

TOWN OF SAXIS

TOWN PROFILE

Saxis Island juts into Pocomoke Sound and is separated from the rest of Accomack County by Freeschool Marsh. The island was first patented in 1666 and a single community existed on the island as a single farmstead that primarily raised cattle until 1800 when four families inhabited the island. The community grew in size throughout the 1800s and cattle farming declined due to lack of space on the island. It was during this period that seafood became the primary economy. In the 1920s, the causeway connecting the island to the mainland was constructed and a channel was dredged to the harbor allowing for larger boats to access the island. Seafood continues to be the main economy for the Town. Saxis was incorporated as a town in 1959 (*Saxis Town Plan, 1997*).



Figure 1: Saxis Aerial Map

SOCIO-ECONOMIC

Part of assessing hazards in relation to their risk is understanding the people affected. Not all people are affected equally. Some are affected by the factors that relating to their ability to understand risks posed by hazards, and some by their ability to remove themselves from harm’s way. Those factors include age, mobility, income and the languages individuals speak and the languages in which individuals are able to access information. The following sections are intended to provide insight in the make-up and characteristics of the community and how it relates to hazard vulnerability.

DEMOGRAPHICS

The 2010 Census indicates that the Town had a population of 241, which indicates a 10% decrease in population in comparison to the 2014 estimate of 216. The Town has experienced a decline in population since 1960 when the population was 577 (*Saxis Town Plan, 1997*). The median age for residents in Saxis in 2014 was 57.3 (American Community Survey (ACS), 2010 – 2014). This is a population older than the national average, which could indicate a more high risk population during times of emergency.

Table 1: Saxis Demographic Information

	2014***	2013**	2010*	2000****
Population	216	218	241	337
Median Age	57.3	57.8	55.5	47.3
Disability	13	20	NA	NA
Income				
Median Household Income	\$30,500	\$30,500	\$29,545	\$18,125
Poverty Level	13.4%	18.3%	17.6%	
Language				
Only English	97.4%	100.0%	NA	99.4%
Other	2.6%		NA	0.6%
Spanish	2.6%		NA	0.6%

* U.S. Census 2010, ** ACS 2009 – 2013, *** Annual Estimates of the Residential Population: 2010 – 2014, **** U.S. Census 2000

WORK FORCE

Employment patterns are important to examine for two reasons. They can help to identify concentrations of people for hazard information dissemination or hazard rescue and evacuation. They can also identify where disruptions in employment and income might occur in the aftermath of a disaster.

Saxis is primarily a community of working watermen and the fisheries industry has provided the economic base for the community since the 19th Century. The fisheries industry is based on soft shell crabs and hard crabs resulting from the soft shell catch. Some clamming and fin fishing also occur. From April to November, peeler crabs are caught in traps, scrapes, pots, and dip nets, held in floats until they shed, and sold as soft crabs (*Saxis Town Plan, 1997*). Although Table 2 indicates a steep 55% decrease in the fisherman workforce since 2010, this is actually the fourth season of improved oyster harvest, so actually the numbers should have increased since 2010 versus decreased. There are more people working in education, health care, and social services than there are in agricultural, forestry, and fishing.

Table 2: Saxis Local Workforce

Civilian Employed Population								
Industry	2014*		2012*		2010*		2000**	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Agriculture, forestry, fishing/hunting, or mining	10	12.3%	15	14.9%	22	20.8%	21	16.2%
Construction	8	9.9%	8	7.9%	5	4.7%	8	6.2%
Manufacturing	8	9.9%	15	14.9%	13	12.3%	5	3.8%
Wholesale trade	8	9.9%	9	8.9%	21	19.8%	9	6.9%
Retail trade	4	4.9%	6	5.9%	2	1.9%	6	4.6%
Transportation and warehousing, and utilities	3	3.7%	3	3.0%	3	2.8%	0	-
Information	0	-	0	-	0	-	2	1.5%
Finance, insurance, real estate, and rentals	4	4.9%	6	5.9%	3	2.8%	3	2.3%
Professional, scientific, waste management	5	6.2%	10	9.9%	9	8.5%	3	2.3%
Educational, health care, social services	13	16.0%	10	9.9%	13	12.3%	0	0.0%
Arts, entertainment, recreation, food	7	8.6%	12	11.9%	8	7.5%	0	0.0%
Public Administration	8	9.9%	4	4.0%	4	3.8%	2	1.5%
Other	3	3.7%	3	3.0%	3	2.8%	4	3.1%
TOTAL CIVILIAN EMPLOYED POPULATION	81	-	101	-	106	-	130	-

Source: *ACS, 2010 – 2014, ** U.S. Census 2000

BUSINESSES

Business data provides basic information used in projecting potential economic losses from business and employment disruption, along with wage losses to employees. It can also serve as an indicator of community recovery resources. Finally, it can help to prioritize restoration of utility and infrastructure functions following a high-intensity hazard.

Fisheries have long provided the economic base for Saxis. There are seafood companies in Saxis that are concentrated around the harbor, which pack and package crabs and other seafood (*Saxis Town Plan, 1997*). Due to the Town’s dependence on seafood, the water quality within Chesapeake Bay is an important factor in the Town’s economic sustainability. In the harbor, 72.5% of the 75 slips are used by commercial watermen, but off-season some of those slips are sublet to attract additional new boats. As of July 1, there were 17 on the waiting list for the slips. (Mayor Denise Drewer, personal communication, June 9, 2016)

Many people in the Town are hoping that improvements to the public boat ramp, new restaurant options, the Saxis Island Museum, and potential improved public beach access facilities will open the town to additional visitors and tourism-based businesses (JD Marshall, personal communication, June 9, 2016).



