VIRGINIA WORKING WATERFRONT MASTER PLAN

Guiding communities in protecting, restoring and enhancing their water-dependent commercial and recreational activities

JULY 2016

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Chapter I

Introduction

Since 1607 when the first settlers set foot on Virginia soil, working waterfronts have been the main portal for commerce in Virginia. From the early colonial years of exporting tobacco to England and importing goods from Europe, the commercial waterfronts in coastal Virginia have transitioned to become the primary facilities supporting the economy of eastern Virginia. Working waterfronts support most all of Virginia's:

- Commercial fishing operations - large and small
- Ship and boat building, maintenance and repair operations
- Marine research facilities
- Export and import facilities
- Recreational boating and support serves
- Marine transportation
- US Navy operations

Working waterfronts play a major roll in supporting every aspect of Virginia's economy. NOAA estimates of economic impact of working waterfronts on six marine industries, ship building and repair, tourism, marine transportation, living resources, marine construction, and offshore mineral extraction, to be 122,000 employed in these sectors and a $8.5 billion contribution to Virginia's gross domestic product. These figures do not include military employment and its impact on Virginia's domestic product. Of the 122,000 marine related jobs, tourism is about half, shipbuilding and repair about a third and marine construction about 15%. Of the total contribution to Virginia's gross domestic product by marine activity, shipbuilding and repair is about 40%, marine transportation about a quarter and tourism about two-fifths.

Working waterfronts are areas or structures on, over, or adjacent to navigable bodies of water that provide access to the water and are used for water-dependent commercial, industrial, or government activities, including commercial fishing, recreational fishing, tourism, aquaculture, boat and ship building, boat and ship repair, boat and ship services, seafood processing, seafood sales, transportation, shipping, marine construction, military activities and other water dependent uses.

In addition to the economic impact on Virginia, our working waterfronts have served as a cultural cornerstone supporting the rich heritage of a Chesapeake Bay lifestyle. Working waterfronts are the conduits for translating activity on tidal waters to our settlements on land. Our communities depend upon the vitality of these resources to support not only the economy but also our tidewater life style tied to the water.

Over the years Virginia has seen many transitions in the character and activities that our working waterfronts support. In our colonial years the ports and landings served as our

connection to England and the rest of the world. The Revolutionary War battle and surrender of the British at Yorktown helped create our great nation. The roll of Hampton Roads during the Civil War was critical to the unity of our nation and the change from an agrarian to an industrial economy. The numerous steamboats lines and the associated wharves and landings served as the commercial highways up until the 1950's when highway bridges and tunnels were constructed crossing our major rivers and the Chesapeake Bay. Today our working waterfronts support a robust ship and boat building, repair and maintenance industry, the largest naval base in the world, one of the most active ports on the east coast, a recovering seafood and aquaculture industry, and a robust tourism industry.

Today, our working waterfronts are under substantial threats and pressures from; rising sea levels, climate change, changing global economic conditions, loss of natural habitat supporting our shellfish and finfish populations and competition from residential development. Once a working waterfront transitions to an alternative use it very seldom reverses back to a working waterfront. It is critical for the future of the Commonwealth's economy to have adequate and specially dispersed working waterfronts throughout coastal Virginia.

This Working Waterfront Master Plan was developed from the bottom up with a series of interviews and discussion with local officials, to statewide workshops with a variety of stakeholder groups, to regional Planning District Commission plans that make up individual chapters of this document. The Master Plan is the culmination of several years of analysis and study of the conditions present at working waterfronts and efforts that have been used to help preserve them. This Master Plan pulls together the common themes of those efforts and recommends a series of policy tools and options that can be implemented at the federal, state, regional and local governmental levels along with actions that land owners and the private sector can take to help ensure that working waterfronts remain vibrant well into the future.

Chapter II

Acknowledgements

Working Waterfront Steering Committee Members & Acknowledgements

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Chapter III

Executive Summary

This Virginia Working Waterfront Master Plan outlines the overall contribution of working waterfronts to Virginia's economy, the historical context of working waterfronts to the development of the Commonwealth, a review of the status of working waterfront in each of the four coastal Virginia Planning Districts, the threats that working waterfronts face from natural forces of sea level rise, global warming, subsidence and channel shoaling and the a series of policies that could be enacted at all levels of government to preserve and protect working waterfronts well into the future.

Working waterfronts are those structures on, over, or adjacent to navigable bodies of water that provide access to the water and are used for water-dependent commercial, industrial, or government activities, including commercial fishing, recreational fishing, tourism, aquaculture, boat and ship building, boat and ship repair, boat and ship services, seafood processing, seafood sales, transportation, shipping, marine construction, military activities and other water dependent uses.

The coastal Planning District Commissions (PDC's) have identified approximately 600 active working waterfronts. While this is a fairly large number of facilities supporting commerce related to the navigable waters of eastern Virginia, it is but a fraction of the number of working waterfronts that dotted the shorelines 75 to 100 years ago. Virginia's historical development and culture has been inexorably linked to the activity on our tidal waters. From earliest colonial times when our culture and commerce were tied to England and Europe, to the 1950's when the steamboat era was coming to an end, working waterfronts were the hub of the majority all commerce in Virginia. With the advent of highway and air transportation systems allowing the dispersion of economic activity across the Commonwealth, working waterfronts have lost some their economic importance. The decline of seafood over the years also has resulted in many of the small wharves and landings supporting the seafood industry to be converted to other uses or just being abandoned. Even with these factors leading to the decline in number and level of activity at our working waterfronts the economic impact of the remaining working waterfronts is substantial. Working waterfronts still host the largest naval installation in the world, many of Virginia's leading employers and the internationally renowned Virginia Institute of Marine Science (VIMS).

In the four coastal PDC's NOAA estimates of economic impact of working waterfronts on six marine industries, ship building and repair, tourism, marine transportation, living resources, marine construction, and offshore mineral extraction, to be 122,000 employed in these sectors and a $8.5 billion contribution to Virginia's gross domestic product. These figures do not include military employment and its impact on Virginia's domestic product or marine activity outside of the coastal PDC's or other marine related business activity outside these six industry

classifications. Of the 122,000 marine related jobs, tourism is about half, shipbuilding and repair about a third and marine construction about 15%. Of the total contribution to Virginia's gross domestic product by marine activity, shipbuilding and repair is about 40%, marine transportation about a quarter and tourism about two-fifths.

Here are a few statistics that illustrate the impact (direct, indirect and induced) to Virginia of the activity at our working waterfronts:

- 300 licensed commercial fishermen in VA
- 3rd largest producer of Marine products in US
    - 4,944,028,366 pounds in 2012
    - Dockside value - $192M
    - Hard clams and oysters - $36.9M
- Recreation boating impact, annual to VA
    - Between $1.2 and $2.9B
    - 156,547 jobs
- Port of VA impact – 2013
    - $60B
    - 6.8% of Gross State Product
    - 374,000 total jobs
    - 9.4% of VA employment
    - $17.5B in wages

Working waterfronts influence the everyday lives of all Virginians from the imports we consumed, to the bounty of the seafood in our grocery stores, to the products that are exported, to the security that is provided at coastal military installations, to the economic ripple effect of waterfront commerce. Even the most western counties in Virginia export their coal through the Port of Hampton Roads providing jobs for our western most coal-mining region.

Today our working waterfronts face new and continuing threats to their existence. The continuing changing global economy has shifted economic activity away from our historic Virginia waterfront locations to more competitive locations in other countries or other locations in the US. Older traditional marine industries are struggling with increasing competition, increased regulatory environment and rising land and water conflicts from neighbors. The fact that working waterfronts are where land meets water makes them especially vulnerable to increasing natural threats including rise in sea level, frequency and magnitude of storm events, natural subsidence of eastern Virginia and the shoaling of navigable channels limiting water travel. These threats make it imperative that a concerted action at all levels of government and the private sector be taken in the years ahead to ensure that these precious resources are still available to future generations in support of Virginia's commerce.

Northern Neck - The 123 working waterfronts of the four counties of the Northern Neck, Virginia, Lancaster, Northumberland, Richmond and Westmoreland counties, support

commercial fishing, aquaculture, recreational boating and to a limited extent traditional boat building and repair. The Omega Protein, menhaden fishing operation in Reedville, is the Commonwealth's largest fishery contributing $88M to the state's economy. This fishery is limited to a harvest of 158,700 metric tons of menhaden in 2015 and will likely have similar limits placed on the fishery in the years to come. Other commercial fish harvested are rockfish, croaker, perch and spot. In recent years commercial oyster aquaculture operations have expanded significantly throughout the region. In 2015, there were 1113 commercial fishing licenses issued by Virginia Marine Resources Commission (VMRC) generating $294,822 in license fees. NOAA estimates that 6 marine industries generate 1218 jobs in the Northern Neck representing 10% of total employment. These 6 industry categories generate $31M in wages and $254M in goods and services to the regional economy. Marine related activity has been the backbone of the regional economy historically. Given the decline in the shellfish industry and limits on other fisheries the region has seen a shift from a dependence on marine related businesses to a service based economy. The Northern Neck is a prime location for retirement living supporting the highest percentage of citizens over 60 years of age in Virginia. Aquaculture and tourism are two economic sectors that have shown growth in the region and are likely to expand in future years.

Here are a series of recommendations that will help preserve and expand commercial activity at working waterfronts in the Northern Neck:

- Catalog the infrastructure characteristics of the existing working waterfront businesses
- Identify active commercial fishery operations
- Identify and encourage the adaptive reuse of vacant or failing waterfront properties
- Encourage new waterfront commercial enterprise development
- Increase public access to the waterfront
- Actively educate the public on marine related activities
- Promote the expanded use of the existing marine related facilities
- Encourage the localities to adopt provisions supportive of commercial marine activities in their comprehensive plans and land use regulations

Middle Peninsula – The Middle Peninsula bounded by the Rappahannock River to the North and the York River to the South has 1200 miles of coastline with 81 inventoried working waterfronts. Four of the six Middle Peninsula localities, Essex, Gloucester, Mathews and Middlesex employ about 6% of their workers in 6 marine industries. This represents 1660 jobs to the region generating $22.7 M in wages and $43.8 M in goods and services. 386 commercial fishing licenses were issued by VMRC in the six counties of the Middle Peninsula including King and Queen and King William Counties. These licenses generated $331,537 in license fees to the Commonwealth. The working waterfronts in the Middle Peninsula typically support either small commercial fishing operations or recreational boating. Deltaville is a hub for boating services in the southern Chesapeake Bay serving a variety of smaller recreational and commercial vessels

from workboats to sailboats to powerboats. The VIMS one of the world's premier marine research facilities has its main campus on the York River at Gloucester Point.

Historically, the regional economy was fueled by the strength of the agriculture, forestry and seafood industries. As economic conditions have changed the economy is now tied closely to the Richmond and Hampton Roads metropolitan economies. Many job seekers make the daily commute to these areas and residents of these metro areas tend to retire to the area or have a weekend getaway residence in the Middle Peninsula. In recent years the region has seen a significant growth in aquaculture operations and will likely see continued growth in this business sector.

The Middle Peninsula Planning District Commission (MPPDC) created the Middle Peninsula Chesapeake Bay Public Access Authority (MPCBPAA) in 2003 to provide greater public access to its tidal waters. Within a remarkable short period of time the MPCBPAA has acquired 33 waterfront properties totaling 162 acres. The MPCBPAA offers a unique institutional framework for the public to acquire, preserve and develop threatened working waterfronts in the region. This institutional framework could be replicated in other areas of coastal Virginia.

The MPPDC has worked extensively with its local governments to plan for the preservation and redevelopment of their working waterfronts. The MPPDC has undertaken several cutting edge efforts such as proposing a Marine Aquaculture and Marine Business Park for Mathews County to investigate the local government legal and policy issues related to floating structures within their territorial boundaries.

The future of working waterfronts in the Middle Peninsula depends upon the concerted collaborative efforts of the private sector, local governments, regional institutions and State organizations. Without this collaboration working waterfronts will continue to succumb to economic and natural forces.

Hampton Roads – The Hampton Roads area is the second largest Metropolitan area in Virginia with a population of 1.7M. The region spans from the North Carolina line on the south to the York River on the North from the Atlantic Ocean on the east to Williamsburg and Franklin to the West. Hampton Roads supports major international marine industrial complexes, military, shipbuilding, Port of Virginia, ship repair and maintenance, sport fishing, commercial fishing and seafood processing. Hampton Roads is home of the largest naval base in the world and home of some of the state's largest employers that happen to be marine related (i.e. Huntington Ingalls Industries, BAE, Norfolk Naval Ship Yard, General Dynamics, Norfolk and Southern, CSX, etc.). The Port of Hampton Roads is the only port on the east coast authorized to have a 55 ft. channel accommodating the largest container ships that will traverse the new Panama Canal. Hampton Roads has, by far, the most industrialized and intensely developed waterfront areas in Virginia.

The Hampton Roads Planning District Commission identified 165 working waterfronts in five different classifications, Commercial (88), Industrial (40), Military (2), Recreational (7), and Seafood (28) and 30 subgroups.

Table 1: HRPDC Working Waterfront Inventory Classifications

Working Waterfront Groups	Working Waterfront Subgroups
Commercial	Boat Dealer Boat Repair Boat Supplies Marina Navigational Services
Industrial	Bulk Liquid Storage and Shipping Cargo Shipping/Handling Marine Construction Marine Dredging Marine Towing Petroleum Bulk Stations and Terminals Petroleum Terminal Power Generation Products and Services Ship Repair
Military	Military Ship Repair
Recreational	Boat Rental Charter Boats Cruises Fishing Pier
Seafood	Seafood Retail Seafood Wholesale Seafood Transportation Shellfishing

Working waterfronts were identified in twelve (12) Hampton Roads localities: Chesapeake, Gloucester County, Hampton, Isle of Wight County, James City County, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, and York County. A review of the comprehensive plans and zoning regulations of these localities indicates that most all of the localities have recognized the important role of working waterfronts and have made provisions within their land use regulations for the continuation of commercial use of the waterfront.

Eastern Shore – The Eastern Shore has 77 miles of Atlantic shoreline with approximately that same number of miles of shoreline along Chesapeake Bay. The Atlantic shoreline is protected by 14 barrier islands managed by the Nature Conservancy's Virginia Coastal Reserve in partnership with the Virginia Department of Conservation and Recreation and the Virginia Game and Inland Fisheries. This peninsula region supports the largest number of working

waterfronts, 222, of any of the four Virginia coastal regions. Wallops Island supports a spaceport and NASA, NOAA and Navy facilities.

Working waterfronts have a huge economic impact to the Eastern Shore economy. Northampton County is a clear leader in shellfish aquaculture among all Virginia localities. In 2013, Northampton County shellfish farms sold over $36.7 M in clams and oysters, and commercial fishermen unloaded over $5.7 M in wild finfish and shellfish for a total of $42.5 M of seafood products. The total economic impact of this activity is estimated at $97.4 M in output that supported 987 jobs generating household and business income of $27.1 M.

On Chincoteague alone, commercial fishermen annually land millions of dollars worth of scallops, summer flounder, scup, and black sea bass, as well as many other species.

In 2015, VMRC issued 1107 oyster harvesting and production licenses/permits, 593 clam harvesting and raising permits, and 776 licenses for crab harvesting or shedding. VMRC licensing fees for all permits (including other species) totaled $359,806.

The Eastern Shore's working waterfronts are also used for recreational boating and fishing including but not limited to Chincoteague, Cape Charles, Onancock, Saxis, Wachapreague, Willis Wharf, Red Bank, Quinby and Oyster. Individuals also use the counties' public boat ramps for harvesting clams, oysters, crabs, and fish. In addition, water-based tourism has been enhanced by the development of the Seaside Water Trail starting at the Eastern Shore of Virginia National Wildlife Refuge and extending through the seaside coastal bays to Chincoteague and Assateague Island and the Captain John Smith National Historic Trail with landings in Cape Charles, Onancock, and Tangier.

There are several factors that have negatively affected working waterfronts on the Eastern Shore; development pressure in specific locations where residential growth and tourism are occurring, governmental regulations, flooding-related hazards, and shifts in seafood market economics. Lack of flood insurance coverage is a contributing factor to the decline of working waterfronts, as many are not rebuilt after major storm events.

Another factor that negatively affects working waterfronts is navigability of the access channels to both bayside and seaside waterfronts. Many access channels have silted in due to storms, changes in land-use practices, and hard-scaping the shorelines near some channels.

The following action steps are recommended to ensure that working waterfronts remain economic drivers on the Eastern Shore of Virginia:

Short Term Recommendations:

- Establish a Public Access Authority that will preserve water access.
- Complete the Eastern Shore Working Waterfronts Inventory and update it as uses change to track trends involving the region's working waterfronts.

