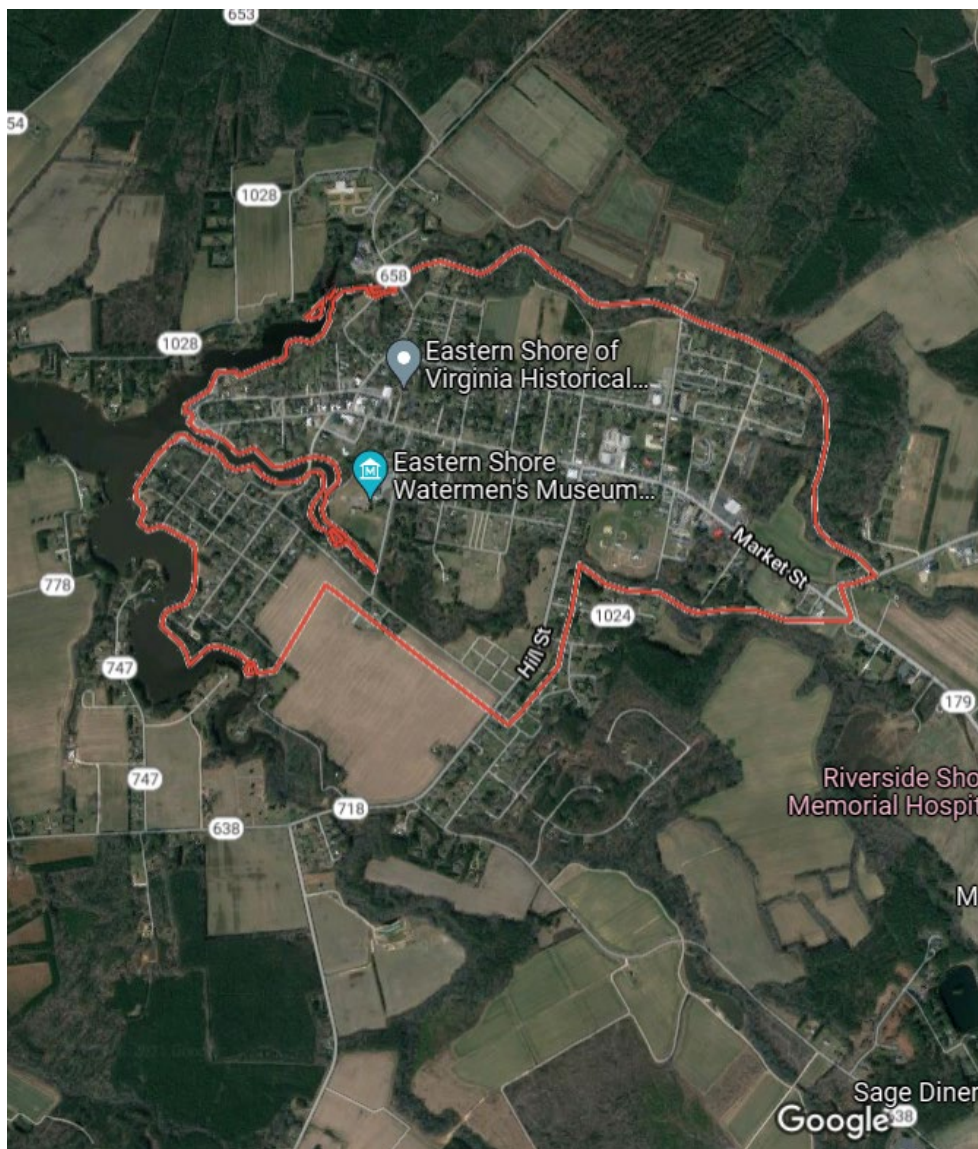


# CHAPTER 17: TOWN OF ONANCOCK

## TOWN PROFILE

The Town's port was founded to collect tax on tobacco and other products exported from Accomack County. In 1680, the Act of Cohabitation set aside 50 acres at the head of Onancock Creek for development of a town center. This area was called Port Scarborough, but was quickly changed to Onancock. Accomack's county seat was located here until 1693 when a new courthouse was built in the nearby Town of Accomac. The Town was a major port on the Eastern Shore allowing access to Baltimore's markets. The Town declined after 1884 when the railroad was built further inland. Today, the Town includes 665 acres (just over a square mile) and is a residential center, service area, and small active port with 91 business establishments, many located in its historic downtown area (*Town of Onancock Comprehensive Plan, 2021*).



**Figure 1: Onancock 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 2010 Census indicates that the Town had a population of 1,263, which is a 17.2% decline from the 1,525 people that lived in the Town during the 2000 Census. According to the 2019 American Community Survey estimates, the population has continued to decline, now estimated at 1,098. The median age for residents in 2019 was 57.3, signifying a population nearly 20 years older than the national average with 38.6% of the population over the age of 62. Older populations often require additional assistance in the event of a hazard. Over 10% of the population in Onancock speaks a language other than English, which is important to consider during a hazard in regards to accessing safety information. Most, if not all, of these residents are able to access hazard and safety information in a language they are able to understand (Personal communications, Matt Spuck, Town Manager, March 31, 2021).