Figure 2: The Harbor at Saxis. Photo by Shannon Alexander.

According to Mayor Drewer, there are now three restaurants, including one snack shack and two seafood restaurants (personal communication, June 9, 2016). The wholesale and manufacturing establishments referenced in Table 3 are assumed to be seafood related.

Table 3: Saxis Business Types

Industry Code Description	Total Establishments		
	2013	2011	2009
Manufacturing	1	1	1
Wholesale Trade	1	1	1
Total, All Establishments	2	2	2
Total Employees	NA	NA	NA

Source: Census Zip Code Business Patterns, 2009, 2011, 2013

BUILT INFRASTRUCTURE

Housing units, community facilities, and transportation are all important factors when considering hazard resiliency. They provide the social services necessary during hazardous scenarios, safe cover for those wanting to stay, and a way to evacuate.

HOUSING UNITS

The majority of homes in Town are occupied, but the Town has experienced an increase in the number of homes that were purchased as vacation homes and remain vacant through the majority of the winter months. These properties are at greater risk to damage during the times they are vacant. The majority of housing stock in Saxis is in standard condition, although several houses are not maintained properly and could pose a threat to public health and safety. The Town has their own ordinance and thus the authority to enforce repairs or clearance of dilapidated buildings and has been systematically addressing this issue since the mid-1990's. There are another two homes scheduled for demolition in the next year.

The estimated total number of vacant housing units noted in Table 4 is most likely too high, and is estimated to be closer to twenty. Just less than 50% of the population are seasonal or transient, however they are anticipated to move to Saxis permanently within the next few years (Mayor Denise Drewer, personal communication, June 9, 2016).

Within the Town, a special use permit is required for mobile homes, and home age, electric condition, block foundation, etc. are strictly reviewed and required. There have been no new mobile homes since May of 2008. Because mobile homes are typically more susceptible to damages from winds and flooding, this process of review and permit reduces risks associated with these hazards.

Table 4: Saxis Housing

	2014*	2010**	2000***
Total Housing Units	168	179	193
Occupied	118	117	148
Vacant	50	62	45
Owner-Occupied	98	93	127
Renter-Occupied	20	24	21
Median Housing Value	\$103,000	NA	NA

Source: * ACS, 2009 – 2013, ** U.S. Census 2010, *** U.S. Census 2000

TRANSPORTATION

Saxis is connected to U.S. Route 13 by State Route 695, a rural road approximately 11 miles long. Most of the Town’s streets are maintained by the Virginia Department of Transportation. Many are not in adequate condition, due to pot holes and regular flooding after rainfall (*Saxis Town Plan, 1997*).

Table 5 reveals that there are fewer households with no vehicle available than there were in 2000; however, ACS estimated that there were 16 residences without vehicles in 2014. This is thought to be an overestimate by Mayor Drewer, which could have been skewed by a higher number of elderly residents in 2010 than there are currently. She believes that there are only four residents without their own vehicle, and that those individuals have family and friends and would not suffer in the case of necessary evacuation (personal communication, June 9, 2016). There is no public transportation that serves the Town. State Route 695 provides the only road access to the Town and portions of the route are often inundated during storm events or astronomically or wind-driven tides. There are about a dozen golf carts, which are allowed on the Town roads. Transportation by water is often utilized; however, there is no ferry service to or from Saxis.

Table 5 : Saxis Resident Vehicles

Vehicles Available	2014*	2010*	2000**
None	16	13	23
One	51	77	55
Two	33	52	53
Three or more	18	19	17

