

AT THE FOOT OF PRINCE GEORGE STREET: The Burtis House, Hell Point, and Climate Change



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EXECUTIVE SUMMARY

The University of Maryland's Historic Preservation Studio Course presents the following abridged summary of historic research to be used on interpretative wrap-around signage at the historic dwelling of Captain William Burtis. The goals of this project fulfill the deliverables of Preservation Maryland's Request For Proposals, namely that any results produce context for the historic Burtis House, educational materials, and interpretive displays about the surrounding neighborhood and its history. The materials for the Burtis House interpretive signage come from a range of sources: census records, deeds, probate archives, historic real estate and insurance maps, photographs, existing historical and archaeological scholarship, planning documents, local Annapolis library collections, maritime studies, and the Filipino American Community Archives. This document contains summaries and information pertaining to Captain Burtis, the Hell Point Neighborhood, maritime history of Annapolis, and climate change in Annapolis.



CAPTAIN WILLIAM H. BURTIS



Figure 1.1: Captain Burtis

Captain William H. Burtis (1832-1910) was a New York native who had moved to Annapolis to marry Emily Hollidayoke in 1860.¹ Once in Annapolis, he found a position as a constable in the Annapolis Police Force alongside his father-in-law, Edward Hollidayoke.² Burtis later captained a police boat in the State Oyster Navy, a regulatory entity that prevented the illegal dredging of oysters, after working on the Annapolis Police force.³

Captain Burtis and his family lived at 69 Prince George Street, the last home before the bay. The home was originally a duplex that was later converted to a single family residence as the Burtis family expanded in the 1890s.⁴ From this house, Burtis started an entrepreneurial venture renting pleasure boats for leisurely activities such as fishing and touring the Chesapeake Bay.⁵ Various accessory structures, including a boat house and a wharf, were constructed to accommodate the business's growth.



Figure 1.2: Left to Right Standing: Gordon Claude (Mayor), Margaret Taylor Randall [Worthington], Bessie Webster, Capt. William Burtis. Seated: Carrie Wilcox and Rev. Savage

Figure 1.3: A variety of accessory structures can be seen on the far left, next to the Burtis house (on the left of the Prince George Street).



It was from this location that Burtis kept a watchful eye on the waters of the Chesapeake. His daring rescues and shark hunts made him a local hero in the Hell Point community.⁶ Captain Burtis raised his four children, Edward, Solomon, Rose, and Daniel, in the Hell Point neighborhood. Solomon and Daniel continued their father's business and Edward served as Annapolis' Market Master.

ANNAPOLIS WATERMAN

Captain Burtis began his business in the 1880s selling oysters from outside his house on Prince George Street. By the 1890s he was renting out "pleasure boats, row-boats, sail-boats, fishing tackle, bait, etc."⁷ Accessory structures, such as a boat house, were added to the property to support this business.

THE LOCAL HERO

CAPTURED A SHARK.

Captain William H. Burtis Harpoons a Man-Eater in the Harbor.

Ever since the appearance of several sharks in our harbor about a week ago, Captain William H. Burtis, the well-known boatman, foot of Prince George street, has been on the lookout to make a capture and has at last succeeded by harpooning a shark yesterday morning which measures 9½ feet long and weighs over nine hundred pounds. Captain Burtis considers his prize valuable because the shark has double rows of well-formed teeth, which is unusual.

Captain Burtis said his attention had been attracted to the shark shortly after eight o'clock yesterday morning. It was then off Martin's wharf, a short distance from his boathouse. He immediately secured a rowboat and a harpoon, already prepared with fifty yards of line. The shark, frightened by the noise of the boat, made a detour, but Captain Burtis, who is an experienced man in the business, plunged the harpoon in the mammoth fish, striking it about two feet from the tail. It did not live long. The captor said: "After I plunged the spear in the shark, which was four feet away, it disappeared. Soon after I felt my boat moving and realized that I was being carried by the shark which I had penetrated with the harpoon. I knew that the blow that I had struck had taken effect and I did not in the least fear danger from the shark, which was rapidly towing me towards Greenberry

Point, nearly two miles out of my course. The shark, apparently anxious for freedom, struck out in all points of the compass, and the twisting and turning of the boat at times kept me uneasy for its safety, especially as I had tied the rope attached to the harpoon to a barrel which had become fastened under the seat. The barrel had been placed in the boat for a buoy to the line. It required five boats, including a sloop, to tow the shark to the wharf. It was so heavy the combined efforts of eight men were just able to raise the shark from the water to the wharf."

The great monster was brought to Long Wharf, where it was viewed by a large number of persons, some of whom had never seen a shark before. It was then taken to Bay Ridge, and exhibited there to the curious, at five cents a look. While hoisting it from the boat it was relieved of about a bushel of fish, terrapins and crabs. It was brought back to Annapolis and this morning hauled up on shore near the steamboat wharf and dissected. In its capacious maw were found a part of a man's pants, in addition to numerous fish, crabs and terrapins. The liver, which weighed over one hundred pounds, will be converted into oil, which is used by blacksmiths and machinists. It had two rows of teeth, which were taken from its head and will be sold as curios. The backbone was purchased by a prominent official to be converted into a walking-stick. The hide, which is of elephant skin color, and of rough surface, will also be utilized in different ways.

Figure 1.5: Annapolis Evening Capital, Aug 19, 1895.

PLEASURE  BOATS

TO HIRE.

W. H. BURTIS, Foot of Prince George Street, is prepared to furnish Pleasure Boats, Row-Boats, Sail-Boats, Fishing Tackle, Bait, &c., on the most reasonable terms. Will furnish a man to row or sail boats when required.

