

CHAPTER 10: ACCOMACK COUNTY

COUNTY PROFILE

There are 14 incorporated towns in the County: Accomac, Belle Haven (portion located in Northampton County also), Bloxom, Chincoteague (most populated town), Hallwood, Keller, Melfa, Onancock, Onley, Painter, Parksley, Saxis, Tangier, and Wachapreague. The following information is for the unincorporated areas of Accomack and the incorporated Town of Belle Haven. Information for the other incorporated towns in Accomack is located in their respective chapters. These Towns include Accomac, Bloxom, Chincoteague, Hallwood, Keller, Melfa, Onancock, Onley, Painter, Parksley, Saxis, Tangier, and Wachapreague.

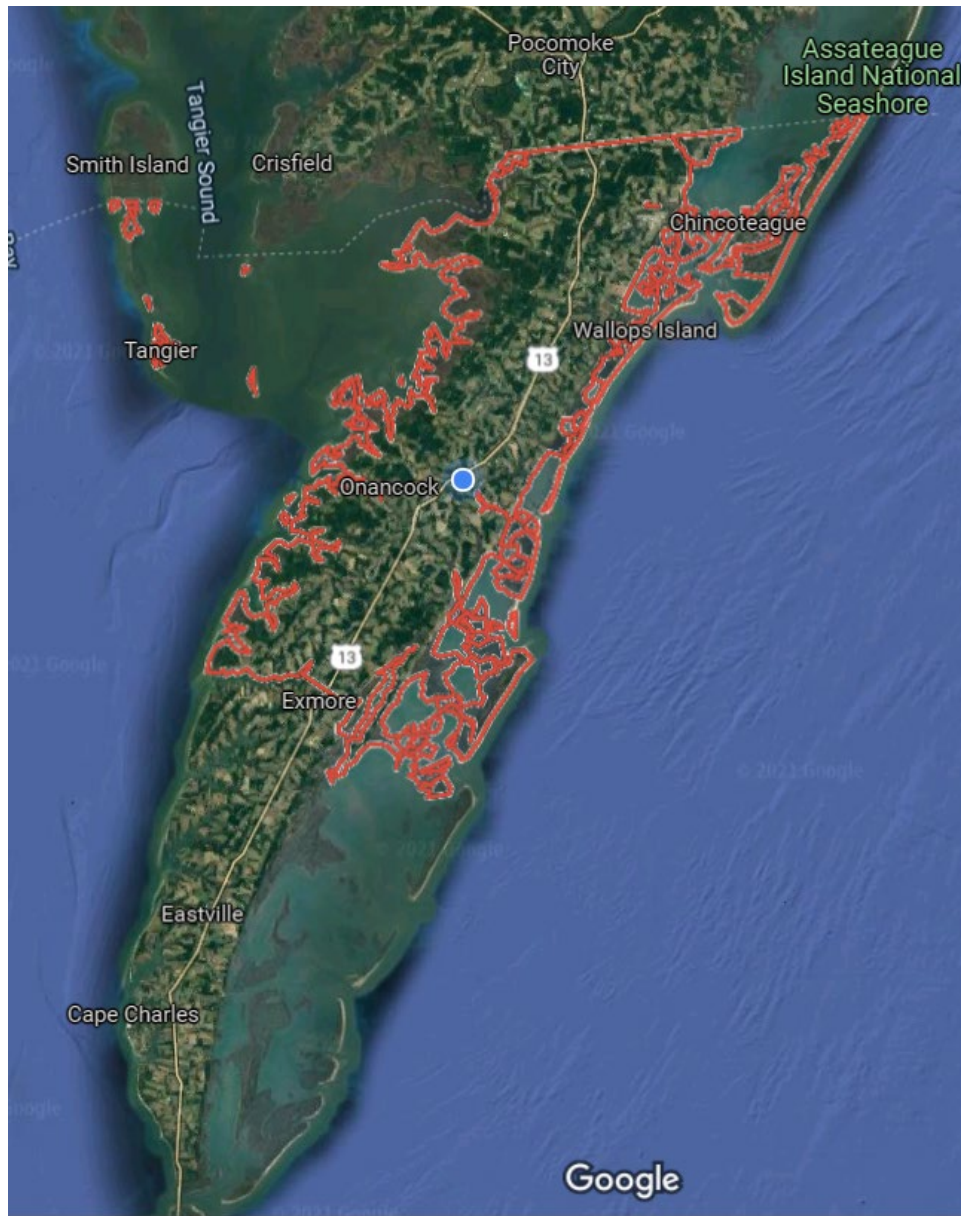


Figure 1: Accomack County Context and Google Map

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 factors 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.

DEMOGRAPHICS

The 2019 American Community Survey estimate indicated the County had a population of 32,673, which would indicate that the population is remaining more or less steady and has not declined much since 2000. The median age for residents in Accomack County in 2019 was indicated to be 45.9, which is about 7 years higher than that of both the state and nation, and is an increase from 2000. Often, individuals in a higher age bracket require additional assistance, particularly in the case of an emergency.

Table 1: Accomack County Demographic Information

	2020	2014**	2010***	2000****
Population	33,413	33,165	33,164**	34,488****
Median Age (Years)	45.9*	44.9	44.7**	39.4
Disability	14.1%*	12.1%	3.2%	19.9%
Income				
Median Household Income	\$46,073*	\$38,389	\$41,372*	\$30,130
Poverty Level	19.0%*	20.5%	34.7%*	18.0%
Language				
Only English	88.5%*	89.6%	91.3%*	93.3%
Other	11.5%*	10.4%	8.7%*	6.7%
Spanish	8.1%*	8.3%	6.9%*	5.7%
Ind-Euro	2.7%*	1.9%	1.4%*	0.7%
Asian	0.6%*	0.2%	0.3%*	0.2%
Other	0.1%*	-	-	-

Source: U.S. Census 2020, *ACS 2014-2019, **ACS 2009-2014, ***U.S. Census 2010, ****U.S. Census 2000, *****Accomack County Comprehensive Plan

As illustrated in Table 1, poverty levels returned to only slightly higher than those indicated in the 2000 Census. Values from Table 1 also indicate that the non-English speaking population is increasing. County representatives also indicated that there has been an increase in non-English speaking residents, particularly, an increase in residents speaking Creole and Spanish. Populations living in poverty and populations that do not speak English are often at a disadvantage in their ability to receive imperative information for preparing for and recovering from hazards.

WORKFORCE

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. Additionally, they can identify where disruptions in employment and income might occur in the aftermath of a disaster.

The County's two largest industries are manufacturing and educational and health care services. The vast majority of individuals in the manufacturing industry are most likely employed at either Tyson Foods or Perdue Farms. These companies often have policies in place to mitigate the economic impact of a hazard for both the company and the employees; however, long-term closures would have strong negative impacts on the County. There would be a 'domino effect' from such a closure, as employees in that industry wouldn't have spending dollars for rent, local

shops, nor family necessities. Other dependent agricultural businesses would be at a loss as well, particularly noting the increasing trend of individuals in the agricultural industry within the County. Although it may take some time for the industry to recover following a hazard, the United States Department of Agriculture (USDA) Farm Service Agency provides assistance for natural disaster losses, which enables farmers to rebound more easily following severe weather events. Other large employers in the County include the County of Accomack, Accomack County School Board, NASA, Eastern Shore Community Services, and Riverside Shore Memorial Hospital, to name a few.

Although a respectively smaller group of the employed population work in fishing and aquaculture, it is a culturally invaluable trade. In the year 2000, there were 599 commercial licenses and zero aquaculture permits issued by the Virginia Marine Resources Commission (VMRC). In 2010 VMRC issued 475 commercial licenses, but also 153 oyster aquaculture permits and 116 clam aquaculture permits, revealing an increase in the number of individuals who make their living working on the waterways of the Eastern Shore. There is an observation that many of the individuals who were previously employed as migrant workers are staying on the Eastern Shore year-round and working in the aquaculture industry. Because clam and oyster aquaculture are long-term investments, with oysters typically taking about three years to reach suitable size for market, and because the equipment can be costly, this important industry could take years to rebound following a damaging storm event.

Table 2: Accomack County Local Workforce Industry

Civilian Employed Population								
Industry	2019*		2014**		2010***		2000****	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Agriculture, forestry, fishing/hunting, or mining	961	7.0%	669	4.6%	740	4.9%	1,050	5.8%
Construction	1,092	7.9%	873	6.0%	1,283	8.6%	1,357	7.5%
Manufacturing	2,686	19.6%	2,276	15.8%	1,960	13.1%	2,945	16.4%
Wholesale trade	331	2.4%	785	5.4%	860	5.7%	697	3.9%
Retail trade	1,472	10.7%	1,619	11.2%	1,770	11.8%	2,963	16.5%
Transportation and warehousing, and utilities	585	4.3%	310	2.1%	470	3.1%	581	3.2%
Information	75	0.5%	137	0.9%	259	1.7%	19	0.1%
Finance, insurance, real estate, and rentals	356	2.6%	299	2.1%	729	4.9%	702	3.9%
Professional, scientific, waste management	1,188	8.7%	1,339	9.3%	1,067	7.1%	940	5.2%
Educational and health care services	2,641	19.3%	2,922	20.2%	2,879	19.2%	2,696	15.0%
Arts, entertainment, recreation, food	1,013	7.4%	1,575	10.9%	1,183	7.9%	1,567	8.7%
Public Admin	834	6.1%	1,105	7.7%	1,257	8.4%	1,181	6.6%
Other	447	3.3%	524	3.6%	512	3.4%	740	4.1%
TOTAL CIVILIAN EMPLOYED POPULATION	13,681	-	14,433	-	14,972	-	17,983	-

Source: *ACS 2015-2019, **ACS 2010-2014; ***US Census 2010, ****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. According to Table 3, the County has seen a steadily declining business presence over the last ten years, and the total civilian employed population has also declined, respectively. Retail Trade and Accommodation and Food

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Services are the two industries with the most establishments in the County, which is reflective of the tourism-based economy in many of the Eastern Shore towns.