Source: * ACS, 2009 – 2013, ** U.S. Census 2000

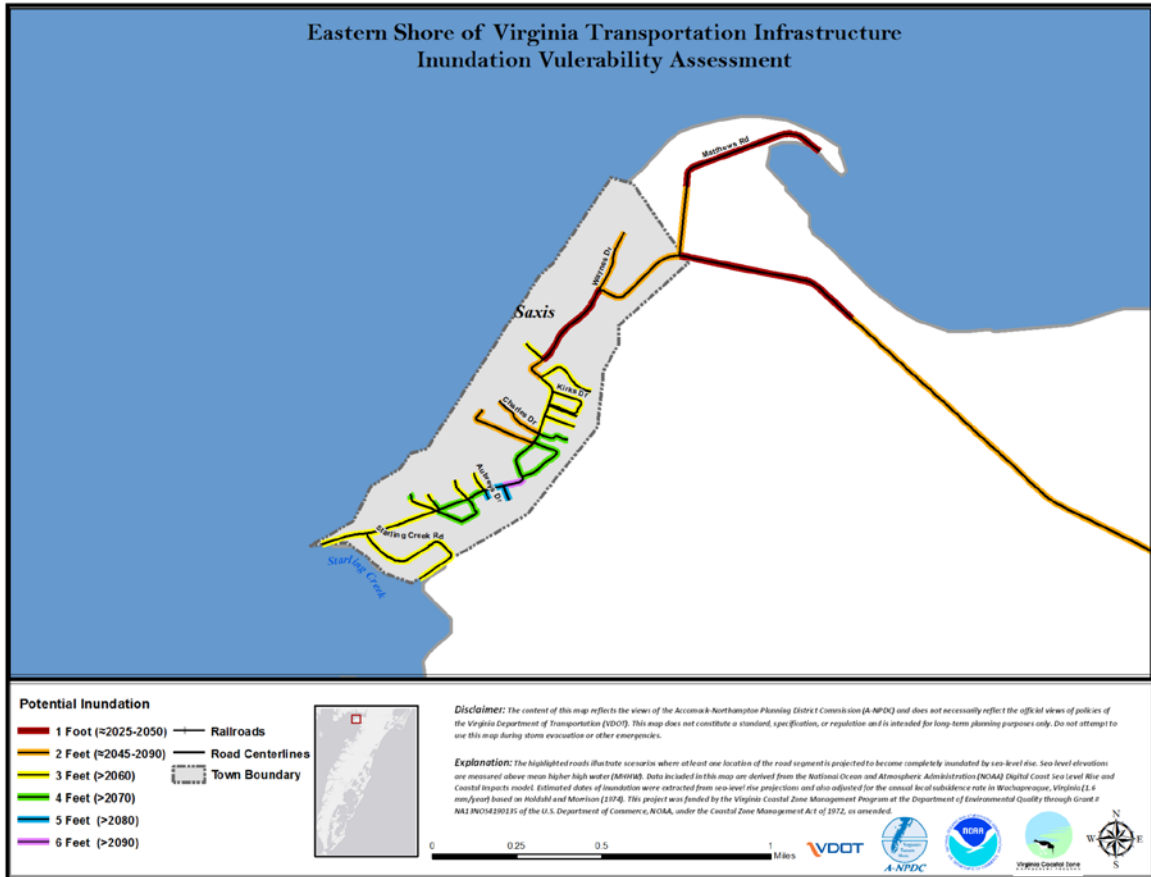


Figure 3: Town of Saxis Transportation Infrastructure Inundation Vulnerability

With only one foot of sea level rise (SLR), it is estimated that the part of State Route 695 will be submerged with one foot of water. This is important to note, as it also reflects that with one foot of flooding about mean high tide, this section of the road would also be inundated, and the remainder of Route 695 leading towards Sanford vulnerable to two feet of SLR or flooding above mean high tide.

COMMUNITY SERVICES AND FACILITIES

Community facilities are facilities required to support the services and functions provided by the Town government or in coordination with other public and private entities. These facilities enhance the overall quality of life for the Town and its citizens. It is important to note what facilities are available in case of a hazard, and it is important to make an inventory of facilities that could be impacted by a hazard. Most of the community facilities within Saxis focus upon the harbor and seafood industry.

PUBLIC SAFETY

Fire protection for the Town is provided by the Saxis Volunteer Fire & Rescue Company, Inc. The fire company also provides ambulance service and includes one ALS ambulance, two engines, one tanker, and one brush unit. The brick building itself, a renovated schoolhouse, has four bays and doubles as the Town Hall of Saxis. Police protection is provided by Accomack County Sheriff's Office, primarily in the evening hours (Mayor Denise Drewer, personal communication, June 9, 2016). There is an intention to utilize the Accomack Sheriff's Office patrol units more, increasing their presence in the Town.



Figure 4 : Saxis' firehouse and Town office are located in a flood zone. Photo by Elaine Meil.

PARKS AND RECREATION

A public harbor and boat launch are located in Town, and two other boat launch facilities are located nearby, outside of Town limits. The Saxis Wildlife Management Area, which borders the eastern half of the Town, offers opportunities for hunting, fishing, and bird watching. There is also a basketball court made available by the Town, and a volleyball court and playground made available on church property (*Saxis Town Plan, 1997*).



Figure 5 : The Saxis Town Pier is located on the western shore of the island. Photo by Curt Smith

The fall of 2016 should bring the completion of the pavilion at the Town Harbor. The large building is to be accompanied by a restroom facility that will be 28 by 28 feet. These improvements will allow for events such as an oyster roast and encourage visitors to the Town. The Town is working to establish Parker's beach park, the beach adjacent to the USACE leased dredge spoil site.

HARBOR

A public harbor was built in 1962 at the south end of Town adjacent to Starling Creek, and funds were reinvested in 2005 to upgrade and maintain the facility. The harbor contains 75 boat slips rented out on a yearly basis for a fee. The harbor is equipped with electricity, lights, a concrete boat ramp, and a working stall with a hoist. About 72.5% of the boat slips are used by commercial boats. While water depths within the harbor appear to be adequate, maintaining the access channel navigability is important (*Transient & Working Waterfront Infrastructure Needs Assessment, 2013*).

Town of Saxis

The entrance channel and turning basin were authorized by the River and Harbor Act of 30 August 1935. The harbor was designated as a federal Harbor of Refuge by the U.S. Army Corps of Engineers (USACE) in July 1960. The last time that Starlings Creek and the harbor were dredged was in 2015 with Hurricane Sandy funds at a cost of almost \$700,000.00 which removed 82,500 cubic yards of sediment (USACE). Dredge spoils were used for beach nourishment and the finer sediments were pumped into the dredge spoil site on the property that the U.S. Army Corps of Engineers leases from the Town.

CULTURAL RESOURCES

Saxis Island Museum was created in 2014 in the larger portion of the same building that hosts the Post Office. Saxis just received state historical designation and is applying for federal designation, which could lead to additional funding for mitigation and resilience projects. There has already been a Federal grant to move into the Crockett Store in the next few years after it is renovated. In Town and along the shoreline, arrowheads are frequently found, particularly following storms and high winds and the associated erosion. To date there have been no surveys to document these findings, but this is a desired project, as it would create additional knowledge about the Native American history in the area.

The Cemetery is a cultural resource in the Town. During Hurricane Floyd in 1999, a few of the graves floated up on the north area of Town. Cemeteries will be at increased risk as sea level continues to rise, increasing frequency and duration of inundation and erosion rates.

