

ISSUE 1, JANUARY 2025

In our inaugural report, the City of Saco Shoreline Commission hopes to establish a regular summary of the items that are important to our community. Reports will focus on climate resiliency and sustainability as it relates to the Saco coast and our protected coastal wetlands, and the community in general. Whether that be at the City, County, State or Federal levels, anything relevant will be reported. It is the Shoreline Commission's intention to be an educational starting point for those issues that are important to the Saco community.

Weather event recovery and climate resiliency are complicated, understanding that our coastline and wetlands are interconnected with not only individual properties, but our shared natural resources and other regional communities. Each of us, our neighbors, and local businesses are affected by these challenges differently as our community moves forward. The economics and social consequences of maintaining this extensive natural resource is important to each person, organization, business, and the City.

A significant part of what can be done now and in the future is linked to multiple agencies, programs, commissions, committees, and councils. As part of our effort to keep the Saco community updated, we will work to stay connected to and updated on the most relevant news and information. Below you'll find examples:

ORGANIZATIONS/AGENCIES

City of Saco (<https://www.sacomaine.org>)

City of Saco Section 111

(https://www.sacomaine.org/departments/administration/camp_ellis.php)

City of Saco Public Works

(https://www.sacomaine.org/departments/public_works/index.php)

City of Biddeford Sustainability

Committee (<https://www.biddefordmaine.org/5598/Mayors-Sustainability-Committee>)

Federal Emergency Management Agency (<https://www.fema.gov/>)

Maine Bureau of Resource Information and Land Use Planning

(<https://www.maine.gov/dacf/rilup/>)

Maine Climate Council (<https://www.maine.gov/future/climate/council>)

Maine Department of Transportation (<https://www.maine.gov/mdot/>)

Maine Natural Resource Conservation Program (<https://www.mnrpc.org/>)

Maine Office of Policy Innovation and the Future (<https://www.maine.gov/future/>)

Infrastructure Rebuilding and Resilience Commission

Community Resilience Working Group

Maine State Department of Environmental Protection (<https://www.maine.gov/dep/>)
Rachael Carson National Wildlife Refuge (<https://www.fws.gov/refuge/rachel-carson>)
Southern Maine Planning and Development Commission (<https://smpdc.org/>)
US Army Corp of Engineers (<https://www.usace.army.mil/About/>)
US Environmental Protection Agency (<https://www.epa.gov/>)
York County Emergency Management Agency (<https://www.yorkcountymaine.gov/ema>)
Various municipalities' resilience and adaptation efforts along the Southern Maine Coast

GUIDELINES/ACTIONS/PLANS

2022 Camp Ellis Study

(<https://cms1files.revize.com/sacome/Camp%20Ellis%20Architectural%20Survey%20and%20Climate%20Resiliency%20Study.pdf>)

City of Biddeford Climate Action Plan

(<https://www.biddefordmaine.org/DocumentCenter/View/12242/Biddeford-Climate-Action-Plan?bidId=>)

Department of Environmental Protection Chapters 305, 310 and 355

(<https://www.maine.gov/sos/cec/rules/06/chaps06.htm>)

FEMA Category B and G Flood Management Compliance

FEMA Flood Plans and affected areas (<https://www.fema.gov/flood-maps>),

(<https://msc.fema.gov/portal/home>)

Maine Climate Action Plan (<https://www.maine.gov/climateplan>)

Maine Community Resilience Partnership

(<https://www.maine.gov/future/climate/community-resilience-partnership>)

Maine State Comprehensive Planning and Land Use Regulation Act of 1988

(https://www.maine.gov/dacf/municipalplanning/docs/2005manual_highres.pdf)

Maine Natural Resource Protection

Act (<https://www.maine.gov/dep/land/nrpa/#::~:~:text=The%20purpose%20section%20of%20the,dune%20systems%20are%20resources%20of>)

National Coastal Resilience Fund (<https://www.nfwf.org/programs/national-coastal-resilience-fund>)

Saco "Climate Adaptation and Action

Plan" (<https://cms1files.revize.com/sacome/Final%20Climate%20Adaptation%20Action%20Plan%20August%202024.pdf>)

Saco "Beach Management Plan" (In progress)

Save Our Shores Saco Bay (SOS) - (<https://sossacobay.com/>)

Southern Maine Planning and Development "Climate Ready Coast

(<https://storymaps.arcgis.com/stories/4b1a578fa6f84e8b83593c17d9c824aa>)