**Table 1 : Onancock Demographic Information**

	2020	2014**	2013***	2010****	2000*****
<b>Population</b>	1,169	1,226	1,381	1,263	1,525
<b>Median Age</b>	57.3*	51.6	50.1	51.1	45.3
<b>Disability</b>	159*	101	73	NA	NA
<b>Income</b>					
Median Household Income	\$50,347*	\$39,927	\$40,313	\$41,372	\$28,214
Poverty Level	15.3%*	30.1%	25.6%	21.2%	NA
<b>Language</b>					
Only English	89.9%*	92.7%	94.7%	93.5%	94.0%
Other	10.1%*	7.3%	5.3%	6.5%	6.0%
Spanish	5.4%*	0.3%	0.9%	6.3%	4.1%
Ind-Euro	2.8%*	6.6%	4.2%	0.2%	0.8%
Asian	1.9%*	0.0%	0.0%	0.0%	0.1%
Other	0.0%*	0.3%	0.2%	0.0%	0.0%

Source: U.S. Census 2020, \*ACS, 2014-2019, \*\*Annual Estimates of the Residential Population, 2010-2014, \*\*\*ACS, 2009-2013, \*\*\*\*U.S. Census 2010, \*\*\*\*\*U.S. Census 2000

### 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.

Onancock has seen a declining workforce since 2000, as shown in Table 2. The majority of the workforce is employed in the educational, health care, and social services industry as well as the professional, scientific, and waste management industry, likely due to the Town's Waste Water Treatment Plant. A large portion of residents also work in retail trade, reflective of the downtown retail area, and manufacturing, due to the close proximity of various industrial poultry processing plants nearby. Following an emergency situation that caused significant negative impacts to the tourism industry, the rebound for the Town would most likely also be negatively impacted; however, the portion of the workforce employed in education, construction, professional services, and utilities would be in high need, potentially lessening the negative impact.

**Table 2 : Onancock 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	7	1.7%	15	3.0%	16	2.2%	11	1.8%
Construction	3	0.7%	21	4.2%	72	10.0%	36	6.0%
Manufacturing	40	9.8%	91	18.1%	88	12.2%	86	14.3%
Wholesale trade	12	2.9%	6	1.2%	47	6.5%	51	8.5%
Retail trade	43	10.5%	49	9.7%	76	10.6%	81	13.5%
Transportation and warehousing, and utilities	19	4.6%	5	1.0%	27	3.8%	11	1.8%
Information	2	0.5%	10	2.0%	11	1.5%	16	2.7%
Finance, insurance, real estate, and rentals	33	8.0%	37	7.4%	22	3.1%	24	4.0%
Professional, scientific, waste management	63	15.4%	37	7.4%	47	6.5%	37	6.2%
Educational, health care, social services	88	21.5%	143	28.4%	126	17.5%	131	21.8%
Arts, entertainment, recreation, food	32	7.8%	48	9.5%	94	13.1%	42	7.0%
Public Administration	44	10.7%	33	6.6%	73	10.2%	48	8.0%
Other	24	5.9%	8	1.6%	20	2.8%	26	4.3%
TOTAL CIVILIAN EMPLOYED POPULATION	410	-	503	-	719	-	600	-

Source: \*ACS, 2014-2019, \*\*ACS, 2010-2014, \*\*\*U.S. 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.

Onancock is one of the few incorporated towns in the region that has an entity responsible for increasing the success of the community in order to enhance the quality of life for the citizenry. The [Onancock Business & Civic Association](#) fills this role and is an excellent resource for new residents, entrepreneurs, and information about businesses in the Town.

Onancock was once an active maritime shipping center for locally grown produce. Though it remains an active maritime port of seafood landings and commodity imports, the rail and truck shipping industry supplemented the transport of locally grown produce. The majority of Onancock's industry focuses on retail and commercial areas. There are also construction businesses, several food and accommodation services, retail shops, art galleries, theaters, museums, and more throughout the Town.

**Table 3: Onancock Business Establishment Types**

Industry Code Description	Total Establishments			
	2019	2013*	2011*	2009*
Agriculture, Forestry, Fishing and Hunting	-	1	1	1
Construction	~8	12	10	11
Manufacturing	1	2	1	1
Wholesale Trade	1	1	2	2
Retail Trade	18	14	11	14
Information	-	4	4	4
Finance and Insurance	5	5	4	4
Real Estate and Rental and Leasing	6	7	6	8
Professional, Scientific, and Technical Services	6	8	11	10
Management of Companies and Enterprises	1	1	1	1
Administrative and Support and Waste Management and Remediation Services	3	3	4	5
Health Care and Social Assistance	5	9	9	9
Arts, Entertainment, and Recreation	9	2	4	4
Accommodation and Food Services	17	10	10	8
Other Services (Except Public Admin)	18	11	14	14
<b>Total, All Establishments</b>	<b>91+</b>	<b>90</b>	<b>92</b>	<b>96</b>
<b>Total Employees</b>	<b>-</b>	<b>590</b>	<b>518</b>	<b>533</b>

Source: [Directory of Businesses and Services | Town of Onancock, Virginia](#), \* Census Zip Code Business Patterns, 2009, 2011, 2013

## 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. The Town of Onancock does have some higher density, multi-family accommodations on the northwest area of Town. During educational outreach, these areas would be well-suited for additional focused attention.

In 2019, the ACS five-year estimates show a slight drop in total housing units from 794 to 771 and a dramatic increase in vacant housing units. The majority of these units are single-family housing and are owner-occupied. The presence of substandard housing in Onancock has been greatly reduced over the last 40 years. There is still a presence of some substandard housing in disrepair; however, the Town has a very active plan for removing housing blight. In the last few years, six structures have been demolished and removed and ten were repaired. Grant applications to continue this work are currently in progress (Personal communications, Matt Spuck, Town Manager, March 31, 2021).