WATER SUPPLY AND WASTEWATER

Town residents obtain their water from private wells and dispose of wastewater with private septic systems. Due to Saxis' location near the coast, there is an increased chance of saltwater intrusion into the York-Eastover Aquifer, from which private wells source the resident's water although no impacts have been measured to date. The majority of the developed portions of the Town are on Bojac sandy loam and Munden sandy loam soils, which are considered to be most and fairly suitable, respectively, for development on the Eastern Shore as they drain well, particularly the Bojac.

Public health risks may be encountered during and following coastal flooding events as septic system drainfields are inundated with flood waters. Town applied for USDA grant to obtain their own back hoe for maintenance and will be looking into additional grants for a building to house the back hoe and the mosquito truck that they own already.

SOLID WASTE

Residents are responsible for disposal of their own household waste. The nearest convenience center is in Makemie Park, about 10 miles east of Saxis.

POWER AND COMMUNICATIONS INFRASTRUCTURE

Mobile service in Town can be inconsistent depending on the service provider. There have not been issues with long-time power outages, however, the power lines are suspended along the Saxis Road (Rt. 695), the only road accessing the Town, which is prone to flooding, saturated marsh soils, and the risk of downed power line poles that accompanies these conditions.

The Saxis fire house is the designated staging area following an emergency and has a raised generator.

SCHOOLS

There are no schools in the Town of Saxis. The school age children primarily attend Kegotank Elementary and Saint Paul.

NATURAL ENVIRONMENT

Saxis is situated on a ridge of sand-rich soils on the western perimeter of Freeschool Marsh. It has a 9,000 foot long shoreline including a narrow beach along the Pocomoke Sound. The Town is adjacent to the Saxis Wildlife Management Area to the east and is bound by Starling Creek to the south. The entire Town lies within the Chesapeake Bay Watershed.

LAND USE LAND COVER

The Town of Saxis encompasses 210 acres. The predominant land use is residential. Commercial land uses are mainly concentrated around the harbor. Tidal wetlands are located along the northern half of the shoreline at the northern edge of Town. Wetlands assist in preventing erosion and retain storm water.

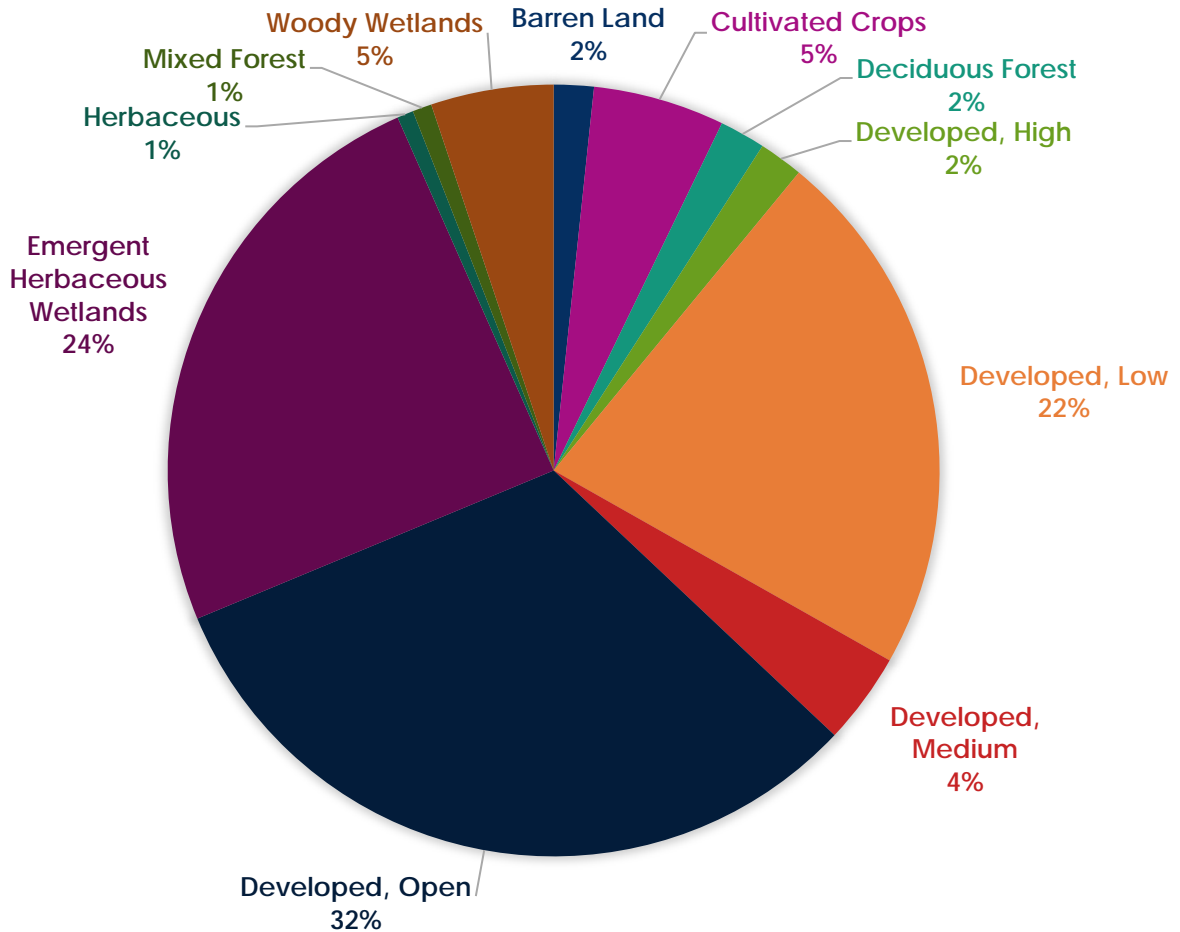


Figure 6 : Saxis Land Use Land Cover Percentages

HAZARD PREPAREDNESS & COMMUNITY CAPABILITIES

PREVIOUS HAZARD MITIGATION PLANS

Saxis has participated in the hazard mitigation planning process since 2006. The Town’s primary risk is associated with coastal erosion and flooding.