W. H. BURTIS,
64 Foot of Prince George Street.

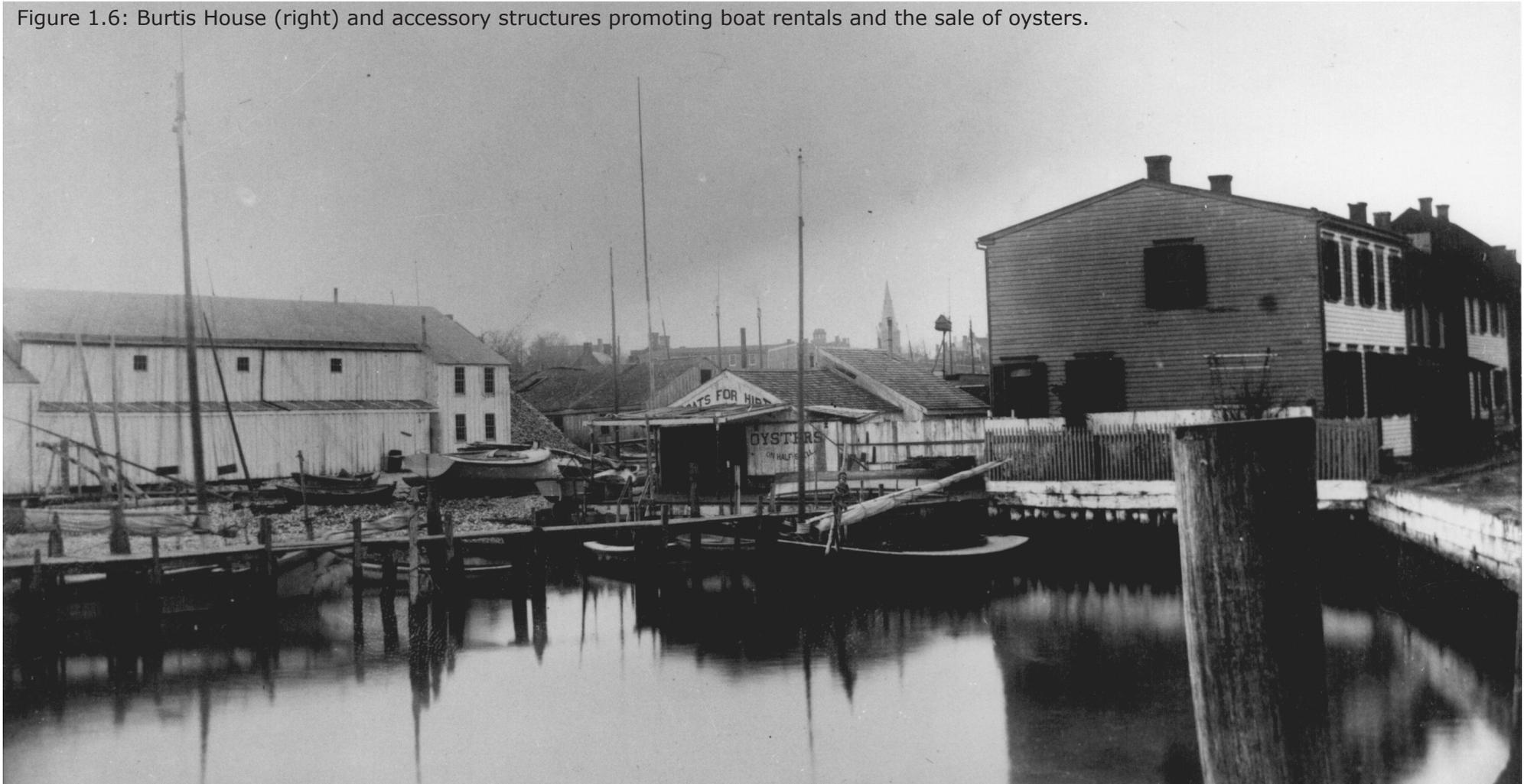
Figure 1.4: Annapolis Evening Capital, Nov 19, 1890.

In June of 1895, Captain Burtis was celebrated as a local hero when he saved a drowning boy. The Kerr family of Baltimore was out on their yacht when their six-year-old son fell overboard. Burtis and his own son, Daniel, saw this incident and rowed out to save the child. Several days after this incident, a profile of Captain Burtis was written up in the *Evening Capital* describing him as "one of the most popular as well as charitable men about the wharf...He is a man of good judgment and can be relied upon at all times, and his word is his bond."⁸ That same summer, Burtis was recognized for harpooning a nine-and-a-half-foot shark in the Annapolis Harbor, cementing his status as a local hero.⁹

THE BURTIS CHILDREN

Captain Burtis and his wife, Emily, had four children, Edward, Daniel, Rose, and Solomon. His eldest son, Edward, became a huckster, running a produce and poultry stall at the Annapolis Market House.¹⁰ By 1901 Edward was able to open a lunch room as a restauranter.¹¹ In 1904, he was appointed Market Master, which was a position that oversaw the maintenance of the market house. He rented out vacant stalls, collected fees, and enforced market regulations.¹² His other two sons, Daniel and Solomon, became watermen.¹³ The Burtis House continued to be home to William Burtis' descendants until 1971.¹⁴

Figure 1.6: Burtis House (right) and accessory structures promoting boat rentals and the sale of oysters.



HELL POINT NEIGHBORHOOD

Before it was Hell Point it was Hill's Point. By 1887, the neighborhood of Hill's Point was more commonly referred to as Hell Point.¹ The reason for the change, if documented, has yet to be found. The Hell Point neighborhood of Annapolis no longer exists today except in the memories of its former residents. Though the Hell Point community adopted many different boundaries over the course of its life, its last known perimeter consisted of Randall Street to its West, King George Street and Prince George Street to its North and South, and the shore line to its east. The Naval Academy would eventually acquire most of Hell Point's neighborhood by the mid-1940s, displacing residents and signaling an end to Hell Point's vibrant maritime community.

