channels with relevant meeting materials and opportunities for engagement.

As the team begins holding webinars or in-person meetings, consider recording presentations for them to be shared later on the website and on social media channels.

Televise presentations or meetings on the expected bylaw changes and coastal resilience to increase accessibility of the information.

1-4 MONTHS PRIOR TO BYLAW ADOPTION

STRATEGY
Continue implementation of outreach plan, sharing key messages with the prioritized stakeholder list in person or through online channels.

Consider ways to take stakeholder feedback in the meetings. Hold internal meetings to review feedback and consider amendments to the proposed bylaws if relevant.

About 2 months before anticipated bylaw adoption, review the measures of success established at the beginning of the communications strategy process again. Update and adapt the communications strategy as needed if evaluation indicates that progress is not being made as expected.

MEETINGS:
Present information to realtors, developers, and the business community, leveraging groups of interested citizens where possible (such as chambers of commerce and homeowners' associations).

Continue hosting meetings with and delivering presentation to stakeholders who will be most impacted by the bylaw adoption.

Present any proposed changes to the bylaw to the Bourne Board of Selectmen.

RESOURCE DEVELOPMENT:
Continue adding content to the Town's website, newsletters, and social media channels with relevant meeting materials and opportunities for engagement.

Update presentation materials to reflect any feedback or changes to the proposed bylaw as necessary.

0-1 MONTH PRIOR TO BYLAW ADOPTION

STRATEGY
Continue implementation of outreach plan, increasing the frequency of online communication and sharing key messages with the highest priority stakeholders.

Continue to take stakeholder feedback in the meetings. Hold internal meetings to review feedback and consider amendments to the proposed bylaws if appropriate.

After bylaw adoption review the measures of success established at the beginning of the campaign, and evaluate whether the campaign met expectations. Develop key takeaways that can inform the next communications campaign.

MEETINGS:
Continue to present information to residents and the development and business communities; focus on leveraging stakeholder groups where possible.

RESOURCE DEVELOPMENT:
Continue adding content to the Town's website, newsletters, and social media channels with relevant meeting materials and opportunities for engagement.

Update presentation materials to reflect any feedback or changes to the proposed bylaw as necessary.

Increase frequency of posts and emails to ensure stakeholders' clarity on the new regulations.

Defining and Measuring Success

The individuals responsible for implementing the communications plan framework should compare the goals and objectives set in step one to the outcomes throughout the plan's implementation. By evaluating the effectiveness of messaging and communications strategies periodically, staff can adapt and adjust their techniques and messaging, goals, and objectives as needed.

EVALUATING COMMUNICATIONS EFFORTS

Measuring and evaluating communications efforts is not only crucial to understand the strengths and weaknesses of a communications approach, but also vital to the success of an organization's communications plan overall.

The most essential question to ask in the evaluation process is whether or not the communications plan facilitated the adoption of updated Coastal Resiliency Bylaw regulations. Beyond that, individual goals and objectives (such as those proposed in the beginning of the framework) will guide the evaluation process.

MEASURING PROGRESS & ADJUSTING GOALS

Setting goals and objectives from the outset of the communications plan can facilitate understanding of whether it achieved positive results. Leveraging these goals and the following questions can help set the evaluation framework:

- What is your measure of success?

- How will you measure it?

- What stakeholders are you targeting?

- What are you asking of them?

After setting targets and measuring outcomes, communicators will then need to evaluate the success and assess how well they are connecting with intended audiences. Some examples of questions to ask in the evaluation stage include the following:

- Are you reaching the stakeholders and communities you are targeting?

- Are people engaging with your communications efforts? How are they reacting to your messages?

- What did audiences do with the information they received?

- How many people have you reached?

- Which demographics are you reaching? Which demographics are you not reaching?

- Are your audiences growing?

- Are you changing beliefs, attitudes, and behaviors around climate change? How is this being demonstrated?

If the campaign did not achieve the desired results, the next step will then be to assess the reasons why. A few common reasons that campaigns fall short of their goals include a lack of time or money, targeting the wrong stakeholders, or having a mismatch between outreach strategies and audience segments, and external factors beyond an organization's control.

A clear understanding of what went wrong can be turned into learnings that will make the next communications campaign more efficient and effective. If using digital measurement tools, it may not even be necessary to wait until a campaign is over to make adjustments that can improve the course of the campaign while it is still active. If evaluating a campaign once it is over, be sure to document it thoroughly so that findings can be referenced when setting goals and strategies for the next campaign.