- Present the completed inventory to the Eastern Shore Regional Navigable Waterways Committee (ESRNWC) and to the localities as a tool to prioritize improvements to working waterfronts infrastructure.
- Respectfully request that the ESRNWC facilitate development of a dredging plan for the Eastern Shore.
- Present preservation and planning tools (www.WaterAccessUs.com for toolkit) to Accomack County, Northampton County, and Chincoteague.
- Develop a two-year associates' or certificate program at the community college or VIMS for aquaculture training on the Shore.
- Share identified stressors developed by the Working Waterfronts Steering Committee with localities.
- Develop a stakeholders group that can be apprised of all developments and attend workshops and meetings.
- Evaluate current policy and recommend changes to regulations that will continue to protect water quality as well as allow water-dependent industries to thrive in new and current locations.
- Develop and present model comprehensive plan language that strengthens the aquaculture industry and preserves working waterfronts infrastructure.
- Analyze permitting processes in both counties to reduce turnaround times.
- Determine how many privately owned facilities plan to continue to operate after the current owner/operator retires.
- Research why marina owners are wary of grant programs.
- Enact state legislation creating a Virginia Working Waterfronts Designation Program.
- Develop zoning tools such as a working waterfront district designation or a local commercial seafood overlay district that will make it easier for commercial enterprises to expand or improve their facilities.
- Provide information to marinas on the Virginia Clean Marina Program and Boating Infrastructure Grant.
- Investigate the possibility of the Eastern Shore becoming the state's first "Clean Marina Region".

Long Term Recommendations:

- Study possible locations for additional lodging and solicit private sector developers.
- Investigate solutions (perhaps wireless broadband) to poor cell phone coverage.
- Encourage working waterfront owners and operators to make dock infrastructure accommodations for elevated sea levels and increased flooding.
- Promote working waterfront culture so it is universally recognized as an important asset.

- Research and present for consideration the steps taken by similar areas to preserve working waterfronts including but not limited to:
    - Develop a Coastal Living Policy
    - Develop a policy to protect working waterfronts infrastructure
    - Use of legal and policy tools that anticipate emerging business models such as the growth of the shellfish industry
    - Research how distinctions could or should be made between water-dependent enterprises and their activities and needs ashore as contrasted with engaging in economic pursuits in public waters

Resiliency – Working waterfronts in coastal Virginia are under increasing threats from four major natural conditions, sea level rise, subsidence, global warming and channel shoaling.

Relative Sea Level (RSL) change has been occurring naturally for decades but due to several factors the rate of sea level rise is projected to increase dramatically though the rest of this century. The rate of sea level rise in the Chesapeake Bay region is the highest of any area along the Atlantic Coast and is projected to rise between 1 and 2 feet over the rest of the century (Boon et al. 2010).

Also within the Chesapeake Bay region, land subsidence contributes to RSL change. Processes contributing to land subsidence include movement of the earth's crust and man-induced impacts (e.g. groundwater withdrawal, hydrocarbon removal). The most severe subsidence rates have been reported in the West Point and Franklin areas where there are major groundwater withdrawals in support of paper mills in those locations. Based on land subsidence information, the RSL rise rate conservatively would be expected to increase by another 1.4-1.7 ft. by 2100 (Holdahl and Morrison 1974; Davis 1987; Pope and Burbey 2004). It is projected that RSL rise rates will accelerate in Chesapeake Bay region with conservative projections of sea level increases of approximately 2.3 - 5.3 ft. by 2100 (Pyke et al. 2008).

Sea level rise and recurrent flooding pose a significant threat to Virginia's working waterfronts with RSL expected to rise between two and seven feet by the end of the 21st century. Many working waterfronts would be at risk under the lowest sea level rise scenarios, but higher estimates will result in significant damage to some of the State's largest working waterfront facilities. Under the lowest sea level rise scenario; twelve of the working waterfronts in the Hampton Roads region would be vulnerable. At the highest-level scenario, nearly all 592 working waterfronts in coastal Virginia would be vulnerable. There is a high potential that working waterfronts will be inundated, which will hinder access to the water for commercial and recreational uses.

Global warming is a major contributor to the projected sea level rise over the course of this century but global warming will have other significant impacts on our working waterfronts. With global warming comes more frequent and severe weather patterns. These storms are

projected to be more devastating and create more property damage over time. The August storm of 1933 was much more severe than hurricane Isabel in 2003 but the hydraulic impact was about the same. While major storms such as hurricanes and nor'easters cause extensive property damage with sea level rise, even modest storms can cause localized flooding disrupting transportation and activity at working waterfronts. The higher risk levels posed by severe weather events will place the working waterfront facilities, access roads and utilities at even greater risk of damage.

There has been a significant shift in national policy related to flood insurance in recent years that will make it more costly for businesses located at working waterfront locations. With the huge burdens on the federally subsidized flood insurance program from several major hurricanes over the last decade, federal policy has changed to make the flood insurance premiums reflective of the actual cost of the risks of damage. The result has been a significant rise in the cost of flood insurance and in some cases the inability of some property owners to get policies adequate for operation of their business. If these federal policies continue and risks of damage increase as projected, then the cost of doing business on the waterfront will drive a number of marine related business away from working waterfronts to inland locations.

Shoaling, or sediment build up in a waterway's riverbed, is a natural process that over time makes a waterway shallow and impassable. This is another factor that currently hinders ingress and egress into tributaries and rivers. Due to shoaling, access is limited to deeper waters, which directly affect the ability of maritime industries to conduct business as normal.

Shoreline erosion also poses an additional threat to a few working waterfronts. As natural erosion takes place, the shorelines retreat potentially exposing the land-based facilities to additional wind and wave action. As sea level rises and weather events become more severe the rates of shoreline erosion are expected to increase. Most working waterfronts are in locations that are protected harbors but if those protecting landmasses erode away they become vulnerable to sever weather conditions. Such locations as Tangier Island and Saxis are threatened because of high rates of shoreline erosion.

Because each working waterfront is unique in its location, physical conditions, exposure and use, the threat from natural hazards varies greatly. To adequately plan for the future of working waterfronts from the threats of sea level rise, subsidence, more frequent and severe weather events and shoaling it will be necessary to conduct an evaluation of each working waterfront and determine the best solution for that facility. Since there are almost 600 working waterfronts in coastal Virginia it will be necessary to evaluate them on a priority basis over an extended period of time.

Recommendations – Given the threats to our working waterfronts from natural forces to changing economic conditions to conflicts with surrounding land and water uses these economic engines of Virginia's economy will continue to decline in number and level of activity. It is imperative that actions be taken soon to address the long-term viability of our working

waterfronts. No one solution or action can address all of the threats and challenges. No single government or level of government can tackle the problem along. While the various levels of government can provide the much needed tools and conditions for working waterfronts to flourish it will also take the marine businesses and waterfront property owners to invest in the facilities at our working waterfronts. If the working waterfronts in coastal Virginia are to be preserved and redeveloped over time then a broad array of actions will need to be taken by all levels of government and the private sector. This Master Plan outlines whole series of actions across all levels of government and private sector action that if implemented will to the preservation and redevelopment of working waterfronts in Virginia. The following is an outline of the recommendations contained in this Master Plan.

Recommendations

Federal government actions

- **Congress should adopt a national Working Waterfront Preservation Act.**
- **Congress should reinstate funding for the shallow channel-dredging program of the Army Corps of Engineers.**
- **The US Maritime Administration should designate additional America's Marine Highway Program corridors in Virginia.**
- **The National Park Service should more actively promote the Captain John Smith Chesapeake Bay Historic Trail.**

State government actions

- **The Virginia General Assembly should:**
    - **Enact a Working Waterfront Preservation Act,**
    - **Establish a legislative study commission with members representing a broad cross-section of stakeholder groups to review the long-term viability of Virginia's working waterfronts,**
    - **Establish a shallow channel dredging matching grant program,**
    - **Dedicate the marine motor fuel tax and other marine related taxes/fees to working waterfront improvements,**
    - **Enable localities to establish Working Waterfront Development Areas.**
    - **Enable localities to classify commercial fishing vessels and related equipment as a separate class of personal property,**
    - **Expand the Port of Virginia Economic and Infrastructure Development Fund to include private investment a smaller commercial harbors, and**
    - **Establish a state Working Waterfront Preservation income tax credit.**

- **The Governor should:**
    - **Issue an Executive Order establishing priority for working waterfront improvements in numerous State administered grant programs –**

Community Development Block Grant, Transportation Alternatives Program, Clean Water, etc.,
    - **Establish an advisory group to evaluate the relaxation of State storm water and Chesapeake Bay Act regulations related to development at working waterfront locations, and**
    - **Charge the Commonwealth Center for Recurrent Flooding Resiliency with the long-term planning for the resiliency of select working waterfronts of regional importance.**
- **The VA Port Authority should expand funding for small port and harbor improvement throughout Tidewater Virginia.**
- **The Commonwealth should continue active fishery resource management and Chesapeake Bay cleanup programs.**
- **The Commonwealth should establish adequate workforce development programs and facilities for the changing marine related industries.**

Regional planning and development actions

- **The coastal Planning District Commissions should:**
    - **Continue research and planning for the preservation and redevelopment of working waterfronts,**
    - **Increase technical assistance to local governments towards the preservation and redevelopment of working waterfronts,**
    - **Serve as the test demonstration organization/site for working waterfront preservation methods, and**
    - **Create revolving loan funds for commercial waterfront development and equipment financing.**
- **Use the Public Access Authorities for future acquisition and development of select working waterfront sites.**

Local government actions

- **Coastal local Governments should:**
    - **Adopt a working waterfront policy as a part of the comprehensive plan or as an independent policy,**
    - **Establish permissive, by right, zoning policies for working waterfronts,**
    - **Establish local taxation policies that stimulate water dependent business development (personal property, real estate, BPOL, and machinery and tools taxes),**
    - **Extend local zoning provisions to cover land and water uses to avoid future conflicting water uses,**

- **Establish a set of development incentives to encourage the appropriate use of working waterfronts,**
- **Invest in the development of select working waterfronts,**
- **Use the appropriate development districts (EZ, Technology Zone, CDA, TIF, etc.) to achieve the desired development objectives along the working waterfront, and**
- **Plan for adaptation and resiliency of public facilities along the waterfront.**

Private sector actions

- **Education of the public, community leaders and decision makers on the importance of our working waterfronts to our economy and our culture.**
- **Conduct sufficient succession planning to ensure continuation of marine businesses.**
- **Plan for the resiliency of private waterfront businesses at our working waterfronts.**

The initial step to begin the process of preserving our working waterfronts is the acceptance and adoption of this Working Waterfront Master Plan by; the four Coastal Planning District Commissions, Tidewater local governments, the Virginia General Assembly, the Governor of Virginia, and impacted State agencies.

Chapter IV

Working Waterfronts – State of the Commonwealth

Working waterfronts and waterways have long been an important component of the Virginia economy, as well as its cultural and social heritage. The deep channels of multiple rivers, combined with the colonial government's grants of land, shaped the development of Virginia east of the Fall Line. The various rivers connecting to the Chesapeake Bay provided easy access for trans-Atlantic ships to collect cargo from the peninsulas and riverbank wharves in Tidewater. During the 19th and early 20th centuries, steamboats became central to Chesapeake commerce and communication. The wharves where these ships made landings offered freight service so that farmers, fishermen and manufacturers could sell their wares in Baltimore, Washington and Philadelphia where demand for those goods was highest. At their peak, an estimated 600 boats serviced a dense network of 300 landings along riverbanks to the farthest points of navigation.

As history has unfolded, the waterfront scenes of the steamboats have long fallen silent, although some of the properties associated with the landings remain in the public domain. In their absence the ports of Virginia have grown to contribute significantly to the economy of the Commonwealth. According to the Port of Virginia 2015 annual report, "*A study published by the College of William & Mary's Raymond A. Mason School of Business in December 2014 highlighted the economic importance of the port in fiscal year 2013. The study found the port generated $60 billion in in-state spending, accounting for 6.8 percent of Virginia's 2013 gross state product (GSP). Moreover, the research shows that the port provided more than 374,000 jobs (direct, indirect and induced) amounting to 9.4 percent of the commonwealth's resident employment that year: total compensation for that labor force was $17.5 billion.*"

But the working waterfronts are not restricted to the ports alone. Their diversity includes ship and boat building, repair and maintenance –large and small, serving both the recreational and commercial markets, fishing and seafood processing, passenger vessel operations, marine technology, military operations, recreational boating, and numerous support industries which extend from Hampton Roads into the various tributaries throughout the tidewater. All of these waterfront entities contribute substantially to the economies of coastal Virginia.

In 2013, approximately 3,000 licensed commercial fisherman and aquaculture permit holders relied on access to Virginia's working waterfronts. Virginia is the nation's third largest producer of marine products with total landings of over 494,028,366 pounds in 2012 and is only out paced by Alaska and Louisiana. The dockside value to watermen alone was $191,664,734. Continued growth of the shellfish aquaculture industry in Virginia has added significant value to the state's seafood marketplace. Virginia's watermen-farmers are providing consumers with a growing quantity of hard clams and oysters that represents $36.9 million dockside value.

Recreational boating is not only a part of the culture of the Commonwealth; it has a significant positive economic impact. While many think of yachts when recreational boating is mentioned, more than 90 percent of recreational boats are less than 30 feet, and many are sail and unpowered craft. The economic impact from recreational boating is created by spending throughout boat owners' spending cycle. Boat building and repair creates jobs and economic activity for boat builders, designers, engineers, and component manufacturers. Sales have impacts on brokers, dealers, and financers. Ownership creates impacts in permanent moorage, maintenance and repair, insurance, parts, and accessories. Operation creates spending for fuel, guest moorage, and visited retail. Recent studies by the National Marine Manufacturers Association and the Marine Advisory Services at the VIMS have determined that the economic impact of the recreational boating industry in Virginia ranges between 1.2 and 2.9 billion dollars annually, providing 15,547 jobs.

However, many of these traditional industries are threatened as the coastal areas are experiencing dramatically increased demand for residential development. With the exception of Hampton Roads, the coastal area is surrounded by rural counties, which for the most part, have experienced the greatest impact from the pressures of this growth. The challenge then, is to develop a set of strategies to help offset the impacts of this pressure, with an emphasis on assisting those areas most significantly affected.

To some degree all of the rural counties recognize that the balance between working waterfronts and residential development is trending to one that is predominantly residential. This demand often results in the need for services and resources that are not compatible with the nature and character of the community that attracted the development in the first place. As a result, historic industries that support the functionality of many waterfront communities become disadvantaged by impacts of new development. Localities with working waterfronts often lack sufficient information and/or organizational capacity to effectively respond to the changes presented by increased growth and development which are now threatened by accelerated real estate development of non-water dependent waterfront properties over recent decades. Loss of working waterfronts and waterways is negatively impacting coastal communities economically, socially, culturally, and environmentally. Some communities are proactively preserving and maintaining existing working waterfronts and waterways, using creative financial and organizational approaches. Nonetheless, piecemeal conversion of properties that previously supported water dependent commercial activities, such as fishing and shipping, to non-water dependent uses, has had unexpected cumulative impacts on communities. In many cases, the rate of loss and conversion outpace community action to address the issue. Raising the awareness and visibility of these industries is a high priority across all segments of the waterfront.

Managing coastal areas requires a concerted effort by government institutions at all levels, the private sector, and community groups, as well as sustained political support. Achieving a balance between top-down legislative authorities and bottom-up community involvement

requires understanding the issues and maintaining strong links with stakeholders in the area. Efforts to balance local interests with state and national legislation must consider the socioeconomic context of the coastal population and the role demographic patterns play in the region.

Any strategy should also include the public's right of access to the water when making development decisions. The public trust doctrine establishes that all navigable and historically navigable waters, including the lands beneath and resources within, are held in trust by the state for the public's benefit and use. The doctrine protects a range of uses, including commerce, navigation, and fishing. This doctrine is a key factor affecting coastal and waterfront development and should be taken into consideration in all land use decisions involving the waterfront.

Future development of coastal communities will rely on the opportunities presented by the coastal environment, and the level of public policy that governs such opportunities. The challenge is to devise a strategy that will promote compatibility between economic development and the long term environmental and socio-economic needs of the community. Compatible multiple-use objectives should favor long-term development and resource conservation strategies rather than short-term development objectives.

Nationally, coastal states and localities are using planning, zoning, land conservation and acquisition, tax incentives, public improvements and state and local regulations to help preserve their working waterfronts. In many cases these initiatives are the result of a coalition of groups with similar interests including industry associations, nonprofit groups and government agencies.

The Virginia CZM Program has partnered with VIMS – Sea Grant Marine Advisory Service to develop a public policy designed to protect and enhance Virginia's working waterfronts. The first step in this process began with an exercise across the coastal zone, among regions with a tradition of commercial fishing and other water dependent activities, to derive their own definition of a working waterfront. Specifically, Accomack-Northampton, Hampton Roads, Middle Peninsula and Northern Neck planning districts started with the model definition developed by proposed legislation at the national level. Some PDCs adopted this definition while others tailored it to capture additional details of their region. Another step in the policy development process has been to conduct an inventory of existing working waterfront sites within these planning districts. The inventories captured the precise location (including digital maps and photos), specialized support services, unique site features and in some cases planning effort toward future transfer of site ownership.