Table 3: Accomack County Business Establishment Types

Industry Code Description	Total Establishments			
	2018	2014	2012	2010
Agriculture, Forestry, Fishing, and Hunting	5	4	4	3
Utilities	5	4	4	2
Construction	78	78	81	96
Manufacturing	21	19	17	21
Wholesale Trade	21	24	28	31
Retail Trade	147	168	173	168
Transportation and warehousing	16	17	23	22
Finance and insurance	32	31	15	16
Information	14	13	32	35
Real Estate and Rental and Leasing	42	37	38	39
Professional, Scientific, and Technical Services	46	59	64	71
Management of Companies and Enterprises	-	3	3	3
Administrative, Support, Waste Management	27	26	25	27
Education Services	3	3	2	2
Health Care and Social Assistance	50	55	57	61
Arts, Entertainment, and Recreation	17	17	15	20
Accommodation and Food Services	96	97	101	106
Other Services (except Public Administration)	92	86	92	103
Industries not Classified	-	1	-	-
Total, All Establishments	714	742	774	826

Source: Census Zip Code Business Patterns, 2019, 2014, 2012, 2010

BUILT INFRASTRUCTURE

[§201.6\(d\)\(3\)](#) 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 leave towards safety.

HOUSING UNITS

Knowledge of a community's housing base contributes to hazard and vulnerability analysis by identifying how many homes are at risk. Vehicles available to households is one indicator of a household's ability to evacuate when necessary.

As Table 4 reveals, there has been little change in the number of housing units in the County with a slow but steady increase since 2000. The table also indicates that over a quarter of the total housing units are vacant. As of December 2020, approximately a third of the parcels identified as potentially having a residential use were owned by entities outside of Accomack County. While it is possible some of these units are rented to individuals residing in them, the number of these units that are second homes, used seasonally, as well as hotels, seasonal campgrounds, and migrant housing, indicates the local population tends to increase during the summer months (Personal communications, Tom Brockenbrough, Floodplain Administrator, March 2, 2021). The high influx of seasonal residents account for a large portion of what the US Census classifies as vacant housing units; however, there are still several vacant

dilapidated units in the unincorporated areas of Accomack County that are not accounted for in each incorporated Town's chapter and a large number of manufactured homes in the County as well. Dilapidated structures pose a threat and can cause additional debris hazards during high-wind events due to lack of maintenance. Manufactured homes are typically more susceptible to storm damages incurred from winds and flooding.

Table 4: Accomack County Housing

	2019*	2014**	2010***	2000****
Total Housing Units	21,319	21,054	21,002	19,550
Occupied	13,438	14,289	13,798	15,299
Vacant	7,881	6,765	7,204	4,251
Owner-Occupied	8,977	10,053	9,963	11,482
Renter-Occupied	4,461	4,236	3,835	3,817
Median Housing Value	\$171,800	\$152,500	NA	NA

Source: *ACS 2014-2019, **ACS 2010-2014, ***US Census 2010, ****US Census 2000

TRANSPORTATION

The measure of vehicles available to households is one indicator of a household's ability to evacuate when necessary. As of 2019, it is estimated that about 9% of the County's occupied residences are without even a single vehicle. This is a slight decrease from previous years. This can be assumed to be due to the fact that the owners of the new residences since 2000 most likely have at least one vehicle.

Table 5: Accomack County Vehicles Available per Household

Vehicles Available	2019*	2014**	2010***	2000****
None	1,222	1,470	1,287	1,447
One	4,142	4,664	4,372	5,570
Two	4,916	5,263	5,647	5,686
Three or more	3,158	2,892	2,779	2,596

Source: *ACS 2014-2019, **ACS 2010-2014, ***ACS 2006-2010, ****US Census 2000

Star Transit provides substantial, daily services up and down the Eastern Shore. The Greyhound bus line typically offers travel from the Eastern Shore across the Chesapeake Bay Bridge Tunnel; however, it does not have a stop in Accomack County, but rather right at the County line with Northampton in the Town of Belle Haven. The cost is not very high (about \$20 each way to either Norfolk or Salisbury); however, this service would probably not run during an emergency and does not have the capacity to evacuate all residents without a vehicle. Star Transit is available to assist in the event of an evacuation, although this service would cease upon the arrival of hazardous conditions. Additionally, Shore Ride, a private ride-sharing company, serves the region and offers long-distance transportation.

Prior to the construction of the railroad in 1884, water-based transportation dominated the region. Water-transportation is still vital in Accomack County. Used both commercially and recreationally for enjoyment and fishing activities, the waterways are essential to the economy of the County. The Island of Tangier relies upon personal vessels and the ferries to gain access to the mainland and its essential commodities. Dredging of these channels is vital not only for safe transportation, but also for the local economy. The [Regional Dredging Needs Assessment](#) was completed in Fall of 2016 and provides details about the condition of navigable waterways in the region.

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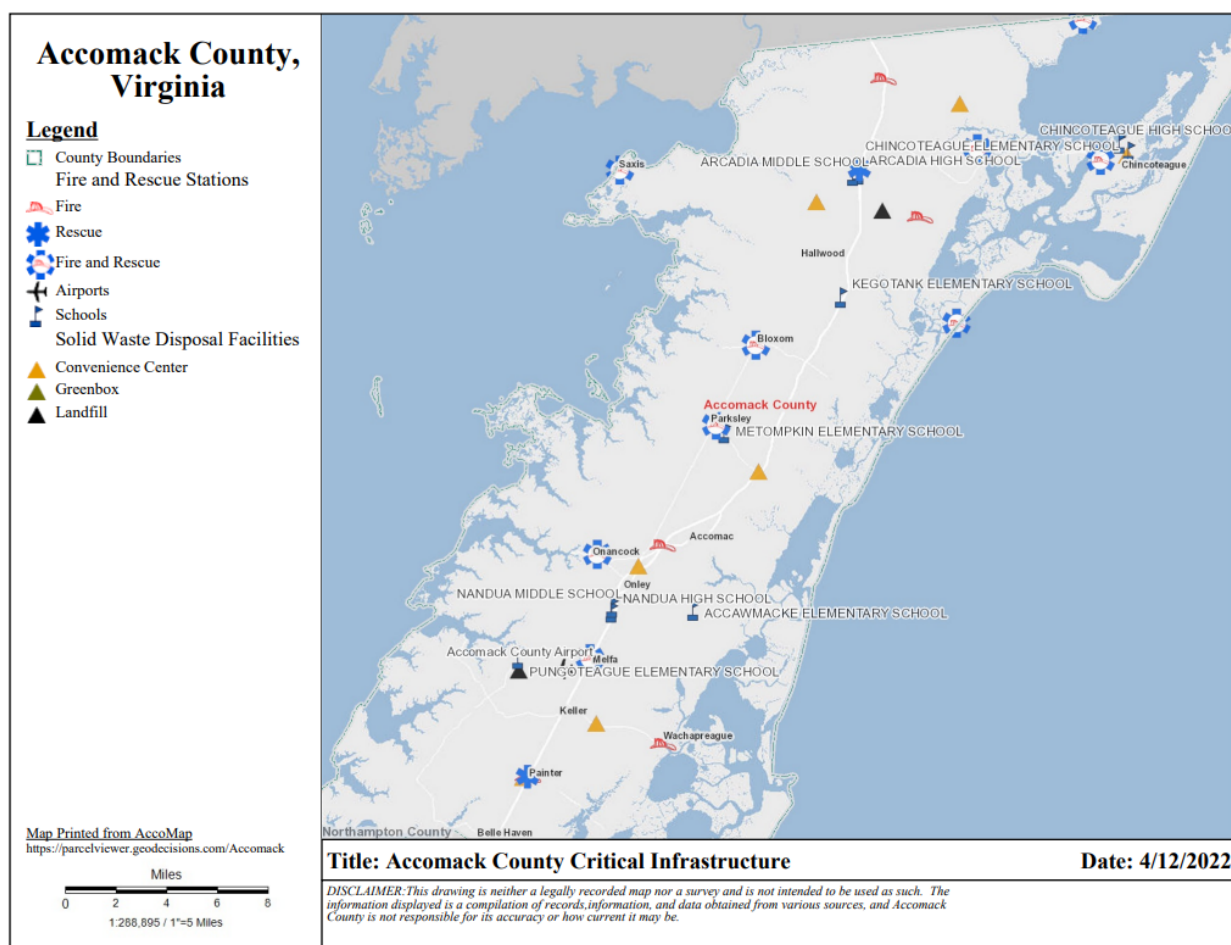
The Accomack County Airport (MFV) sits on 410 acres and is the only public airport on the Eastern Shore of Virginia. The runway is lit and is 100' wide and 5,000' long. The airport also has 18 hangars and jet fueling services. This is also the location of the Automated Weather Observation System AWOS III.