Table 6 : Town of Saxis Hazard Mitigation Resources

	Ordinances, Plans, & Publications													Resources, Committees						
Authority	Building Code	Chesapeake Bay Act	SWMP	Hazard Mitigation Plan	Comprehensive Plan	Ordinance	Storm Water Regulations	Transportation Infrastructure Inundation Vulnerability Report	All Hazards Preparedness	Emergency Operations Plans	Mutual Aid	Agreements/Documents	Neighborhood Emergency Help	Virginia Hurricane Evacuation	Oil & HazMat Response Plan; HazMat Commodity Flow	Ground Water Committee	Navigable Waterways Committee	Climate Adaptation Working Group	ES Disaster Preparedness Coalition	
Local	*				*	*														
County			*																	
Regional				*				*	*	*						*	*	*		*
State		*					*							*						
Federal	*																			

NATIONAL FLOOD INSURANCE PROGRAM & HAZARD MITIGATION GRANT PROGRAM

NFIP

The Town joined the NFIP on November 17, 1982. In 2003, Saxis had 13 flood insurance claims since 1982 (*FEMA NFIP Flood Insurance Report*, July 2003). There was one claim in the Town from 2003 to 2011, with the average claim settled being \$6,314 (*FEMA NFIP Flood Insurance Report*, May 2011). Between 2011 and 2016 there were 12 claims totaling about \$210,000, all of these were probably from damaged incurred during Hurricane Sandy. (Mayor Denise Drewer, personal communication, June 9, 2016).

With the 2015 FIRM, the majority of the Town is still designated to lie within the A zone of the Special Flood Hazard Area (SFHA), meaning that they will be inundated by the 1-percent-annual-chance flood (or 100 year storm) event. However, the base flood elevation (BFE) have increased throughout the Town to a current designation of eight foot BFE, with the very southern and northern parts of Town designated at nine feet. The northern part of Town, although not yet built upon, is already subdivided with over 50 parcels, all of which fall within the 9 foot BFE, some of which have the shoreward portions of the lot in the velocity zones with a ten foot BFE. This is a significant change from the previous FIRM, which indicated only the northern part of Saxis with a nine foot BFE and the developed portion of Town as about evenly proportioned with seven and eight foot BFEs. Therefore, homes that were raised to the previous BFE are often either one or two foot below the new 2015 FIRM BFE. Although their policy premium should not increase this year due to these changes, if a storm event occurs which damages their home and/or contents, then their policy cost will increase the following year. There are four low risk policies; indicating that some property owners maintain insurance despite their lack of requirement to do so. The Town zoning requires homes to be built at two feet above the FEMA BFE.

Table 7: Summary of Saxis' past NFIP participation

	HMP 2006	HMP 2011	HMP 2016
NFIP (date joined)	November 17, 1982	November 17, 1982	November 17, 1982
Number of Policies		48 policies	49 policies: 1 V-zone, 44 A-zone, 4 other
Total Premium Amount		\$34,726	\$44,938
Total Coverage Amount		\$5,913,000	\$6,534,200
Number of Claims (since 1978)	13	14	26
Total Paid (since 1978)		\$88,397	\$295,928
HMGP	2003 Isabel participation	-	-
CRS Score (1 highest, 10 lowest)	-	-	-

Source: *ESVA Hazard Mitigation Plan*, 2006 and 2011; *FEMA NFIP Insurance Report* 2006, 2011, 2016

HMGP

The Town elevated 16 houses following Hurricane Isabel in 2003 using HMGP funds. This is the only time the Town has participated in the Hazard Mitigation Grant Program.

HAZARD PROFILE

Coastal erosion, coastal flooding, and high winds are the highest threat to the Town. Storm water flooding is primarily tidally dependent and thus considered more of a coastal flooding issue.

WIND

The entire Town is located in the wind borne debris hazard area. This area extends 1-mile inland. For a 1% annual chance storm event, Hazus® estimates that a total of \$282,173 in damages could occur in Saxis. Damages from flooding are several magnitudes higher than from wind damage. This lower figure could also reflect the improvements to roofs, windows, etc. The majority of this sum would be from damage to buildings and content, with approximately \$60,000 being from losses associated with inventory, relocation, income, rental, and wages. In 2006 the Eastern Shore of Virginia Wind Vulnerability Assessment Assuming, estimated approximately \$838,000 in wind damages, but this methodology did not take into account some of the updated data and factors included in the Hazus® calculations.

In addition to wind threats from hurricanes, there is also the potential for Nor'easters, tornados/water spouts, and straight line winds. The Town Zoning does require 120 mph gust zoning standards for new and renovation constructions.