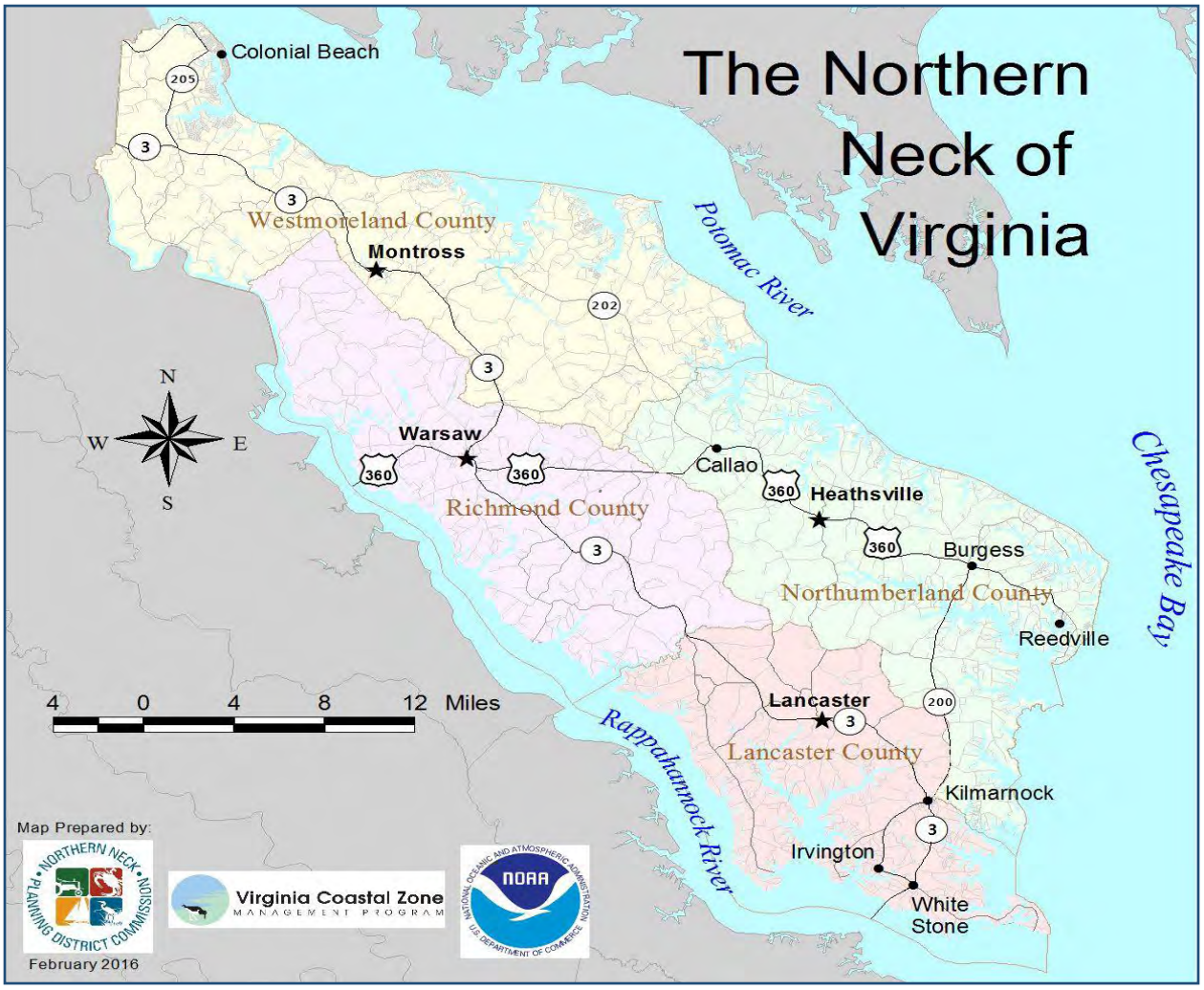
In 2007, Virginia hosted the first national Working Waterfronts Symposium in Norfolk, which was sponsored by the Virginia CZM Program. In February 2014 the CZM Program sponsored the Virginia Working Waterfronts Workshop which helped identify issues faced by rural working

waterfront communities in Virginia, and provided an opportunity for stakeholders to become directly involved in clarifying the issues and challenges facing Virginia's working waterfronts.

During the summer and fall of 2015, meetings were held with stakeholders across the Middle Peninsula, Northern Neck and Eastern Shore to discuss historic and current use of working waterfront space, the economic value of working waterfronts, and legal, policy, and financing tools that can be used to preserve, enhance, and protect these valuable areas. In total, well over 200 meetings with local Boards of Supervisors, individual Board of Supervisor members, local government administrators, and local working waterfront business leaders. Through these meetings, 12 working waterfront issue areas or "stressors" were consistently expressed in each region.

The intent of this Working Waterfront Master Plan is to address those stressors and frame a set of policies that will serve to assist in protecting, restoring and enhancing water-dependent commercial and recreational activities. The strategy will help communities with existing water-dependent commercial infrastructure better understand the long-term costs associated with the loss of working waterfronts, develop new policy tools to help them manage the increasing growth pressures, and build capacity to develop working waterfronts as a thriving component of local economic development. Efforts have also been made to identify an innovative means to help preserve commercial fishing heritage/folklore. For these vocations are intrinsically valuable and an inherent part of the landscape.

Chapter V
Northern Neck Planning District Commission - 17



A. Introduction

The Northern Neck Planning District Commission (NNPDC) is the regional government agency serving the four counties of the Northern Neck. The counties included in the NNPDC are: Lancaster, Northumberland, Richmond and Westmoreland. The Northern Neck is surrounded on three sides by water, to the north by the Potomac River, to the east by the Chesapeake Bay, and to the south by the Rappahannock River. While there are lowlands in Northumberland and Lancaster County, there is considerable topography on the Northern Neck, with the highest elevation of 200 feet occurring in Westmoreland County. There are many creeks and rivers that bisect the counties of the Northern Neck, in Westmoreland County some of the larger tributaries are Monroe Bay/Creek, Nomini Creek, Lower Machodoc Creek, Yeocomico River in Westmoreland County. In Northumberland County, the Coan River, Little Wicomico River, Great Wicomico River, Indian Creek and Dividing Creek are some of the larger waterbodies. In Lancaster County, Dymer Creek, Antipoison Creek, Carter Creek, and the Corrotoman River are the major waterbodies that connect as well as divide the County. Richmond County has Lancaster/Morattico Creek at its southern end with Farnham Creek, Totuskey Creek and Cat Point Creek, to the North, which all drain into the Rappahannock River.

Activities that take place in the coastal zone of the NNPDC include farming, forestry, and fishing. In the last twenty years there has been an increase in waterfront residential development, with many homes being second homes or retirement homes. With the current economic downturn, the pace of waterfront residential construction has slowed considerably. Waterfowl hunting is a popular sport in the Northern Neck, and in most creeks you will find at least one duck hunting blind on stilts in shallow water. Recreational boating is popular in the Northern Neck in the warmer months, from powerboats, to sailboats to personal watercraft to kayaks, canoes and stand up paddleboards. There are twelve canoe and kayak water trails that have been created in the Northern Neck, through Virginia Coastal Zone Management Grant funding, which can be accessed through the Northern Neck Tourism's webpage (northernneck.org). In Reedville, in Northumberland County, there is an industrial menhaden processing company, Omega Protein that is the last of the fish factories that process menhaden into oil and fish by-products on the East Coast. The menhaden fishery is the largest in Virginia by volume, and contributed $88 million to Virginia's economy in 2014. The Commonwealth's 2015 allowable menhaden harvest will be set at 158,700 metric tons, of which a majority will be harvested by Omega Protein. In addition to industrial fishing, there are a substantial number of watermen that employ pound and gill nets to harvest fish from local waters. Fish harvested include rockfish, croaker, perch, spot, as well as flounder. In addition to net fishing, there is a local hook and line commercial fishery for rockfish as well. Many watermen also harvest blue crabs, most of the crabs are caught employing crab pots, but some also use trot lines. There are substantial harvests of oyster in the Rappahannock River rotational harvest areas in the lower

Rappahannock River in the Fall, and oyster aquaculture is increasing at such a rate that a local county staff person noted it was like "a gold rush on leasing state bottom land". An oyster hatchery was established in Northumberland County a few years ago and oyster aquaculture featuring spat-on-shell setting technique in cages, in floats and on oyster bottom is increasing.

The NNPDC is interested in enhancing, retaining and increasing working waterfront industries in the Northern Neck region because they are an integral part of the culture and history of the region. In the late 1800's, and early 1900's almost all transportation of goods and persons to the Northern Neck was by steamboat, and there are generations of Northern Neck families that have worked on the water. The independent spirit and hard work ethic of those that work on the water is an iconic ideal for many in the region. Many of the working waterfront businesses are small businesses and the Northern Neck Economic Development Plan identifies small business growth and entrepreneurship as priorities for the region. In addition, the economic diversity that working waterfronts provide help to create a more resilient local economy.

B. History of Working Waterfronts in the Region

Before Europeans settled in the Northern Neck Region, Virginia Indians used nets to capture migrating shad, sturgeon, and other fish. Native Americans also plied the water in dugout canoes, constructed using fire and hatchets in order to hollow out tree trunks. Native Americans would also harvest oysters from oyster bars that at that time, which were so abundant, as to be uncovered at low tide. Oyster middens, which are piles of oyster shells that were discarded by Native Americans after eating the shellfish, are prevalent along and near the shoreline in most areas of the Northern Neck. When the English colonists arrived, all transportation in the New World was by boat, as there were few roads. After Jamestown, colonists moved up the James River and northward on the Chesapeake Bay and created plantations. The Northern Neck was one of the first areas settled outside of Jamestown. Plantations would grow corn, but mostly tobacco for export back to England, with manufactured goods being imported on the return trip.

In the late-1800's, steamboats were the principal means of transporting people and goods around the Chesapeake Bay region. For decades steamboats and smaller sailing vessels were the Bay's only practical means of transportation. Isolated rural communities depended upon their nearest river landing for machinery, supplies and store bought goods. In return, they shipped produce, tobacco, grain livestock and seafood to sell in the cities of Baltimore or Norfolk. Rural residents would travel on the steamboats to the larger cites for doctor's appointments, shopping or for business reasons. Arrival of steamboats to isolated rural steamboat landings became a real social event, and a connection to the outside world. In the Northern Neck, there were steamboat routes that connected the region to Baltimore and Norfolk, which docked in protected harbors along the Potomac River, Rappahannock River, and

the western shores of the Chesapeake Bay. Some of the more notable steamboat landings on the Rappahannock River side of the Northern Neck were Sharps, Morratico, Monaskon, Weems, Irvington, White Stone Beach and Westland (Windmill Point). Steamboat Landings on the Northern Neck side of the Potomac River included Colonial Beach, Kinsale, Lodge Landing, Walnut Point, Lewisetta, Cowart, Bundick and Coan Wharf Landing. At the peak of the steamboat era, 85% of all the oysters harvested in the world came from the Chesapeake Bay and were shipped by steamer around the world. Most often their journey started on a paddle wheel steamer. The devastating hurricane of 1933 destroyed most steamboat ports, which by and large, was the end of the Steamboat Era in the Chesapeake Bay.

In 1867, Elijah Reed of Sedgwick, Maine, brought the menhaden fishing industry to Northumberland County. Menhaden, an oily, unappetizing fish, used locally as fertilizer, had begun to replace the dwindling number of whales as a source for oil. Reed set up a factory for rendering the oil from the fish in the area between the Little Wicomico River and Great Wicomico River. The remaining fish meal was sold to farmers as fertilizer. Through the 1870's and 1880's seven fish and shellfish rendering and packing houses were built in Northumberland County and by the turn of the century the village of Reedville was the largest fish port (by volume) in the United States and one of the largest in the world. So much money was made of the menhaden fishery, Main Street in Reedville was called "Millionaires Row". Today, there is only one menhaden processing facility in Reedville and it is the largest employer in Northumberland County.

Throughout the history of the Northern Neck, individual watermen would venture out in small sailing vessels and set fish nets, both gill and pound nets to capture various species of fish. These rugged individuals would also oyster and crab, and sell to independent crab and fish houses. The independent nature and strong work ethic of these individuals is admired by many in the region.

In the 1920's, Benjamin F. Lewis (1858-1950), a native of Mulberry Grove, Illinois, moved to Harry Hogan, Virginia on Northumberland County's Yeocomico River, and invented the Chesapeake Bay Crab Pot. Mr. Lewis patented the crab pot in 1928, and perfected it ten years later. The invention changed the way crabs are harvested in the Chesapeake Bay, and the design is still in use today. Variations on the original crab pot design are used worldwide.

There is also a tradition of boat building on the Northern Neck, mostly traditional Chesapeake deadrise boats. George Butler of Reedville was a prolific builder, and many of the boats he made still ply the local waters. Another local Northumberland County boat builder was Odis C.W. Cockrell, and his son, Tiffany Cockrell who began building Chesapeake deadrise workboats in 1934. They initially built boats part time in the summer, and harvested oysters in the winter. After World War II, there were two cold winters where not much oystering was accomplished, and the pair decided to build boats year round. They began to build pleasure boats and in 1949, Tiffany's father decided to retire and turn over the business to his son. In the 1960's they built

wooden pleasure boats from 30 to 40 feet in length, and in the 1970s' transitioned to building fiberglass boats. The Cockrell family has built over 150 boasts since the 1930's.

A notable boat builder in Westmoreland County was Clarence Stanford from Colonial Beach, who operated Stanford's Marine Railway from 1945 until his passing in 2006. Clarence Stanford constructed wooden vessels and was one of the top boat builders in the Mid-Atlantic, with many of his vessels still operating in local waters.

In Lancaster County, specifically, the Weems area, the Rappahannock Marine Railway, was built in 1905 primarily for the repair and maintenance of the large menhaden boats in the area, however several vessels were also built on the site. A one hundred and four foot tugboat and a one hundred and twenty eight feet fishing vessel was built at Rappahannock Marine Railway before it changed hands in 1917 and the name changed to Humphrey's Railways. Humphrey's Marine Railways and Lumber Corporation which was the official name of the company, and they built 11 vessels, 10 of them being fishing vessels, with lengths ranging from sixty-two to one hundred and thirty-four feet. The most well-known vessel built at Humphrey's Railways was the side paddle wheel steamboat, The Westmoreland, which was 100 feet long and was built in 1921. Humphrey's Railways became Ampro Shipyard, Inc. in 1988, and is one of the working waterfront case studies that is highlighted later in this chapter.

C. Current Status of Working Waterfronts in the Region

In the Northern Neck of Virginia, the term `working waterfront' means real property (including support structures over water and other facilities) that provides access to coastal waters to persons engaged in commercial fishing, recreational fishing businesses, boatbuilding, aquaculture, or other water-dependent, coastal-related business and is used for, or that supports, commercial fishing, recreational fishing businesses, boatbuilding, aquaculture, or other water-dependent, coastal-related business.

The status of working waterfronts in the region has declined in previous decades due to the decline of the oyster and crab populations. There are several abandoned oyster/crab houses in each county of the Northern Neck, and as the years go by, these structures continue to deteriorate. However, in the last few years oyster aquaculture has increased and leases on state bottomland in local creeks have also been increasing in coverage. Local marinas have remained relatively steady, but many have seen decreased profits. Boat building has declined, but there are still a few boat builders still in business in the region.

- Working waterfronts are being used by recreational boaters and fishermen, industrial fishing operations, charter fishing boats, ecotourism tour boat operators, boat builders, watermen, marine construction businesses, marinas, and oyster aquaculturists.
- Working waterfront infrastructure benefits the region in many different ways.

- Economic benefits of working waterfronts vary, depending on the county. Northumberland County has the highest economic impact in the region from working waterfronts, or Ocean Jobs, from the NOAA Coastal County Snapshots. According to the NOAA 2013 economic data, Northumberland County leads the region with 429 employees, $16 million in wages, and $161 million in goods and services with 17.6% of the total jobs being maritime jobs. Second in the region is Westmoreland County with 425 employees, $10 million in wages and $70 million in goods and services from ocean jobs and 12.7% of the total jobs being maritime jobs. Third is Lancaster County, with 268 employees, $4 million in wages and $22 million in goods and services from ocean jobs and 5.9% of the total jobs being maritime jobs. Richmond County has the least economic benefit from ocean jobs in the Northern Neck region, with 96 employees, $1 million in wages and $1 million in goods and services and 3.7% of total jobs being maritime jobs.
- Another way to measure the economic benefits of working waterfronts, and specifically the local fisheries impact is to examine the number of Virginia Marine Commission (VMRC) commercial fishing and shell fishing licenses sold in each of the counties, as well as the cost of those licenses. The table below comes from the 2015 Virginia Marine Commission Commercial Licenses and Permits dataset (the full 2015 dataset is included in the appendix), and shows selected data for the four Northern Neck Counties. The counties are abbreviated to two letters, LC = Lancaster County, NC = Northumberland County, RC = Richmond County, WC = Westmoreland County, NNK = Northern Neck (all four counties combined).

Table 2

Selected 2015 VMRC Commercial Licenses and Permits	**LC**	**NC**	**RC**	**WC**	**NNK**
Oyster Aquaculture Production Owner Permit	26	45	5	26	**102**
Shucking House Combined (from under 1,000 to >200,000 oysters)	5	5	1	6	**17**
Crab pot Licenses Combined (from 85 or less to 256-425 crab pots)	52	99	44	76	**271**
Nets Combined (Pound Net, Staked Gill Net, Gill Net 600 & 1200 ft.)	102	273	84	162	**621**
Totals	**211**	**467**	**139**	**296**	**1113**

The above table reinforces previous statements regarding the increasing activity in oyster aquaculture in the region, and that individual watermen harvesting oysters and crab are a significant portion of the working waterfront businesses in the Northern Neck region.