Generally, a large portion of vacant housing units can be hazardous during storms due to lack of maintenance and loose debris; however, the Town's efforts in removing dilapidated structures helps to mitigate this hazard. The remaining portion of vacant homes in the Town are largely in part due to seasonal residents, second homes, retirees, and vacation homes. Town officials have also stated they believe this number to be too high (Personal communications, Matt Spuck, Town Manager, March 31, 2021).

**Table 4: Onancock Housing**

	2019*	2014**	2010***	2000****
<b>Total Housing Units</b>	771	794	753	733
Occupied	547	649	594	656
Vacant	224	145	159	77
<b>Owner-Occupied</b>	359	394	350	411
<b>Renter-Occupied</b>	188	255	244	245
<b>Median Housing Value</b>	\$196,900	\$183,000	NA	NA

Source: \*ACS, 2014-2019, \*\*ACS, 2010-2014, \*\*\*U.S. Census 2010, \*\*\*\*U.S. Census 2000

## TRANSPORTATION

Market Street (Route 179) serves as Onancock's primary street and provides a direct route in and out of the Town to Route 13. Other major roads in Town include Hill Street (Route 179), Liberty Street, and North Street. Hill Street connects to communities from the south such as Cashville, East Point, and Pungoteague. The most active internal collector roadways in Town are Kerr Street and Boundary Avenue. VDOT maintains approximately 75% of the Town's roadways, with the Town maintaining the remaining 25% (*Town of Onancock Comprehensive Plan*, 2021). Vehicular traffic through the Town is a growing concern as many residents and visitors are walking and biking as a means of transportation and recreation at increasing rates. A "Road Diet" funded through SMART SCALE should help to mitigate this issue. VDOT has sponsored a transportation plan for Onancock that includes bike trails, and the Town plans to connect the bike trail to the future Eastern Shore Rail-to-Trail that will stretch approximately 49 miles from the Town of Cape Charles north to the Town of Hallwood. Planning efforts for these projects are ongoing. Several streets are in need of maintenance and repair to potholes that have formed due to regular vehicular traffic as well as repairs made to water and sewer lines.

STAR Transit offers weekday bus service to Chincoteague and Cape Charles, with stops to all major communities, shopping centers, health care facilities, and government offices. Shore Ride offers transportation services to and from almost anywhere on the Eastern Shore, including Salisbury, Maryland and Norfolk/Virginia Beach, Virginia. The seasonal Tangier Ferry offers regular service to Tangier Island and offers foot passengers and bicyclists the opportunity to connect to other boats travelling to Reedville, Virginia and Crisfield, Maryland (*Town of Onancock Comprehensive Plan*, 2021).

**Table 5: Onancock Vehicles Available per Household**

<b>Vehicles Available</b>	2019*	2014**	2010***	2000****
None	63	94	105	95
One	212	284	274	256
Two	165	172	218	200
Three or more	107	99	118	100

Source: \*ACS, 2014-2019, \*\*ACS, 2010-2014, \*\*\*ACS, 2006-2010, \*\*\*\*U.S. Census 2000

Individuals with personal vehicles can most often more easily remove themselves and their families from harm's way in the event of an emergency. According to Table 5, as of 2019, 11.5% of the Town's occupied residences are without a single vehicle. Although this is a vast improvement from 2010 Census figures, it should still be taken into consideration in planning for a hazard. Golf carts and utility vehicles may also be used on certain streets within the Town where the speed limit is 25-mph or lower when driven by a licensed driver (*Town of Onancock Comprehensive Plan*, 2021). Golf carts have been increasingly utilized within several towns throughout the Region.



---

## COMMERCIAL AREAS

Commercial activity in the Town is concentrated in three areas along Market Street and separated from each other by residential land uses. The first commercial area is referred as the “business highway” or “uptown” area and includes a laundromat, car service stations, and other businesses. The second commercial area is the “business downtown” area located farther west on Market Street. This is the Town’s “Main Street” and is characterized by one-story and two-story brick buildings. Commercial activity in this area consists of local government administrative offices, retail shops, restaurants, and several other businesses. The third area of commercial activity is located along the Onancock Harbor or Wharf. Commercial uses include retail stores, a sand and gravel loading area, an oil company, a seasonal ferry service, and commercial fishing operations.

---

## COMMUNITY SERVICES AND FACILITIES

Community facilities comprise all the public services and facilities provided by the Town to all residents. Those services include public water and sewage treatment facilities, police and fire departments, wharf, parks and recreation facilities, and solid waste management.

---

### PUBLIC SAFETY

The Town employs five full-time police officers headquartered at the police station on North Street next to the Town Hall ([Police | Town of Onancock, Virginia](#)). Accomack County Sheriff’s Department and Virginia State Police also provide assistance when needed. Fire protection and rescue services are provided by the Onancock Volunteer Fire Department. The fire department serves the Town of Onancock and the outlying areas of Deep Creek, Chesconessex, Bayside, Cashville, Nebo, East Point, and part of Savageville. A combination of paid and volunteer firefighters as well as volunteer non-firefighters provide 24/7 coverage. The department currently operates three ALS ambulances and an EMS first response vehicle. Fire apparatus includes one engine, one tanker, one ladder truck and one brush truck as well as a utility vehicle ([Fire | Town of Onancock, Virginia](#)). A 1993 tanker that could carry two individuals was recently replaced with a new one that is able to carry four and has recently applied for a FEMA grant to replace air packs for self-contained breathing apparatus (Vaughn, C., “OVFD Update” *Eastern Shore Post*, 2021).