TOOLS FOR MONITORING AND EVALUATION

Surveys

One potential evaluation tool is conducting a stakeholder survey to gauge changing awareness on issues related to land subject to coastal storm flowage. Communicators can issue one or more surveys to determine the baseline of knowledge and attitudes about a particular topic; future surveys can indicate any changes to level of knowledge or rate of implementation.

Commission staff conducted a regionwide survey as part of the Climate Action Plan process to determine a baseline for public attitudes about climate change and receptiveness to and support for various adaptation and mitigation measures. With this baseline in place, measurement and evaluation later on could provide a more accurate reading of how effective various efforts were at raising awareness and motivating behavioral change. Surveys can also be used to better understand an audiences' preferences for communications and help to make decisions on what tools and methods to use in the future.

Google Analytics

Google Analytics is a free web analytics service that provides detailed insight into visitors to an organization's website. This tool is most useful when posting climate action related content to a primary website, and then using a variety of outreach strategies to drive people to the webpage.

Google Analytics provides details such as the audience demographics, which channels are driving the most traffic to the webpage, how long people are engaging with content, and more. The data can be viewed in various graphic formats, and help to understand which strategies are working, and whether a campaign is meeting communications goals. Google also provides free resources to better understand the tools and improve evaluation efforts through Google Analytics Academy.

Social Media

Social media websites provide information and data points on engagement with content. To understand the effectiveness of online engagement, it may be useful to track simple metrics such as the number of followers, the number of "impressions" on social media posts (number of people who have seen content), and the number of e-newsletter subscribers or website visitors. These numbers can be compared at the beginning, middle, and end of the communications plan to evaluate audience growth, and track how audience interest levels in coastal resilience-related topics have changed over time.

Media Monitoring

Outreach strategies that focus on publishing articles in outlets such as newspapers, newsletters, and blogs can be measured based on the number of people those publications are reaching. The circulation numbers for a variety of newspapers and other high-visibility publications can often be found through a Google search. Sometimes these statistics will be locked behind a paywall, but the advertising department of most publications will typically provide them upon inquiry. If sending out a newsletter or publishing a blog, platforms such as MailChimp and Wordpress will provide data on the number of subscribers, views, and more. Finally, if an op-ed or news article is published in an outlet with high circulation, often other writers and bloggers will re-post the article on their own site. Be sure to search for the title of the article to track all media hits.

Events

If organizing events as part of a communications plan, there are variety of ways to measure the success of a given event. Tools such as Eventbrite can help advertise an event and keep track of the number of views an event advertisement has, the number of RSVPs, and the final number of attendees. During or following the event, it can be useful to understand how the attendees' experience was. Audience polling tools (such as Mentimeter or AhaSlides) can be used to take the audience's temperature at various points throughout the event using surveys, polls, and more, while Survey Monkey is a popular free tool one can use to get feedback on the attendees' experience afterwards.

Resources

The following resources have been compiled from a variety of sources, including recommendations from the Commission's stakeholder engagement process and field scan of climate communications resources. The resources included here are meant to support different aspects of communications planning efforts, from finding visuals to use for campaigns, to deciding which method of evaluation to use.

RESILIENT CAPE COD RESOURCES

In 2016, NOAA awarded a three-year, $780,000 Regional Coastal Resilience Grant to the Cape Cod Commission and partners to develop a tool and public outreach program to study the environmental and socioeconomic effects of local and regional coastal resiliency strategies. The "Resilient Cape Cod" project focused on the effects of erosion, storm surge, and sea level rise, and resulted in the creation of several resources that climate change communicators can leverage in their work:

- **Adaptation Strategies Database**: The database is a collection of information on a broad range of 41 "green" and "gray" strategies to address coastal hazards on Cape Cod. The strategies include nature-based solutions, structural solutions, and policy approaches, that are classified based on their ability to protect, accommodate, or retreat from the impacts of erosion, storm surge, and sea level rise. Information is available in a full Excel matrix and as simplified fact sheets, as well as integrated into the Coastal Planner tool.

- **Coastal Planner**: Commission staff engaged the Timmons Group, Inc., in the development of a decision support tool to communicate the impacts of coastal threats and adaptation strategies, including costs and benefits, and the need for action in a GIS-based, user-driven tool. The Coastal Planner educates users on the climate change hazards impacting Cape Cod's coastline, the adaptation strategies available to address them, and implications for local infrastructure and ecosystems. Communicators can leverage the tool in place-based discussions on climate change impacts. It centralizes coastal hazard planning layers such as FEMA FIRM and projected sea level rise scenarios, and integrates the cost of doing nothing into scenario results.

EDUCATIONAL RESOURCES

The following educational resources on coastal resilience and climate change were identified by the members of the Climate Action Plan Communications Stakeholder Working Group and the Cape Cod Commission staff.