Train service south of Hallwood in the County was discontinued in 2018; however, there are ongoing plans to turn the abandoned railroad corridor into a multi-use bike and pedestrian path.

COMMUNITY SERVICES AND FACILITIES

Community facilities support the services and functions provided by the County government or in coordination with other public and private entities. These facilities enhance the overall quality of life for the County and its citizens. It is important to note what facilities are available in the case of a hazard and to make an inventory of facilities that could be affected by a hazard.

Figure 2: Accomack County Critical Infrastructure



PUBLIC SAFETY

Emergency Services in Accomack County are provided by 60 career personnel and over 600 volunteer members (Personal communications, Tom Brockenbrough, Floodplain Administrator, March 2, 2021). Services are delivered from 13 independent volunteer fire and/or rescue companies. Crews respond to an estimated 7,000 calls annually. In addition to emergency response, the Department of Public Safety personnel provide a free smoke detector program, disaster preparedness presentations, Emergency Response Training (CERT), community CPR training, and staff serve on regional committees to advance emergency services within the County and Region ([Accomack County Public Safety](#)).

Several of the volunteer fire departments in the County are struggling to obtain an adequate amount of funding and number of volunteers. A lack of fire and EMS volunteers create additional demand on County resources. Since 2016, EMS services transitioned from the Wachapreague Station to the Painter Station, which strengthened the effectiveness and decreased the EMS response time in the southern reaches of the County. In 2017, the Onley Volunteer Fire and Rescue Company was dissolved (Personal communications, Tom Brockenbrough, Floodplain Administrator, March 2, 2021).

With 30 deputies, the Accomack County Sheriff's Department responded to more than 9,600 calls and 1,104 arrests in 2020 (Personal communications, Accomack County Sheriff's Department, July 27, 2021). The Sheriff's Department is not located within the Special Flood Hazard Zone Area (SFHA).

During a 1-percent-annual-chance flood event, Hazus® estimates that out of the 13 total fire stations in the County, one would be completely lost and two would be at least moderately damaged. According to Hazus®, all of the police and fire stations are to be unaffected by a 1-percent-annual-chance wind event, although this statement is not supported by local representatives (County Staff, personal communications, July 14, 2016, 2021).

MEDICAL SERVICES

Riverside Shore Memorial Hospital relocated from Nassawadox to between Onley and Onancock. The County has just hired 12 EMS personnel, as many of the fire companies also provide EMS services (Personal communications, Tom Brockenbrough, Floodplain Administrator, March 2, 2021). There are five Eastern Shore Rural Health (ESRH) Community Health Centers (CHC) located in Accomack County that provide medical and dental services; however, Onley and Chincoteague CHC's are solely medical, while Pungoteague Elementary and Metompkin Elementary are dental. The Atlantic CHC provides both medical and dental services and is located in the unincorporated area of New Church.

PARKS AND RECREATION

The Accomack County Department of Parks and Recreation maintains three parks and a gold driving range at Pungoteague Elementary School (35 acres). Arcadia Park (25 acres) and Nandua Middle Park are used extensively for picnics, reunions, family gatherings, and excursions. Accomack County's new Sawmill Park located at the former Jones Lumber property adjacent to the Town of Accomac opened in 2018 (Personal communications, Tom Brockenbrough, Floodplain Administrator, March 2, 2021). The 35-acre site includes a baseball/softball field and a soccer field as well as concessions, a playground, a walking trail, a pavilion, and picnic tables. A football field and dog park are planned for this location in the future (Personal communications, Tom Brockenbrough, Floodplain Administrator, March 2, 2021).

The County maintains twenty-seven water access sites of varying infrastructure, only two of which (Greenbackville and Quinby Harbors) incur any fee for use. As of July 1, 2021, a boating facilities parking permit is required at 15 of these sites. The permit is available free-of-charge to Accomack County tax payers and is offered to all others for a fee (Personal communications, Tom Brockenbrough, Floodplain Administrator, March 2, 2021). A list of these access

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points with their location and facility types can easily be found on the [Accomack County website](#). There is extremely limited access to beaches in Accomack County. The beach on Assateague Island at the Chincoteague National Wildlife Refuge and Assateague Island National Seashore is accessible for a fee of \$10/day. Longer permits are also available for purchase. There are two other water access sites, Guard Shore and Burton's Shore, which have a limited amount of sand and even more limited parking. Mutton Hunk is the only Natural Area Preserve in the County with public access, and although there are two walking trails and seaside bay views, there is no water access. Saxis and Greenbackville beaches are also quite small with limited sand and parking; however, those with pets visit these beaches quite frequently.

WATER SUPPLY AND WASTEWATER

Most residents rely on private wells and septic systems for their water supply and wastewater disposal. The only public Waste Water Treatment Plants (WWTP) in the County for residential sewage treatment are located in the Town of Tangier and just outside Onancock Town limits (Personal communications, Tom Brockenbrough, Floodplain Administrator, March 2, 2021). There are several private sewage treatment plants, including NASA Wallops Flight Facility (WFF), that serves Chincoteague and is designed for 800,000 GPD, and Captain's Cove in Greenbackville, which currently serves over 1,500 residents and has the capability to serve over 200 homes. The Captain's Cove facility has two lagoons for onsite effluent treatment and in 2016 updated their VDEQ permit to allow for infiltration polishing basins. In the past, poor soils limited development on some vacant parcels of land in the County, but above-ground septic technologies have made some previously undevelopable parcels available for development; however, these systems are much more expensive to build and to maintain than traditional systems.

There are ongoing plans for Hampton Roads Sanitation District (HRSD) to provide services up and down the Eastern Shore. Phase 1 of the project would connect Nassawadox in Northampton County to the Town of Onancock's WWTP in Accomack County, while allowing several towns to connect along the way. Future phases would provide several other localities in both Accomack and Northampton County the option to connect to the sewer system, which would allow for a significant increase in development on the Eastern Shore and would assist in the mitigation of groundwater contamination.

The largest industries which discharge waste directly into surface waters are Perdue Farms, Tyson Foods, NASA Wallops Flight Facility, the Town of Onancock's WWTP, and several seafood facilities. Although surface water in the County is not used for human consumption, it is important for recreation and shellfish harvesting, thus water quality must be protected in accordance with the State Water Control Law. According to the 2014 VDEQ Water Quality Assessment Integrated Report, almost all of the creeks in the County are considered impaired due to various causes such as pH, Enterococcus, Fecal Coliform, benthic-macroinvertebrate bioassessment, E. Coli, dissolved oxygen, etc. There are many causes for the various impairments, including wildlife; however, it is worth noting that there are an estimated 200 to 400 homes Shore-wide lacking any plumbing. This is a source of contamination that could be avoided, while at the same time directly improving the quality of life of individuals living in these conditions.

Due to the sole source aquifer designation of the Eastern Shore's water supply, Accomack County has revised its zoning ordinance to require that groundwater protection be considered in all major site plan reviews. The primary concern is not quantity of water in the York-Eastover aquifer, but rather, quality, as saltwater intrusion has already been documented in some coastal areas.

SOLID WASTE

The County operates seven Convenience Centers, all of which are closed one day each week (staggered) and offer recycling, tire, and used oil disposal. Some offer disposal of scrap metal including appliances, but none accept commercial waste. There is one landfill and one landfill transfer station which meet the disposal needs for commercial operations, construction companies, and households.

POWER AND COMMUNICATIONS INFRASTRUCTURE

Old Dominion Electric Cooperative (ODEC) in cooperation with Accomack and Northampton Electric Cooperative (ANEC) replaced the main transmission line between Tasley and Exmore. This project extended the redundant line from the state line to Tasley that was installed several years ago (Janelle Dawkins, ANEC, personal communication, July 28, 2016). There are plans to add more redundant lines, which will help ensure that long-term power outages are not a wide-spread concern on the Eastern Shore. Maintaining and advancing our infrastructure is key to increasing our resiliency in the occasion of a hazard. In 2016, the Amazon Solar Farm Virginia, an 80-megawatt project, came online in the Withams area. This was a new land use, that required rezoning and additional permits as well as decreases in acreage available for agriculture, as currently, there are no designated joint land uses for these operations (Personal communications, Tom Brockenbrough, Floodplain Administrator, March 2, 2021).

In 2019, an Information Technology (IT) Disaster Recovery Plan was prepared by Accomack County to develop, implement, and maintain the ability to recover its information technology systems. This Plan complies with the County Security Standards, meeting the requirements of CJIS, HIPAA, and PCI DSS. The Plan has been distributed internally within the County and with external organizations that might be affected by its implementation. Training exercises for all IT staff are completed on an annual basis (Personal communications, Tom Brockenbrough, Floodplain Administrator, March 2, 2021).

It is important to note that the IT DR Plan is a supporting component of Accomack County's Continuity Plan, which has also been in the process of development since late summer of 2020. The Continuity Plan provides direction and documentation as it relates to the response, recovery, resumption, restoration, and return to normal operations after a severe business disruption, which can also include an IT disaster; therefore, these plans must be developed and maintained together to ensure consistency in the County's response to incidents. Finalization of the Continuity Plan and subsequent training exercises for all County leadership were scheduled for completion by the end of March 2021 (Personal communications, Tom Brockenbrough, Floodplain Administrator, March 2, 2021).