---

### PARKS AND RECREATION

Onancock’s Town Square is located on Market Street and covers an area of about half an acre. It features a gazebo and two monuments. The Northeast Onancock Community Park is about 14 acres and has a basketball court, playground equipment, and benches. There are fields in the Town at Fireman’s Field with no active courts or maintained fields. The fields at the water tower are leased for recreational sports use.

The Onancock Wharf and Marina facility includes 12 floating dock slips and two stationary slips available for local and transient use. Public restrooms and private bath houses as well as free laundry facilities for slip rental guests are also available. The Marina sells non-ethanol mid-grade gasoline and diesel fuel, 10 lb. bags of ice, and provides hourly or daily golf cart rentals ([Wharf Information | Town of Onancock, Virginia](#)). The public boat ramp is currently closed for renovations. Adjacent to the Marina, the Onancock Landing Park boasts a kayak and paddle board launch and several picnic benches. There are plans to construct a new nature trail, bike path, and dog park (Personal communications, Matt Spuck, Town Manager, March 31, 2021).

The Historic Onancock School and Cultural Center contains 13 acres for recreation, exercise, and walking the Nature Trail along Onancock Creek. A playground, ball field, and additional open spaces are available for pet exercise, frisbee, picnics, and more ([What to Do | Town of Onancock, Virginia](#)). The Town also contains two cultural museums, the Roseland Theater hosting first-run films as well as monthly international films, and the North Street Playhouse staging live play and other productions throughout the year.

---

### WATER SUPPLY AND WASTEWATER

The Town has a municipal water system supplied by groundwater wells at Hartman Avenue. Well depths are about 265 feet, and sodium hypochlorite is injected into the water at the water tank. Two smaller back-up wells are located at the Parker Street site along with a pump station. The water tower is 168-feet-high and contains a 300,000-gallon elevated storage tank. Water is distributed through 2-, 4-, 6-, and 8-inch water lines.

The Town owns and operates a wastewater treatment facility located on North Street. The facility serves all residents and businesses in Town, as well as the Airport Industrial Park and several businesses and commercial establishments located on the west side of Route 13 south of Route 179 in Onley. The facility was updated in 2012 from a capacity of 250,000-gallons-per-day to 750,000-gallons-per-day. Ownership of the facility is in the process of being transferred to Hampton Roads Sanitation District as part of a regional project that will eventually provide the opportunity for several towns up and down the Eastern Shore of Virginia to connect to the wastewater treatment plant (WWTP). The first phase of the project will connect from the Town of Nassawadox up to the Onancock facility.

---

### SOLID WASTE

The Town contracts with Davis Disposal for weekly residential trash collection, which is transported to the Northern Accomack County Landfill. Many residents also use the Tasley Convenience Center regularly to recycle. The Town also provides monthly pick-up of yard debris (Personal communications, Matt Spuck, Town Manager, March 31, 2021).

---

### POWER AND COMMUNICATIONS INFRASTRUCTURE

Eastern Shore Communications has a contract with the Town to have a receiver on the Water Tower for broadband. AT&T antennae for wireless service and the broadband transmission is also on the water tower. A variety of services are primarily provided by Verizon, Spectrum, and Charter Communications, the latter of which is housed in the Town. The water tower is vital in providing communications during and following emergency situations. Onancock is served by multiple power substations, so the Town is less likely to have widespread power outages during a hazardous event. The Town is currently pursuing a grant to move utilities underground in the Downtown District of Onancock (Personal communications, Matt Spuck, Town Manager, March 31, 2021).

## NATURAL ENVIRONMENT

---

### LAND USE LAND COVER

Almost 70% of Onancock is developed; however, this includes green space, such as parks and large grassy yards. This trend can easily be seen in the satellite imagery for the Town, presented in Figure 1, where the majority of the Town is residential. The percentage of wetland area is somewhat low relative to the waterfront property, approximately 3.3 miles, and many of the homes on waterfront properties are less than 80 feet from the water's edge. Because wetlands act as sponges during flooding events, typically areas with more extensive wetland fair better during these events. That said, the elevation of much of Onancock is over 20 feet, thus, the Town is less sensitive to flooding, except the westernmost areas of the Town. Onancock has an official Tree Board to improve their green space and long-term green-scape planning. The Town has also recently implemented a dark-sky policy to help mitigate light pollution for migrating birds and other wildlife (Personal communications, Matt Spuck, Town Manager, March 31, 2021).

## HAZARD PREPAREDNESS & COMMUNITY CAPABILITIES

### PREVIOUS HAZARD MITIGATION PLANS

[§201.6\(b\)\(3\)](#), [§201.6\(c\)\(3\)](#), [§201.6\(d\)\(3\)](#) Onancock has participated in the hazard mitigation planning process since 2006. The Town's primary risk is associated with coastal flooding. The Town updated their comprehensive plan in 2021.