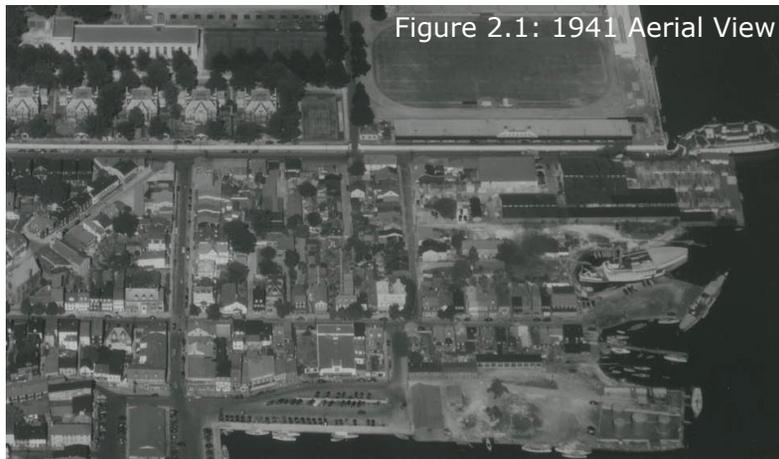


Figure 2.1: 1941 Aerial View

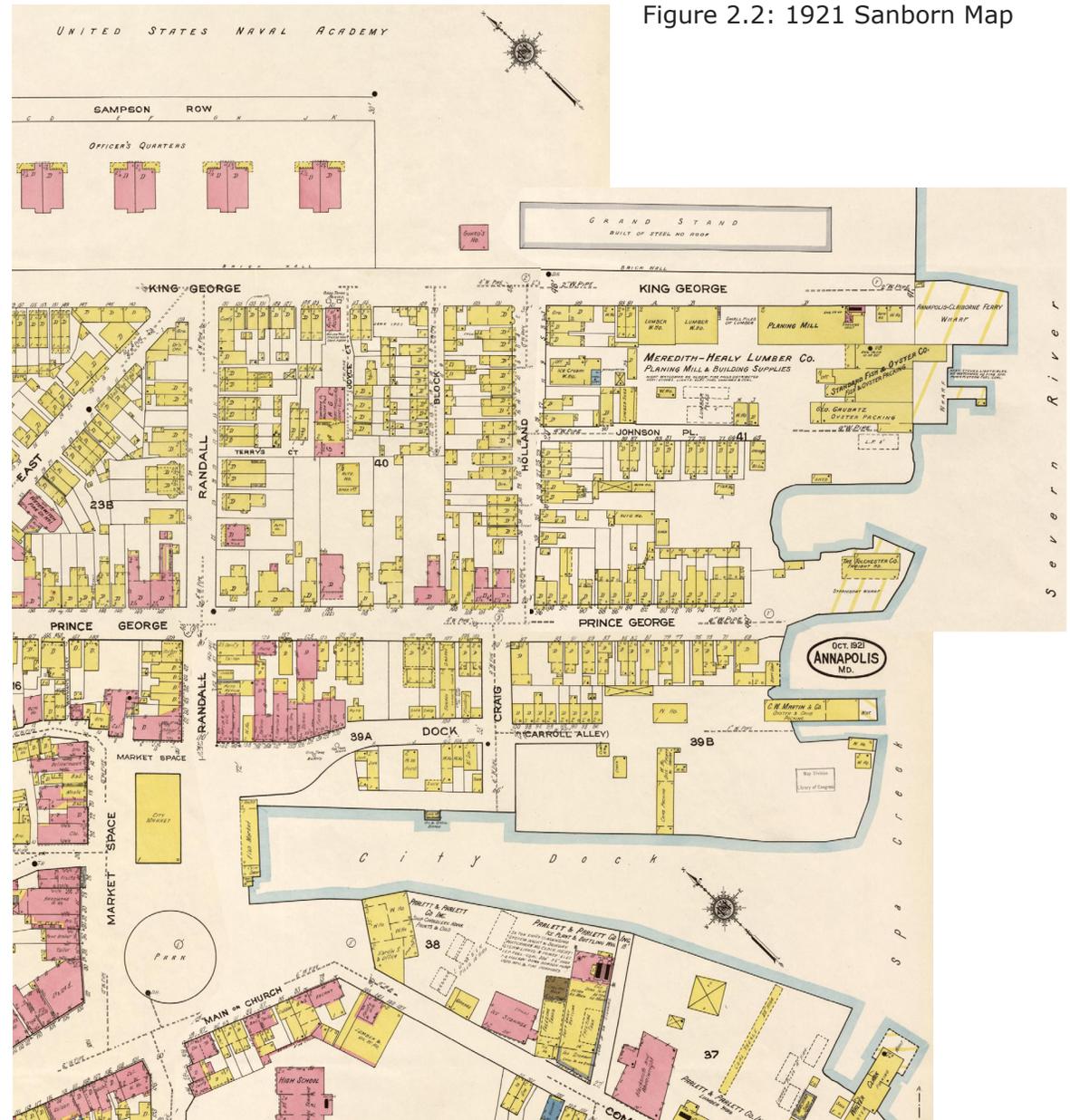


Figure 2.2: 1921 Sanborn Map



Figure 2.3: 1939 Aerial View

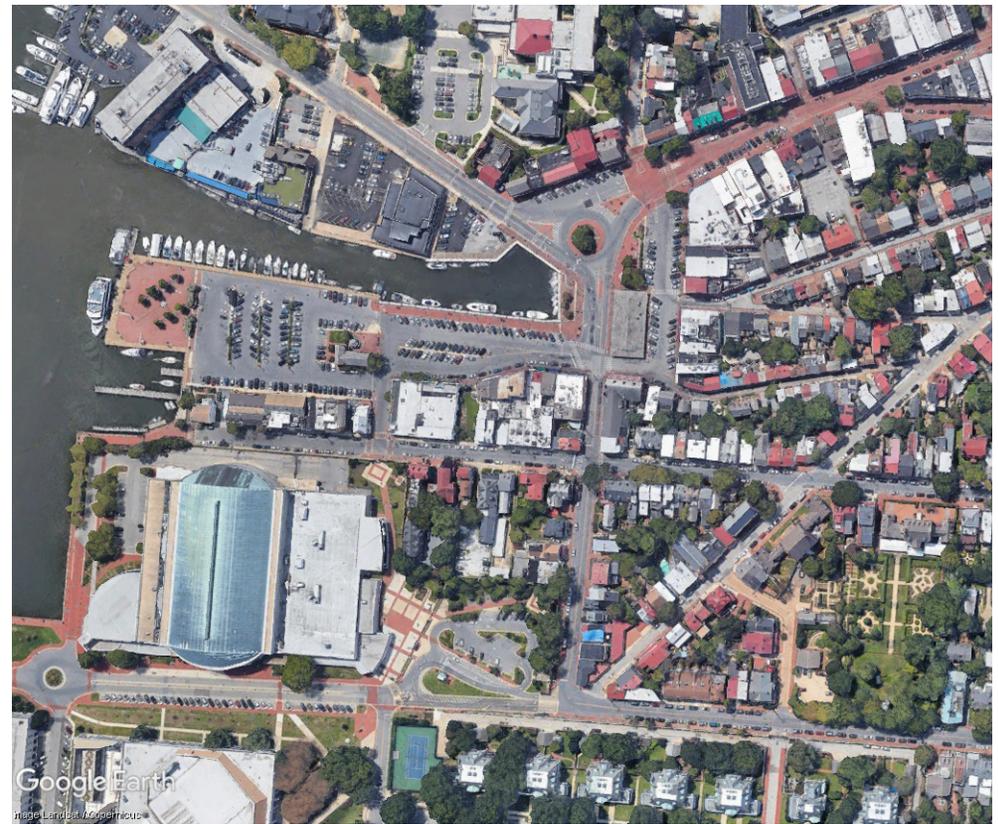


Figure 2.4: 2022 Aerial View



Figure 2.5: 1939 Aerial View



Figure 2.6: 2022 Aerial View

Hell Point by the turn of the twentieth century was a diverse working class community. German, Greek, Irish, Scottish, and English residents resided side by side on roads like Prince George Street, King George Street, and Market Space. African Americans and Filipinos rented homes along alleyways like Holland Street, Block Street, and Johnson Place. Despite these ethnic differences, they were all tied to the sea. One of the most common occupations listed in Annapolis' census for the years 1880-1940 was waterman.² Hell Point was sandwiched between two important industries, the U.S. Navy and the Market House on Market Space. The U.S. Navy employed many locals as well as bringing many new residents to Hell Point such as Filipino immigrants. The Market House was the place for watermen to sell their catches. Stalls were rented by all forms of businesses related to the water and land.³ It was Annapolis' commercial hub.

While diverse in the cultural makeup of its residents, Hell Point businesses were confined to a handful of commercial establishments centered around the water. The majority of businesses established in Hell Point between 1885 and 1941 were oyster houses, over ten documented within that time period alone. These oyster houses include DuBois & Co. Oyster Packers, Peterson & Co. Winders & Dredgers, and the Standard Fish and Oyster Company. Many of these complexes can be found in fire insurance maps dating back to 1885.⁴



Figure 2.7: Block Street alley houses



Figure 2.8: 8 and 10 Holland Street, 1941.

OYSTER HOUSES

With a heavy reliance on oysters and seafarers, Hell Point residents established the Union of Oyster Shuckers, reported in an *Evening Capital* news article in 1887, and the Oystermen's Protective Association of Annapolis, documented in another *Evening Capital* article in 1905.⁵ In the 1905 article, Mr. DuBois, owner of DuBois & Co. Oyster Packers advocated to "enact laws to protect and perpetuate the oyster beds," and the "entire abatement of dredging" practices.⁶

Throughout its history Hell Point was home to over ten oyster houses, conveniently located along the waterfront between Prince George and King George streets. At any given time, Hell Point had an average of four oyster houses in operation. Between 1885 and 1900 it is estimated that oysters harvested an average of nine million bushels of oysters annually.⁷ From 1884-1885 Annapolis employed 350 oyster shuckers. During this same season, Maryland set a record high of fifteen million bushels of oysters harvested.⁸