The Eastern Shore of Virginia Broadband Authority (ESVBA) network of fiber cable stretches from Virginia Beach to the Maryland border and serves as the electronics 'backbone', providing high-speed internet to both Counties. The majority of service is provided along Route 13 as well as every incorporated Town in Accomack and Northampton Counties; however, there are still a high number of underserved households in Accomack County that are not located along Route 13 or an incorporated Town. Wide-spread high-speed internet provides residents with the capability to take advantage of educational opportunities, work from home, etc.

DRAINAGE DITCHES

The County relies on VDOT for the maintenance of ditches along state-maintained roadways but is responsible for maintenance of all ditches along County roads and between properties that drain state ditches. There are approximately 1,516 miles of primary and secondary roads in Accomack and Northampton Counties (Virginia Base Mapping Program Road Centerline Data, 2014).

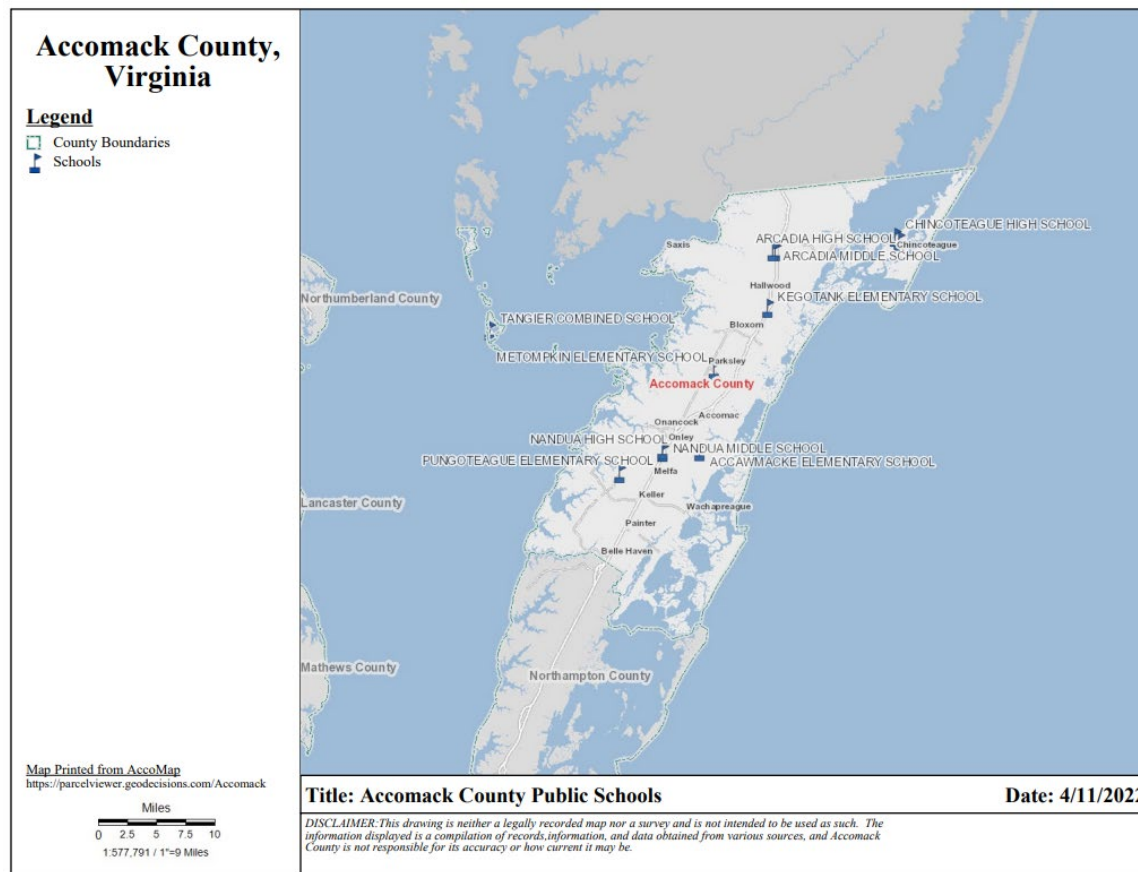
SCHOOLS

Schools are important to consider for disaster readiness and during an actual emergency. Schools offer an opportunity to teach children and adults how to effectively and efficiently respond to many emergency situations. They are also areas of concentrated high-risk individuals, particularly primary schools with young students. The Accomack County Public School Division is responsible for such planning. Each school has a Crisis Response Team, an emergency radio to receive updates on weather situations, two-way radios, a Crisis Management Plan for all bus drivers, and a pre-recorded warning message system.

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There are five elementary schools, five secondary schools, and one K-12 combined school in the Accomack County school system, with locations of these schools displayed in Figure 2. Central Baptist Academy in the Town of Onley is the only private school in Accomack County (Personal communications, Tom Brockenbrough, Floodplain Administrator, March 2, 2021). According to FEMA estimates using Hazus®, of the 11 total schools, damage would be incurred by both Chincoteague Elementary School and Tangier Combined School during a 1-percent-annual-chance flood event. The remaining nine schools are not expected to incur damages from this event.

Figure 3: Accomack County Public School Locations



According to the Virginia Department of Social Services (DSS), there are 7 licensed and 7 unlicensed daycare facilities in the County, with locations in Accomack, Atlantic, Hallwood, Horntown, Keller, Onancock, Onley, Painter, and Parksley ([Virginia DSS](#)). Arcadia Middle School and Nandua Middle School are the emergency shelters for the County. The County has previously expressed willingness to open their shelters and, if necessary, additional schools to Northampton County residents, considering they are currently without a shelter. Six of the County's schools are designated emergency shelters and can easily be found on [Accomack County's Website](#). Additionally, the Eastern Shore Community College in Melfa has been used as a base of operations during times of declared emergencies.

CULTURAL RESOURCES

Although the County has several building museums, Kerr Place, Locustville Academy, the Debtors Prison, the Railway Museum, Tangier Island Museum, etc., there is no interpretive center or readily available materials that comprehensively teach the history of the Eastern Shore culture. The Historical Society of the Eastern Shore is based in Onancock, maintains three properties there, and offers a range of educational programs.

Only 25 buildings in Accomack County are registered with the Virginia Department of Historic Resources (VDHR) as official Historic Places. In 2001, the VDHR completed the archaeological survey of the Chesapeake Bay shorelines and in 2003, the Atlantic coast shorelines associated with both Eastern Shore Counties. The latter was updated in April of 2016.

NATURAL ENVIRONMENT

Accomack County, entirely within the Atlantic Coastal Plain, is relatively flat with elevation ranging from sea level to about 50-feet above mean sea level. The majority of slopes are under 1%, but in a few sections, the slope reaches up to 15%. The average depth of the water table is about 18 inches. Flat areas are typically more prone to flooding problems, particularly where the water table is high and hydric soils dominate.

There are approximately eighteen major tidal creeks on the seaside and twelve on the bayside, according to FEMA reports. The [Regional Dredging Needs Assessment](#) inventoried 34 seaside creeks and 24 bayside creeks in Accomack County.