**Table 6 : Town of Onancock Hazard Mitigation Resources**

	Ordinances, Plans														Resources, Committees			
Agency	Building Code	Chesapeake Bay Act	SWMP	Hazard Mitigation Plan	Comprehensive Plan	Zoning Ordinance	Storm Water Regulations	Transportation Infrastructure Inundation Vulnerability Report	All Hazards Preparedness	Emergency Operations Plans	Mutual Aid	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		*																

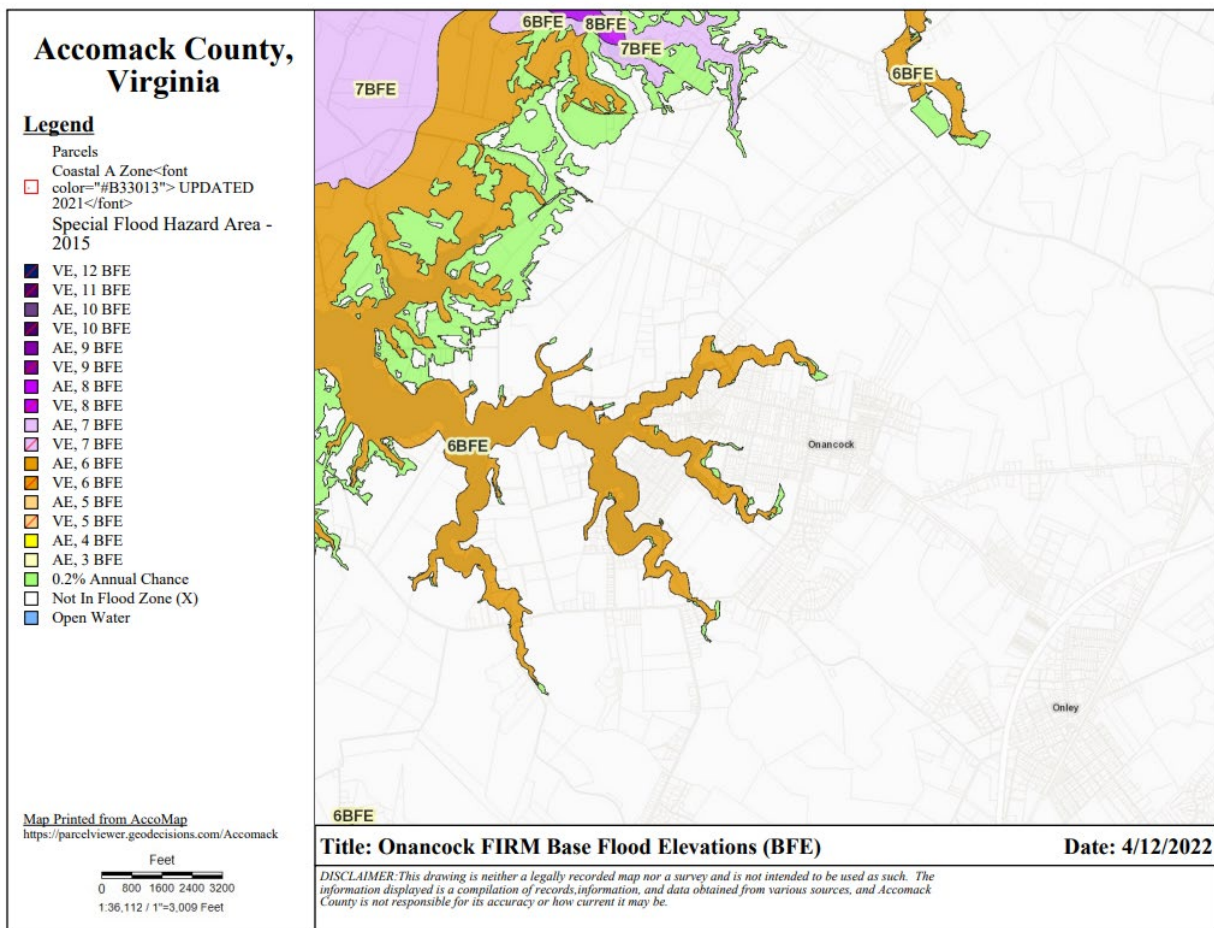


## NATIONAL FLOOD INSURANCE PROGRAM & HAZARD MITIGATION GRANT PROGRAM

### NFIP

§201.6(c)(2)(ii), §201.6(c)(3)(ii), §201.6(d)(3) The Town joined the NFIP on December 15, 1981. There are currently 30 active policies in the Town and two claims filed to date. The Town does not participate in the Community Ranking System (CRS). Unlike many of the coastal Towns on the Eastern Shore, the amount of land in the SFHA remained the same with the new 2015 FIRM. Although the area in the SFHA remained at 0.1-square-miles, the delineation shifted slightly, removing two buildings from the zone and adding three buildings for a net increase of only one building in the SFHA.

**Figure 2: Town of Onancock FIRM Base Flood Elevation (BFE)**



### HMGP

The Town has not participated in the Hazard Mitigation Grant Program.

## HAZARD PROFILE

### PANDEMIC RESPONSE AND READINESS

The Town of Onancock responded to the COVID-19 pandemic in several ways. Matt Spuck, Town Manager, stated that the Town worked diligently with much success to retain all businesses and to keep their residents safe (Personal communications, July 29, 2021). The Town was able to develop and implement an Infectious Disease Plan that provided management the protocols to follow for the health and safety of employees and customers. The Town invested massive amounts of money in technology in order to allow for employees to work remotely and attend virtual meetings. Additional tools and supplies were also purchased to avoid sharing between employees and shifts were staggered to avoid the sharing of vehicles. Federal acts were implemented that governed sick-leave during COVID-19 and how the Town was required to compensate those employees that came into contact with an exposed individual, or were exposed themselves (Personal communications, Matt Spuck, Town Manager, July 29, 2021). The Town Hall remained closed to the public until CDC guidelines and State of Virginia emergency regulations allowed re-opening.

The Town secured several grants and distributed 100% of all funds to residents for utility payments and utility-in-arrears support. Residents also received personal protective equipment (PPE), such as masks, sanitizer, etc. on behalf of the Town. In addition, hundreds of thousands of dollars were distributed to businesses that remained open throughout the course of the pandemic and PPE was also provided to them by the Town. Not one business in Onancock was lost during the COVID-19 Pandemic (Personal communications, Matt Spuck, Town Manager, July 29, 2021).

