

3.9.2. SOMERSET COUNTY AND CRISFIELD, MD

SOMERSET COUNTY, MD

Population Density	82.8/ sq. mi.
Form of Government	County
Category	Rural Bayfront
CRS Rating	Not Participating

Median Household Income	Median Per Capita Income	% Owner Occ	Population	2000-2010 Pop Growth Rate	% White	% Minority	% Seasonal Housing
41420	17599	66.6	26470	-0.5	54.7	48.8	7.8

Adaptations	Status	Incorporates CC	Type	Impact	Standard Costs	Funding Source
Maryland Coast Smart Rising Sea Level Guidance Study	Completed	Yes	Procedural	Recommendation	Unique Medium (<\$100,000)	NOAA, State

CRISFIELD, MD

Population Density	1078.8/ sq. mi.
Form of Government	City
Category	Rural Bayfront
CRS Rating	Not Participating

Median Household Income	Median Per Capita Income	% Owner Occ	Population	2000-2010 Pop Growth Rate	% White	% Minority	% Seasonal Housing
26988	20514	34.3	2726	-0.33	59	42.9	10.2

Adaptations	Status	Incorporates CC	Type	Impact	Standard Costs	Funding Source
Freeboard - 2 Ft	Implemented	No	Accommodation	Mandatory	Unique Zero	None
Maryland Coast Smart Rising Sea Level Guidance Study	Completed	Yes	Procedural	Recommendation	Unique Very Low (< \$1,000)	NOAA, State
Comprehensive Plan Incorporates SLR	Completed	Yes	Procedural	Recommendation	Unique Zero numbers	None

CONTACTS

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POPULATION AND GEOGRAPHY

Somerset County has a population of 26,470 as of 2010 and a population density of 81 people per sq. mi. The population is 54.7% white and 42.5% black. The Asian population is less than 1% and the Hispanic population is 3.3%. Median per capita income is \$16,191 and median family income is \$42,443. The homeownership rate is 67%. The City of Crisfield has a population of 2,726. It has a homeownership rate of 43%. Its population is 59% white and 36% black and 3.7% Hispanic of any race. Median per capita income was \$39,046.

Somerset County is located in the southwestern part of Maryland's Eastern Shore. It comprises an area of 611 sq. mi.—327 sq. mi. of land and 283 sq. mi. of water. It is bordered by Accomack County, Virginia, to the south, Wicomico County to the north, and Worcester County to the east. It is located to the southwest of Salisbury, MD. The county seat is Princess Anne. It is a largely agricultural county with concentrations in the poultry and seafood sectors. Sysco Food Services is one of the largest employers, with more than 750 workers. The University of Maryland Eastern Shore is also located in the county.

The City of Crisfield is one of two incorporated municipalities in the county. It is the southernmost municipality in the State of Maryland. Its legendary seafood and fishing industry has declined somewhat due to pollution and overfishing, while tourism has replaced some of the resource-based economy. It has an area of 3.0 square miles—1.6 sq. mi. is land and 1.4 sq. mi. is water. The city is located on the Tangier Sound, coterminous with the Chesapeake Bay. It is also bordered by the Pokomoke River and has an important commercial fishing industry, long been referred to as "The Crab Capital of the World."



Figure 3.9.2:1 - Crisfield's website depicts its status as the crab capital of the world.

COASTAL ISSUES

Somerset County contains 619 miles of shoreline and 30,000 acres of tidal wetlands. A number of rivers, such as the Pocomoke and Wicomico, are completely tidal, and almost all of the waterways in the county are tidal for several miles. Historical development occurred on these tidal reaches, making the county's population vulnerable to coastal flooding and the expected impacts of climate change and sea level rise. 58% of the county is in the 100-year floodplain. A three-part special cover series documenting the issue of sea level rise ran in *The Daily Times*, the local newspaper based in Salisbury, MD, the week of our visit. One article specifically addressed Somerset.

"Mayor Percy 'P.Jay' Purnell said the effects of rising sea level are obvious. 'I can see it because of the level of flooding...the water is higher, quicker and it stays longer.' He went on to further state "while flooding from the waters of the Tangier Sound was always common during hurricanes and nor'easters, it has become a regular occurrence during unusually high tides." of particular concern are the decimation of offshore islands in the Chesapeake Bay. The article said at Janes Island and Old Island are "washing away." The Mayor said "we are only a year or two away from a wash-through at Old Island" (Holland, 2012).

Mr. Marshall said that the coverage in the local paper has raised awareness in the county, but not among the general public. "I go to a coffee club, and ever since that article came up in the paper, I just been hearing people laughing...a lot of people do not believe SLR will happen" (Personal Communication, Aug. 24, 2012).

Despite the skeptics, the knowledge that land is being lost to the sea appears widespread in these parts. Another article in *The Daily Times* series details the concern about loss of marshland. "Sea level rise is a reoccurring nightmare for the people, environment, and species of Wicomico, Dorchester and Somerset counties...At the 28,000 acre Blackwater National Wildlife Refuge, scientists estimate...an acre of marsh is lost every day... 3,000 acres a year in recent years, and 8,000 acres since 1938" (Montgomery and Murray 2012).

The article details the reason Chesapeake Bay is particularly at risk: a relatively shallow tide of about 2 feet limits flushing, causing the marshes to be more subject to strain during times of drought. McCall was quoted as saying, "It's the first line of defense for our communities...any time a storm comes through, the marshes that stand between the water and the community play a vital role in helping the community adapt...without the buffer...the community becomes more vulnerable" (Montgomery and Murray 2012).