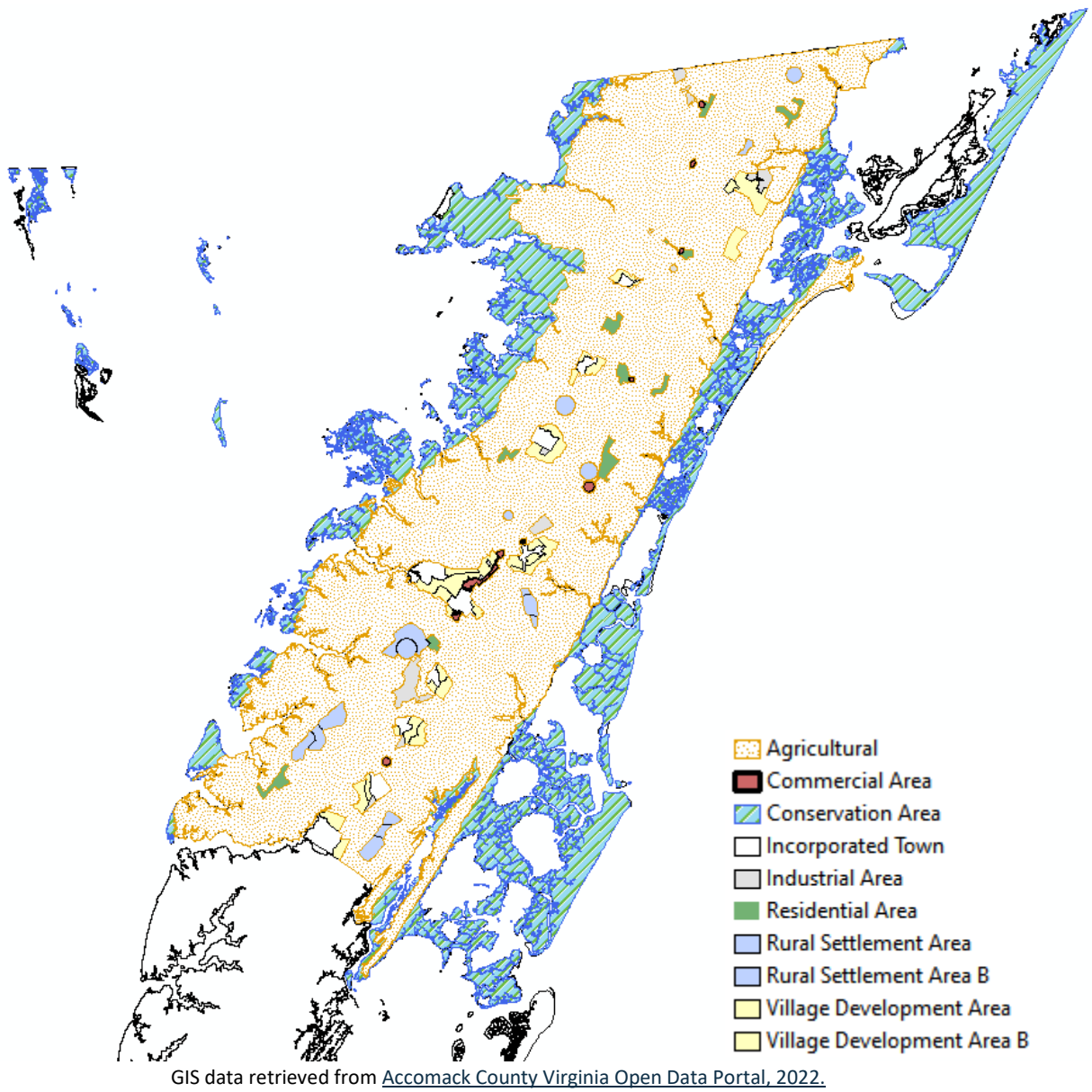
LAND USE LAND COVER

The total land and water area of Accomack County is approximately 602 square-miles, 476 of which is comprised of uplands and the adjacent wetland areas. The majority of land use consists of farms, forests, and marshlands, dotted with towns, villages, and hamlets.

According to the Census of Agriculture, there were 239 farms in 2017. Despite an increase of 13 farms since 2012, the total acreage and average size of farms has decreased. There has been a downward trend in the number of farms, the total acreage of farms, and the acreage of land in the agricultural and forest districts dating back to at least 1992. Although there was a boom in subdivision activity which peaked between 2004 and 2006, many of those areas were never developed after the downturn in the economy. The larger decrease in farm acreage cannot be largely attributed to these subdivisions, but rather the result of various causes. A 2009 publication indicated that 47 acres of wetlands are created annually from the inundation of low-lying farms (Titus, 2009), which could be part of the cause in the continuing decrease of farmlands. Around the time of the 2012 Census, one of the major vegetable growers was going through bankruptcy. They owned and leased a large quantity of land. In 2013, another company bought the majority of their operations at auction and now most of the land is back in production. It was expected that the 2017 Census would show a rebound in the number of farms; however, this was dependent on the expansion rate of solar energy production areas and other operations. It is possible this could affect numbers in the 2022 Census.

Water and wetlands originally made up approximately 65% collectively of land use, and the terrestrial, upland land cover is more relevant for management purposes. According to the NOAA C-CAP Land Cover Atlas, between 1996 and 2010 there was a net increase of 4.75% and 8.27% in developed areas and in impervious surfaces respectively. Still, Accomack County only has a total of 4% of its upland areas classified as developed and the percent of the County that is wetland has remained fairly constant for the past two decades (C-CAP NOAA, 2016).

Figure 4: Accomack County Future Land Use



HAZARD PREPAREDNESS & COMMUNITY CAPABILITIES

PREVIOUS HAZARD MITIGATION PLANS

[§201.6\(b\)\(3\)](#), [§201.6\(d\)\(3\)](#) Accomack County has participated in the hazard mitigation planning process since 2006. The County's primary risk is associated with coastal and storm water flooding. Although the County's Comprehensive Plan was updated in 2018, much of the content refers to dated data from the early 2000's. The comprehensive plan further emphasizes the need to protect groundwater, open space, historic resources, agricultural lands, National Aeronautics and Space Administration (NASA) Wallops Flight Facility (WFF), and to strengthen existing towns and communities.

Table 6: Accomack County Hazard Mitigation Resources

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

NATIONAL FLOOD INSURANCE PROGRAM & HAZARD MITIGATION GRANT PROGRAM

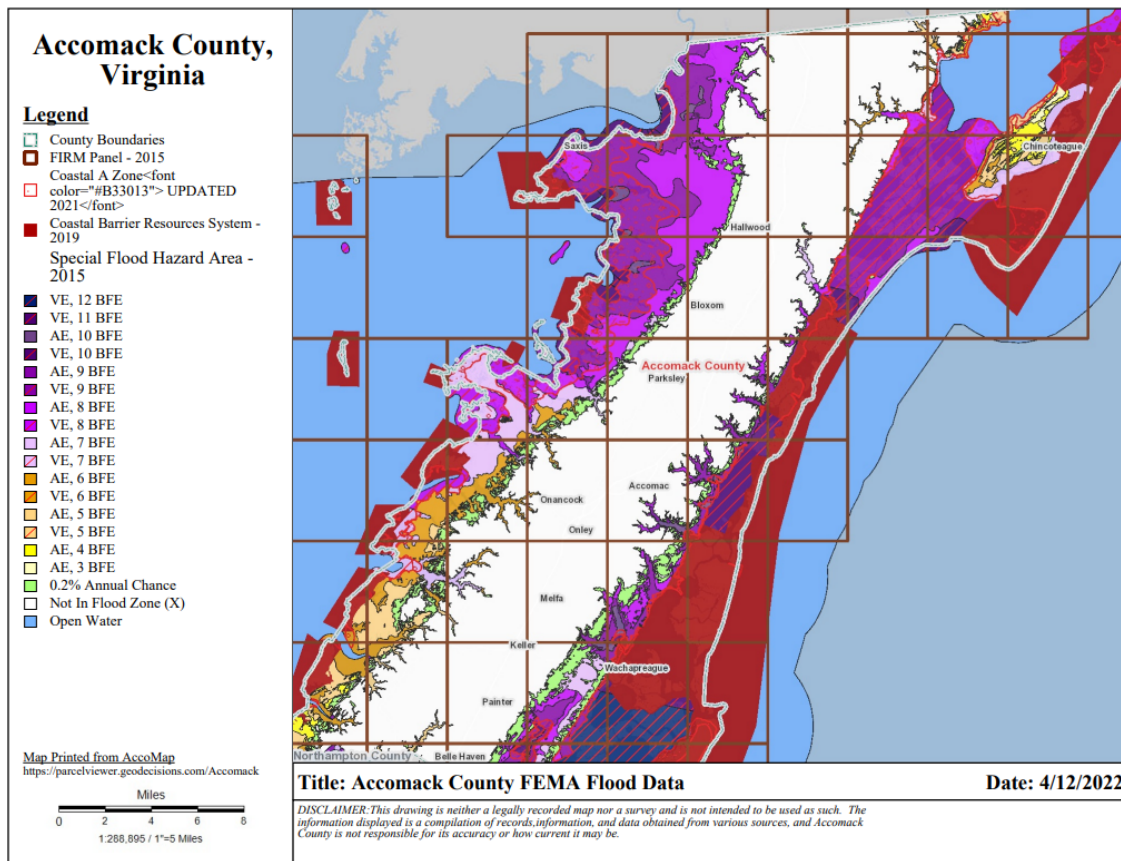
NFIP

§201.6(d)(3) Since 1953, there have been 14 Federal Disaster Declarations for hurricanes, flooding, and severe storms in the County, three of which occurred in the past five years ([FEMA Disaster Declarations, 2022](#)). There are 14 severe repetitive loss (SRL) properties and 92 NFIP-recognized repetitive loss (RL) properties in the County (FEMA NFIP Data Report, 2022), which has increased substantially since 2015. According to the FEMA Flood Risk Report in 2015, there were only 3 SRL and 37 RL properties, which was 12 more than there were in 2003 (FEMA Flood Risk Report 2015, FEMA NFIP Report December 2003). There has been a steady decrease in the total number of active insurance policies for the County, as more homeowners learn of the changes to the Flood Insurance Rate Map (FIRM).

With the 2015 updates to the FIRM, there were changes to the associated Special Flood Hazard Area (SFHA) for the County. The total area of the SFHA increased by 12 square miles and decreased by 16.6 square miles for a net decrease of 4.6 square miles including 1,111 buildings. The area within the V zone increased by 3.6 square miles and decreased by 44.8 square miles for a net decrease of 41.2 square miles including 300 buildings. This is extremely important as 1,411 structures that previously were required to have flood insurance under a mortgage are no longer required to have even basic flood insurance coverage. Flood insurance is cost prohibitive for many residents in the County. Without insurance, should there be flooding, the recovery time for residents, businesses, and the overall community will be much longer.

The County participates in the Community Rating System (CRS) program in order to provide a policy discount to residents and businesses in the unincorporated areas of the County. Since 2016, Accomack County's CRS rating has dropped from 8 to 6, now providing residents a 20% discount for insurance (Personal communications, Tom Brockenbrough, Floodplain Administrator, March 2, 2021). More information on repetitive loss properties, NFIP policies and claims, and the CRS program can be found in Chapter 6: Coastal Flooding and Chapter 9: The Region.