The total cost of commercial permits and licenses in 2015 to the VMRC are shown below.

Table 3

2015 VMRC Commercial Licenses and Permit	**NC**	**LC**	**RC**	**WC**	**NNK**
Total License and Permit Fees Collected	$121,734	$68,127	$36,622	$68,339	$294,822

As you can see from the above table, there is significant revenue sent to the VMRC each year by individuals and businesses in the four Northern Neck counties. In addition, the revenues generated from the living resources legally harvested within the VMRC license and permit limits necessarily exceed the license or permit costs multiple times so there is substantial profit for the individual or business.

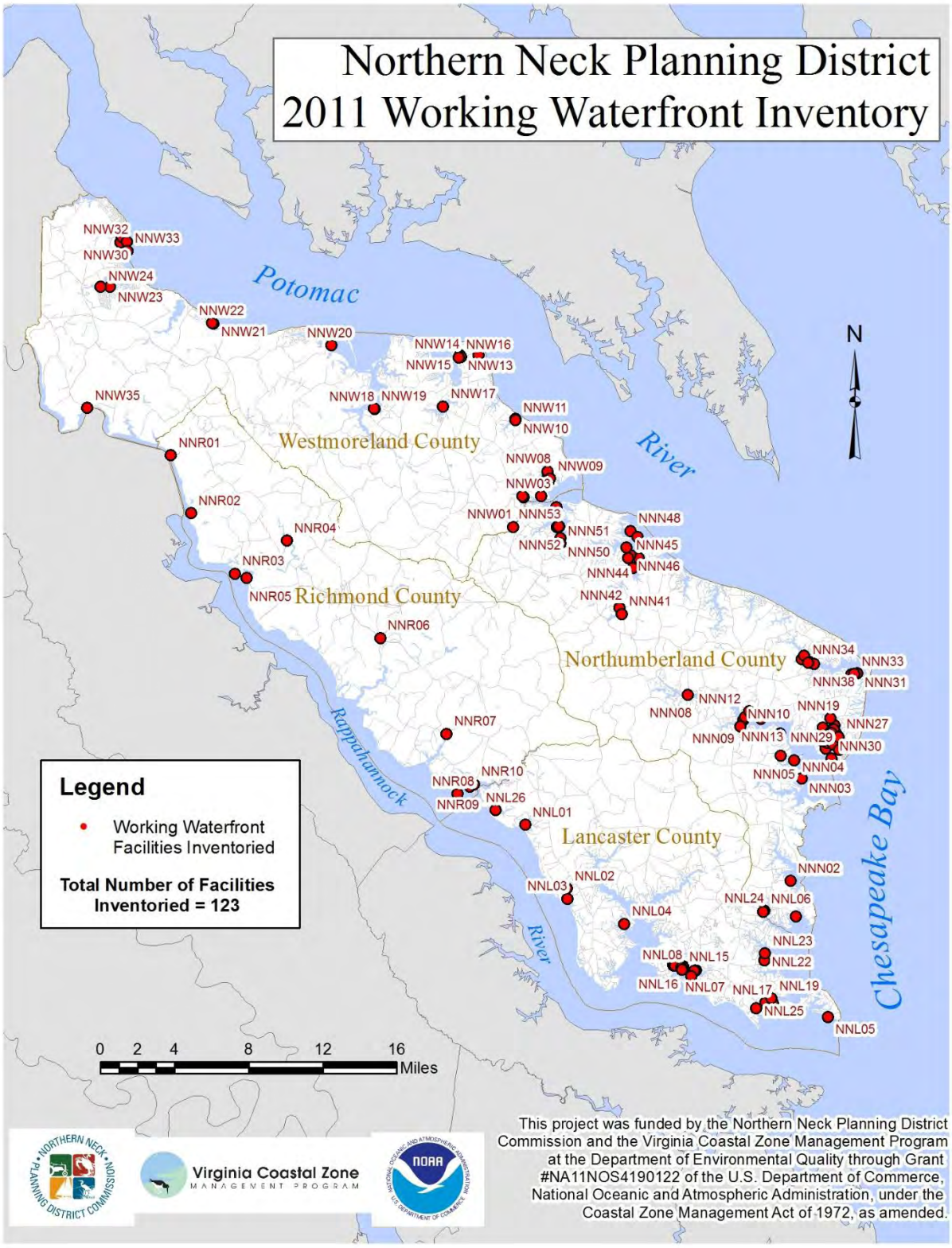
- Societal benefits of working waterfronts include increased recreational opportunities for citizens to enjoy water based recreation activities, such as boating, paddle sports (canoeing, kayaking, and stand up paddleboards), fishing, crabbing, water skiing and swimming. These quality of life amenities make the Northern Neck a place where many choose to live as well as make the area a prime location for second homes, vacation homes, and retirement homes .In addition, the economic diversity that working waterfront provide helps increase the resilience of the local economy to endure hardships while providing jobs.
- Cultural benefits include the aesthetic appeal of traditional working waterfront activities. Many persons enjoy watching a waterman methodically circling his crab pots, one by one, to empty, cull and rebait the crab pots. Others, such as artists revel in the working waterfront scenes of old crab boats, or skiffs tied up to dilapidated structures. As a culture, these scenes and activities help tie us to the past and give us a link to traditions that have been relatively constant over our lifetimes, and our forbearer's lifetimes.

Working waterfronts are under threat from a variety of stressors. Loss of living resources have closed many oyster and crab houses on the Northern Neck that had operated for decades. Coastal hazards, such as tropical storms and nor'easter's, as well as flooding are a threat to the area's working waterfront, as they have been in the past. Sea level rise, coupled with coastal hazards are also increasing the vulnerability of some these working waterfront areas. Other threats to working waterfronts include the lack of legacy planning, where the death or retirement of the owner of the working waterfront business can lead to the closure of the business. In the recent past, waterfront residences have been constructed on the sites of former oyster and crab houses in at least two Northern Neck Counties. The grandfather clause of Virginia's Chesapeake Bay Preservation Act allows structures to be built in the same footprint

of buildings that existed prior to the institution of the Bay Act in 1989. This is appealing to citizens who want a home closer to the water's edge, as any new construction is required by the Bay Act to be setback 100 feet from tidal water or tidally connected wetlands. In both instances, the oyster or crab house was abandoned and in various states of dilapidation, but once those sites are transitioned to residential development, they rarely return to business use. In recent years, the economic downturn has slowed the threat to convert working waterfronts to residential use, as there are currently a surplus of waterfront houses on the market.

Working waterfronts remain important to the Northern Neck PDC and its member localities. The working waterfront economy is an integral component of the overall economy, and provides diversity to each county's local economy. Recreation and tourism are important components of the local economy, and working waterfronts provide the gateway to enjoy the water-based recreation, whether it is sight-seeing, recreational boating and fishing, waterfowl hunting or bird watching. Preserving working waterfronts are import to the culture and history of the Northern Neck, and provide a connection to the past that is important to many citizens of the Northern Neck. Small businesses are an integral component of the Northern Neck economy, and individual watermen and oyster aquaculturists are beginning to grow, strengthening the local economy.

Figure 1


Northern Neck Planning District
2011 Working Waterfront Inventory
Potomac
River
Westmoreland County
Richmond County
Northumberland County
Lancaster County
Rappahannock
River
Chesapeake Bay
N
NNW32
NNW33
NNW30
NNW24
NNW23
NNW22
NNW21
NNW20
NNW14
NNW16
NNW15
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NNL04
NNL23
NNL08
NNL15
NNL22
NNL16
NNL07
NNL17
NNL19
NNL25
NNL05
Legend
Working Waterfront Facilities Inventoried
Total Number of Facilities Inventoried = 123
0 2 4 8 12 16
Miles
Virginia Coastal Zone
MANAGEMENT PROGRAM
This project was funded by the Northern Neck Planning District Commission and the Virginia Coastal Zone Management Program at the Department of Environmental Quality through Grant #NA11NOS4190122 of the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, under the Coastal Zone Management Act of 1972, as amended.

D. Working Waterfront Project Background

Funding to improve working waterfronts within the region was obtained from the Virginia Coastal Zone Management Programs, FY11, Section 309 Focal Area Grant. The grant was used to create a regional definition of Working Waterfronts for the Northern Neck are which was vetted and agreed upon by county staff from all four Northern Neck jurisdictions. This grant also funded the creation of an inventory of working waterfronts within each of the four Northern Neck Counties.

The working waterfront inventory was drafted in ArcGIS and shapefiles were created for each county, and combined into a region wide Geographic Information System (GIS) data set. Various data sources were used, aerial photography, Virginia Department of Health, Division of Shellfish Sanitation watershed reports, as well as local knowledge was used to locate working waterfront infrastructure. In addition, each working waterfront site was detailed in an Microsoft PowerPoint slide show that shows an aerial photo of each site, the NOAA marine chart showing the water approach details of the site, and the attributes of the infrastructure on the site that are also contained in the ArcGIS shapefile attribute file. County staff from all four Northern Neck counties reviewed the WWF Inventory map for their county and offered input as to additions and deletions for their respective WWF inventory. With the creation of the Northern Neck Working Waterfront Inventory, there is now a baseline (from the year 2012) for the region to be able to compare the status of working waterfront infrastructure sites into the future.

The Northern Neck PDC partnered with the Middle Peninsula PDC and the Accomack-Northampton PDC in FY11 in the Rural Chesapeake Bay/Seaside of Virginia Working Waterfront Coalition Virginia Coastal Zone Management Program's grant, Task 53. The Northern Neck PDC examined three case studies, all in Northumberland County that illustrated working waterfront businesses that were closed or in danger of closing, discussed the reasons they closed or were in danger of closing, and documented the issues associated with the closing of each business. The working waterfront case study that was part of the final products of the FY 11, Task 53 grant follows.

The Northern Neck PDC partnered with VIMS Sea Grant, the Middle Peninsula PDC and the Accomack-Northampton PDC in FY13 in the Developing a Working Waterfronts Plan for Virginia's Coastal Zone, Year 3 Grant, Task 92 from the Virginia Coastal Zone Management Program. The Northern Neck PDC created a case study that examined a marine railway in Weems, which is located in Lancaster County on Carter Creek, a tributary to the Corrotoman River. The name of the business present at the location is Ampro Shipyard, Inc. Ampro Shipyard's marine railway has deteriorated and the case study examined impediments to the future use of the site as a working waterfront business.

E. The Future of Working Waterfronts in the Region

The Northern Neck region hopes to foster a working waterfront friendly business environment to help small and large working waterfront businesses take advantage of the surrounding water resources to create a diversified regional economy. As mentioned previously, oyster aquaculture, utilizing cages, as well as spat-on-shell techniques to seed existing oyster beds, in on the increase. Water based ecotourism is another business that is gaining momentum. Charter boat fishing continues to be popular, especially when large striped bass are migrating in the Spring and Fall. While boat building on the Northern Neck has decreased from its heyday in the early 1900's there are still opportunities in that sector of the working waterfront economy.

There are tools that the Northern Neck localities are already implementing to help working waterfront businesses, and plan to do so into the future. For example, Lancaster County has an innovative exemption in its non-conforming use portion of the county's zoning ordinance for certain working waterfront businesses. Most counties have language that states that if a non-conforming use (structure or activity) is discontinued for a period of two years, then it shall be deemed abandoned and any subsequent use will be required to be in conformance with the zoning ordinance. Lancaster County chose to exempt the following uses from the non-conforming use section of the zoning ordinance: oyster houses, oyster shucking houses, crab houses, fish and food processing activities along with some agricultural uses.

In the past few years, oyster aquaculture has become more prevalent in residential areas, and the region has not had as many conflicts as other areas in coastal Virginia. In several instances, county staff have encourages applicants to work out any contentious issues with any neighbors that have objections, such as voluntarily limiting amount of equipment visible, hours of operation, or other conditions that address neighboring property owners concerns. Several examples of the local county Board of Supervisors decisions supporting oyster aquaculture follow. The Lancaster County Board of Supervisors approved a special exception September 27, 2012 that allowed Mifarms Oysters, Inc. to operate their year round oyster business, despite hearing protests from local citizens. The special exception was needed because of the commercial year round nature of the business in a residential zone. The owner of the business agreed to attend to the oyster cages to ensure the premise is not unsightly. On March 28, 2013, the Lancaster Board of Supervisors approved Sledd Oyster Company to operate a year round oyster business on Windmill Point Road, on a parcel of land which was once home to an oyster and crab house. In this case, the neighbors supported the operation. On December 12, 2013, the Northumberland Board of Supervisors voted 5-0 to grant a conditional use permit to Thomas Dale Gaskins Seafood to use and expand a residential pier for commercial purposes. Some neighbors expressed concern regarding the impact on the creek, noise and bringing a commercial business in a residentially zoned area. Several neighbors and watermen supported his request, and several were opposed to the request. One of the conditions the Board of Supervisors placed on the conditional use permit was that the pier can only be used by the

owner of the business and his father, and that the conditional use does not convey with the property when sold. On March 19, 2015, the Northumberland County Board of Supervisors granted a conditional use permit to install an upweller for the Walnut Point Oyster Company to use to expand its oyster growing operation on the Coan River near Walnut Point. There was opposition to the conditional use permit from neighbors on both sides of where the owner of the Walnut Point Oyster Company lives. In addition, there were citizens in opposition to granting the conditional use permit from as far away as Reedville. Opponents to the operation cited noise and traffic, as well as the effect on property values. The property in question is zoned waterfront residential, which allows commercial aquaculture as a conditional use. The owner of the operation noted that the conditions on the use permit limit him to the use of only one truck, and that his commercial seafood license covers all other aspects of his operation. The Northumberland Board of Supervisors voted 3-2 to approve the conditional use permit.

As evidenced by the above local land use decisions by both the Northumberland and Lancaster Boards of Supervisors, the local county governments are willing to encourage use of the waterfront for oyster aquaculture businesses, despite the majority of the waterfront being zoned residential.

When the working waterfront inventory for the Northern Neck was completed in Fy11, there was limited funding for researching the infrastructure characteristics of the hundreds of working waterfront businesses that were cataloged. Research on the attributes consisted of a web-based search for attributes such as whether the business had ice, refrigeration, freezers, winches available for off- loading seafood or equipment, travel lifts for transporting vessels out of the water, whether gear was allowed to be stored on site and additional details on the infrastructure on site. As a result of the limited amount of research, many of the data fields for the infrastructure at the inventoried working waterfront sites were tagged with “unknown”. These data gaps in the working waterfront inventory should be addressed in the future so that the baseline from which to compare any loss of working waterfront capacity can be accurately gauged into the future.

Action steps to help preserve and protect working waterfront in the region could include language added to the County’s Comprehensive Plan, indicating the preservation, protection and enhancement of working waterfronts as a county policy into the future.

Lancaster County, in its last revision of the County’s Comprehensive Plan, added such language. In Chapter 7 of the Lancaster County Comprehensive Plan, on page 7-17, Objective III-A states County land use policy should “Preserve and promote our maritime heritage, the watermen who continue it, and our waterfront recreational and service industries. On the next page of Chapter 7, page 7-18, Strategies to implement Objective III-A include:

- Identify active commercial fishery operations and ensure that County land use decisions on nearby properties are not necessarily detrimental to these waterfront activities.

Educate the public on the contributions these heritage industries make to the economy of our area, as outlined above, which far exceeds the sales value of their product.