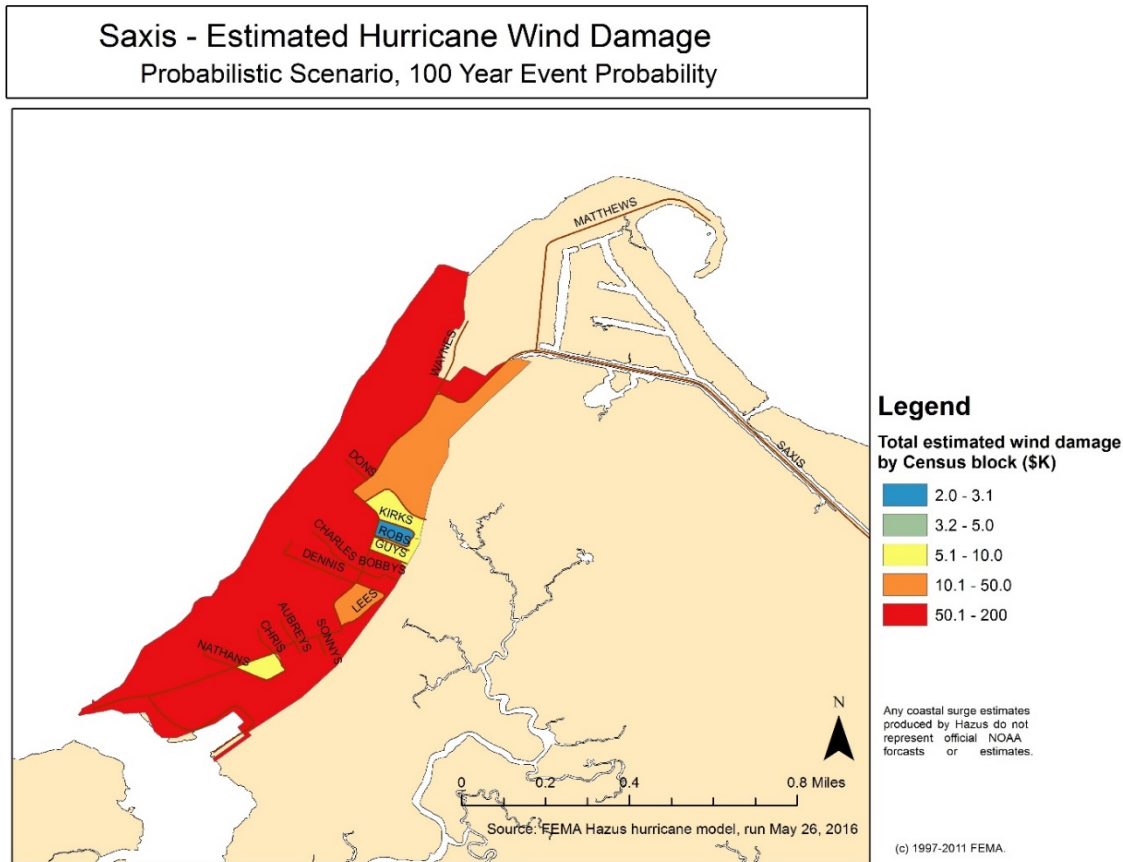


Figure 7: Saxis Estimated Wind Damage by Census Block

COASTAL EROSION

The Town recognizes that it has a serious erosion problem. The Town has been working to resolve the erosion problem since 1972. The average long term erosion rate for Saxis' 9,000 ft long shoreline is 4.9 feet per year (*Saxis Town Plan*, 1997). The Town believes that it is possible that the erosion rate has increased. The Town is only 1,590

feet wide at the widest point. With every bit of erosion, the Town's flood hazard also increases. There are approximately 9 structures in Saxis that are located close to the Bay facing shoreline with little buffer if erosion were to occur in the immediate vicinity of these structures.

The U.S. Army Corps of Engineers (USACE) in Norfolk proposed building a series of seawalls along the western shoreline of the island to restore protective wetlands and in turn, control erosion. The proposal indicated that the Town must match 35% of construction costs, which was \$2.3 million. The Town has unsuccessfully explored multiple funding options and does not expect to be able to secure the needed funds to protect their island. During 2015, the USACE did place sand derived from the dredging of Starling Creek along the shoreline adjacent to the dredge spoil basin within Town to mitigate erosion occurring along that portion of the Town.

COASTAL FLOODING

The Flood Insurance Study (FIS) for Saxis identifies that the greatest threat of flood inundation comes from hurricanes. The August 1933 hurricane, September 1936 hurricane, Hurricane Hazel in 1954 and Hurricane Donna in 1960 all caused flooding in the Town (Saxis FIS, 1982). Since this study, the Town has also experienced flooding during Hurricane Floyd 1999, Hurricane Isabel 2003, Nor-Ida 2009, Irene 2011 and Hurricane Sandy 2012.

In 2013 the Town was able to secure funding from the Virginia Port Authority for a 322-foot jetty to protect the Town, namely the harbor, from wave and storm action. During Hurricane Sandy, a year earlier, the Town pier was devastated, as were the many crab shanties that are vital for many residents' livelihoods. Involvement by the Governor allowed for the reconstruction of some of the shanties. In addition, about 60 mature trees were downed during the rain and winds. Mayor Drewer believes that if the jetty had been installed prior to the storm, there probably would have been much less damage (personal communication, June 6, 2016). There has also been a USGS tide gauge installed at the public boat ramp, so more consistent and accurate data will be available.

According to the 2015 FEMA Flood Insurance Rate Map (FIRM), almost the entire Town lies within a Special Flood Hazard Area (SFHA), except for a small ridge and the dredge spoil deposit location on the west side of town that are in the 500 year flood or 0.2% annual chance zone, as revealed by Figure 7 below. Most of the structures lie within an A zone, with Base Flood Elevations ranging from 8 to 9 feet. The Flood Insurance Study for the Town notes that the development within the floodplain is extensive and includes numerous family dwellings, small businesses and seafood related industries. Despite the changes to the FIRM, Mayor Drewer says that they've noticed an increase in frequency of flooding, but that it doesn't commonly affect buildings (personal

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communications, June 9, 2016).