EFFORT	INTENDED AUDIENCE	ISSUE AREA
After Ice app	General public	Sea level rise
Blue Line Project	General public	Sea level rise
Bringing Wetlands to Market	Educators	Carbon sequestration, Wetlands
Climate Resilience Hubs (CREW)	Community leaders	Community Engagement
Expedition BLUE	General public	Blue economy
Google Earth	General public	General - climate-related issues
LSTA Grant	Intergenerational	Stormwater mitigation, Pollution
Mass Audubon – The Value of Nature	General public	General - climate-related issues
Massachusetts Climate Education Organization (MCEO)	Educators, students	General - climate-related issues
MEES Conference 2021	Educators	General - climate-related issues
National Network for Ocean and Climate Change Interpretation (NNOCCI)	Climate communicators	Ocean impacts
NOAA Digital Coast	Community leaders	Coastal impacts
NY Times	General public	General - climate-related issues
RWU Fact Sheets	General public	General - climate-related issues

COMMUNICATIONS TOOLS

The following is a list of communications tools that have been mentioned throughout this document, including social media and website platforms, online tools for virtual engagement and event management, and more.

PURPOSE	NAME WITH LINK
Virtual Engagement	Resilient MA's virtual engagement toolkit
Virtual Engagement	Mentimeter
Virtual Engagement	AhaSlides
Online Survey	Survey Monkey
Online Survey	Google Forms
Story Maps	ArcGIS StoryMaps
Measurement and Evaluation	Google Analytics
Measurement and Evaluation	Google Analytics Academy
E-newsletter	Mailchimp
Website / blog	Wordpress
Website / blog	Squarespace
Event Management	Eventbrite
Social media	Facebook
Social media	Twitter
Social media	Instagram
Social media	Linkedin
Social media	Snapchat
Social media	Youtube
Social media	TikTok
Social media	Reddit
Social media	Pinterest
Social media	Whatsapp

SELECT METRICS FOR COMMUNICATIONS EVALUATION

Below is a select list of metrics that may be helpful to evaluate the reach of communications campaigns. Please note this list is not exhaustive.

Social Media	Number of followers
Social Media	Number of shares
Social Media	Number of comments
Social Media	Number of likes
Social Media	Number of impressions
Media coverage	Number of hits
Media coverage	Number of readers or listeners
Media coverage	Equivalent of advertising spend
E-newsletter	Number of opens
E-newsletter	Number of click-throughs
E-newsletter	Audience reach by email and partner networks
Partnership	Ambassadors recruited
Event or Presentation	Attendees at events
Website	Website hits and dwell time
Website	Number of downloads of campaign assets

FREE GRAPHICS RESOURCES

The following websites provide photos, videos, and graphics at no charge that can be used in communications campaigns.

PHOTOS	TOOL
Climatevisuals	https://climatevisuals.org/
Unsplash	https://unsplash.com/
Pexels	https://www.pexels.com/search/climate%20change/
Pixabay	https://pixabay.com/es/
Canva	https://www.canva.com/photos/free/
IPCC (Climate Outreach collaboration)	https://www.ipcc.ch/sr15/mulitimedia/photo-library/
StockSnap.io	https://stocksnap.io/
Picjumbo	https://picjumbo.com/
Burst	https://burst.shopify.com/
Picspree	https://picspree.com/es

VIDEO BANKS	TOOL
Videezy	https://es.videezy.com/
Lifeofvids	https://www.lifeofvids.com/
Pexels (video)	https://www.pexels.com/search/climate%20change/
Pixabay (video)	https://pixabay.com/es/videos/
Distill	https://wedistill.io/
Splitshire	https://www.splitshire.com/category/video/
Clipstill	https://www.clipstill.com/
Coverr	https://coverr.co/
Videvo	https://www.videvo.net/
GRAPHICS	TOOL
Freepik	https://www.freepik.es/
Flaticon	https://www.flaticon.com/
The Noun Project	https://thenounproject.com/
Iradesign	https://iradesign.io/
Drawkit	https://www.drawkit.io/#browse-now-button
Absurd illustrations	https://absurd.design/
Manypixels	https://www.manypixels.co/gallery
Freebie	https://freebiesupply.com/
Ouch!	https://icons8.com/illustrations
Vivid	https://webkul.github.io/vivid/
Humaans	https://www.humaaans.com/
NonScandinavia	http://www.nonscandinavia.com/

These resources were collected and shared by the C40 Climate Leadership Group. [26]

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[26] The C40 Cities Climate Leadership Group. "The C40 Climate Action Planning Communications Toolkit." 2020. Link:: https://bit.ly/30zwFSL.

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