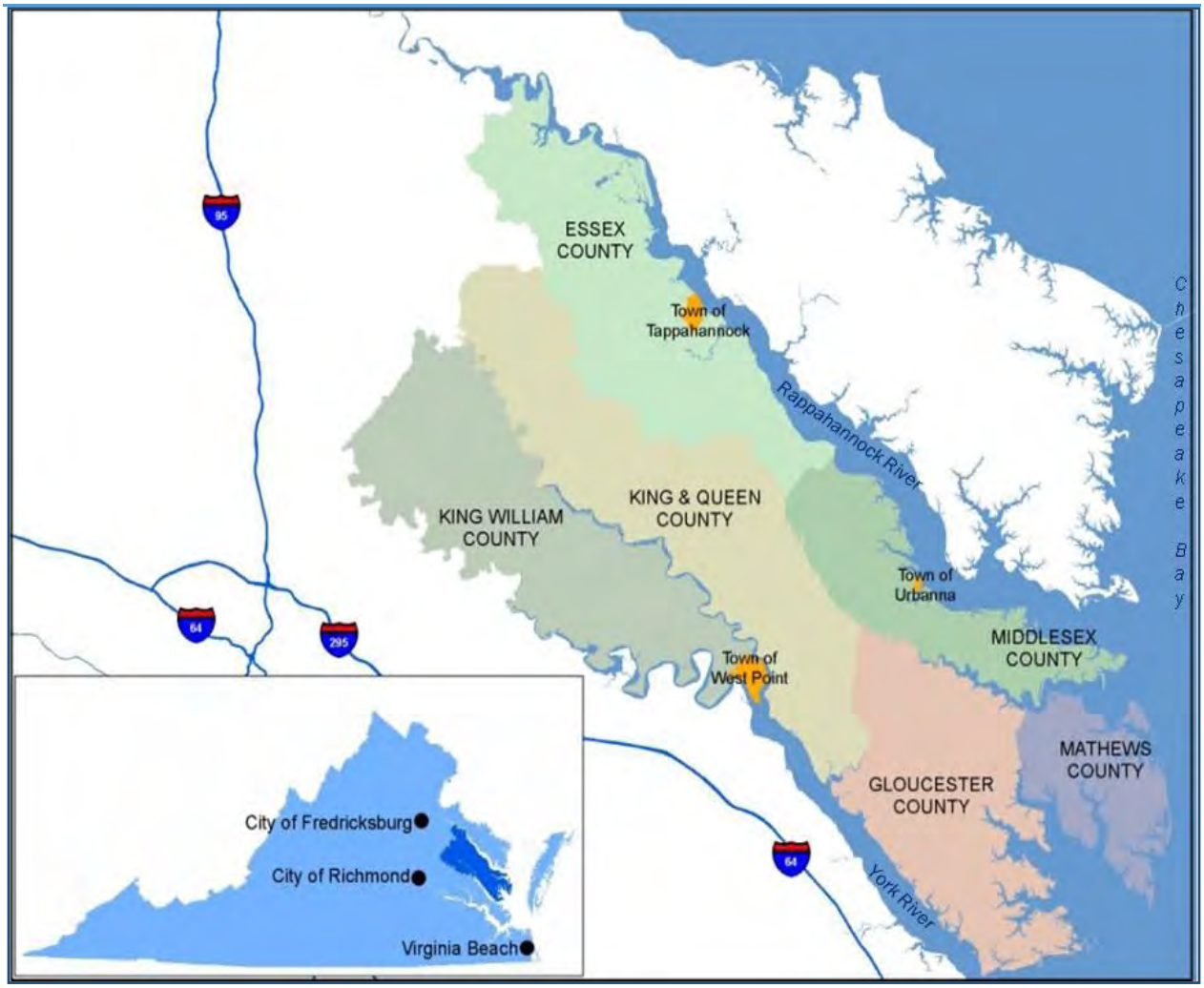
- Identify and encourage the adaptive reuse of vacant or failing waterfront commercial properties. Consider the use of historic tax credits, Community Development Block Grants, or the use of public or privately generated funds to stabilize such properties or develop new uses.
- Consistent with land use and water quality and environmental considerations, seek out and encourage new waterfront commercial enterprises including such things as aquaculture, maritime museums, boating instruction schools, restaurants accessible to boaters, seafood retail stores, marinas, charter fishing operations, retirement communities, etc. Actively help such water-oriented businesses identify suitable sites for their particular enterprise. The adaptive reuse sites discussed above, as well as our waterfront villages and hamlets, could be prime candidates for locating such new enterprises.
- Increase efforts to identify and develop waterfront public access sites and promote multiple uses for such sites. For example, a public fishing pier in an appropriate location could be opened up for three mornings a week to commercial fishermen, oystermen and crabbers to tie up and sell their catch to the public. Canoe and kayak launching public access sites could be linked as part of the County's developing blue water trail system and used for point-to-point scenic paddling gatherings or paddling races.
- Actively educate the public and promote the maritime heritage and waterfront oriented recreational, cultural and business activities of our County. Examples of opportunities for such education and promotion would include our outstanding maritime museums and the picturesque waterfront villages most are located in, Belle Isle State Park and the various recreational opportunities it offers, our marinas and the facilities they provide, boat races and shows, fishing derbies, maritime and seafood festivals, steamboat landing reenactments, tall-ship visits, etc.

Encouraging the other three counties in the Northern Neck, Northumberland, Richmond and Westmoreland Counties to adopt similar language in their Comprehensive Plans would be a good action step in the Northern Neck region, as the Comprehensive Plan is used as guidance when making individual land use decisions.

Another action step to help protect and preserve working waterfronts in the Northern Neck region would be to encourage the other three counties in the Northern Neck, Northumberland, Richmond and Westmoreland Counties to look into revising their non-conforming zoning ordinance language and consider exempting certain working waterfront uses from the non-conforming clause as does Lancaster County (see the Weems/Ampro Marine Railway case study above for specifics). This would allow flexibility to allow the restarting of abandoned oyster and

crab house businesses if the living resources rebound and if there is need for additional seafood processing facilities into the future.

Chapter VI
Middle Peninsula Planning District Commission



A. Introduction

The Middle Peninsula Planning District Commission (MPPDC) is a political subdivision of the Commonwealth of Virginia formed under VA Code §15.2-4203 to provide solutions to problems of greater than local significance and cost-savings through economies of scale. The MPPDC serves nine localities of the Middle Peninsula including Essex, Gloucester, King & Queen, King William, Mathews, and Middlesex Counties as well as the Towns of Tappahannock, West Point, and Urbanna. This region has a total population of 90,826 (US Census 2010). MPPDC staff assist localities with long-term and/or regional planning efforts and has assisted member localities with a variety of projects related to coastal conflicts, policy, and land use changes, including impacts to working waterfronts.

With approximately 1200+ miles of coastline, the Middle Peninsula is located on the western shore of the Chesapeake Bay, bound to the north by the Rappahannock River and to the south by the York River. Since the region is located in the Virginia coastal plain, it has a relatively flat topography. The southeastern-most portions of the region are at sea level, while elevation rises to approximately 200 feet above sea level moving in a northwesterly direction towards King William County. The Middle Peninsula is a predominately rural region with large agricultural fields and forestland split by a number of small closely-knit communities. These communities rely heavily on natural resource extraction to fuel their local economics; however the metropolitan areas of Hampton Roads, Richmond, and Fredericksburg-Northern Virginia in close proximity, influence these communities.

The Middle Peninsula's culture and heritage has been shaped by a long maritime history focused on commercial fishing and shipbuilding. In recent years, however, the influx of people traveling and moving to the coast has influenced the regions dynamics. Whether a vacation destination, a location for a second home, or to retire, this interest in the waterfront has increased coastal development pressures in some areas of the region. Coastal development may have an economic appeal for some localities, but localities ultimately sacrifice losing their historical character, culture and heritage. For instance, traditional access points have been built upon, fenced off, posted "No Trespass", or purchased by new owners who are unwilling to continue old patterns of public access uses. Thus as access to water for maritime traditions and recreational access are under threat, this will affect the local economy and way of life in the region. In some parts of the region, as coastal properties become more desirable and increase in market value, property taxes increase, thus forcing watermen to vacate the waterfront since they can no longer afford the property tax. While historic trends of moving to the coast created the development patterns of today, sea level rise, climate change, the Federal Flood Insurance Reform and a host of other federal and state regulations may discourage future migration to the coast and may cause homeowners and businesses to reconsider living on the rural coast.

Therefore, as working waterfronts were once the epicenters of commerce as well as a cultural focal point for generations, Middle Peninsula localities are interested in preserving working waterfront infrastructure, knowledge and a maritime heritage on which the region was built. In part, MMPDC staff will continue working with localities to provide outreach tools and policy solutions that may improve and address current working waterfront issues. Localities will ultimately need to take the initiative to implement and take action steps to see improves to working waterfronts within their jurisdiction and the region.

B. History of Working Waterfronts in the Region

Working waterfronts of the Middle Peninsula were once the epicenters of economic development. They were the location of shipbuilding, a strong fisheries industry, as well as public access areas for recreational and commercial uses. Ferries transported citizens from peninsula to peninsula, while barges transported goods to and from ports in places such as the Town of West Point and Tappahannock. Watermen would start their workday on the piers and docks that speckled the coastline. They would head out to adjacent rivers and the Chesapeake

Bay to harvest fish, crab, and/or shellfish and return to the pier with their daily catch. This product would be uploaded and then sent to processing houses before going to market.

Figure 2: A photo depicting the hustle bustle of Williams Wharf in Mathews County.

In Mathews County building sailing ships was a major industry during the 1600's through to the 1990's. Approximately 2,000 seagoing vessels were built during this time. While the East River had six shipyards that contributed to the building of these vessels there were a number of other shipyards located on Blackwater Creek, Cobbs Creek, Winter Harbor, Milford Haven, North River, Pepper Creek, Point Breeze, Put-In-Creek, Sloop Creek, and Stutts Creek that created the boat building industry in the county. The East River was also an official point of entry to the US for 10,000+ vessels. In addition to shipyards, wharfs dotted the shoreline providing transportation for passengers, cargo, packinghouses, and canneries. For instance, William Wharf (Figure 1) was a trading post and major port for steamboats running from Baltimore to Norfolk in the early 1900's.

Many of these maritime trades were passed from generation to generation which engrained maritime history and culture into the Middle Peninsula.

C. Current Status of Working Waterfronts in the Region

In the Middle Peninsula of Virginia, the term `working waterfront' is defined as ***real property (including support structures over water and other facilities) that provides access to coastal waters to persons engaged in commercial fishing, recreational fishing businesses, boatbuilding, aquaculture, or other water dependent, coastal-related business and is used for, or that supports, commercial fishing, recreational fishing businesses, boatbuilding, aquaculture, or other water dependent, coastal-related business.***

With this definition in mind, in 2012 an inventory of Middle Peninsula Working Waterfronts was mapped (Figure 3). This depicted 81 working waterfront locations throughout the region.

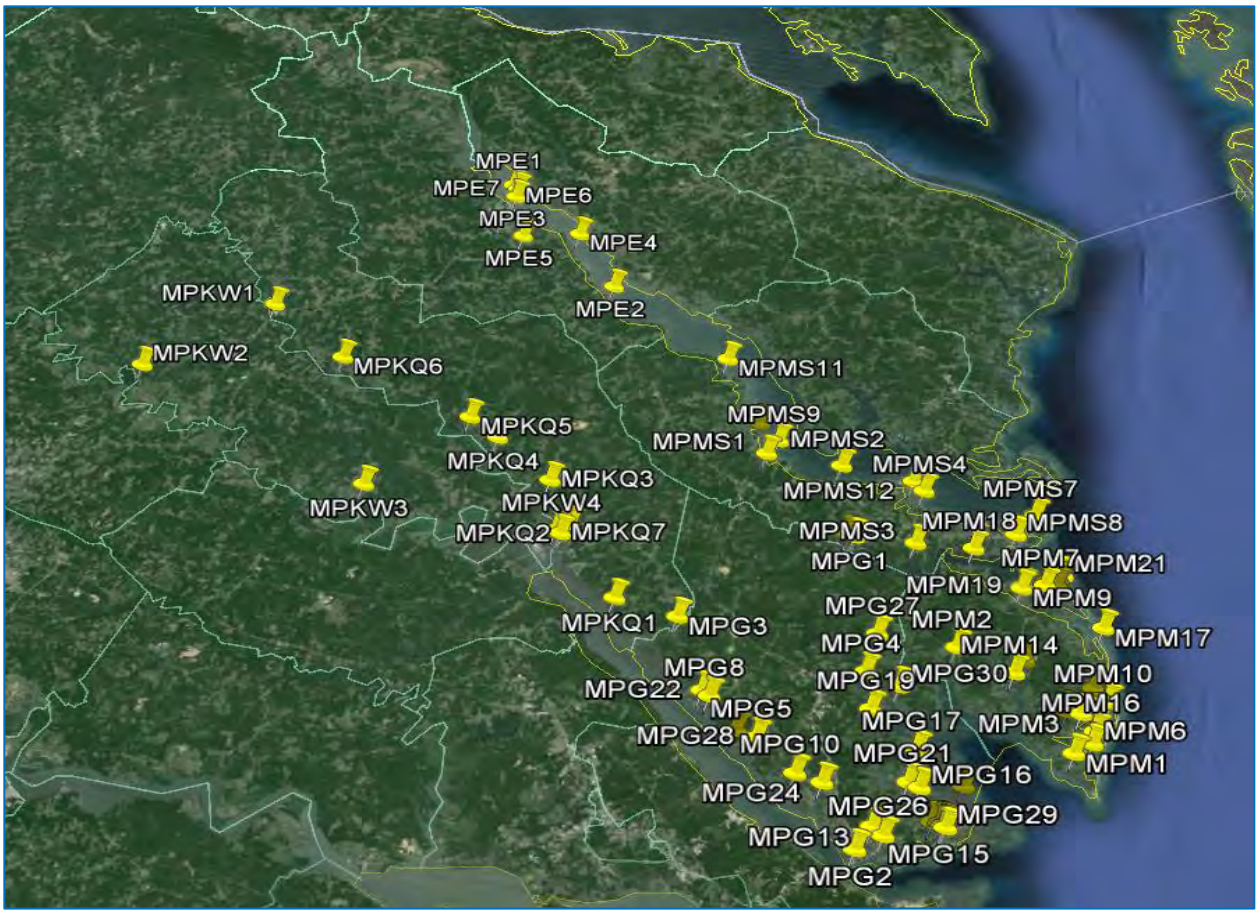


Figure 3: Map of Working Waterfront Infrastructure Inventory within the Middle Peninsula, 2011.

The maritime industry and working waterfronts have been central to the regional's heritage and culture. The Middle Peninsula region celebrates their maritime past and present heritage and culture with festivals including the Urbanna Oyster Festival, Crab Fest in Deltaville, Crab Carnival in West Point, Guinea Jubilee in Gloucester County, and Rivah Fest is Essex County. While maritime trades and skills were passed down from generation to generation for decades, in more recent years a career the maritime industry has become less lucrative and less attractive to younger people there has been a shift in the industry. Instead of relying on the unpredictability of a wild harvest, some watermen and a new generation of watermen are getting involved with oyster aquaculture which can be considered a more structured business. While environmental conditions will impact overall profits, aquaculturists can control more factors (ie. the number of oysters planted, the location, and the environment in which juveniles are reared) which increases the potential of oysters growing to maturity and being harvested. Middle Peninsula aquaculture businesses, including the Rappahannock Oyster Company (Topping, VA), Ward Oyster Company (Gloucester, VA), York River Oysters/Chessie Seafood and Aquafarms (Gloucester, VA), Oyster Company of Virginia (Mathews, VA), and Anderson's Neck Oyster (King & Queen County), are examples of aquaculture businesses that have excelled as they sell directly to high-end restaurants up and down the east coast.

Economically working waterfront industries contribute to the Middle Peninsula local and regional economies. Revenue is generated through tourism and recreation, boat building, harvesting of natural resources, maritime transport and marine construction. Maritime workers make a living inside the Middle Peninsula region and beyond the region. NOAA has taken a snapshot of the economic impact of the maritime industry in the region. Table 4 below provides a summary of the economic impacts to localities in the Middle Peninsula. The data reveals that the Maritime industry in Gloucester County is the strongest and continues to grow, while Mathews and Middlesex County maritime industry growth is slowing.

Table 4: Maritime jobs counting for employees, wages (2013), and good & services (NOAA Coastal County Snapshots, 2013).

County	Maritime Employees	Percentage of Jobs in County	Maritime job Wages	Goods and Services
Mathews	111	1.7%	$1 million	$2 million
Gloucester	902	9.5%	$12 million	$23 million
Middlesex	247	7.7%	$4 million	$8 million
Essex	400	-	$5.7 million	$10.8 million

Please note that NOAA does not track data for King William and King & Queen Counties, which is why they are not included in this table.

Locally a study was performed to illustrate and quantify how much working waterfronts in Aberdeen Creek, a small waterway serving seafood unloading and processing facility, contributes to the local and regional economy. The study estimated the economic impact (i.e., expenditures, economic output, incomes, and jobs) of Aberdeen Creek's commercial fisheries landings, processing/packing industry to the local economy. Aberdeen Creek is a classic example of a working waterway representing a critical nexus between the marine fisheries and the community; providing one of the few remaining commercial fishing unloading points in Gloucester. The study found that activities associated with harvesting, offloading, processing, packaging, and shipping seafood from the Gloucester facilities are intrinsically linked with several sectors of the local economy. The sale of seafood to both local and non-local buyers results in the purchase of inputs from a variety of service and supply firms, and the distribution of incomes to local employees. These expenditures are circulated within the Gloucester economy as these dollars are spent and re-spent. The total economic impact of the Gloucester seafood industry depends on the amount of seafood landings and the general economic conditions that exist at any given time. Thus, the actual impact values will vary from year to year. Table 5 provides a summary of the total economic impacts based on the Aberdeen Creek product flow.

Table 5: Total economic impacts based on Aberdeen Creek Product Flow ($ Millions)			
Impact Measure	Landings Only	25% Remains in County	50% Remains in County
Output	$4.05	$9.37	$14.68
Income	92	3.87	6.83
Employment	105	178	251
Value Added	1.11	5.20	9.28
Indirect Business Taxes	0.07	0.24	0.41
Other Property Income Impacts	$0.13	$1.09	$2.04

The maritime industry also generates revenue through the purchase of VMRC Commercial Licenses and Permits. The revenue generating from the sale of commercial gear licenses is transferred to the Virginia Marine Products Board[1]. VMRC only retains a small portion of any license increases that have occurred over the years and deposited into the Marine Fishing Improvement Fund[2].