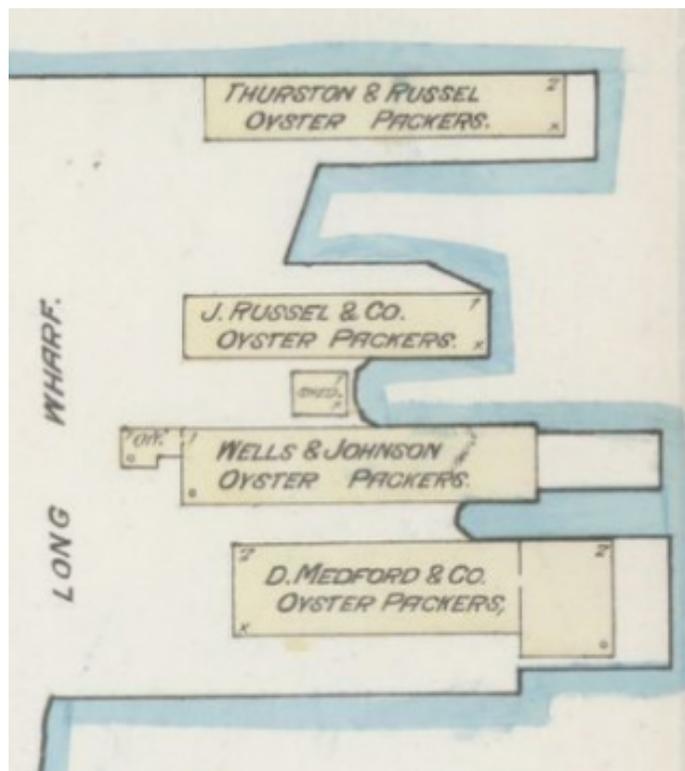


Figure 2.9: 1885 Sanborn Map showing the Thurston & Russel, J. Russel & Co., Wells & Johnson, and D. Medford & Co. Oyster Packers located along the waterfront.

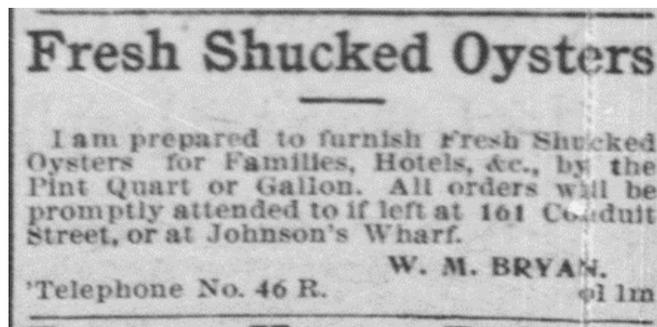


Figure 2.10: Advertisement for fresh oysters in Hell Point, 1905.

THE OYSTERMEN HOLD MEETING.

Last Night's Session At Assembly Rooms Well Attended.

The meeting of the Oystermen's Protective Association of Annapolis held in the Assembly Rooms on Gloucester street last night, was well attended by a number of prominent oyster packers as well as a large crowd of oystermen and watermen from this city and Eastport.

The Association was addressed by Messrs. Elihu S. Riley, James W. Owens and Charles A. DuBois, the two former dwelling at length upon the dangers lurking in the Hayman oyster bill. Mr. DuBois spoke of the great value and the importance of enacting proper laws to protect and perpetuate the oyster beds. He advocates the entire abatement of the dredging of oysters. He said that all this present agitation throughout the state in regard to the Constitutional Amendment that falls into insignificance in comparison to the protection of our oyster beds, and because it is so important as a means for our people to support their wives and children. If to swap my vote to stop the dredging of oysters to accomplish it, I would be willing to vote to disfranchise every negro in the state. Every man in this audience and myself consider that this question is of more importance because the means of support of as many people depend upon it, and it is of so much importance to the city of Annapolis and Anne Arundel county than any measure that the next Legislature will be called upon to consider.

Figure 2.11: A 1905 newspaper article detailing a meeting held by members of the Oystermen's Protective Association of Annapolis for protection and regulation of local oyster populations.

THE PEJI FAMILY

Mariano Peji and Fermina Peji resided at 34 Holland Street in 1930.⁹ The Peji's rented a 2-story, slate or tin-roofed, framed dwelling with a single-story rear attachment and ancillary building positioned farther back in the yard.¹⁰ Rent was \$16 per month, which by today's standards would amount to \$277. When Mariano Peji took his short commute to work as a mess attendant for the United States Navy he was likely greeted by the clamoring sounds of the neighboring lumber yard. Like many other newly arrived Filipino immigrants, the Pejis were drawn to Annapolis by the United States Naval Academy. Filipinos began appearing in Annapolis' census as early as the 1920s and by 1930 Filipinos were in Hell Point, the neighborhood directly adjacent to the U.S. Naval Academy. Based on census schedules, Filipino residents were often employed as mess attendants, stewards, cooks, and laborers by the U.S. Navy.¹¹



Figure 2.12: Fermina Santos Peji and Mariano Peji pictured with their car circa 1930s.



Figure 2.13: Mariano Peji pictured center with fellow servicemen circa 1928.