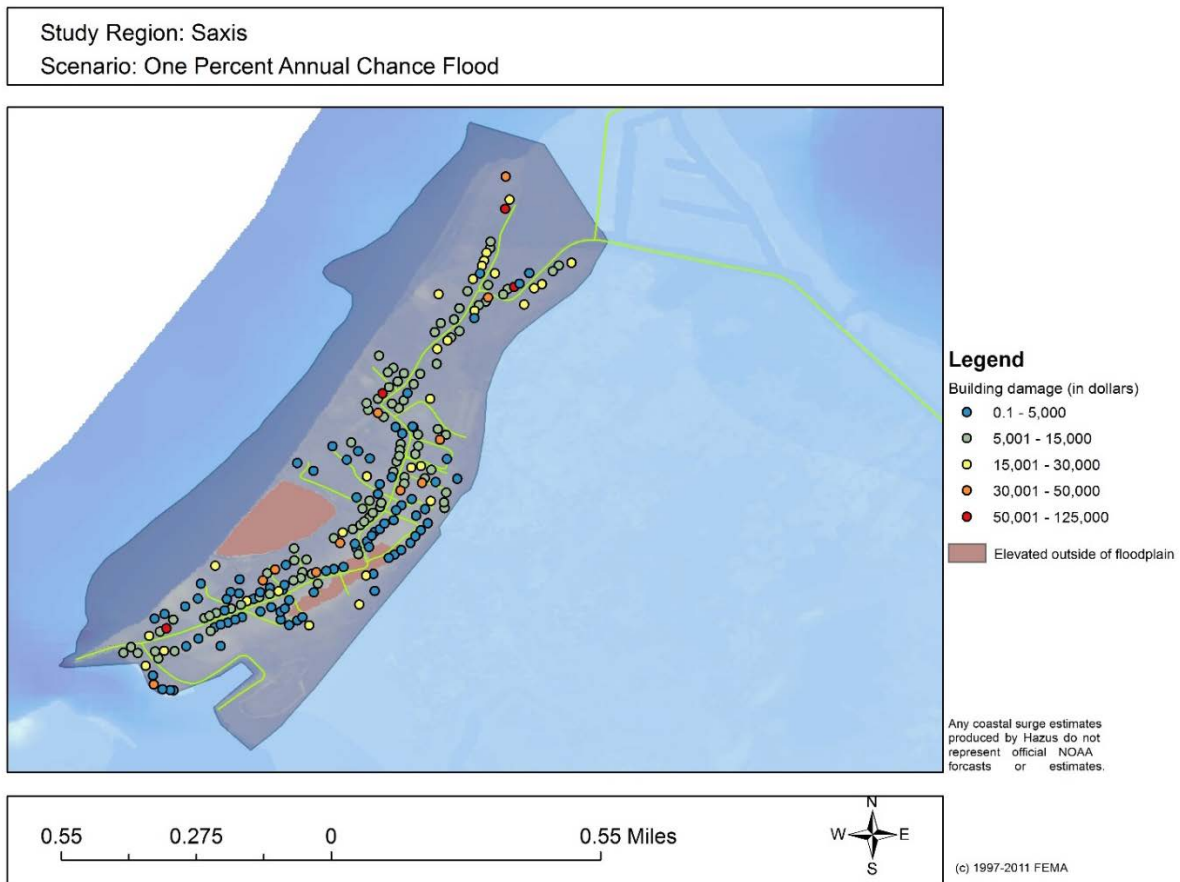


Figure 8 : Saxis Hazus® Predicted Damages During a 1% Annual Chance Flood

The causeway (State Route 695) provides the only vehicular access to Saxis from the mainland. This road regularly experiences coastal flooding during storm events putting residents at great risk. In addition, storm water commonly floods the road in low lying areas near Sanford and Messongo to the east of Town.



Figure 9: View of the causeway leading westward to Saxis. Photo by Curt Smith

Saxis is the highest point of land for approximately 4.4 miles inland. Both the villages of Sanford and Messongo located inland are lower in elevation than Saxis. Sanford is 2.6 miles from Saxis and Messongo is 4 miles from Saxis. The Town serves these areas with its fire station, but would be unable to do so during a flood event.

The harbor at Saxis is a local hub of economic activity. A disastrous flood would adversely affect the Town and surrounding area. Worker productivity would be cut drastically since many persons live and work within the 100-year floodplain. Many employment activities also occur through small businesses and/or self-employment. FEMA notes that small businesses are particularly vulnerable after a disaster with some 30% not surviving (*Planning for Post Disaster Recovery and Reconstruction*, FEMA, 1998).

The fisheries industry is based around the southern end of Saxis near the harbor. This area is classified as an Intensely Developed Area (IDA) according to the requirements of the Chesapeake Bay Preservation Act. It is also zoned commercial-waterfront (C-W). This area is intended to provide space for activities and services relating to the seafood industry (*Saxis Zoning Ordinance*, 1993). This area lies in a regulated flood zone.



Figure 10: Captain E's Hurricane Grill and many fisheries businesses are located in the Intensely Developed Area (IDA) in Saxis. Photo by Shannon Alexander

A small commercial area is located in the center of the Town on Saxis Road. This area previously was classified as Zones A, B and C, but with the 2015 FIRM is now primarily A Zone with a small amount of area in the 0.2% annual chance flood.

In the event of a 100-year or 1% annual chance flood, Hazus® predicts that Saxis would suffer a total of about \$4.3 million dollars in damages. This total is a combination of building loss (about \$2.3 million), content damages (about \$2 million), and inventory loss. There has been an upward trend in the amount of damages that a storm of this magnitude would incur, from the 2006 estimate of \$1.6 million and the 2011 estimate of about \$2.7 million, which corresponds to the increasing erosion and recurrent flooding rates (*ESVA Hazard Mitigation Plan*, 2006, 2011). However, the 2006 and 2011 estimates were created using a totally different tool and the 2016 is using the new Hazus® model. This rise could also be due to the increased value of many of the properties in the area and because of the change in the FIRM BFE.