Figure 5: Accomack County FIRM Base Flood Elevation (BFE)



HMGP

The County of Accomack has historically participated in the Hazard Mitigation Grant Program. After Hurricane Floyd in 1999, the County received a 28-home elevation project for homes located in the unincorporated portions of the County and in the Town of Tangier. See Table 7 for more details. As of 2016, a total of almost 100 homes in Accomack County have been elevated out of the floodplain and no houses have been relocated or razed under the program. These grants are regularly utilized in the County, particularly in coastal Towns such as Tangier and Saxie.

HAZARD PROFILE

PANDEMIC RESPONSE AND READINESS

Accomack County responded to the COVID-19 pandemic in several ways. The County offices were forced to shut down from mid-March of 2020 to June 8, 2021 (Personal communications, Tom Brockenbrough, Floodplain Administrator, July 23, 2021). The majority of meetings were held virtually and some held with limited parties in the meeting room. The public was required to make an appointment to go into the Administrative Building with the exceptions of going to the Commissioner of Revenue Office or the Treasurer's Office.

Staff only attended meetings that were held outside or were socially distanced and alternated between working in the office and working remotely. Masks were required at all times unless working in an office that was not shared with any other staff and high-touch surfaces were cleaned and sanitized frequently. Upon returning to work, some staff were relocated to different offices in an attempt to maintain social distancing of crowded work areas and many offices were reconfigured with plexiglass shields. Additional hand sanitizer dispensers, social distancing floor schedules, flexible work schedules, and arrangements to work remotely to ensure social distancing and to assist those with who had children going to school virtually at home were put in place. The County also assisted employees who were interested in receiving one of the COVID-19 vaccinations (Personal communications, Tom Brockenbrough, Floodplain Administrator, July 23, 2021).

The County used CARES Act and other COVID-19 related funds to purchase any needed PPE and technology to hold virtual meetings. The County used funds for Broadband proliferation and collaborated with Accomack County Schools and the Eastern Shore of Virginia Broadband Authority to create public access hotspots in areas with concentrations of students without internet services. Funds were also used for safety-related facility improvements, hazard pay, grants for small businesses, watermen, and charter/passenger boats, mortgage and rental assistance programs, and more (Personal communications, Tom Brockenbrough, Floodplain Administrator, July 23, 2021). Every incorporated town in the County was also allocated funds according to the town's population; however, a few of the towns left their allotment with the County.

HIGH WIND

The peak wind gusts predicted by Hazus® during a 1-percent-annual-chance wind event are evidenced in Figure 3. The building-related losses are broken into two categories: direct property damage losses and business interruption losses. The direct property damage losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with the inability to operate a business due to damage sustained during the hurricane. Business interruption losses also include the temporary living expenses for those individuals displaced from their homes as a result of hurricane damages.

The total property damage losses were \$72 million, with 5% of the estimated losses related to the business interruption of the region. By far, the largest loss was sustained by the residential occupancies, making up over 95% of the total loss.

Hazus® estimates that approximately 230 buildings will be at least moderately damaged. This is over 1% of the total number of buildings in the region. There are an estimated 16 buildings that will be completely destroyed. The definition of the 'damage states' is provided in the Hazus® Hurricane technical manual.

The model also estimates that a total of 265,278 tons of debris will be generated. Of the total amount, 234,643 tons (88%) is Other Tree Debris. Of the remaining 30,635 tons, Brick/Wood comprises 14%, Concrete/Steel comprises 0%, and the remainder is Eligible Tree Debris. If the building debris tonnage is converted to an estimated number of truckloads, it will require 173 truckloads at 25 tons/truck to remove the building debris generated by the hurricane. The number of Eligible Tree Debris truckloads will depend on how the 26,317 tons are collected and processed. The volume of tree debris generally ranges from approximately 4 cubic yards per ton for chipped or compacted tree debris, to approximately 10 cubic yards per ton for bulkier, uncompacted debris.

The County's Building Code is currently based on the 2012 Virginia Uniform Statewide Building Code (USBC). The USBC is periodically updated and the County updates their code respectively. Our region lies within the 110-mph wind zone; thus, the County requires structures be built to withstand winds of at least this strength (Personal communications, Bruce Herbert, (Former) Building Inspector, August 1, 2016; confirmed Bruce Herbert, A-NPDC Community Development Coordinator, July 19, 2021). These standards affect many aspects of the construction, from the quality of the shear walls to the number of nails used to secure shingles.

Hazus® estimates the number of households that are expected to be displaced from their homes due to a 1-percent-annual-chance wind event as well as the number of displaced individuals that will require accommodations in temporary public shelters. For Accomack County, the model estimates 21 households to be displaced. Of these, 14 individuals, out of a total population of 33,164, will seek out temporary public shelters.

Additional wind hazards, which are described in Chapter 4, are straight line winds, tornados, and nor'easters. Manufactured homes are the most susceptible to wind damages.

COASTAL EROSION

Accomack County is experiencing erosion along the bayside shoreline and the barrier island shorelines on the seaside. The inland seaside shoreline is relatively protected from erosion by the barrier islands, marshes, and bays to the east. That said, the shifting and erosion of the barrier islands and loss of marshes to habitat migration and rising seas, may leave the inland seaside shoreline in a more exposed position in the future.

The erosion rates on the barrier islands range from 7- to 17-feet per year on average; however, a single high intensity nor'easter or hurricane could erode more than that in just a few days. The Accomack County Comprehensive Plan emphasizes the importance of consulting with the VIMS Shoreline Situation Report to prevent building in high erosion areas or those areas indicated to have a loss of greater than one foot per year. The Coastal Resilience Tool finalized an application that shows historic positions of the seaside barrier islands. This tool is now available to the public.

Table 8 reveals the areas in the County identified by the 2002 VIMS *Shoreline Situation Report* and updated information from local County representatives. According to the VIMS Center for Coastal Resources Management 2016 Accomack County Shoreline Inventory, 46 of the 708 miles of shoreline surveyed are defended in some way, the majority of which (26.6 miles) are bulkheads.

Assateague Island, an area vital to the economy in Accomack County, has experienced severe erosion. Decisions are still currently being made for the long-range plan for the Chincoteague National Wildlife Refuge and Assateague Island National Seashore on Assateague Island, with regards to new locations for parking, beach access, interpretive structures, facility buildings, etc.

Just to the south of Assateague is Wallops Island, which is owned by the federal government and home to the NASA WFF, a major economic driver for the County. In June of 2016, the United States Army Corps of Engineers (USACE) completed the Wallops Island beach nourishment, which cost almost \$36 million (about \$10 /yd³ of sediment).

The restrictions within the Resource Protection Areas identified in the Chesapeake Bay Act typically prevent new construction within 100-feet of our waterways and thus reduces increased exposure to erosion; however, erosion does cause additional problems for our navigable waterways, as the eroded sediments can fill channels and create a hazard for water-based transportation and businesses.

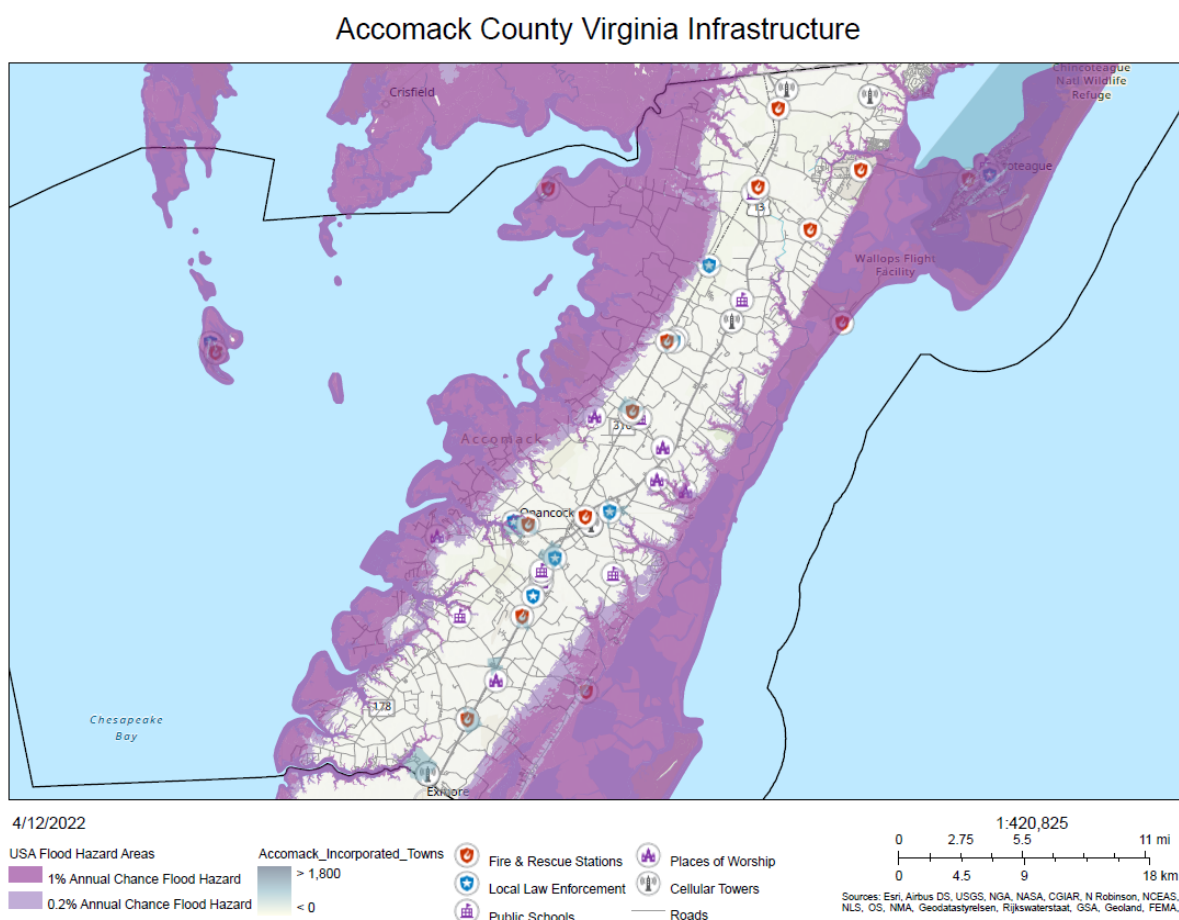
Table 7: Accomack County - Areas Experiencing Coastal Erosion