[1] § 3.2-2705. Virginia Marine Products Fund established.: There is hereby created in the state treasury a special nonreverting fund to be known as the Virginia Marine Products Fund, hereinafter referred to as "the Fund." The Fund shall be established on the books of the Comptroller. All moneys collected and allocated from marine fisheries license fees required under Subtitle II (§ 28.2-200 et seq.) of Title 28.2 shall be paid into the state treasury and credited to the Fund. Interest earned on moneys in the Fund shall remain in the Fund and be credited to it. Any moneys remaining in the Fund, including interest thereon, at the end of each fiscal year shall not revert to the general fund but shall remain in the Fund.
Moneys in the Fund shall be administered by the Marine Products Board and used exclusively for the administration of this chapter, including payment for personal services and expenses of employees and agents of the Marine Products Board, rent, services, materials and supplies.
Expenditures and disbursements from the Fund shall be made by the Marine Products Board on warrants issued by the Comptroller upon written request signed by the duly authorized officer of the Marine Products Board.
The Auditor of Public Accounts shall audit all the accounts of the Marine Products Board as provided in § 30-133.

[2] § 28.2-208. Marine Fishing Improvement Fund continued.: There is hereby continued a special, nonreverting fund in the state treasury to be known as the Marine Fishing Improvement Fund, hereinafter referred to as the Fund. The Fund shall consist of (i) that portion of the nonresident harvester's license fees which have not been allocated to the Virginia Marine Products Fund as provided for in § 28.2-227, (ii) fees collected from the registration of commercial fishermen under § 28.2-241, and (iii) fees collected from the sale of seafood landing licenses under § 28.2-228.1. The Fund shall be administered by the Commission and used solely for (i) managing and improving marine fisheries, (ii) seafood product promotion and development services, (iii) mandatory reporting and stock assessment, (iv) education of commercial fishermen, (v) conservation and management strategies identified by the General Assembly and the Commission, (vi) public information pamphlets and summaries of rules issued with gear licenses, and (vii) retaining commercial fishermen to engage in replenishment, research, and stock assessment activities.

Similar to other coastal communities nationwide, working waterfronts within the Middle Peninsula are either adapting to present day conditions (i.e. regulations, environmental factors, land use changes, etc.) or they are disappearing. Factors that are pressuring working waterfront include:

- Competing and adjoining uses
- Cultural shifts are changing the demographics of the once rural coastal waterfront
- Commercial watermen and water-dependent businesses are being displaced
- Sea level Rise
- Shoaling and financing dredging projects

In the recent past the populations have migrated to the coast, the pattern of coastal land use and ownership is altered. In the past, the people who worked the water owned the majority of coastal property. With direct access to the water, these water dependent businesses could conduct business without time constraints or paying fees to dock or moor their boats. However, with an influx of people coming to the region for vacations, to buy a second home, or to retire, traditional access points have been built upon, fenced off, posted "No Trespass", or purchased by new owners who are unwilling to continue old patterns of public access uses. In some areas of the region, as coastal properties become more desirable it increases market value and property taxes increase, thus forcing watermen to vacate the waterfront since they can no longer afford the property tax changes. While historic trends of moving to the coast created the development patterns of today, sea level rise, climate change, the Federal Flood Insurance Reform and a host of other federal and state regulations may discourage future migration to the coast and may cause homeowners and businesses to reconsider living on the rural coast. For instance, in the Middle Peninsula, private property owners have gifted sizeable tracts of waterfront property to the MPCBPAA. Between 2006 and July 2015, the MPCBPAA has been gifted 33 separate parcels totaling over 162 acres and valued at $3,657,000 with limited or no deed encumbrances. While some property owners are interested in donating properties to receive tax benefits or to support the MPCBPAA in improving water public access for the citizens of the Commonwealth, others merely recognize the long-term burden (ie. financial, regulatory restrictions, environmental) of owning coastal property and want to get rid of the property.

In addition to changing coastal growth and coastal ownership patterns, Middle Peninsula coastlines will be influenced by sea level rise. Relative Sea Level (RSL) change describes the observed change in water level at a particular location. RSL rise rates at the local level are derived from accurate time series of water level measurements spanning several decades or more. A recent analysis of tide gauge data by the VIMS reported RSL rise rates ranging from 0.11-0.23 in/yr (2.9-5.8 mm/yr; period: 1976-2007; 10 stations) within the Chesapeake Bay region, with a number of the values representing the highest rates reported along the U.S. Atlantic coast (Boon et al. 2010). With respect to the Middle Peninsula, the two nearest stations located at Gloucester Point and Lewisetta, VA indicate current RSL rise rates of 0.17 (4.30 mm/yr) and 0.20 in/yr (5.15 mm/ yr), respectively. Also within the Chesapeake Bay region, land subsidence contributes to RSL change. Processes contributing to land subsidence include

tectonic (movement of the earth's crust) and man-induced impacts (e.g., groundwater withdrawal, hydrocarbon removal). During the last glacial period (maximum extent approximately 20,000 yr BP), the southern East Coast limit of the Laurentide ice sheet coincided with northern portions of Pennsylvania (Mickelson and Colgan 2003[3]). Consequently, land subsided under the ice load and, in turn, created a forebulge or upward displacement of lands south of the ice load. Upon retreat of the glacier, the land continued to redistribute, rebounding in previously glaciated areas and subsiding in the more southern forebulge region. Land subsidence rates on the order of 0.05-0.06 in/yr (1.2-1.4 mm/yr) are attributed to the postglacial forebulge collapse within the Bay region (Douglas 1991[4]). It can take many thousands of years for impacted regions to reach isostatic equilibrium. At a more local level, over drafting of groundwater is a significant factor driving land subsidence rates. Land subsidence rates within the Middle Peninsula, based on releveling analysis, vary between 0.09-0.15 in/yr (2.4-3.8 mm/yr) with maximum values being observed at West Point (Holdahl and Morrison 1974[5]; Davis 1987[6]). Pope and Burbey (2004[7]) reported average aquifer system compaction rates of 0.06 in/yr (1.5 mm/yr; 1979-1995) and 0.15 in/yr (3.7 mm/yr; 1982-1995) near the Franklin and Suffolk pumping centers, respectively, and that compaction appeared to correlate with groundwater withdrawal; West Point was not included as part of this study. Based on land subsidence and eustatic sea level information, the RSL rise rate would be expected to be on the order of 0.22 in/yr (5.6 mm/yr) at or near West Point, VA. Extrapolating current Gloucester Point and Lewisetta rates, RSL would increase by another 0.7-0.8 ft (21-25 cm) by 2050 and 1.4-1.7 ft (43-51 cm) by 2100; this represents a conservative and low-end estimate. There is growing concern that RSL rise rates will accelerate in the future with projections of sea level increases in the Bay region of approximately 2.3-5.3 ft (70-160 cm) by 2100 (Pyke et al. 2008). Ultimately however as land subsidence exacerbates sea level rise in the Middle Peninsula, there is a high potential that working waterfronts will be inundated, which may hinder access to the water for commercial and recreational uses.

Shoaling, or sediment build up in a waterway's riverbed, is a natural process that over time makes a waterway shallow and impassable. This is another factor that currently hindering ingress and egress into tributaries and rivers adjacent to the Middle Peninsula. Due to shoaling access is limited to deeper waters, which directly affect the ability of maritime industries to conduct business as normal. For instance, shoaling in Aberdeen Creek has prevented vessels from entering and navigating the waterway. Aberdeen Creek is a shallow-draft Federal navigation channel that requires dredging in order for boats to pass safely in and out the waterway. As an example, the Army Corps of Engineers dredged Aberdeen Creek in 1974 to allow for the harbors continued use, however no substantive maintenance dredging has since occurred. Today, the narrowing of the channel at the entrance to Aberdeen Creek makes it

[3] Mickelson, D.M. and P.M. Colgan, P.M. 2003. The southern Laurentide Ice Sheet in the United States. In: Gillespie, A.R. and S. Porter (eds.). *Quaternary History of the United States.* International Quaternary Association (INQUA) Special Volume for 2003 International Meeting in Reno, NV., p. 1-16.
[4] Douglas, B.C. 1991. Global sea level rise. Journal of Geophysical Research 96(C4): 6981-6992.
[5] Holdahl, S.R. and N.L. Morrison. 1974. Regional investigations of vertical crustal movements in the U.S., using precise relevelings and mareograph data. Technophysics 23: 373-390.
[6] Davis, G.H. 1987. Land subsidence and sea level rise on the Atlantic Coastal Plain of the United States. Environmental Geology and Water Science 10(2): 67-80.
[7] Pope, J.P. and T.J. Burbey. 2004. Multiple aquifer characterization from single borehole extensometer records. Ground Water 41(1): 45-58.

difficult for ingress and egress of commercial vessels to the public landing at the end of Aberdeen Creek Road. To compound the shoaling issue, the funding required to dredge this waterway, and others similar, in the Middle Peninsula is steep and a challenge for localities. Moreover, Congress defunded the Shallow Water Dredging Program operated by the Army Corps of Engineers. As this federal revenue source for dredging has disappeared, this has left federally maintained channels and harbors with no direct source of revenue to fund or initiate a dredging projects further pushing the financial burden on localities with little recognition of the need for dredging in order keep waters open for navigation.

Other factors influencing working waterfronts include governmental regulations – such as federally and state managed commercial fisheries and local zoning, shifts in seafood market economics, the aging of commercial watermen who own the working waterfront infrastructure, and the lack of recruitment of new watermen.

In Gloucester County, for instance, key commercial seafood businesses have closed due to a variety of reasons. Consequently, as watermen are forced to move from or are restricted from using traditional access points, they struggle to sustain their commercial seafood business. With limited sites available for mooring their boats, as well as limited safe infrastructure on which to conduct business, watermen seek new and innovative options to continue business as usual.

The following case studies were selected to illustrate some of these factors in the Middle Peninsula Region:

- ***Gloucester Seafood, Inc.*** was representative of a working waterfront business that closed due to economic hardship and the aging of a commercial waterman.

- ***Cook's Oyster Company, Inc***. was representative of a working waterfront business that closed due to the aging of commercial watermen. Mr. Eldridge Cook owned the property and upon his retirement, he did not have a legacy or succession plan in place to continue operations. Mr. Cook also did not have plans to sell the property, nor was there any family members wanting to continue the seafood business. Mr. Cook passed away and now the property is currently for sale.

- ***International Seafood*** was representative of a working waterfront business that closed due to governmental regulations regulating the primary type of seafood product that this business harvested and processed-the Spiny Dogfish. International Seafood leased space on the property Cook's Oyster Company, Inc. owned to operate their seafood processing business.

Due to the factors listed previously, the Middle Peninsula is slowly losing its working waterfronts- an issue that may have long-term consequences for local economies, the environment, the coastal heritage, and quality of life.

D. Working Waterfront Project Background

In 2000, the MPPDC directed staff to develop a regional strategy for managing and preserving public access and to seek enabling legislation for the formation of a special purpose political subdivision for the sole purpose of protecting the public's right to access public water. The concept of the Middle Peninsula Chesapeake Bay Public Access Authority (MPCBPAA) was introduced. Enabling legislation to create the MPCBPAA was drafted and proposed to the Virginia 98th District Representative Delegate Harvey Morgan. Legislation was introduced in 2001 for the 2002 General Assembly session under HB619 Middle Peninsula Chesapeake Bay Public Access Authority Act. The legislation passed and the Authority came into existence and convened for the first time on June 13, 2003.

The MPCBPAA has been the lead local policy body that embraced the ownership of advocating for the preservation of working waterfronts as commercial seafood depends on access to the water. Therefore, as the MPPDC provides the staff support for the efforts of the MPCBPAA, it has sought funding for projects focused on public access and working waterfronts in the Middle Peninsula. The following is a description of projects associated with this topic.

2008 York River Use Conflict

As the Middle Peninsula transitions from a less rural to a more suburban community, public policies and management tools for near-shore land, public water bodies, and water use rights and privileges need to adapt. Conflicts were becoming increasingly common between waterfront property owners, watermen, boaters, recreational fishermen, sportsmen, aquaculture industries, and others seeking to use the Commonwealth's water resources. The historical balance between working waterfronts and residential development has shifted to predominately residential waterfront. To begin addressing these conflicts MPPDC staff was funded through the Virginia Coastal Zone Management Program (NA07NOS4190178 Task #93.01) to create the York River Use Conflict Committee to identify and determine issues and conflicts within the York River, Gloucester County and develop policy recommendations for the Board of Supervisors (BOS) to consider.

Prior to identifying the issues and developing recommendations to resolve the conflicts the first question that needed to be answered was, "what is considered Gloucester's jurisdiction?" The report found that the County's jurisdiction covers all terrestrial (land area and features), aquatic (water area and features), and air (atmospheric area and features) within its boundaries. Together these areas form the sum total of the locality's jurisdiction, in which Gloucester County has the rights and powers delegated to it by the Commonwealth of Virginia. Upon this finding the York River Conflict Committee identified the conflicts and created recommendations to address them. The recommendations included the following:

> ***Recommendation 1.*** Gloucester County BOS should develop a Coastal Living Policy. Much of use conflict is due to an overall lack of understanding about living in a coastal community. The intention of this policy is to educate residents about coastal living in Gloucester from an economic, cultural, social, environmental and regulatory perspective.

Recommendation 2. Gloucester County BOS should map and identify the County's Land, Air and Water Territorial boundaries in the County's Comprehensive Plan and supporting maps. Identifying the County's authority to manage uses within its territorial boundary will frame the basis for managing conflict by establishing spatial areas for management consideration.

Recommendation 3. Gloucester County BOS should take no action at this time to manage or regulate the aquaculture industry within its jurisdiction. The Virginia Marine Resources Commission recently promulgated regulations regarding aquaculture and time is needed to determine whether the regulations resolve use conflicts regarding this relatively new industry.

Recommendation 4. Gloucester County BOS should develop a policy for the protection of working waterfront infrastructure. Public waterfront access points, together with recreational and commercial fishing industries and related support facilities should be sustained at various points throughout Gloucester County.

Recommendation 5. Gloucester County BOS should develop a Waterfront Outdoor Lighting ordinance. Light pollution, caused by overly bright and poorly designed lighting, is causing nighttime light trespass problems for waterfront users. Many Virginia localities have enacted lighting ordinances to solve this growing and serious problem.

Recommendation 6. Gloucester County BOS should adopt an ordinance restricting floating homes. It is simply a matter of time before these vessels arrive in the County and the County should be proactive in protecting its residents and waters.

Recommendation 7. Gloucester County BOS should develop a master plan for public access infrastructure to ensure equal water access for all user groups to the waterways within Gloucester County.

On February 17, 2009, the Gloucester County BOS accepted the reports and the report's recommendations. These recommendations have been informally presented to Mathews County.

2009 New Public Policy to Support and Sustain Aquaculture-working waterfront infrastructure

Funded through the Virginia Coastal Zone Management Program (NA08NOS4190178 Task #92) MPPDC staff, with assistance from the County Administrator, created an Aquaculture Working Waterfront Steering Committee. Consisting of commercial and hobby oyster and clam farmers, county planners, and the maritime foundation within Mathews County. This committee identified current industry challenges, shared business models, and discussed how the aquaculture-working waterfront industry could be supported or enhanced by Mathews County. Along with the information gathered from committee members, MPPDC staff researched how

other coastal communities in the United States have dealt with similar issues and organized a matrix of public policy options that could be feasible in Mathews County. MPPDC staff also conducted an economic assessment of the seafood and aquaculture-working waterfront industries to supplement Mathews County Board of Supervisors understanding of the current economic climate these industries within the county. And finally MPPDC staff worked to create an educational DVD, titled Mathews Working Waterfront for the 21st Century, which focused on the economic and cultural tradeoffs of community scenarios and specific public policy options that may enhance aquaculture and associated working waterfront industries.

Project outcomes included an economic assessment of the current Mathews County seafood and working waterfront industries; an Inventory of Communities who have taken actions to preserve and sustain their working waterfront as well as the tools that were used; model Comprehensive Plan; as well as public policy recommendations:

Public Policy Option 1: Right-to-aquaculture and/or Right to Working Waterfront Policy– A policy to preserve aquaculture operations/working waterfronts will promote a good neighbor policy, and/or affirm the county's commitment to aquaculture/working waterfronts.

COST: Locality staff time (question of priority)

Public Policy Option 2: Amendments to Current Land and Water Zoning Regulations Associated with Aquaculture – Amend Mathews County's current zoning regulations associated with aquaculture to appropriately define aquaculture and manage zones with incompatible uses. This may include exploring master spatial planning within the county's jurisdictional boundary.

COST: Locality staff time (question of priority)

Public Policy Option 3: Adopt Recommendations from the York River Use Conflict Committee – Mathews County Board of Supervisors should consider adopting six recommendations generated by the York River Use Conflict Committee for Gloucester County which address public solutions to water and land use conflicts.

COST: Locality staff time (question of priority)

Public Policy Option 4: Working Waterfront Districts – a. No Net Loss Ordinance – Developing a No Net Loss Ordinance could ensure that waterfront residential development will not displace working waterfront infrastructure and services. b. Fisheries/ Maritime/ Aquaculture Activity District(s) - Establish Commercial Fisheries/ Maritime/ Aquaculture Activity Districts could designate specific uses of water for water dependant industries (commercial and recreational). c. Working Waterfront Overlay District – Establishment of a Working Waterfront Overlay District would entail the identification and preservation of areas currently and historically used as working waterfronts and/or commercial fishing and aquaculture businesses. d. Working Waterfront Lifestyle Commercial Zoning Ordinance – Developing a Working Waterfront Lifestyle Commercial Zoning Ordinance would protect permitted land uses and would not change or overwhelm the pattern of existing land uses within Mathews County.