### WIND

§201.6(c)(2)(i), §201.6(c)(2)(ii), §201.6(d)(3) The Town is not located in the wind-borne debris hazard area; however, most of the residential areas have mature trees. High winds could damage trees within the Town, potentially leading to damaged houses and outbuildings. The Town constructed a water tower in 2008 on the east side of Town that was built to withstand high-wind events. Major Town facilities, including the wastewater treatment plant and water supply tower, are equipped with back-up power supplies in the event of a power outage. An old wood shop building located on school grounds is also a potential safety hazard, as high-winds could result in flying debris. The Town is currently seeking funding in order to remove the structure (Personal communications, Matt Spuck, Town Manager, March 31, 2021).

The Hazus® model projects a total economic loss of approximately \$10.1 million for a 1%-annual-chance hurricane, which represents 1.46% of the total replacement value of the region's buildings.

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. Business interruption losses are losses associated with inability to operate a business due to the damage sustained during the 1%-chance hurricane. Business interruption losses also include the temporary living expenses for displaced individuals.

The total property damage losses were projected at \$10 million, with 3% 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 96% of the total losses.

The model estimates that a total of 24,387 tons of debris will be generated. Of the total amount, 21,264 tons (87%) is Other Tree Debris. Of the remaining 3,123 tons, Brick/Wood comprises 16% of the total, Reinforced Concrete/Steel

comprises 0%, and the remaining is Eligible Tree Debris. If the building debris tonnage is converted to an estimated number of truckloads, it will require 20 truckloads (@25 tons/truck) to remove the building debris generated by the hurricane. The number of Eligible Tree Debris truckloads will depend on how the 2,626 tons of Eligible Tree Debris are collected and processed. The volume of tree debris generally ranges from about 4 cubic yards per ton for chipped or compacted tree debris to about 10 cubic yards per ton for bulkier, uncompacted debris.

### COASTAL EROSION

Although there is some erosion risk around Onancock, no structures located in the Town appear to be vulnerable to coastal erosion at this time. The initial dredging of the Onancock Creek in the 1800's allowed the Town to develop and prosper. Regular dredging and maintenance of the Onancock Creek channel to prevent shoaling and ensure navigability is vital for the economics of the Town.

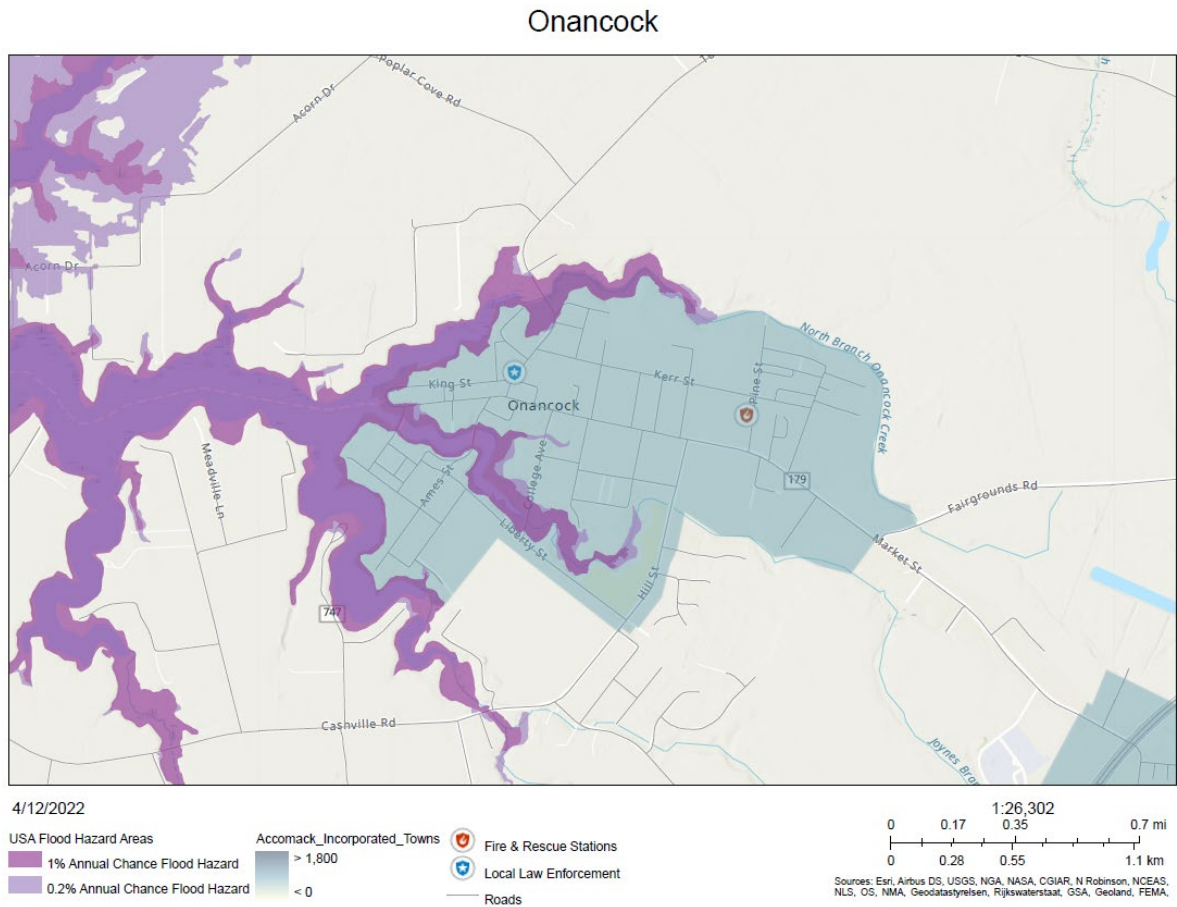
### COASTAL FLOODING

The Flood Insurance Study (FIS) for Onancock, completed in 1981, identifies that the greatest threat of flood inundation comes from hurricanes and nor'easters. The Town is located inland from the Chesapeake Bay and development within the floodplain is minimal (Onancock FIS). Onancock Creek, North Branch, and Titlow Creek border the Town on three sides. In addition, Joynes Branch bisects the Town creating a northern and southern section.