York County Emergency Management Agency "Beach Management Plan" (In progress)

JANUARY 2024 STORMS

The January 10 and 13, 2024, storms had a significant impact on the Saco Bay shoreline, from the jetty at Camp Ellis along the entire coastline north to Goosefare Brook. The hourly wave height during the events topped 20' at the peak of each of the two storms. That said, there were critical differences between the two events:

- The January 10 storm event, a powerful southeaster, had very large waves and a large storm surge but hit at a lower tide. It resulted in extensive erosion of protective dunes, lowered beaches, and battered much of the armored shoreline.
- The January 13 storm event, another powerful southeaster, had smaller waves and a smaller surge but hit at a much higher tide and set record water levels. It caused further erosion, damage, and unprecedented flooding.

(Ref. Peter Slovinsky - Maine State Geologist, Maine Department of Agriculture, Conservation and Forestry, Mar-08-2024)

The storm surge associated with the events (as measured at Portland) was 13.8' and 14.5' respectively. The combination of the individual storms' characteristics and the associated storm surge resulted in an average shoreline erosion along the Saco shoreline of 13 feet and an overwash of 96 feet. Though those statistics don't reflect some important lessons, such as the importance of responsible dune management. Areas that had established fortifications, whether those are manmade, well-established dune grass, or other natural barriers, suffered significantly less erosion, estimated at an average of -7 feet.

Given the Gulf of Maine and by extension Saco Bay have experienced greater sea level rise than global averages (ref. NOAA https://tidesandcurrents.noaa.gov/sltrends/sltrends_station.shtml?id=8418150), The City of Saco continues to pay close attention to this issue. Future decisions on remediation and resiliency will incorporate this data as the city moves forward with its resiliency and infrastructure planning efforts. For additional detail on the effects of the January storms please connect to "[The January 10th and 13th Events: A One-Two Punch to the Maine coastline.](#)"

ARMY CORPS JETTY

Since construction of the jetties at the mouth of the Saco River between 1828 and 1968 as part of a federal navigation project, our community has experienced severe coastal erosion north of the jetty. For decades, the United States Army Corps of Engineers has evaluated potential shoreline erosion mitigation measures for Camp Ellis and the larger Saco Bay.

Throughout this process, the City has remained steadfast in addressing this critical issue, advocating for the community and pursuing the best possible solutions.

In January 2024, Saco signed a Project Partnership Agreement with the United States Army Corps of Engineers for a federally funded project valued at \$45 million to construct a 750-foot spur jetty and an estimated 300,000 cubic yards of beach sand fill.

Read more about current updates on the City's [Section 111 webpage](#).

DREDGE

The Saco River has a long history of dredging and federal river management efforts dating back to 1867. In general, that work has been commercially focused. The more recent efforts, specifically in 2019, have been to offset the effects of significant weather events and augment beach recovery. A brief history:

- **1867:** Dredging and jetty construction at the river's mouth to improve commercial navigation
- **1911–1912:** Dredging to improve the river channel
- **1938:** The Corps of Engineers completed a series of navigational improvements, including a six-mile channel, jetties, and a breakwater
- **1953:** A 700-foot rock revetment was built to protect Surf Street
- **1958:** The north jetty was repaired and extended to keep it attached to the land
- **2019:** The Corps used sand from a dredging project to build up the beachfront

York County, through federal grant funding, purchased dredging equipment to support County municipalities. The equipment operating contract with Michel's Contracting is signed and legacy permits from the 2019 dredge are being checked to make sure they are valid for the proposed dredging of the pier area and lower river. Saco is asking for a dredge in the current dredge season of 11/15/24 to 4/15/25. This is dependent on York County scheduling and logistical requirements. Most of the logistics have been finalized and sand matching, which is critical for compliance with various resource and FEMA requirements related to storm cost reimbursement, has been completed.

The Shoreline Commission is in strong support of the County Program. As of December 2024, four communities have signed the County Memorandum of Agreement to enroll in the program: Saco, Old Orchard Beach, Ogunquit, and Wells. Wells is also expecting a dredge this season and since the equipment is docked there, it is expected Wells will be

first.

RECOVERY

At Saco Public Works readiness, response, and recovery is an ongoing and evolving effort, implementing lessons learned from each event and improving preparedness and recovery strategies.