Area	Location Description	Erosion Rate (feet/year)	Mitigation Strategy	Other
Critically Eroding Areas				
Tangier Island, & Uppards	All coastlines, western shore of Tangier least in danger due to existing seawall	10+	Jetties, Seawalls, Enhancing the Uppards, Reinforcement of the eastern shoreline, Extend seawall on eastern shoreline	
Sluitkill Neck	Between Pungoteague and Matchotank Creeks	4-5 On Bayshore, 1.5 on mainland	Retain as is. Unsuitable for residential or recreational development	Includes Finneys, Scarborough, and Parker Islands
Severely Eroding Areas				
Saxis			Beach nourishment, Groynes, Jetty, Breakwater	
Scarboroughs Neck	Northern shoreline of Occohannock Creek	5	Continue as agricultural use	Unsuitable for residential development. Suitable for recreational camping.
Parkers Marsh	Between Chesconessex and Onancock Creeks	5	Retain as state natural area. Restrict development at Crystal Beach to relatively low value seasonal residences	Includes residentially developed Crystal Beach area
Freeschool Marsh	Between Saxis and mainland	1.9-4.9 (maximum along Saxis waterfront)	Retain as is.	Most is set aside as a wildlife refuge
Moderately Eroding Areas				
Hyslop Marsh	Between Craddock and Back Creeks	2-3	Retain as is.	None.
Nandua Creek	Southwestern Accomack Co.	2-3 in lower creek, 0 in upper creek	Continue as agricultural and lowdensity residential use	Lower creek unsuitable for residential development
Broadway Neck	Between Matchotank Creek and East Point	2 south of Thicket Point, no data for north of Thicket Point	High flood hazard should be considered before future development	The presence of old beach defenses at East Point indicates history of moderate erosion
Onancock Creek	Central Accomack Co. Bayside	Moderate erosion of sand beaches	Restrict additional development on lower part of creek	Localized erosion in areas such as at the end of Bailey Neck
Big Marsh	Between Chesconessex and Deep Creeks	0-3	Continue as agricultural and lowdensity residential use	Includes Schooner Bay development
Parksley	Between Hunting and Young Creeks	2 along beaches, 0 along remainder of creeks	Retain as marshland or agriculture	None.
Michael Marsh	Between Cattail and Messongo Creeks	1.3-1.7 along shore facing Beasley Bay	Retain as is.	Most is set aside as part of Saxis Wildlife Management Area

COASTAL FLOODING

According to the 2015 FEMA Flood Risk Report, 311.5 square miles of Accomack County are in the SFHA and 144.6 square miles are in the V zone. This is approximately 68% and 31% respectively of land area (excluding marsh or emergent wetlands) using the land cover data from NOAA. The three largest landholders are the Commonwealth of Virginia, the Federal Government, and The Nature Conservancy (TNC). Of non-federal land in the SFHA, over 70% is maintained in open space (Personal communications, Tom Brockenbrough, Floodplain Administrator, March 2, 2021).

Figure 6: Accomack County Flood Hazards to Infrastructure



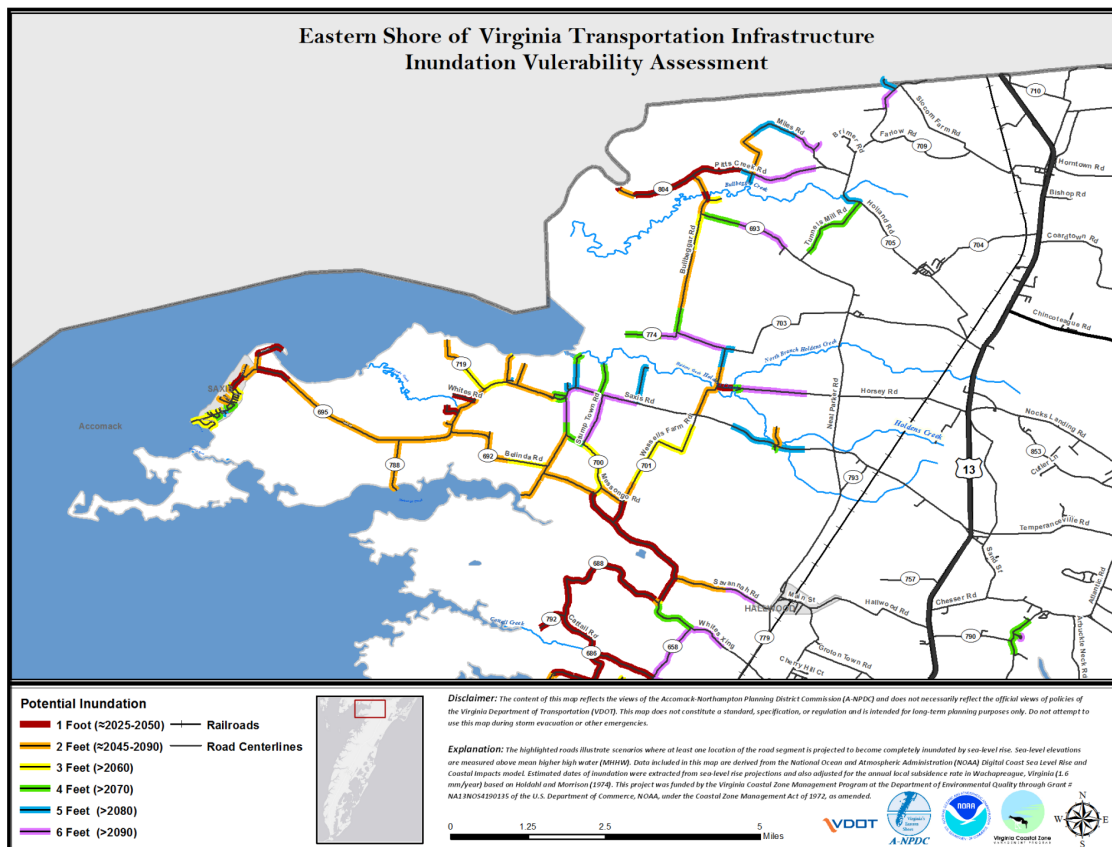
The total economic loss estimated by Hazus® for a 1-percent-annual-chance flood event is \$145.54 million, which represents 10.06% of the total replacement value of the scenario buildings. The Hazus® model indicates that over 65,000 tons of debris would be generated during such flooding event. The quantity of generated debris will likely create accommodation challenges for the landfill, consequently forcing trucks inland for debris processing and disposal. Hazus® estimates the number of households expected to be displaced from their homes and the associated potential evacuation in the event of a 1-percent-chance flood. Additionally, Hazus® estimates the number of those displaced individuals that will require accommodations in temporary public shelters. The model indicates approximately 767 households, or 2,301 individuals, will be displaced due to the flood event. Displacement includes households evacuated from within or very near the inundated area. Of these, 382 out of the County's 33,164 total

population will seek out temporary public shelters. Following Hurricane Sandy in 2012, there were over 200 reported home damages in the County; however, within two weeks, roughly half of these had already been repaired and a quarter were being processed with their respective insurance companies. Between 15 and 20 homes received volunteer assistance for their repairs and two residents from two homes relocated off of the Eastern Shore.

SEA LEVEL RISE

Based on 2010 U.S. Census data, 4,623 people in the County are on land below 3-feet elevation and 6,957 people are below 5 feet. In 2010, Accomack County had 33,164 people in total. Of the County's 1,014 miles of roads, 31 miles (3.1%) will be inundated with 1-foot of sea level rise (SLR) (estimated year 2025-2050), 115 miles (11.3%) with 2 feet (2045-2090), and 183 (18%) with 3 feet (post-2060) (*ESVA Transportation Infrastructure Inundation Vulnerability Assessment*, 2015). Another study by VIMS estimated 326 miles of roads in Accomack County were vulnerable to 1.5 feet of relative SLR when combined with a storm surge of 3 feet. Even small amounts of sea level rise make rare floods more common by adding to tides and storm surge. With 3 feet of sea level rise, there are many towns, unincorporated communities, and economically critical facilities (including NASA WFF and various working waterfront areas) that would be disconnected, inaccessible, or have the majority of the roads inundated with 3 feet of relative SLR. Without significant engineering solutions in the coming years, it should be expected that the livelihood and safety of communities and the integrity of the roadways in the County will largely decline. Figure 5 shows a map from the *Transportation Infrastructure Inundation Vulnerability Assessment* of one of the most susceptible areas to SLR effects in the County. According to a 2014 report prepared by Climate Central, the County has 41,816 acres of land below 5 feet MHHW.