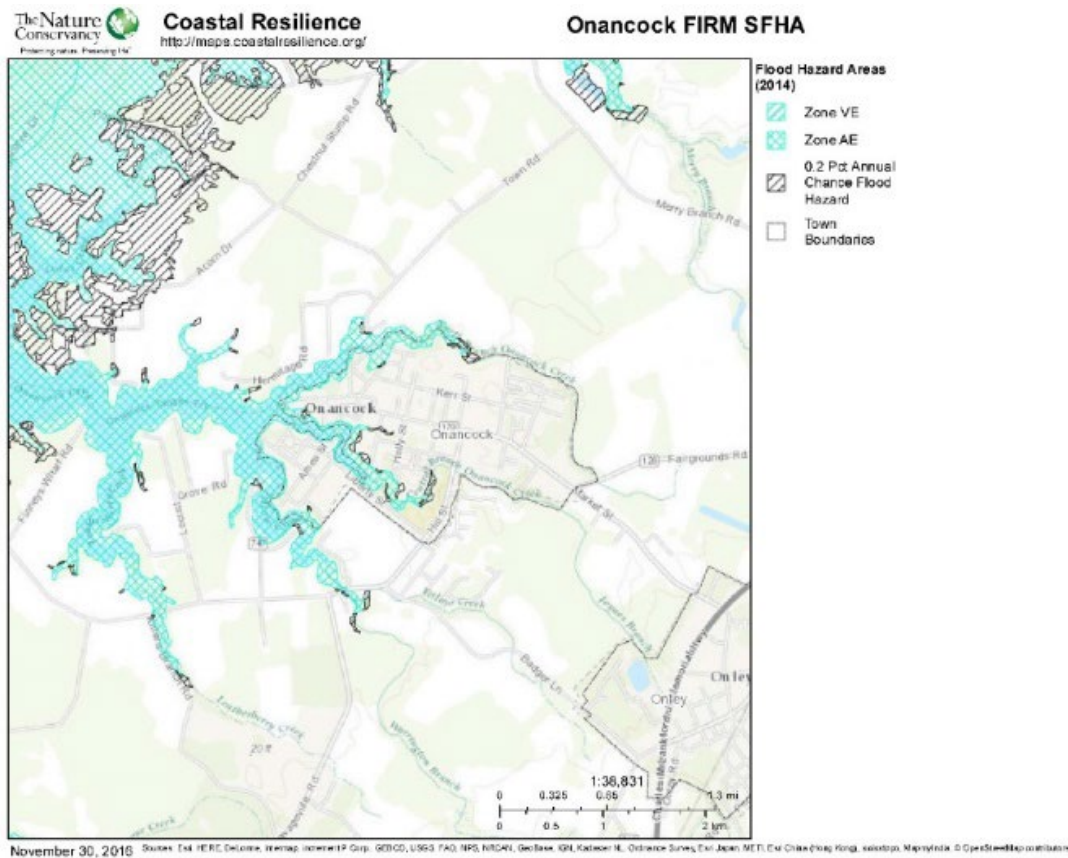
According to the 2015 *FEMA Flood Risk Report* for Accomack County, the Town of Onancock still does not have any identified V zones. The Town, however, does have A zones located near the Town Wharf and along the three branches of Onancock Creek. According to the Hazus® model, total building-related losses were \$3.37 million, with 37% of the estimated losses related to business interruption of the region. The residential occupancies made up 66.47% of total losses during a 100-year storm event. As of 2016, there were only four NFIP policies in the A Zone, indicating that 7 properties and 5 structures in the flood zone are uninsured (FEMA NFIP Insurance Report, 2016).

The model also estimates that there will be a total of 111 tons, or 5 truckloads, of debris generated during a 100-year storm event. Twelve households, or 35 individuals, will be displaced due to flooding. Displacement includes households evacuated from within or very near inundated areas. Of these individuals, 14 will seek our temporary public shelters.

**Figure 3: Town of Onancock Flood Hazards to Infrastructure**



**Figure 4: Onancock Special Flood Hazard Areas Identified, as presented in the TNC Coastal Resilience mapping tool**



The Town also has three facilities that are affected by flooding: the wastewater treatment plant (WWTP), Onancock Wharf, and the Harbormaster's House. The WWTP could contaminate Onancock Creek and North Branch, and to a lesser extent, the Chesapeake Bay, if it failed during a flood event. Recent improvements to the plant have lessened threats from coastal and stormwater flooding and in turn have reduced the threat of contamination to the creek. The Town now has a 4,000-gallon storage and dispensing tank at the Wharf. The new Onancock Wharf Harbormaster's House, completed in 2014, was built several feet higher than the previous building and is more resilient to flooding damages (Personal communications, Russell Jones, Town Mayor, June 2, 2016). Figure 4 reveals an increasingly more common flooding situation at the Onancock Wharf and Marina. Recent repairs were made to the parking lot and drain approaches, however, flooding during storm events continues to be a significant issue.