STORM WATER FLOODING

Storm water flooding also occurs in the Town. During heavy rains the Town's roads are often flooded (*Saxis Town Plan*, 1997). The Town's drainage ditches empty directly onto the western shore and often become clogged with sand from tides. Ditches in the Town are also commonly filled with debris and invasive plant species such as phragmites. Phragmites, or common reed, can completely overtake a ditch preventing proper drainage and is almost impossible to eradicate. The Town also contends with tidal influence on the drainage system. When tides are high the storm water remains in the ditches until the tide goes out. The County Department of Public Works recently cleaned out one of the main ditches and VDOT cleaned out several additional ditches in early 2016. The drainage is actually efficient so long as trash and yard debris is disposed of properly in order to avoid clogging the ditches. Storm water flooding in the Town is tidally dependent. The Town has applied for a USDA grant for a backhoe to be able to be responsible for their own maintenance (Mayor Denise Drewer, personal communication, June 9, 2016).

HAZARDS OF LOCAL SIGNIFICANCE

WATER QUALITY

Since many people rely on the fisheries industry, fish kills and the declining health of the Chesapeake Bay impact the Town. In July 1999, a fish kill near Saxis caused 500,000 young-of-the-year menhaden to be affected. The cause of this fish kill was low dissolved oxygen in the water linked to the prolonged drought Virginia was experiencing at the time. Town Officials also indicated that residents have been historically impacted by concentrations of the pathogenic bacteria, *Listeria monocytogenes*, which originated in the Pocomoke River upstream of the island. These water quality hazards represent a threat to the livelihood of residents in Saxis and northern Accomack County.

MOSQUITOS

The Town also has a significant mosquito problem and residents could potentially be at risk to mosquito-borne illnesses such as West Nile virus. In 2012 the Town purchased a mosquito control truck and has implemented a mosquito control abatement program.

SNOW AND ICE STORMS

Winter weather has historically had adverse impacts on the Town’s seafood industry. The Town’s harbor has historically frozen during extreme cold snaps bringing the seafood-based local economy to a halt. Ice also poses a threat to the causeway and access to the island. Tangier was inaccessible for about a month in both 2012 and 2013, when both the harbor and channel froze over.

CRITICAL FACILITIES

Town officials evaluated the hazards that have or could affect Saxis’ critical facilities. The Town’s office and fire station are located in the 100-year floodplain. When floodwaters come up, the Town’s equipment is moved to the Methodist Church located on the highest point of land in the Town.

The following table lists the critical facilities and their relative importance to the Town.

Table 8 : Saxis Critical Facilities

Facility	HMP 2006	HMP 2011	HMP 2016	Hazards	No of People Affected	Loss potential	Relocation Potential	Retrofit Potential
Town-Owned Facilities								
Saxis Volunteer Fire Company		X	X	Flooding Wind Fire	~2,000	Major Disruption	Yes	Yes
Saxis Harbor		X	X	Flooding Erosion Ice	Entire Town and region	Devastating	No	Yes
Saxis Town Pier		X	X	Flooding Erosion Ice Collision Wind	Entire Town and region	Major Disruption	No	Yes

Eastern Shore of Virginia Hazard Mitigation Plan

Pavilion			X	Fire, Collision, Wind	Entire Town and region	Major Disruption	No	Yes
Dredge Spoil Basin			X	Erosion, Flood	Entire Town	Devastating	Yes	Yes
Saxis Town Park/Beach			X	Erosion, Flood, Wind	Entire Town and region	Major Disruption	No	Yes
Other Facilities								
Saxis Volunteer Fire Company		X	X	Flooding Wind Fire	~2,000	Major Disruption	Yes	Yes
Saxis Causeway		X	X	Flood Erosion	Entire Town and region	Devastating	No	Yes
Saxis United Methodist Church		X	X	Flooding Wind Fire	300	Devastating	No	Yes
Saxis Island Museum			X	Flood, Wind, Fire	Entire Town and region	Devastating	Yes	Yes
Post Office			X	Flood, Wind, Fire	Entire Town and surrounding areas	Major Disruption	Yes	Yes
USGS Tide Gauge			X	Flood	Entire Town and region	Minor Disruption	No	Yes

FINDINGS.

1. The community appears to have coastal A zones where structures built to previous NFIP requirements can still suffer flood damage in the 100-year flood.
2. Storm water flooding issues are tidal dependent and often related to debris and invasive plant species, such as phragmites, clogging up ditches and drains.
3. Locally, Saxis provides services to the surrounding area and serves as an economic center in northern Accomack County. The Town of Saxis is threatened with erosion although it sits at the highest location in the area. The loss of the harbor, fire station and causeway would adversely impact the entire area including Saxis, Sanford and Messongo.
4. The Town's office and fire station building is located in the 100-year flood plain with a base flood elevation of 8 feet and has been flooded in the past.
5. The Town is experiencing erosion and is actively pursuing funding to construct protective wetlands to mitigate the problem.
6. The Town's residents and FEMA need to document damages sufficiently so that the various flood prone homes can receive mitigation assistance.
7. Structures are being built in the local hazard areas and older structures are being added to and remodeled thereby increasing property at risk.
8. New residents may be unaware of the local hazards and need to be educated on the precautions they need to take in the event of a disaster.