Figure 7: Northwestern Accomack County Transportation Infrastructure Inundation Vulnerability Assessment



STORM WATER FLOODING

Local officials identified various areas in the unincorporated portions of the County that have stormwater flooding problems. These areas include, but are not limited to:

- New Church; Rt. 13 & Rt. 175
- Sanford
- Especially Neil Parker Rd (Sanford)
- Pastoria
- Mappsville
- Bayside Rd between Shields and Craddockville
- Family Dollar Store in Tasley
- Intersection of Locustville Rd & Drummondtown Rd
- Clam
- Messongo
- Belinda

The causes are typically from soil type, elevation, lack of proper ditch design and maintenance, or any combination of these.



**Figure 8: Accomack County
Storm Water Flash Flooding -
July 1, 2016. Photo by Shannon
Alexander**



Intense rain events, such as that on Friday July 1, 2016, can come without warning and have serious impacts to travel and safety, as shown in Figure 6. Slow moving storms that moved over Accomack County brought nine inches of rain by evening in the Parksley area, where southbound U.S. 13 was forced to close. Throughout the County, homes were surrounded by and often inundated by water. The gauge in Onley measured 8.58-inches of rain. Ambulances and fire rescue vehicles struggled to reach individuals in need of aid. Luckily, there are alert systems in place that, if signed up for, will send alerts when such a flash flood warning is in effect; however, often times waters are already rising by the time these alerts are issued.

Educating residents about the risks associated with storm water flooding and standing water, such as septic contaminants and mosquito-borne illnesses, is an important step in mitigating potential negative impacts to the population.

HAZARDS OF LOCAL SIGNIFICANCE

Other hazards for Accomack County are described in the Regional Chapter and include, but are not limited to, above and underground storage tanks, snow and ice, fire and drought, fish kills, and biological hazards.

WATER QUALITY

Since many people in the County rely on the fisheries and aquaculture industries, fish kills and the declining health of the Chesapeake Bay can severely impact the residents and the economics of the entire Region. In addition, bacterial impairments can discourage tourism and recreational use of our beaches and waters.

MOSQUITOS

Mosquito-borne illnesses, such as West Nile and Zika Virus, pose a potential risk, especially with standing water from intense rain events and subsequent stormwater flooding.

SNOW AND ICE STORMS

With snow and ice storms, there are often school closures, power outages, isolated communities (by water – Tangier, and roads to many locations), and economic issues from damages to agriculture, water lines, etc.

FIRE AND SMOKE

According to ACS estimates, in 2019, 2,369 (17.6%) of Accomack County houses are heated with fuel oil, kerosene, etc., another 2,905 (21.6%) with bottled, tank, or LP gas, and 227 (1.7%) use utility gas as the primary house heating source. In times of low humidity and high winds, the County is susceptible to field and forest fires as well.

CRITICAL FACILITIES

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

Table 8: Accomack County Critical Facilities

Facility	Hazards	People Affected	Loss Potential	Relocation Potential	Retrofit Potential
County-Owned Properties					
Public Schools: Tangier Combined, Chincoteague Combined, Arcadia Middle & High, Nandua Middle & High, and Pungoteague, Accawmacke, Metompkin, Kegotank, and Chincoteague Elementary	Storm Water, Coastal Flooding (Tangier & Chincoteague), Wind, Fire, Ice	20,000+	Major Disruption	Yes	Yes
911 Communications	Wind, Fire, Ice	45,000+	Devastating	Yes	Yes
Sheriff's Office & Jail Complex	Wind, Fire, Ice	33,000+	Devastating	No	Yes
Health Department	Wind, Fire, Ice	33,000+	Major Disruption	Yes	Yes
Social Services	Wind, Fire, Ice	20,000+	Major Disruption	Yes	Yes
Administration Building	Wind, Fire, Ice	33,000+	Minor Disruption	Yes	Yes
Public Safety Building	Storm Water, Wind, Fire, Ice	33,000+	Major Disruption	Yes	Yes
Fire Training Center/Emergency Operation Center	Wind, Fire, Ice	33,000+	Major Disruption	No	No
Building & Grounds Maintenance Shop	Storm Water, Wind, Fire, Ice	33,000+	Minor Disruption	Yes	Yes
Veteran's Affairs Office	Wind, Fire, Ice	5,000+	Minor Disruption	Yes	Yes
County Garage	Storm Water, Wind, Fire, Ice	33,000+	Major Disruption	Yes	Yes
Industrial Parkway, Service Rd, & Atlantic Dr	Storm Water, Wind, Fire, Ice	20,000+	Minor Disruption	No	Yes
Airport Complex	Storm Water, Wind, Fire, Ice	3,000+	Major Disruption	No	Yes
North & South Landfills	Storm Water, Coastal Flooding, Wind, Fire, Ice	33,000+	Major Disruption	No	Yes
Mappsville Communications Tower	Wind, Fire, Ice, Lightning	33,000+	Major Disruption	Yes	Yes
Planning Office	Wind, Fire, Ice	33,000+	Minor Disruption	Yes	Yes
Lumber Mill Complex (Joyes Neck Rd)	Storm Water, Wind, Fire, Ice	33,000+	Inconvenience	No	Yes
Convenience Centers: Chincoteague, Fisher's Corner, Horntown, Makemie Park, Grangeville, Painter, Tasley	Storm Water, Coastal Flooding, Wind, Fire, Ice	33,000+	Major Disruption	Yes	Yes
County-Owned & Operated Public Utilities					
Industrial Park Water & Wastewater Systems	Wind, Fire, Ice, Flooding	33,000+	Major Disruption	No	Yes
Leachate Treatment Plant	Wind, Fire, Ice, Flooding	33,000+	Major Disruption	No	Yes
Accomac Water System	Wind, Fire, Ice, Flooding	2,000+	Major Disruption	No	Yes
Health Dept. Water System	Wind, Fire, Ice, Flooding	33,000+	Major Disruption	No	Yes
Court Systems Buildings Complex	Wind, Fire, Ice, Flooding	10,000+	Major Disruption	No	Yes
DSS Water & Wastewater Systems	Wind, Fire, Ice, Flooding	3,000+	Major Disruption	No	Yes

FINDINGS

1. During a 1-percent-annual-chance flood event, the total economic losses are estimated at approximately \$145.54 million. During the same chance wind event, the total property damage loss equals roughly \$72 million. If these Hazus® estimates are combined, which is a likely scenario during a hurricane, the damages are over \$217 million. A high-wind storm system that also produced 1-percent-annual chance flooding is a significant threat to the County.
2. During a 1-percent-annual-chance flood event, 767 households, or 2,301 individuals, would be displaced from their homes. An estimated 382 of these individuals would be forced to seek out temporary public shelter. Coastal flooding is the greatest threat to the County.
3. With the 2015 updates to the FIRM, 4.6 square miles, including 1,111 buildings, were removed from the SFHA and 41.2 square miles, including 300 buildings, were removed from the V zone. From April of 2011 to January of 2016, there has been a decrease of 602 policies in the unincorporated areas. This number is estimated to continue to increase as more residents learn that flood insurance is no longer required. The changes in the FIRM are thought to create a sense of decreased vulnerability to flooding, and the resulting drops in policies may increase the rebound time for the County and its residents following a flood event.
4. According to 2016 NFIP data, there are 38 repetitive loss properties and 3 severe repetitive loss structures in the County. It is possible both of these numbers have increased over the last five years.
5. As of 2021, the Towns of Keller, Melfa, and Painter do not participate in the NFIP but experience stormwater flooding. Many areas of stormwater flooding are not identified by the current FIRMs. Residents and business owners in these areas cannot currently purchase flood insurance or be eligible for some loan opportunities. Often, drainage ditches are the culprit behind storm flooding, thus maintenance and re-evaluation of many systems may be needed to address this hazard.
6. High winds from a 1-percent-annual-chance event are predicted to cause at least moderate damage to 230 buildings and completely destroy 16. Property damages and economic losses would total approximately \$72 million. Although this is significant, it is not even half of the damage incurred by a 1-percent-annual-chance flooding event. The majority of these damages are to residential structures.
7. Most of the worst coastal erosion in Accomack County has occurred on the bay shoreline. Erosion also causes shoaling of channels and creeks, thus hindering waterway navigation and increasing maintenance dredging needs and costs.

Accomack County

8. There have been several factors that have increased the risk in the County since 2011. These include an increase in the number of vacant homes, an increase in the number of manufactured homes, an increase in the number of homes with no vehicle available, and an increase in the number of non-English speaking residents.
9. The County has identified other additional hazards including winter storms, sewage spills, drought, wildfire, hazmat incidents, heat waves, biohazards, and well contamination. Furthermore, the County faces secondary hazards from flooding such as poultry kills and mosquito-borne disease, which could potentially impact the health of residents and the local economy. Of concern for wildfire and structure fire is the increasing difficulty with which the fire companies are having in securing sufficient volunteers to offer complete services.