**Figure 5: Clockwise from top: The historic Hopkins Store, the new Harbormaster's House, and the parking lot, all of the Onancock Wharf during the October 2015 North American storm complex, largely influenced by Hurricane Joaquin. Photo by Connie Morrison**





## STORM WATER FLOODING

An additional 19 structures carry flood insurance, but are not located in a flood zone (FEMA NFIP Insurance Report, January 2016). This may indicate potential storm water flooding issues within the Town. The total number of NFIP policies rose from 10 in 2003 to 30 in 2011, but fell to 23 in 2016 (FEMA NFIP Insurance Report, July 2003, May 2011, January 2016).

The soil in Onancock drains well compared to many areas on the Eastern Shore and due to its coastal location, there is a change in elevation (reaching sea level approaching the surrounding creeks). Despite this, the Town still experiences some stormwater flooding problems, including the building that houses the Town Office and Police Station. Of particular concern is Lilliston Avenue, west of Lee Street, which is partly paved right off of Market Street. VDOT is responsible for the maintenance of the ditches adjacent to state-owned roads; however, there are several roads that are owned by the Town for which the Town is responsible. The Town contracts for weed control in Town-owned drainage ditches (Personal communications, Matt Spuck, Town Manager, March 31, 2021).

## HAZARDS OF LOCAL SIGNIFICANCE

---

### HAZARDOUS MATERIALS

Due to the existence of the fuel tanks at the Wharf, there is potential for a Hazmat incident to cause damage to Onancock Creek, North Branch, the existing homes on King Street, commercial buildings on Market Street, and the Onancock Wharf and Marina. There are also houses located on the Creek outside of the Town's boundaries that could be damaged by such an incident.

---

### GROUNDWATER CONTAMINATION

Onancock's location on the Onancock Creek and its direct connection to the Chesapeake Bay cause the Town to be vulnerable to two types of saltwater intrusion. Wells further inland could lead to vertical movement of brackish water found below the lens of potable water. Because all of the Town residents rely on the municipal water system, which is supplied by groundwater wells, this is of high concern. Further south on the Bayside, the Town of Cape Charles has already experienced salt water intrusion.

---

### NAVIGATION HINDRANCES

Hindrances to navigation or a lack of channel maintenance would negatively impact the Town's economy.

---

### MOSQUITO-BORNE ILLNESSES

Like many areas on the Eastern Shore, the Town of Onancock experiences a high volume of mosquitoes that could potentially put residents and visitors at risk for mosquito-borne illnesses, such as West Nile and Zika virus. The Town contracts to have a twice-weekly Town-wide spray from April through October in order to reduce the number of mosquitoes and the associated diseases (Personal communications, Matt Spuck, Town Manager, March 31, 2021).

## CRITICAL FACILITIES

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

**Table 7: Town of Onancock Critical Facilities**

Facility	HMP 2006	HMP 2011	HMP 2016	HMP 2021	Hazards	No of People Affected	Loss potential	Relocation Potential	Retrofit Potential
<b>Town-Owned Facilities</b>									
Town Office/Police Station	X	X	X	X	Wind, Stormwater Flooding, Fire	1,098+	Major Disruption	No	Yes
Onancock Town Wharf and Marina	-	-	X	X	Wind, Coastal Flooding, Erosion, Ice, Groundwater Contamination	2,500+	Devastating	No	Yes
Waste Water Treatment Plant	X	X	X	X	Wind, Flooding	1,098+	Devastating	No	No
Water Supply Tower	X	X	X	X	Wind, Stormwater Flooding	1,098+	Major Disruption	No	No
South Street Pump Station	X	X	X	X	Coastal Flooding, Stormwater Flooding	1,098+	Major Disruption	No	Yes
<b>Other Facilities (Not Town-Owned)</b>									
National Guard Armory	X	X	X	X	Wind, Fire	1,098+	Major Disruption	No	Yes
Fire Station	X	X	X	X	Wind, Stormwater Flooding	3,500+	Major Disruption	No	Yes
Telephone Company Exchange Building	X	X	X	X	Wind, Stormwater Flooding, Fire	45,000+	Major Disruption	No	Yes
Gas Station	-	-	X	X	Wind, Stormwater Flooding, Fire	1,098+	Minor Disruption	Yes	Yes
Riverside Shore Memorial Hospital	-	-	-	X	Wind, Stormwater Flooding, Fire	45,000+	Devastating	No	Yes

## FINDINGS

1. The greatest threat to the Town is the secondary effects of flooding. A 1%-annual-chance flood event would directly impact 9 structures within the Town and cause an estimated \$555,806 in damages.
2. Most of the residential areas are older construction with mature trees. During a wind, snow, or ice event, branches and trees may come down causing secondary wind damage and power outages.
3. A 1%-annual-chance wind event is estimated to affect 65 buildings and cause approximately \$3 million in damages.
4. The Town's wastewater treatment plant (WWTP) now has increased capacity and a backup power supply. Hampton Roads Sanitation District (HRSD) is taking over operations of the facility.
5. There are several higher occupancy housing areas in the Town that may not have access to personal vehicles and may require additional efforts in outreach for education about preparation for hazard events and for assistance during and following an event.
6. Other hazards facing the Town include hazardous materials incidents, groundwater contamination from saltwater intrusion and potential fuel spills at the Wharf, navigation hindrances, and mosquito-borne illnesses.