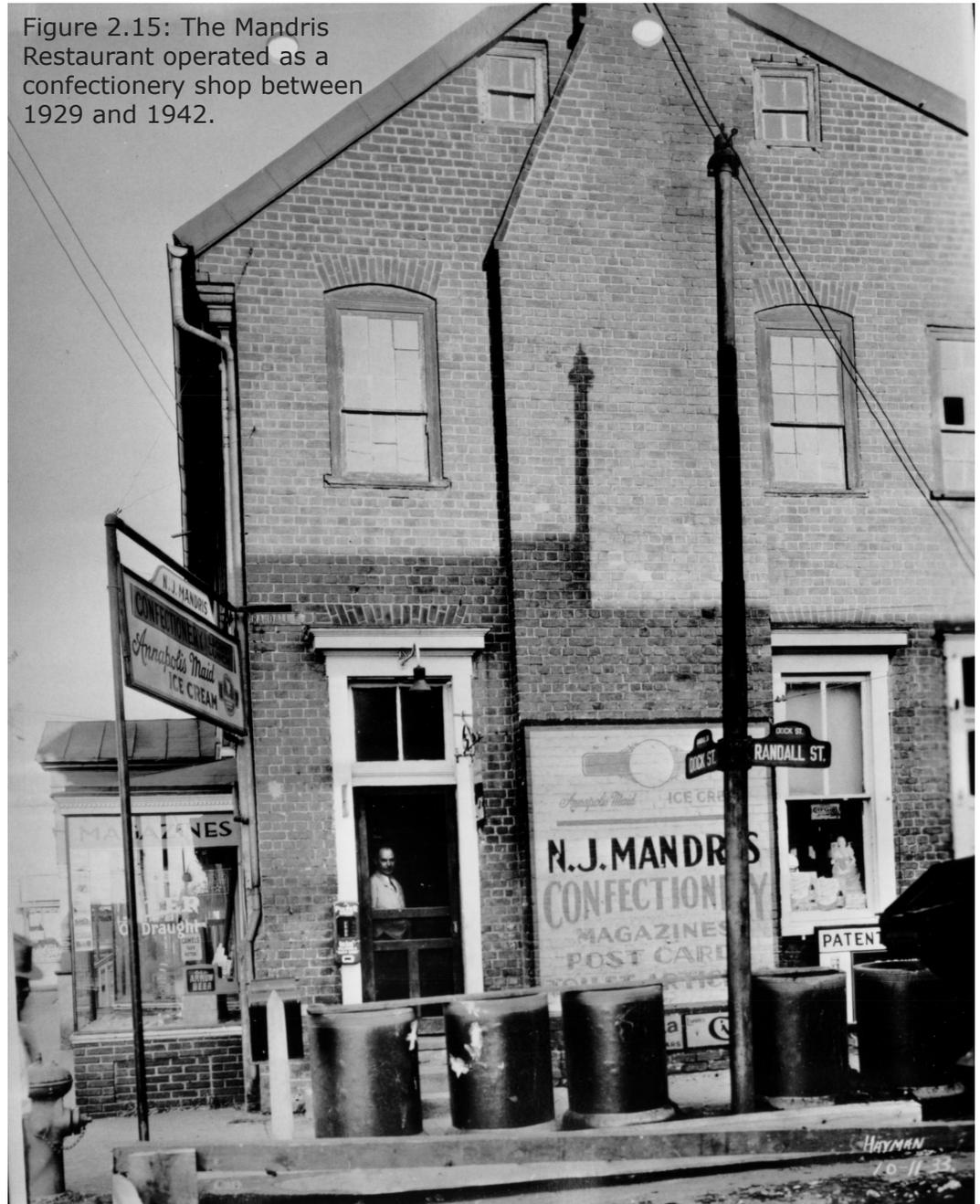


Figure 2.14: 1928 image of the Filipino-American Friendly Association band. Mariano Peji, last row, center.

THE EUCARE AND MANDRIS FAMILIES

Valentine and Ann Stewart Eucare lived at 4 Market Space, two doors down from the corner of Market Space and Randall Street. Their dwelling was sandwiched between two businesses, one of which was the well-known Middleton Tavern but operating then as the Mandris Restaurant.¹² The Mandris Restaurant, a confectionery store and ice cream parlor, was run by Nicholas James Mandris. Nicholas was born in 1886 as Nikoloas Demetrios Mandrapilias in Xirokambion, Greece.¹³ After moving to the United States in the early 1900s, Mandrapilias settled in Annapolis, Maryland working for a time as a clerk until opening his own store with his brother, Lewis.¹⁴ Their advertisements could be found in Annapolis' *Evening Capital* tempting readers with the promise of bon bons, candy canes for holidays, and "[f]ancy boxes of chocolates from 1lb to 5lbs."¹⁵ By 1929, Nicholas had moved to his Market Space location where he ran his confectionery independent of his brother. In that same year, his neighbors, Valentine and Ann Stewart Eucare, repurposed their home to serve as the new clubhouse for Annapolis' Filipino American Friendly Association.¹⁶ They hosted club events like the association's first Halloween party and provided lodging to many young Filipino men employed by the U.S. Navy.¹⁷

Figure 2.15: The Mandris Restaurant operated as a confectionery shop between 1929 and 1942.



THE FRANK FAMILY

John Frank Jr., a native of Annapolis, began his craft at an early age. By the time Frank Jr.'s occupation was recorded in the 1920 census as "fisherman," he had been in the trade for nearly 5 decades.¹⁸ In 1891, John Frank Jr. and his father could be found renting stalls next to one another at the local fish market based on the *Evening Capital's* market stall report.¹⁹

The Franks were reflective of Hell Point's working-class demographic, in which it was all hands on deck to support the family. While Frank Jr. was out on the water, Elizabeth Frank cooked up homemade sauerkraut to sell. Her advertisements for fermented cabbage could be found from 1910 to 1920. Her success was seen in the price increase during this period. In 1910 she sold her sauerkraut for 8 cents a quart. A decade later her sauerkraut was 20 cents for the same amount and her advertisements were more elaborate with stylized fonts.²⁰ Elizabeth Frank, however, was not the only one selling homemade sauerkraut. She had to compete with her entrepreneurial neighbors like the Thorogoods at 87 Prince George Street, less than 10 houses away, who were selling their homemade sauerkraut for 15 cents per quart.²¹



Figure 2.16: Advertisement, 1920.

ARCHEOLOGY OF HELL POINT

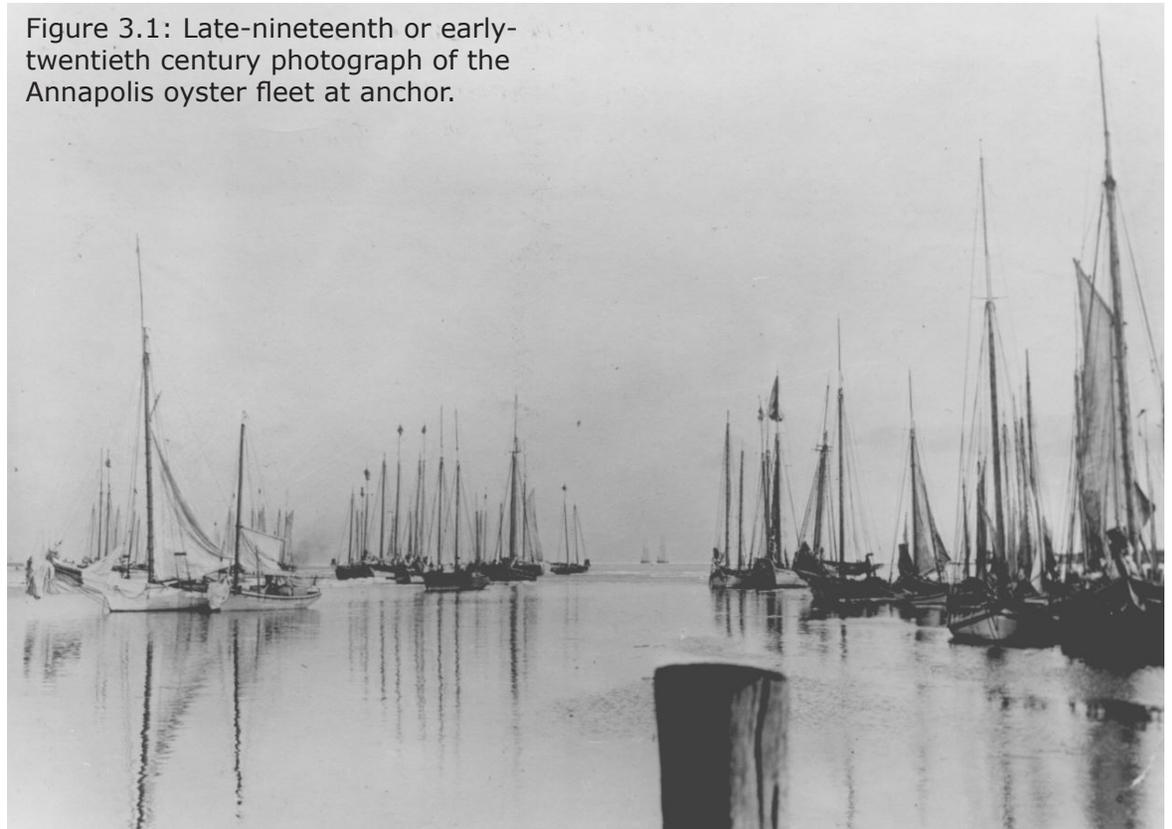
The archaeological investigation of the former Hell Point neighborhood has thus far yielded little information; due to the USNA acquisition and subsequent development of Hell Point proper in the early 1940s, much material has been lost. Subsurface examination of residential and commercial sites within the Hell Point boundaries has been stymied by mid-twentieth-century demolition and construction as the USNA expanded further into the cityspace of Annapolis. With the exception of an early-nineteenth-century cut stone seawall, the remnants of a wooden wharf, and brick piers that likely supported a nineteenth-century frame oyster house, archaeology in Hell Point has struggled to produce finds that could better illuminate the lives and experiences of those who lived in the shadow of the great Georgian-era buildings for which Annapolis is so widely known.²² As such, archaeological investigation of the Burtis House is paramount in the search for sites that possess stratigraphic integrity; discovery of intact below-ground resources could help us to better understand the family that inhabited the building from the 1890s through the early 1970s. Archaeology of the Burtis House could further our perception and interpretation of the family's relationship to the wider world of Hell Point and Annapolis through the use and distribution of their material culture.