As with the January storms, when there is the potential for a coastal storm in Saco, Public Works, along with Fire, Police, and York County Emergency Management, are communicating days in advance to assess and track many factors.

- **Pre-storm tracking and monitoring**
 - Monitor weather forecasts and track storm timing against tide charts and anticipated storm surge timing.
 - Cancel local events and get early warning messages out to public
- **Storm response planning**
 - As the storm event approaches Saco Public Works prepares equipment, establishes off hours response and staffing level schedules, secures contractor availability for assistance, and prepares coastal roadways and evacuation route detours and signage.
- **In-storm response**
 - During a major coastal storm staff is monitoring key access points to and from Camp Ellis, Kinney Shores, and other Seaside Avenue neighborhoods. Roads are barricaded as hazards that would strand a car are identified.
 - As the tide and floodwaters recede, key access routes are opened back up, typically with a front end loader removing sand and debris from the roadway.
 - Drainage systems are checked and debris removed so areas can drain more quickly.
 - Barricades are left in place on secondary roads if hazards or washouts still exist.
- **Post Storm Recovery**
 - Each coastal street is checked for washouts, debris, low lying utility wires, or other potential hazards.

- Inspection results determine a priority order and estimated time to restore each roadway back to pre-storm conditions.
- Time of year and availability of construction services and materials can determine if roads can be fully restored and paved right away, or need to wait until spring/summer construction season.

RESILIENCE

Saco Climate Adaptation and Action Plan

Looking forward, Saco has begun the necessary efforts to establish a measurable framework for planning and recovery from significant climate events and climate change. With significant community engagement, Saco's Energy & Sustainability Committee developed Saco's first Climate Adaptation & Action Plan <https://cms1files.revize.com/sacome/Final%20Climate%20Adaptation%20Action%20Plan%20August%202024.pdf>, approved by the City Council in October 2024. This plan was created through the work of the Energy Committee, Saco's Planning Department, Southern Maine Planning and Development Commission's "Climate Ready Coast" research, the Conservation Commission, and other City departments and advisory bodies.

The foundation for this plan was laid out in 2020 when a group of Saco Middle School students asked the Conservation Commission and Energy & Sustainability Committee to work with them to present a climate emergency declaration to the City Council. The "Resolution Endorsing the Declaration of a Climate Emergency and Emergency Mobilization Effort to Restore a Safe Climate" <https://cms1files.revize.com/sacome/Packet%209.21.20.pdf>, was [adopted by the City Council in 2020](#).

Since this declaration, Saco's Energy & Sustainability Committee has moved forward with sustainability projects funded by Community Action Grants awarded by the Governor's Office of Policy and Innovation. One such grant was used to fund the creation of Saco's Climate Adaptation & Action Plan. Learn more about this plan on the City's Climate Plan webpage at www.sacomaine.org/climate.

Beach and Coastal Management

As had been reported this year, Saco is in the process of developing a specific "Beach Management Plan." This coincides with similar efforts in Biddeford, Wells, Ogunquit, Old Orchard Beach and Scarborough. For Saco specifically, this may entail assuming coastal beach management of the River Jetty from the Army Corp of Engineers, hardcoast, and

significant consideration of transition areas, dunes, and compliance with natural resource and endangered species regulations. This may also include strategies for FEMA emergency access where necessary. This program is pending the results of the referenced York County Emergency Management Agency project (see below) to develop a county-wide baseline for a beach management plan.

Ferry Road and Seaside Avenue

The City of Saco announced that the Maine Department of Transportation (MDOT) has awarded \$1,257,000 in funding for infrastructure improvements at the entrance to Camp Ellis through the Maine Infrastructure Adaptation Fund (MIAF). This investment is part of a broader effort to enhance coastal resiliency in response to rising sea levels and the increased frequency of coastal storms.

(https://www.sacomaine.org/news_detail_T6_R551.php)

Third Annual SOS (Save our Shores/Saco Bay) Saco Bay Coastal Conference, Oct. 8, 2024

Established in 2019, SOS is a non-profit advocacy group that aims to encourage Saco Bay area communities to work together to save their beaches and shores. Its goals are to prevent beach erosion and to intensify interventions to remediate the erosion caused by the Saco River Jetty that threatens several Saco Bay communities, including Camp Ellis.

The organization is working to introduce wave attenuation technology and promote the York County dredge program's sand replenishment goals. It is also working to expand a Saco beach management initiative that strengthens local efforts through community collaboration, focusing efforts, sharing resources, and building a website library that makes available pertinent regional and national information.