COST: Locality staff time (question of priority)

Public Policy Option 5: Storm Water Pollution Ordinance/ No Discharge Zones – In coincidence with Virginia Code § 15.2-1200 - General powers of counties – secure and promote the public health safety and general welfare - a water pollution ordinance or no discharge zone(s) could protect water quality pertinent for culturing shellfish.

COST: Locality staff time (question of priority)

Public Policy Option 6: Aquaculture Business Park and Incubator – The establishment of an In-water Aquaculture Business Park could create a relief option for aquaculturists with condemned waters. Aquaculturists could move shellfish stocks to these transfer areas where shellfish stocks would remain "consumable" by Virginia Department of Health standards. This park could also be open to the public to encourage hobby growers and ultimately continue a maritime tradition.

COST: To be determined during year two of this project

Public Policy Option 7: Current assessment and taxation regimes of Working Waterfront Properties

a. Current Use Valuation of Working Waterfront Properties – Instead of assessing working waterfront properties at the highest and best value, General Assembly should/could consider allowing localities, like Mathews, to assess working waterfront properties at the current/actual use value. If a. (current use valuation) is not politically possible, please consider
b. Taxation Credits/ Rebates/ Relief – Advocate action by the General Assembly to amendment the land use taxation regulation, through the development of a Land Use Taxation category specific to aquaculture.

COST: -Requires action by the General Assembly - Board of Supervisors and locality staff time (question of priority)

<u>2010 Mathews County: In-the-Water Public Aquaculture and Maritime Business Park</u>

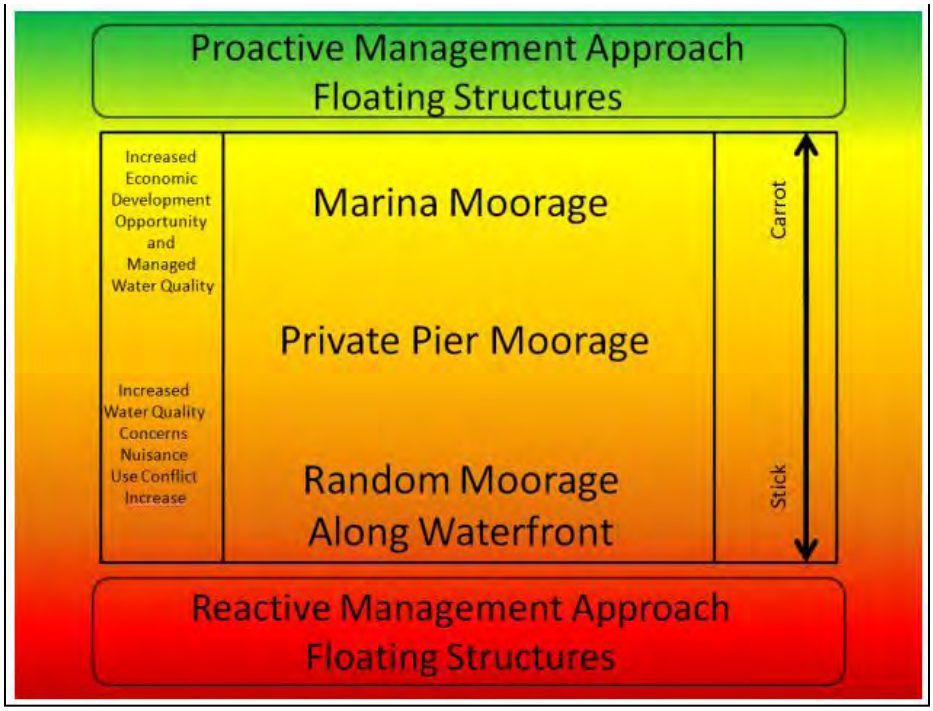
To continue efforts in Mathews County, the MPPDC was funded through the Virginia Coastal Zone Management Program (NA09NOS1490163 Task #92) to focus on developing the concept and framework of an in-the-water public aquaculture business park and relay areas. In general, the park and relay areas could be utilized by current aquaculture industry members, as well as hobby gardeners and entrepreneurs entering the industry. To gain local support and feedback, MPPDC staff presented these concepts to the Mathews County Industrial Development Authority (IDA) as well as to the Aquaculture Working-Waterfronts (AWW) Steering Committee. The IDA responded positively to the idea and passed a resolution to support future MPPDC staff efforts on this project, while the AWW Committee provided essential local and industry feedback as to the ideal locations for the park as well as potential services that could be offered at the park. To-date the Mathews County Board of Supervisors have not taken policy action(s) concerning the business park, however with their support MPPDC staff continues to work with VMRC to establish Aquaculture Opportunity Zones in the waters Mathews County.

During this project year Mathews County updated their County's Comprehensive Plan. The document not only included new language regarding shellfish aquaculture, but the document referenced six of the seven York River Use Conflict Committee Recommendations. The draft was presented to the Planning Commission on August 17, 2010 and they voted unanimously to recommend the BOS hold a joint public hearing to solicit comments from the public. This was the only action taken by the County to address these recommendations.

2010 Law & Policy for Floating Homes

In response to conflicts regarding floating homes/structures, the MPPDC and its member localities, funded through the Virginia Coastal Zone Management Program (NA10NOS4190466 Task 2.02) and Virginia Sea Grants' Coastal Community Development Program, undertook a study to enable local governments to identify and determine the issues and conflicts associated with floating structures and coastal governance (#NA07NOS4190178 Task 93.01). In part, this project established a Floating Home Study Committee to consider the policy implications of floating homes from a local government perspective and worked with the National Sea Grant Law Center to have a report written on the Law and Policy Regarding Floating Homes. The Study Committee reviewed the current status of floating homes/structures within the region and developed management recommendations for local governments. More specifically the recommendations were based on three spatial classifications of floating structures, each relates to moorage characteristics and includes a starting point for a definition: 1) Floating structures and marina moorage; 2) floating structures and private pier moorage; and 3) floating structures and random moorage along waterfront. By classifying floating structures within three spatial groups, the intention of the Study Committee was to provide options for local governments depending on how proactive or reactive of a position a locality may wish to take. The Study Committee found that the economic development potential, use conflict and environmental impact are directly related to the spatial classification of floating structures (Figure 4).

Figure 4- Gradient of Recommended Management Approaches: Management approaches for both proactive and reactive management of floating structures, relative to the spatial classification of floating structures and their economic and environmental impact as well as potential use conflict.



2011 Shallow water dredging policy and financing

The purpose project was to provide the MPCBPAA with a probable average annual cost for maintaining all the Federal navigation channels within the geographic boundaries of the Authority assuming other mechanisms would provide funding streams for the work in the future. Average annual costs for maintaining a beneficial use shoreline placement program to supplement the dredging program are also provided. But there are some events that could cause the average annual costs to vary (go up or down) over time. For instance, competitiveness within the dredging industry could cause variation in bid prices or physical variations at the projects could cause a more or less frequent dredging cycle. For this reason, the project brackets the most probable average annual cost with high and low bounds for the average annual cost. This allows the user to perform his or her own prioritization and risk analyses. Considering these variations, the most probable average annual cost for maintaining (dredging) a shallow draft navigation program on the Middle Peninsula is approximately $1,630,000 per year. The cost for dredging could range from $550,000 per year to $4,917,000 per year. In addition, approximately $111,000 per year would most probably be required in order to use available suitable material in a beneficial manner for placement along nearby shorelines. The cost for beneficial placement could range from $24,000 per year to $247,000 per year.

2011 Rural Chesapeake Bay/seaside of Virginia Working Waterfront Coalition

For many Virginia rural coastal communities, there is a strong need to maximize the potential of the waterfront as a driver for economic vitality. However, market forces, changing demographics, and increasing tax burdens on waterfront properties are increasingly driving a transition of waterfront properties toward residential or recreational uses. In addition, regulatory changes affecting marine fisheries management are impacting water dependent industries and working waterfronts. If access to the waterfront is limited or severed, commercial and recreational fishermen, researchers, and other water-dependent businesses will have fewer options to successfully make a living from the tidal waters of the Commonwealth, including the Seaside on the Eastern shore. As a result, many rural Chesapeake Bay and Seaside communities are challenged to maintain their identity and are shifting away from water-dependent employment, causing economic and cultural changes that can limit economic diversification opportunities and fundamentally alter the nature of the communities themselves. These challenges are particularly acute in both rural Chesapeake Bay and Seaside Coastal Communities.

During this project, a case study and report were generated in which the Accomack-Northampton Planning District Commission (ANPDC), the Northern Neck Planning District Commission (NNPDC), and the MPPDC each identified and researched three (four for ANPDC) working waterfront businesses that were closed or in danger of closing, discussed the reasons they closed or were in danger of closing, and documented the issues associated with the closing of each business. Additionally, the report discusses the land use planning tools associated with the impacted business, identifies the business or legacy succession planning the businesses had in place, provides a section on legacy and succession planning available for working waterfront businesses, and a list resources available for businesses.

The results show that working waterfront businesses close for a variety of reasons such as: loss of fishery; death of owner; retirement of owner; sale to developer; and loss of property due to sea level rise, storms, and flooding. The zoning for the properties varies from businesses that: are non-conforming uses and cannot open after being closed for 2 years; are zoned residential with a conditional use permit; and have limited or no restrictions. The common theme for legacy planning was that it was not done. Subsequently, most of the businesses identified indicated that selling their property and/or business is their retirement solution, with no guarantee that the property would continue as a working waterfront. This report has been used to reach out to Working Waterfront owners (identified in the WW Inventory Project) to promote working waterfront solutions and will be posted on www.mppdc.com for use by interested parties.

2011 Perrin River Commercial Seafood Harbor Master Plan and Improvements

Gloucester County, Virginia has seen a decline in the number of commercial waterfront businesses in recent years. The county has recognized this as an issue that affects the economy and the fundamental nature and culture of the county. In 2008, the completion of the York River Use Conflict Study further identified the need for the Gloucester County Board of Supervisors (BOS) to manage various waterfront use issues. In response, in 2009 the Gloucester County BOS passed a resolution that directed staff to develop the tools necessary to manage these issues. In part, the draft Gloucester County Comprehensive Plan under revision identifies the need to protect "Working Waterfronts". In 2010, the closure of Cook's Seafood, a major commercial waterfront business in Gloucester County, displaced over 15 commercial work boats. This event reinforced the need for both watermen and the county government to act to prevent losing the traditional watermen lifestyle in the County. This study, the Perrin River Seafood Harbor Master Plan, builds upon these previous efforts to protect the Working Waterfronts of the County. Specifically, it focuses on the Perrin River, a traditional commercial port in the Eastern portion of Gloucester County that is home to several existing Working Waterfront businesses, one private marina, and the much-used public "Perrin River Landing". The landing is also locally referred to as Sedgers Creek, Sedgers Wharf, Perrin Creek Landing, Perrin Wharf, Perrin Landing and King's Landing. The study identified existing zoning and existing waterfront uses, and developed two specific policy recommendations for the Gloucester County BOS to consider:

> 1.) Develop a Commercial Seafood Overlay District for the Perrin River – This is a specific tool that a local government can use to preserve and protect the working waterfront, preserve the cultural identity of the region, and preserve and create jobs. The district boundary could include only land based parcels which require waterfront for seafood operations or land based parcels and water areas within the limited harbor area of the Perrin River. The goal is to protect the harbor and working waterfront uses which routinely happen in and along the Perrin River while avoiding the complications of spot zoning (spot zoning is the application of zoning to a specific parcel of land within a larger zoned area when the rezoning is usually at odds with a county's current zoning restrictions).

2.) Continue to implement the adopted recommendations from the York River Use Conflict Committee (YRUCC) - The YRUCC recommendations provide a series of tools to manage water use conflict along the waterfront. The Gloucester County Board of Supervisors should consider enacting the various policy recommendations developed by staff to bring closure to the YRUCC work. These would include the proposed working waterfront comprehensive plan language and a coastal living policy for the county. For the recommendations left unaddressed, the Board should consider providing staff with additional resources and prioritization directives to carry out the recommendations. This strategy would send a clear public policy message that Gloucester County desires an active and well-managed waterfront.

2012 Developed Working Waterfront Definitions and Conducted an Infrastructure Inventory

The Virginia Institute of Marine Sciences conducted an inventory and identified a list of businesses and landing sites connected to the waterfront. Resources utilized to create the list included: Local Comprehensive Plans, the Virginia Department of Game and Inland Fisheries (DGIF) Public Boating Access online database, commercial businesses and area watermen. Overhead photos were obtained from Google Earth or Google Maps and the nautical charts were obtained from the National Oceanic and Atmospheric Administration's (NOAA) Online Chart Viewer. Latitude and Longitude data were obtained from Google Maps, Google Earth and the Virginia Department of Game and Inland Fisheries (DGIF) online public access database. Site photos were taken by MPPDC staff.

2013 MPPDC Perrin Wharf Improvements

The Perrin Wharf Waterfront Revitalization project was designed to reorganize the first 100 feet of the Perrin Wharf located in Gloucester County, Virginia (Figure 5), to improve the organization and safety of the docking arrangement, and to assist with the mooring and off-loading of vessels. To do this, the MPCBPAA proposed to install 10 new slip poles and 3 new finger piers using donated labor from a marine contractor. The project intended to create 5 new slips, however, the project was so well received that the MPCBPAA obtained donations for an additional five 35 foot pilings from the Gloucester County Parks and Recreation Department, and donated time and labor from another local businessman to load, move and unload the additional pilings. Further, with the donation of the extra pilings, the MPCBPAA and the marine contractor, were able to work together to re-organize the slip arrangement to create an additional 4 slips, for a total of 9 slips.

Right Side of Wharf– Before Project

Right Side of Wharf – After Project

Left Side of Wharf – Before Project

Left Side of Wharf – After Project

View from Land – Before Project

View from Land – After Project

Figure 5: Perrin Wharf improvements. Before and after photographs.

2013 Floating structures Policy and Permitting

In summer 2012, Anderson's Neck, LLC submitted a Joint Permit Application (JPA) to Virginia Marine Resources Commission (VMRC) to establish an aquaculture business using an "Oysterplex" that would be used to harvest, clean, tag, and bag oysters in Morris Bay (King & Queen County). This Oysterplex was described by the applicant as "basically a barge with a building on it, walls, windows, doors, a roof, and solar panels on the roof to power upwellers." In past efforts the Middle Peninsula Planning District Commission (MPPDC) staff assessed the policy implications of floating homes from a local government perspective (Virginia Coastal Zone Management Program Grant # NAOS4190466, Task 2.02). MPPDC staff considered the "use" of floating homes and focused on three specific classifications: (1) marina moorage, (2) private pier moorage, and (3) random moorage along waterfront moorage. As these categories encompassed the breath of floating structures within the region at the time, with the proposal of the Anderson Neck's Oysterplexes that included two floating structures in open water used for commercial use rather than residential use, new permitting, regulatory and jurisdictional questions presented themselves to State and Local entities.

For this project (#NA10NOS4190205 Task 53) MPPDC staff worked to understand the permitting challenges and breakdowns of the Anderson's Neck project and explored ways to improve permitting processes for future innovative projects. To assist with gathering this information, MPPDC staff created a Floating Structures Committee that consisted of representatives from VMRC, Virginia Department of Health, Virginia Department of Housing and Community Development, and King & Queen County. Through extensive discussions with the Committee it became clear that each State entity has a very specific lens in which they consider a proposed project that is based on the agency's authority and mission. Nevertheless, there were two questions consistently asked amongst these entities: (1) what is the location of the floating structure, and (2) what are the intended uses of the structure? As these questions typically guide the agency in the direction of remitting the proper permit(s), State agencies 1 advised that each submitted JPA project has unique details that are taken into consideration on a case-by-case basis.

As another outcome of working with Committee, communication was identified as an essential aspect of the permitting process that moves a project along in a timely manner. It was found that State entities need to work with each other as well as with local entities to provide a holistic solution to a proposed project. For instance, during the permitting of the Anderson's Neck project the JPA was received by the Local Wetland Board staffer at the County, it was reviewed and was found not to fall into the Board's jurisdiction. Although this satisfied the JPA's authorization needs from the Local Wetland Board, there were new and unanticipated local land-use implications that the King & Queen County Planning and Zoning Staff had to address. Thus communication between the Wetland Board staffer and the Planning and Zoning Staff would have improved efficiencies at the local level. Beyond this example, JPA applicants are encouraged to provide as much detailed information about the project and the proposed business plan to State and Local entities. This will assist entities with their permitting decisions. If information changes through the permitting process, this may alter the permitting course of the project and/or delay project altogether.

The Anderson's Neck Oysterplex project proved to be challenging, and as the scale and intensity of aquaculture technology and water uses change, localities across the coastal zone as well as State agencies will continue to face complicated policy questions and permitting options. While localities may need to acknowledge their jurisdiction over water and/or even consider zoning over water, which is consistent with the 2011 Virginia Supreme Court ruling JENNINGS v. BOARD OF SUPERVISORS OF NORTHUMBERLAND COUNTY, State agencies may need to redefine traditional uses and their approach to projects. Regardless, however the permitting of Anderson's Neck pushed State and Local entities to think outside of their traditional box and work through the permitting process. Overall, each entity gained an experience that will be a reference for the permitting of future projects.