MARITIME HISTORY OF ANNAPOLIS

Long before the area became “Annapolis” the Indigenous people who lived along the coast of the Chesapeake understood the necessity of the bay. The Chesapeake provided not only food but a method of transportation and trade with other people. The Algonquian tribes that once lived along the Eastern Shore were displaced by an Iroquoian tribe known as the Susquehannocks who resettled in the area. In 1608, when John Smith explored the Chesapeake Bay he encountered the Susquehannocks who at the time had claimed the upper western shore.¹ In 1649 a group of Puritan exiles from the Virginia colony moved north and established a settlement on Greenbury Point. This became Providence. As the settlement grew and spread across the Severn River it was renamed Anne Arundel Town. By 1694, the capital of Maryland moved from St. Mary’s City to Anne Arundel, which was renamed Annapolis.²

Following the end of the American Revolution, the state of Maryland prospered due to its strategic location in the center of the Atlantic Seaboard and long-established international shipping routes. Annapolis, however, fell behind Baltimore as the major trading port for Maryland because Baltimore had a larger, deeper harbor and better facilities for ship building. In 1845 the Federal government chose Fort Severn as the site for a school to educate midshipmen. This was later named the Naval Academy. Annapolis prospered following the Civil War as the seafood industry boomed across the Chesapeake Bay. By the early twentieth century, watermen saw diminishing harvests and increasingly the boatbuilders of Annapolis turned to the production of pleasure craft. Throughout the remainder of the twentieth century Annapolis’ reputation as a center of recreation grew and today it is known as one of the great sailing capitals of the world.

Figure 3.1: Late-nineteenth or early-twentieth century photograph of the Annapolis oyster fleet at anchor.



MARITIME INDUSTRY

Figure 3.2: This photo shows two steamboats around the Long Dock of Hell Point. The steamboat in the background, Emma Giles, is docked at the Tolchester Beach Improvement Company wharf. In the background are the oyster packing houses and lumber yard in Hell Point. The tall buildings are part of the Naval Academy.



The earliest plans for Annapolis, drawn in 1695, included a site designated as the Ship Carpenter's Lot along what is now the north side of City Dock.³ This area contained ropewalks, ship chandleries, slipways, and carpenter's buildings, all the necessities for the building and outfitting of ships. The Ship Carpenter's Lot was leased several times following the American Revolution and gradually broken into smaller lots upon which oyster packing houses, blacksmith shops, lumber yards, and steam mills would be built. Following the Civil War, Annapolis saw a rapid growth in the seafood harvesting industry reaching its peak in 1878 with 14 oyster packing houses found along its shores (8 in Hell Point alone).⁴ The Hell Point neighborhood was the traditional center of Annapolis' maritime industries, home to over a dozen oyster packing houses, several wharves, lumberyards, boat building operations, a ferry terminal, and a steamboat landing from the 1860s to 1941.⁵ In 1868 Horn Point was subdivided into hundreds of lots that would later be named Eastport.⁶ Crowded conditions and premium land prices in Hell Point forced boat building across Spa Creek. Eastport became the new home for Annapolis' boatyards, a tradition which continued until the closure of the final yard in 1973.⁷ In 1941 the Naval Academy annexed the Hell Point neighborhood and demolished all its structures, erasing much of Annapolis' maritime industrial heritage.⁸ The last oyster packing house in Annapolis, McNasby's Oyster and Seafood Company in Eastport, closed in 1985.⁹

TRANSPORTATION

Since its founding in 1649, Annapolis has served as an important transportation hub on the Chesapeake Bay. Several colonial road networks converged at Annapolis and its ferries carried thousands of passengers across the bay to destinations such as Rock Hall in Kent County and Broad Creek on Kent Island where roads wound through the countryside to Philadelphia.¹⁰ Steamboats from Baltimore had regular service to Annapolis by the 1830s and maintained that service until 1932 when the Emma Giles last pulled from the steamboat wharf at the foot of Prince George Street.¹¹ In 1916, Maryland authorized \$50,000 for a cross bay ferry which was realized in 1919 with the establishment of the Claiborne-Annapolis Ferry Company. The Company operated a ferry terminal at the foot of

King George Street and carried both passengers and cars to Claiborne in Talbot County until 1930 when a new terminal was built at Matapeake. In 1941 the Annapolis terminal was closed, and a new facility was built at Sandy Point. The ferry was bought by the state in 1941 and renamed the Chesapeake Bay Ferry System, which continued to operate until 1952 when the Chesapeake Bay Bridge opened. With that new beginning ended an over 300 year old chapter in the history of the Chesapeake.¹²

