3. BEST PRACTICE RESULTS

3.1. MAINE

3.1.1. OGUNQUIT, ME

Population Density	299/ sq. mi.
Form of Government	Town
Category	Oceanfront Seasonal
CRS Rating	Not Participating

Median Household Income	Median Per Capita Income	% Owner Occ	Population	2000-2010 Pop Growth Rate	% White	% Hispanic	% Minority	% Seasonal Housing
56591	44732	83.1	892	-5.3%	97.0	2%	2%	71.8

Adaptations	Status	Incorporates CC	Type	Impact	Standard Costs		Funding Source
Comprehensive Plan - Incorporates Climate Change	Completed	Yes	Procedural	Recommendation	Above Required	Zero	None
Redefined Mean High Water to increase margin over current observations by 4 feet	Implemented	Yes	Procedural	Mandatory	Unique	Zero	None
Sea Level Rise Study (Sewer District)	Completed	Yes	Procedural	Recommendation	Unique	Low (< $10,000)	Other

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POPULATION AND GEOGRAPHY

Located on the Wells Bay, Ogunquit is a well-known summer tourist destination in York County, Maine. The town is bordered by the towns of York, Wells, and the Atlantic Ocean to the east. Ogunquit has an area of 4.3 square miles of which 0.2 miles is water. According to the comprehensive plan, the town, "despite its diminutive size, is bursting with special places that define the community." Among those places include the Marginal Way, a unique seaside trail with cliffs and spectacular views that connects Ogunquit Beach and Perkins Cove. Ogunquit is also home to a number of notable cultural amenities including the Ogunquit Playhouse. It has a vibrant historical downtown area as well as farms, woodlands and seacoast, and is a popular destination among members of the LGBTQ community.

Its census reported population was 892, but almost 72% of the housing stock is reported as seasonal, indicating a much larger summertime population. The community is wealthy and white. Of the year-round population, minorities only represent 2% and the median household income is over $56,000.

COASTAL ISSUES

Ogunquit has 97 acres of coastal wetlands that are at risk from coastal flooding, and some flooding already occurs in the Perkins Cove neighborhood. However, due to topography, most of Ogunquit's building stock appears relatively insulated from direct coastal flooding impacts. Predicted impacts to the built environment under a 2 foot sea level rise scenario are localized and minimal.

The town decided to focus its attention on the sewer district plant, as it was identified as a major asset at risk from sea level rise, and has indeed already been experiencing significant flooding, most recently during the Patriot's Day Storm in 2007. The Ogunquit Sewer district pump station could be at risk after 1 meter of sea level rise.

ADAPTATIONS

Comprehensive Plan Incorporates Climate Change

Ogunquit is taking a comprehensive approach to preserving its unique qualities. Its comprehensive plan promises that Ogunquit Beach will "continue to be the premier ocean beach in Maine and the dune system will have been protected." In addition, the plan indicates that

rivers and streams will be preserved, its rural areas will be protected development, and its historic pedestrian-oriented downtown will be enhanced and expanded. (p. 5-2)

The plan identifies sea level rise as a risk in its natural and marine resources section. It says that sea level rise would have the most significant effect on coastal flooding. It suggests that the town's floodplain ordinance might need to be revised in light of these concerns (p. 4-3).

The plan recommends that future development not be permitted in floodplains and that "existing development and incompatible land uses should not be allowed to expand and should be amortized for their eventual elimination, to the maximum extent feasible" (p. 4-6).

The plan recommends the town adopt a policy "to require detailed consideration of appropriate climatological factors including the potential for sea level rise, in the design and siting of all future development" (p. 6-4).

It recommends the town implement the policy in the following ways:

A. Require all land uses...in areas subject to predictable storm tides and flooding appropriate steps be taken to avoid such likely damages.
B. Continue to require that applicants for the approval of development proposals submit appropriate if ration regarding how climactic factors, energy conservation and human comfort have been considered in project planning.
C. Modify the land use regulations in coastal areas to reflect the potential for sea level rise and require that development proposals in these areas be sited and designed to accommodate this possibility. (p. 6-4).

Shoreline Setbacks

The town is using a unique legal method to increase its shoreline setback without changing the setback itself, but rather by amending the definition of normal high water upon which the setback is based.

The highest annual tide predicted for the region is generally about 7 feet above mean high water. By amending its definition of "normal high water" to 11 feet above mean sea level, the town includes a margin of about 4 feet for sea level rise, which is also 2 feet higher than the FEMA 100-year designated floodplain.

The adopted language reads as follows:

> In the case of land adjacent to tidal waters, the normal high water line shall be considered to be the contour line at an elevation of 11.0 feet above mean sea level as determined by a land surveyor based on the nearest USGS benchmark. (Town of Ogunquit, ME, Town Code, Art. 2, Definitions, p. 24)

Ogunquit Sewer District Study

The town of Ogunquit received an NROC & GOMA Coastal Resilience Grant through the New England Municipal Coastal Resilience Grants Program.

The Ogunquit Sewer District recently undertook a study to specifically look at the impacts of sea level rise, storm surge, and flooding at its wastewater treatment plant. The plant provides secondary treatment for approximately 1.28 mgd of sanitary waste water and operates 12 pumping stations and 20 miles of sewer lines. In 2011, the Maine Geological Survey, the Southern Maine Regional Planning Commission, and the town collaborated on the Coastal Hazard Resiliency Tools project. The town identified its WWTP as at risk and the MGS prepared simulations projecting sea level rise for the plant.

Figure 3.1.1:1 - Ogunquit's treatment plant is located just over the primary dune

The study was undertaken because of the significant risks to the plant, its aging infrastructure, and regulatory concerns. The plant has experienced significant flooding in the past, particularly during the Patriot's Day Storm in 2007. It is located in a coastal sand dune system and within the coastal barrier resource system. The study was based on projections of 1 foot of SLR by 2050 and 3.2 feet by 2100.

The analysis showed that by 2050 the access road to the plant would flood in the 100-year storm, and by 2100 a 100-year storm would inundate the site and be close to inundating the outside process tanks. Given projected sea level rise, the risk analysis concluded that there is no practical solution that allows the plant to be viable on the current site beyond 2052. The plan concluded that "even under the best scenarios, there appears to be no practical long-term solution that would feasibly allow the town to continue utilizing the WWTP site beyond 2032-2052 given current projections." Major flooding would shut the plant down, cause the beach to be closed, and cause significant public health and image issues for the town, which relies on tourism and its image of an environmentally conscious, attractive community.

The sewer district is considering all options to deal with the projected issues, including moving to a new site, or shutting the plant down and regionalizing with another utility. Eroding dunes and the sea wall will become more susceptible to failing during storms and it is estimated that the dune will deteriorate completely within the next 50 years.