The group has a website www.sossacobay.com and a Facebook page www.facebook.com/sossacobay. Documentation from its third annual coastal conference, entitled Confronting Rising Seas and Coastal Erosion, can be viewed at www.ferrybeach.org/sos-saco-bay-conference.html.

MUNICIPAL, COUNTY, AND STATE PROGRAMS

Municipalities

Our neighboring municipalities are also working to protect our shared coastal resources. Please feel free to connect with their efforts:

Biddeford - Climate Action Plan (<https://our.biddefordmaine.org/en/projects/climate->

[action-planning-1\)](#)

Kennebunkport/Kennebunkport - Climate Action Plan

(<https://www.kennebunkmaine.us/1131/Climate-Action-Committee>)

Kittery Climate Action Plan (<https://www.kitterymaine.gov/home/news/town-kittery-climate-action-plan-now-available-viewdownload-june-2024>)

Ogunquit Climate Action Plan

(https://ogunquit.gov/DocumentCenter/View/2229/Ogunquit-Climate-Change-Fact-Sheet_v5-PDF-)

Old Orchard Beach - Comprehensive

Plan (<https://www.oobmaine.com/board/comprehensive-plan-committee/>)

Scarborough - 2024 Vulnerability Assessment (<https://www.scarboroughmaine.org/stay-connected/municipal-projects/vulnerability-assessment>)

Wells - Comprehensive

Plan (<https://www.wellstown.org/AgendaCenter/ViewFile/Item/4811?fileID=13127>)

York County

The York County Emergency Management Agency is undertaking a significant effort to support the entire southern Maine coastline. With the urgency that the January Storms raised, they are assembling a comprehensive coastline management program that they would then implement. In an effort to ensure the continuity of the work that needs to take place along the entirety of the Southern Maine shoreline in conjunction with the individual municipalities, this is a critical step in aligning the county's ability to fully utilize both Maine and federal government resources as climate events take place in the future. This includes compliance to FEMA Category B (5-year) and Category G (100-year) climate event management and recovery programs plus the state Natural Resource Protection Act Chapter 355, Coastal Dunes, working to a median sea level rise projection of 1.5' by 2050 and 3.0' by 2100.

State of Maine

Governor Janet Mills and the Legislature created the Maine Climate Council in June 2019, an assembly of scientists, industry leaders, bipartisan local and state officials, and engaged citizens to develop a four-year plan to address the impacts of climate change on Maine, build resiliency to climate effects, and meet state statutory targets to reduce greenhouse gas emissions. The plan was delivered to Governor Mills on Dec.1, 2020. By law, the first updated plan must be drafted by 2024.

This updated plan is scheduled for release prior to the end of the year. Supporting the Climate Council, Governor Mills established the Infrastructure Rebuilding and Resilience

Commission. The Commission took a detailed look at the results and implications of the January storms.

- A portion of the updated 2024 report with the Council's draft strategies is available here (<https://www.maine.gov/future/sites/maine.gov.future/files/2024-10/Maine-Wont-Wait-Draft-10.15.24.pdf>)
- *Maine Won't Wait*, A Four-Year Plan for Climate Action (https://www.maine.gov/future/sites/maine.gov.future/files/inline-files/MaineWontWait_December2020.pdf)
- *Maine Won't Wait*, 2023 Progress Report (https://www.maine.gov/future/sites/maine.gov.future/files/2023-12/_2023_MWW%20Progress%20Report.pdf)
- Infrastructure Rebuilding and Resilience Commission interim report (https://www.maine.gov/future/sites/maine.gov.future/files/2024-11/_GOPIF_IRRC_2024_digital_111224.pdf?utm_source=Maine+Climate+Council+Newsletter&utm_campaign=6eaf80becf-October-Draft-Chapters_COPY_01&utm_medium=email&utm_term=0_6d18abc92f-6eaf80becf-614922229)

Summary

One can see, there are a tremendous number of moving parts to this conversation. As the Shoreline Commission, we hope to keep you updated on the issues that will be relevant to you. That said, we are also certain that we will not be able to capture everything that might be significant as we move forward with this initiative. We hope that you will let us know what we might be missing. We also hope that you will investigate your own avenues of interest with the starting points that are listed here. Don't hesitate to reach out to us or the City of Saco with questions, comments or suggestions.

The Saco Shoreline Commission:

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David Plavin - Chair

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