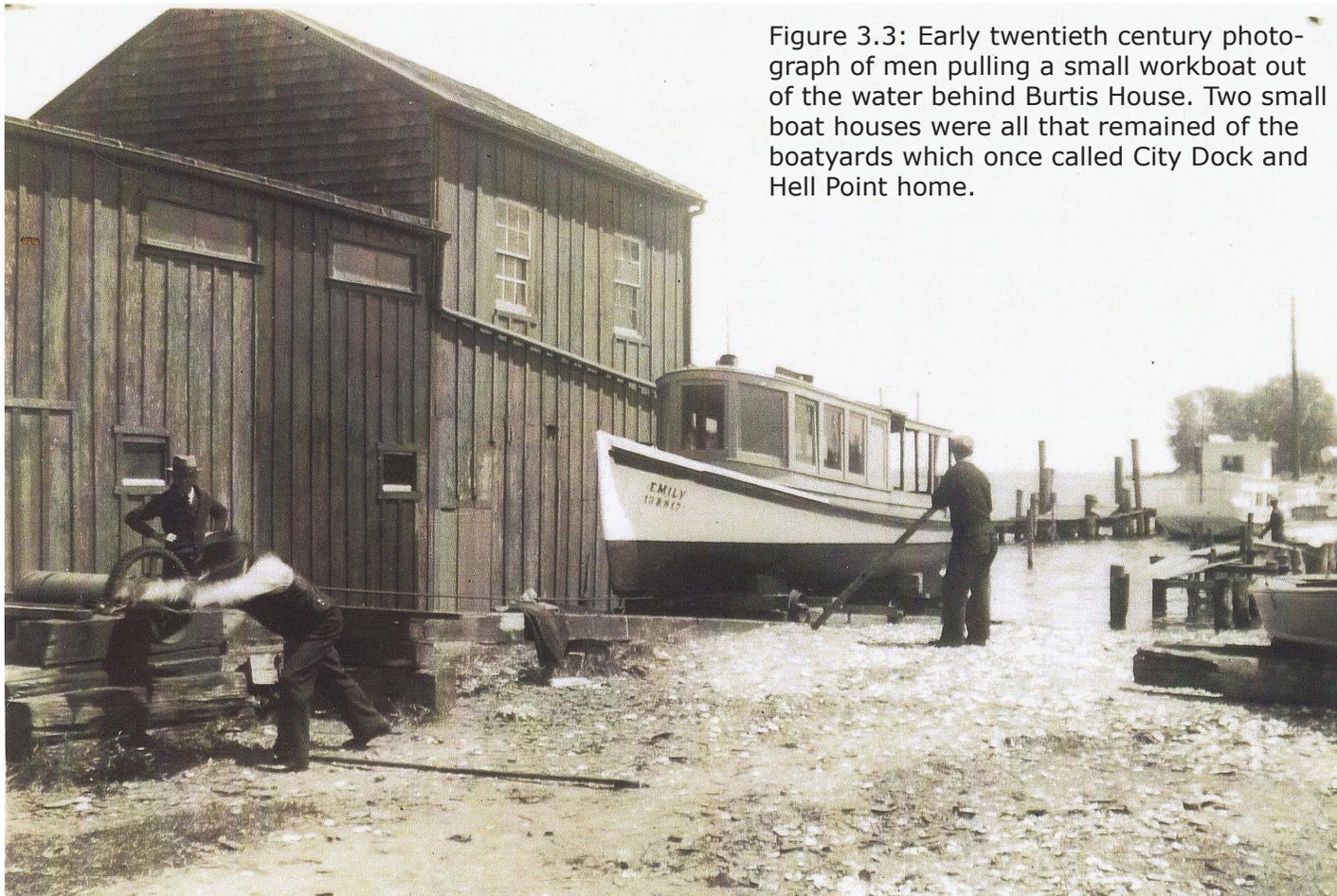


Figure 3.3: Early twentieth century photograph of men pulling a small workboat out of the water behind Burtis House. Two small boat houses were all that remained of the boatyards which once called City Dock and Hell Point home.

MILITARY / NAVAL ACADEMY

Annapolis has been a fortunate city throughout its history. In its earliest days, Annapolis was defended by a battery of cannons located at the end of the Ship Carpenter's Lot.¹³ During the American Revolution, earthen fortifications were built at Horn Point, Windmill Point, and on Beaman's Point across the Severn.¹⁴ In 1807 Fort Severn was constructed at Windmill Point and Fort Madison across the river.¹⁵ All of these defenses were constructed to face the numerous threats which challenged the city including raids by pirates, the Spanish, the French, and eventually the British. Annapolis however was spared from fighting and none of its forts ever fired a shot in anger. The longest lasting impact of the military on Annapolis began with the founding of the United States Naval Academy in 1845 on the grounds of Fort Severn.¹⁶ The academy has proven to be a mixed blessing for Annapolis. Several annexations have gobbled up dozens of acres of the city, incorporating the land into a manicured landscape affectionately known as "The Yard." The academy has also employed thousands of Annapolitans since its founding in roles such as construction workers, tailors, stewards, mess attendants, janitors, and watchmen. Federal money and the patronizing of Annapolis' many businesses by academy staff, students, and their visitors has helped the city to grow into the trendy destination of today. Annapolis is truly a Navy town.¹⁷



Figure 3.4: Aerial photograph of the construction of the Halsey Field House, labeled New Field House, in 1957. This building was built over much of Hell Point. Note the buildings to the bottom left, they are all that remained of the Hell Point neighborhood.

CLIMATE CHANGE IN ANNAPOLIS

At the foot of Annapolis' Prince George Street, rising sea levels threaten the last surviving historic structures of the formerly robust maritime district known as Hell Point. The original home of Captain William Henry Burtis, "one of the best-known watermen of Maryland and a highly respected citizen of Annapolis"¹, is at risk of succumbing to the Chesapeake Bay as it faces a changing environment.

The Burtis House is being elevated from its present location to protect it from the anticipated sea level rise as an effect of climate change. Elevating the Burtis House is part of a large plan to revitalize the City Dock area and protect the downtown business and residential district from future flooding damage. The entire coastline of City Dock will require additional flood protection and the Burtis House is one of the first major improvements as part of the City Dock improvement initiative. Plans for the area of City Dock include additional flood protection measures such as natural land barriers and passive flood mediation systems. The preservation plan for Burtis House is a major step towards restoring historic resources, while also taking preventive measures to combat the effects of climate change. The first phase for City Dock prioritizes the stabilization of the Burtis House and preservation of existing historic resources for future adaptive reuse. Preventative measures against the effects of climate change include raising the Burtis house, water infiltration protection measures, and other mitigation measures. Elevating buildings has become one of the most widely discussed strategies for protecting historic resources against flooding.²

Figure 4.1: Burtis House proposed elevation.



From its earliest days, downtown Annapolis has flooded with some regularity. However, the difference between flooding and sea level rise is that flood waters will subside, but sea level rise will not. Scientists have predicted the potential sea level rise for this area of Maryland. Factors such as melting glaciers, polar ice sheets, and changing ocean currents between now and the year 2050 could contribute to a sea level rise of 0.8 to 2.3 feet.³ This increase in sea level rise will change the coastline forever. Annapolis has a unique vulnerability to climate change due to the proximity of the city to the Chesapeake Bay. The city has experienced a 925% increase in nuisance flooding days over the past 50 years.⁴ This is the largest increase of flooding of any U.S. city, according to the National Oceanic and Atmospheric Administration.

FLOODING

Flooding in Annapolis is an historic issue for the City Dock district. Repeated flooding has caused physical damage to properties and had a long-lasting impact on the health and safety of the residents. Scientists say that the entire mid-Atlantic region may be a “hot spot” for sea level rise. A projected 1.6-foot rise in sea level is expected in 2050 and up to 4.2 feet by 2100. Portions of the Annapolis City Dock are underwater 50 days a year; this number has increased from just three to four days a year since half a century ago.⁵ Tidal ranges at other locations in Maryland, such as Baltimore, vary due to the functions of the tides.⁶

Flooding in Annapolis falls into three categories: nuisance flooding, high tide flooding, and storm surge. Flooding is measured into three categories based on height above the average high tide levels: minor, moderate, and major. Nuisance flooding is flooding that leads to public inconveniences such as road closures and repairable water damage to buildings. High tide flooding occurs when water levels exceed that of a normal high tide. Minor high tide flooding is when water levels reach a minimum of 1.8 feet above the average high tide.⁷ Moderate flooding is when water levels reach a minimum of 2.8 feet above the average high tide.⁸ Major flooding is when water levels reach a minimum of 3.9 feet above the average high tide.⁹



Figure 4.2: Prince George Street Flooding 1915



Figure 4.3: Prince George Street Flooding 1915

STORM SURGES

Strong winds from hurricanes or tropical storms can push water onshore. A storm surge can be the deadliest part of a storm, and its ferocity can change with the storm track, coastline, or the size and speed of the storm.¹⁰ When a storm surge hits Annapolis, the storm drains are overwhelmed, roads are flooded, and infrastructure can become compromised. When Hurricane Isabel hit in 2003, a storm surge of over seven feet overwhelmed City Dock.



Figure 4.4: The Alex Haley Statue on City Dock, Tropical Storm Isabel 2003.