ADAPTATIONS

Maryland Coast-Smart Communities Rising Sea Level Guidance Study

Somerset County received a grant through Maryland's Coast-Smart Communities Initiative program to assess the county's vulnerability to climate change and develop a plan of action to prepare for those impacts. The county reviewed existing plans, development codes, regulations, and laws to ensure the necessary policies and codes were prepared for the reality of the county's climate future, specifically addressing sea level rise and coastal storms. The county developed

Somerset County, Maryland: Rising Sea Level Guidance, which included a vulnerability assessment as well as recommendations on how to adapt the county's management and codes to best prepare for climate change.

In 2009, Maryland launched the Coast-Smart Communities Initiative to provide a support center for local governments dealing with the impacts of climate change. The Coast-Smart Initiative undertook three initial projects in Somerset, Worcester, and Dorchester counties, some of Maryland's most at-risk coastline areas. The Coast-Smart program provided financial support for the county's adaptation planning processes through the Coastal Communities Initiative (CCI) grant program, as well as much-needed technical support.

The county conducted a vulnerability assessment to consider how sea level rise, coastal storms, and flooding will likely impact the county's population, housing, infrastructure, and critical facilities. Based on the analysis, the county proposed a number of changes to existing planning and regulatory policies, including the Zoning Ordinances, Floodplain Management Ordinance/Building Code, Subdivision Regulations, Comprehensive Plan, and Hazard Mitigation Plan.

However, county planner Bob Callander expressed some reservations about the project. He was disappointed that they only modeled one foot of sea level rise based on historical data and said that none of the recommendations had been adopted. The report was presented to the county commission and the planning commission, but very little happened. Shortly thereafter staff went to the county commission to propose a county freeboard requirement of 3 feet, and it was denied.

Mr. Cadwallader said that the project has raised awareness in the planning department but had little impact on the general public. Other ad-hoc actions were taken, such as elevating the generators above 10 feet at the local hospital and putting in place evacuation plans to move patients to other regional facilities. Many of these evacuation plans were put in place successfully during Hurricane Irene in 2011.

The county also has a Critical Area Law in its zoning ordinance, which is the implementation of the Maryland state law.

Crisfield – 2 Foot Freeboard and Zoning Ordinance

The City of Crisfield has a 2-foot freeboard requirement. Crisfield's zoning also attempts to incorporate flood mitigation and resource protection in significantly limiting development in sensitive areas. Although these regulations represent Crisfield's implementation of Maryland's Critical Areas Law, Crisfield's zoning is an exemplar of regulations designed to prevent further degradation of the natural environment and decreases risk from future sea level rise.

One interviewee pointed out the challenges to implementing new regulations, indicating the short time-horizon of elected officials is a challenge. The Somerset County and Crisfield staff thought that new laws are more likely to be effective if mandated by the state but implemented with a local component and extensive education and outreach efforts. The key to effective implementation of regulations, they indicated, is partnership and not mandates.

Crisfield – Comprehensive Plan Incorporates Sea Level Rise

Sea level rise was incorporated into Crisfield’s recently adopted comprehensive plan: (Crisfield, Md. Comprehensive Plan 2010)

"Sea level rise is a significant factor to consider with regard to the region’s vulnerability to coastal flooding. Tide gauge records for the last 100 years show that the historical rate of sea level rise in Maryland has been between 3-4 mm per year or about one foot per century; a rate nearly twice the global average. Current scientific research, however, indicates that sea level rise rates are accelerating and may result in as much as two to three feet of rise along Maryland’s shores by the year 2100. Sea level rise can influence and exacerbate coastal flood events. As sea level rises even in very small increments, storm surges heighten and extend further inland. In low-lying coastal areas, like Crisfield, a one-foot rise in sea level could translate into a one foot rise in flood level, intensifying the impact of flooding and storm surge to homes, businesses, institutions, and roadways."

Crisfield's comprehensive plan land use categories, which comply with Maryland’s Critical Areas Law, were developed in consideration of existing shoreline conditions, potential exposure to flooding risks, and elevation to determine what development is permitted.

Land Use / Natural Area Compatibility						
Land Use	Primary Sensitive Area					
	0-2 feet above sea level	2.1 to 3 feet above sea level	3.1+ feet above sea level	Remaining Natural Shoreline	Tidal Marsh / Non-Tidal Wetlands	Remaining Intact Woodlands
Waterfront Planning Area						
Conservation of Existing Development						
Water-dependent uses	●	●	●	-	○	-
Non-water dependent uses	○	●	●	-	○	-
New Development / Redevelopment						
Water-dependent uses	●	●	●	○	○	-
Non-water dependent uses	○	○	●	○	○	-
Recreation						
Active (involves some land development)	●	●	●	○	○	-
Passive	●	●	●	●	●	-
Resource Conservation	●	●	●	●	●	-
Outside of Waterfront Planning Area						
Conservation of Existing Development						
Neighborhood Conservation	○	●	●	-	-	-
Neighborhood Infill (Limited to Vacant Lots)	○	●	●	-	-	-
Commercial Revitalization	○	○	●	-	-	-
New Development / Redevelopment						
Residential, Neighborhood Redevelopment	○	●	●	○	○	○
New Urban Development (non-residential)	○	●	●	○	○	○
Recreation						
Active (involves some land development)	●	●	●	○	○	○
Passive	●	●	●	●	●	●
Resource Conservation	●	●	●	●	●	●

Key ○ Incompatible
● Limited Compatibility
● Full Compatibility

Figure 3.9.2:2 - Crisfield's Comprehensive Plan Land Use Categories