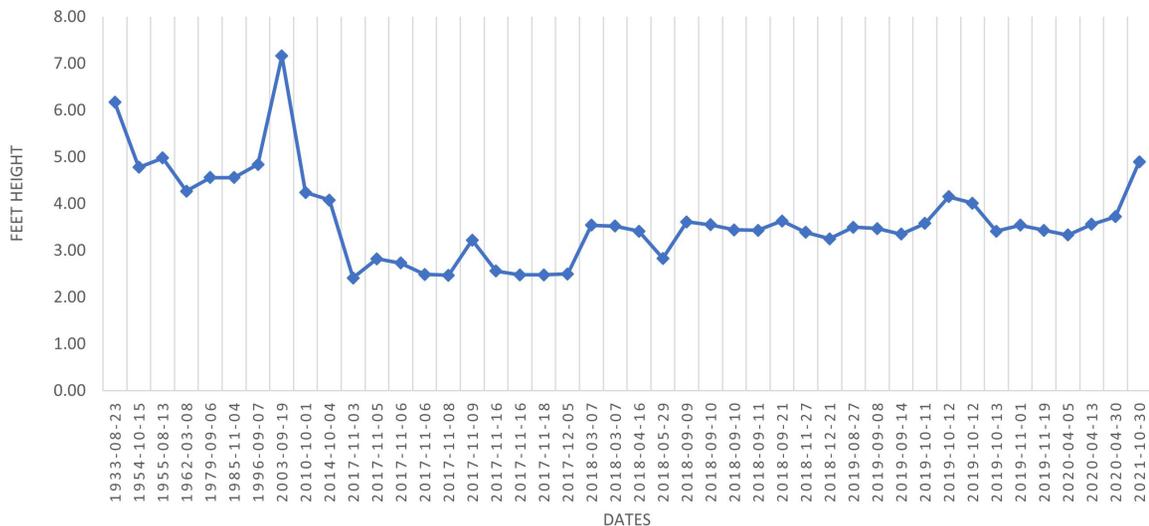
Figure 4.5: The Alex Haley Statue in normal conditions



Figure 4.6: City Dock, Tropical Storm Isabel 2003.

HISTORICAL FLOOD DATA

HISTORIC CRESTS 1933 - 2021



The predicted increase in flooding events is a major concern for the residents of downtown Annapolis. Historic flood data shows that over the past 100 years, the frequency of flooding has increased. Measuring data since 1933, historic crests (the highest surface of a tide wave) show that high tidal waves are becoming more frequent. Only seven flooding events occurred in the first 63 years of recorded data between 1933 and 1996.¹¹ The frequency of flooding increased significantly after that with 37 flooding events in the past 20 years.

Figure 4.7: Collected data from Annapolis nuisance flooding (above 2.0 feet) since 1933.



Figure 4.8: 2010 flooding

Frequency of Flood Events

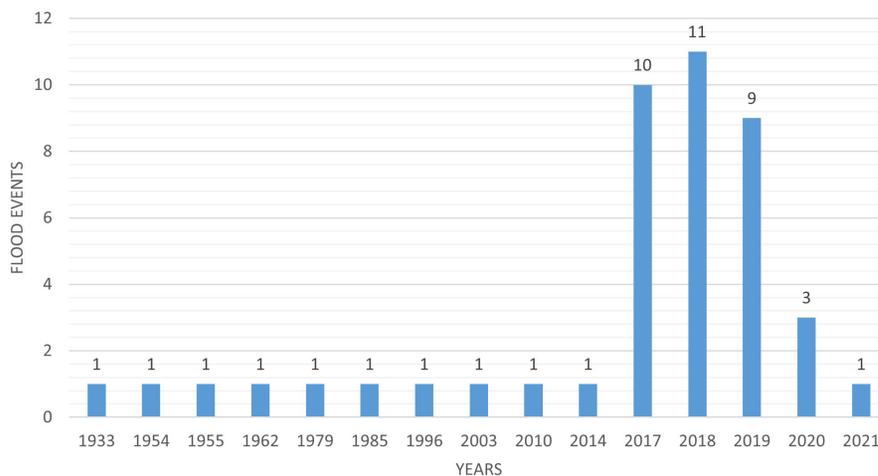


Figure 4.9: Frequency of flooding data.

In the year 2018 alone there were a total of 11 flood events in Annapolis, Maryland. This number increased from 10 floods the year prior in 2017. Prior to 2017, approximately one flood event would occur per year in Annapolis. This number has increased in recent years and residents of Annapolis can continue to expect at least one to ten floods each year.

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"USNA and City Dock, aerial view of Hell Point area two years before it was demolished." Beavin. 1939-10-10. MSA SC 2140-1-115 Location: 33/02/02/23

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Figure 1.1: "Captain Burtis." Courtesy of David Burtis.

Figure 1.2: "1895 c. Worthington, Margaret Taylor Randall Sailing Party" MSA SC 2140-1-394

Figure 1.3: "Unloading From Steamship Prince George Street" MSA SC 1477-1-6735 Location: 33/02/01/67

Figure 1.4: "Pleasure Boats to Hire," *Annapolis Evening Capital*, Nov 19, 1890.

Figure 1.5: "Captured a Shark" *Annapolis Evening Capital*, Aug 19, 1895.

Figure 1.6: "Prince George Street dock area." MSA SC 985-1-238 Location: 33/01/02/47

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Figure 2.1: "6970 - Aerial View of USNA." 1941-09-12. United States Naval Academy. RG-405.10 Entry 146G.

Figure 2.2: Sanborn Fire Insurance Map from Annapolis, Anne Arundel County, Maryland. Sanborn Map Company, Apr, 1921. Map. https://www.loc.gov/item/sanborn03572_007/

Figure 2.3: "Aerial view." 1939-10-10. Beavin USNA. 1939-10-10. MSA SC 2140-1-113 Location 33/02/02/23

Figure 2.4: Google Earth Aerial of Hell Point and City Dock area, accessed Dec. 11, 2022.

Figure 2.5: "Thompson field and City Dock, aerial view." Beavin USNA. 1939-10-10. MSA SC 2140-1-118 Location 33/02/02/23

Figure 2.6: Google Earth Aerial of Hell Point and City Dock area, accessed Dec. 11, 2022.

Figure 2.7: "8-10-12-14 Block Court." Worthington, T.C. 1941. MSA SC 2140-1-208 Location 33/02/02/24.

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- Figure 2.12: "Fermina Santos Peji and Mariano Peji with their car, Annapolis, Maryland, circa 1930s" Rita M. Cacas Filipino American Community Archives. <https://digital.lib.umd.edu/resultsnew/id/umd:688715>
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- Figure 2.16: "For Sale- New Homemade Sauerkraut," *The Evening Capital*, October 4, 1920, <https://chroniclingamerica.loc.gov/lccn/sn88065726/1920-10-04/ed-1/seq-3/>.

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- Figure 3.2: "USNA view from Eastport." Circa 1920-1930. Edgar Pickering. MSA SC 2140-1-20 Location: 33/02/02/23
- Figure 3.3: "City Dock 2" Courtesy of the Burtis Family.
- Figure 3.4: "6990 - View showing New Field House." 1957. USNA. https://usna.primo.exlibrisgroup.com/view/UniversalViewer/01USNA_INST/12101340210006751

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- Figure 4.2: "Prince George Street." Martin, Walter. 1915-08-04. MSA SC 2140-1-389 Location: 33/02/02/25.
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- Figure 4.6: "Hurricane Isabel floods Annapolis in Anne Arundel County, Maryland." 2003-09-19. Chesapeake Bay Program. <https://www.flickr.com/photos/chesbayprogram/23577632331>
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- Figure 4.9: "Frequency of Flood Events." Gold, Tabby. Chart 2022.



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