2014 Aberdeen Creek Master Plan

Another unique working waterfront location just off the upper York River in Gloucester County, Virginia is Aberdeen Creek. Aberdeen Creek provides seasonally critical access for landing, docking, and mooring in close proximity to the public and private oyster grounds and public crabbing grounds on the upper York River. Interviews with local watermen found that water access sites on the upper York River are vital to their businesses and that Aberdeen Creek is one of the few locations they use, have traditionally used, and want to continue to use. 1 The waterfront property on Aberdeen Creek is predominantly developed as single family residences, with the exception of a working waterfront area consisting of one public landing and one commercial property. While both of the working waterfront properties are in states of disrepair, they continue to be over utilized by commercial watermen during crab and oyster seasons.

The public landing has two piers and records show that the property was deeded in 1947 to government ownership specifically to be used as a public landing. However, determining what government entity owns the landing is complicated. Adjacent to the public landing is the commercial property, the former seafood processing facility, Gloucester Seafood, Inc. This property was used for processing long before Gloucester County adopted a zoning ordinance in 1984. Gloucester Seafood, Inc. maintained a business license until 2010, but they did not renew their business license after that year. The property was zoned single family residential when zoning was adopted and this zoning remained in place as part of the county-wide rezoning and zoning ordinance updates adopted in 1998. The zoning ordinance classified seafood processing as a use permitted only by special exception in certain zoning districts and not at all within the Single Family (SF-1) zoning district. Because the seafood processing use on this property was established prior to the enactment of the zoning ordinance and subsequent amendments, it was allowed to continue as a legally non-conforming use. However, pursuant to both state and local regulations, once a use ceases to exist for over two years, it no longer has vested rights to that non-conforming use. Therefore, when Gloucester Seafood, Inc. became inactive for more than two years (Figure 2), the legal nonconforming status of the property ceased. While the site is not actively used for seafood processing, it does retain much of the infrastructure that could be beneficial to working watermen.

With commercial watermen depending on sites such as those found on Aberdeen Creek, there is particular urgency for a master plan that assesses the needs of the commercial seafood industry, harbor management, and current and future infrastructure improvements for Aberdeen Creek, as well as other critical working waterfront areas within Gloucester County. A well designed and focused strategy for Aberdeen Creek will help to ensure that current and future commercial watermen have access to strategically local infrastructure and business support services to enhance and protect the important economic and cultural practices of the seafood industry in the county.

The Aberdeen Creek Harbor Master Plan provides three recommendations to the Gloucester County Board of Supervisors intended to preserve the working waterfront of the creek for future generations:

A. Amend the zoning ordinance to create a commercial waterfront district which allows certain working waterfront uses by right,
B. For the public landing, formally negotiate single ownership status and decouple joint ownership with VDOT and the Commonwealth,
C. Have Gloucester County and/or the Middle Peninsula Chesapeake Bay Public Access Authority collaborate and coordinate with other stakeholders to develop and implement a plan to maintain the channel on Aberdeen Creek.

2014 Aberdeen Creek TIF

As mentioned earlier Aberdeen Creek in Gloucester County, is an important harbor for commercial fishing operations along the York River. Today commercial watermen are experiencing narrowing of the channel due to shoaling, which occurs at the entrance to Aberdeen Creek.

Further complicating matters is the funding. Federal funding for dredging has historically been provided by the Army Corps of Engineers budget for shallow draft low use navigation projects. Current federal budget metrics are not providing sufficient funds at levels to sustain maintenance dredging of the 17 federal navigation channels in the Middle Peninsula. Budget restraints may continue into the future and federal channels will still need to be maintenance dredged. The question facing local governments is given the priorities which local government finance, how can the cost of dredging the harbor be levied against other pressing priorities.

Therefore, to begin addressing the funded issue, MPPDC staff provided possible solutions to the issue of financing through the compilation of the five products identified and compiled into a final report.

> **Product #1 -** ***Utilizing Tax Increment Financing (TIF) as a strategy to generate revenue to fund future dredging projects****:* MPPDC partnered with Virginia Sea Grants to explore a new use of Tax Increment Financing (TIF) authorized under the Sec: 58-1-3245 of the Virginia State Statute. The project applied local government taxing process to help determine possible spatial area needed to finance a dredging project for the creek.

Various scenarios were provided to cover cost of dredging and permitting as well as recommendation on supplemental financing options were provided.

Product #2 - ***Aberdeen Creek Historic Shoreline Change****:* MPPDC partnered with VIMS Shoreline Studies program to quantify the historic shoreline change along the Creek. This data was used to help determine the cost of dredging and possible disposal sites and is included in the final report.

Product 3# - ***Assess Aberdeen Creek's Waterfront Infrastructure***: Scott Hardaway, Director of the VIMS Shoreline Studies program provided an assessment of the condition of Aberdeen Creek working waterfront infrastructure and an estimate of maintenance and repairs.

Product#4 -***Survey the navigation channel and determine dredge placement options:*** VIMS Shoreline Studies Program provided information on bathymetric contours and channel sediment sampling. This helped to determine the extent to dredge and type of dredge material.

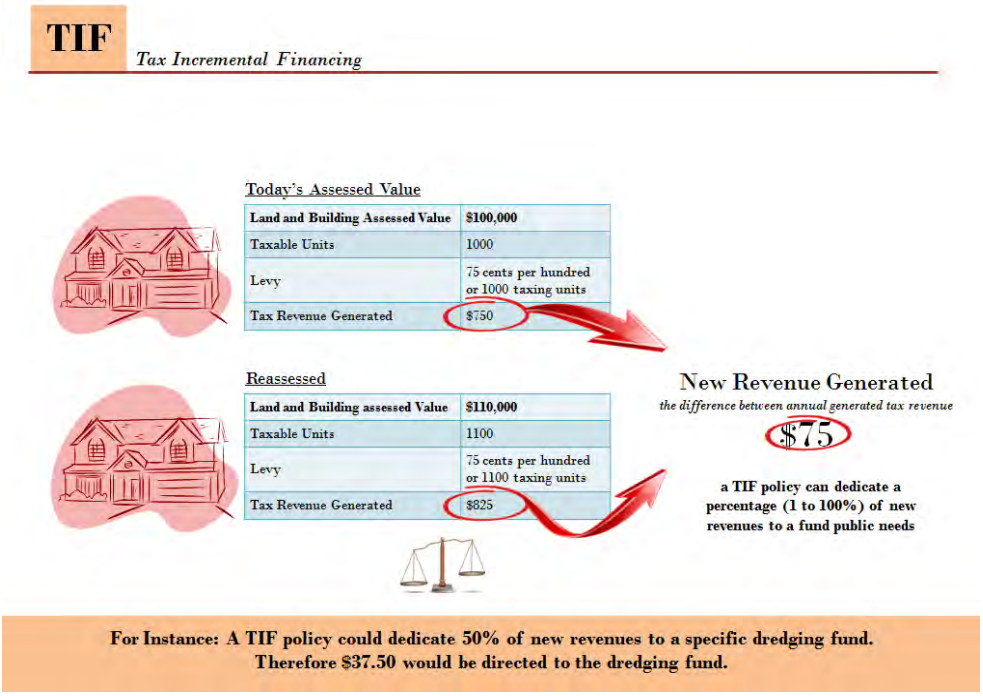
Product #5: ***Aberdeen Creek navigation channel and associated Working Waterfront Plan:*** The final report is a compilation of the first four products that can be used as guidance for other local governments with similar characteristics

To begin, MPPDC staff researched implementing Tax Increment Financing (TIF) to finance the dredging of Aberdeen Creek. TIF is an economic development tool that allows municipalities to pay for public improvements without raising taxes or diverting current funds, but rather through the earmarking of future property tax revenue within the area in which the improvements are to occur, known as the TIF district. Authorized under Section §58.1-3245.2 of the Virginia State Code, TIF uses future revenue from property value increases to be allocated to projects in designated areas. A TIF district is created when a project need has been identified, the area in which the project will take place has been designated and funding is allocated through future tax revenue generation to finance the project. Specific parcels are outlined, composing the TIF district and the details of how the funding will be allocated are defined by the adoption of a policy by the local government. Unlike special districts, it is not a new tax, but redirects and segregates the increased property tax revenues generated in a specific area to a specific purpose. While traditionally, property tax revenue has been the only object of TIFs, personal property tax, sales tax and other fees have also been included to boost revenue generation.

Once a TIF district is established, a year establishing the base valuation for properties in that district is set, allowing for revenue generated from property value increases to be used to fund the project for which the district was created. In other words, the property values at the established year serves as the base line assessment value. Annual property tax revenue that exceeds the revenue of the specified year is deposited into the TIF district fund on an annual basis for the life of the project or until the debt for the project is paid. Figure 6 provides an example of how TIF works.

The Virginia State Code provides TIF powers to localities with taxing authority, however, there are several ways local governments may create TIF districts. One way is through agreements between a locality and a third party entity commonly referred to as Community Development Association (CDA). In this case, local government creates the TIF district, however, the CDA is responsible for carrying out the guideline of the policy which are outlined in an agreement between the locality and the CDA. The CDA is responsible for ensuring that the project requirements are met.

Figure 6: TIF – how it works



Another way TIF districts may be created is through zoning code. Like overlay districts, localities may amend their codes to include a TIF district, however this is the least preferred method as it is very rigid and takes much longer to implement. Most local governments in Virginia that have used TIF districts prefer TIF district creation by policy rather than through local codes and legislation. TIF by policy allows local governments the flexibility to establish multiple districts with variations in terms to meet the need for which each was established with amending local law. Revenues generated from TIF are projected to help determine the life of the district. Because most TIF districts have a life span that is also flexible, TIF creation by policy is more efficient than code amendments to amend the policy as needed and/or dissolve the district once the goals are fulfilled.

2015 Virginia Working Waterfront Plan – Local policy development

Within the coastal Virginia, increasing demand for waterfront property along has resulted in increased property values and higher costs for traditional water-front businesses. These and other factors have caused not only the region but the Commonwealth to slowly lose its working waterfronts - an issue that will have long-term consequences for local economies, the environment, coastal culture, and overall quality of coastal living. Loosing working waterfronts

constitutes a potential loss of jobs for watermen (i.e. recreation and commercial, shellfish farmers, etc.) and the agriculture industry (i.e. timber and grain barges); a loss of a cultural identity and heritage of the region; and a loss of working waterfront support industry jobs (i.e. boat building transportation, seafood processing, etc.).

While threats to the existence of working waterfronts remain, there is growing recognition of the problem and an expanding list of possible solutions. Nationally, coastal states and localities are using planning, zoning, land conservation and acquisition, tax incentives, public improvements, and state and local regulations to help preserve their working waterfronts. Thus in preparation for the development of a Virginia Working Waterfront's Plan in 2015-2016, the Middle Peninsula Planning District Commission was funded through the Virginia Coastal Zone Management Program to research policy tools applicable to localities within the Commonwealth. This toolkit provides Virginia localities with policy options and tools to improve, preserve, or protect working waterfronts.

Additionally, to build on previous efforts focused on working waterfronts, MPPDC staff continued hosting meetings of the Working Waterfront Steering Committee in order to discuss on-going local working waterfront issues within communities and ways to resolve these issues. In part Committee members worked together to develop specific questions for Tidewater localities to answer. These questions aimed to understand current policies within the locality related to working waterfronts as well as new policies that the locality would consider to further protection of working waterfronts within their jurisdiction.

Overall, these projects have assisted in improving working waterfront local policies, infrastructure, and overall management.

E. The Future of Working Waterfronts in the Region

Within the Middle Peninsula, localities will need to take the lead in preserving working waterfronts within their jurisdiction. Based on interviews with Middle Peninsula localities and other coastal PDCs twelve stressors were identified, including: (1.) Shifting development patterns, (2.) Land use change, (3.) Appropriate use of zoning to ensure that the waterfront is managed in a harmonious way, (4.) Additional comprehensive plan language needed, (5.) Loss of commercial processing facilities, (6.) Loss of commercial fishing facilities, (7.) Maintain a network of public tie up facilities, (8.) Private working waterfront business owners (marina owners, dock owners, fish and oyster houses etc.) need for preservation of commercial slips that spatially and seasonally correct, (9.) Tools to expand oyster farming, (10.) Tools for business legacy planning and transition planning, (11.) Improved understanding of existing and new tools to protect water quality, and (12.) Dedicated State funding for existing public working waterfront infrastructure. Therefore, localities will need to choose an approach to address these stressors for their particular locality.

ESSEX COUNTY –
$7,285 in VMRC Commercial Licenses & Permits representing 42 different types of licenses (2015).
The Essex County 2015 Comprehensive Plan acknowledges a list of assets of associated with working waterfronts including:

- The importance of the Rappahannock River, tidal waters, and flowing streams to the County due to the resources for the recreation and commerce that are essential to the growth and diversification of the economic base for the area.
- There is a need for greater management capability over waterfront access and use due to competing interests between subdividing large tracts of waterfront property into numerous smaller lots or keeping these large tracts for privacy and the upland residents and tourists seeking use of the waters. This concern leads to the need of greater management capability over waterfront access an uses."
- The importance of surface waters to the County as it holds various fish species for commercial fisheries as well as sport species. A disruption in the ecosystem can cause far-reaching effects, threatening the livelihood and health of those dependent upon these resources. Public and private access to the water and shoreline areas is important to the economy and environment of Essex County.
- "NOAA's research showed that maritime related businesses provided 12% of the total jobs in Essex County, all in recreational and tourism industries. This represents a 10 percent increase in maritime jobs since 2005. Nationwide, Maritime jobs present double the number of jobs supported by agriculture, the primary industry in Essex County. This indicates a window of opportunity for Essex County to strengthen its maritime economy by boosting recreation and tourism activities as well as promoting aquaculture and working waterfront businesses.

Therefore, while the plan describes the importance of water access and recreation, Essex County does not state specific policies about working waterfronts for the future.

GLOUCESTER COUNTY –
$181,098 in VMRC Commercial Licenses & Permits representing 104 different types of licenses (2015).
In 2008, the York River Use Conflict Committee (YRUCC) provided the Gloucester County Board of Supervisors with recommendations on maritime water use for Gloucester County. The seven recommendations included:

Recommendation 1 –develop a "Coastal Living Policy"
Recommendation 2 – map and identify the County's Land, Air and Water Jurisdictional boundaries in the County's Comprehensive Plan and supporting maps.
Recommendation 3 – take no action at this time to manage or regulate the aquaculture industry
Recommendation 4 – develop a policy for the protection of working waterfront infrastructure.

Recommendation 5 – develop a Waterfront Outdoor Lighting Ordinance.
Recommendation 6 – adopt an ordinance restricting floating homes.
Recommendation 7 – develop a master plan for public access infrastructure to ensure equal water access for all user groups to the waterways within Gloucester County.

In 2009, the Gloucester County Board of Supervisors adopted these recommendations by resolution. The seven adopted recommendations were designed to: serve as a reference for the development of future public policy in Gloucester County, VA; shape future legislative and policy positions to be advocated by the Middle Peninsula Planning District Commission (MPPDC); and inform others, particularly state officials, of the County's preferred position on coastal community development issues.

To build on the adopted recommendations of the YRUCC, the 2013 Gloucester County draft Comprehensive Plan update recognizes that water plays an important part in Gloucester's culture, history, and economy. The plan speaks to the increase in residential development along the County's shorelines which can contribute negative impacts on water-based industries, including seafood and boat operations. Managing land use conflicts between waterfront industries and residential development is a major goal of the County's comprehensive plan. To this end, certain sections of the plan designate areas along the shore as working waterfront and marina areas, where future residential development can be avoided to help reduce conflict with water-based uses. These areas are intended to support uses such as commercial seafood operations, boatyards, marinas, and accessory uses. Working waterfronts are the primary use of these areas, with residential development as a secondary use, similar to the stance taken in the agricultural districts with residential uses. Mixed-use development which may incorporate residential and commercial uses in conjunction with active working waterfronts, such as marinas, may be appropriate in these areas as well. Such mixed-use developments could be achieved through the use of a Planned Unit Development District under the current ordinances but the Comprehensive Plan Update recommends the creation of a new district to better protect and encourage the continuation of these uses.

Specific goals and objectives identified in the plan relevant to working waterfronts include:

Land Use Goal: To maintain Present and encourage additional industrial development.

Objectives:

5. To encourage commercial recreation, tourism, fisheries, and water- and boating-related industries.
6. To encourage and support retention of the agriculture, fishing, and forestry industries

Economic Development Goal: To provide a balanced economy for future growth

Objective:

2. To encourage the continuation of those industries that are basic to the local economy, including agriculture, fisheries, lumber and wood products, food and kindred products, health care facilities and service industries.

KING WILLIAM COUNTY –
$8,245 in VMRC Commercial Licenses & Permits representing 39 different types of licenses (2015).
According to the King William Comprehensive Plan, aquaculture is a part of county economy, "There are 181 aquaculture species cultured worldwide with an estimated production of 10 million metric tons of seafood. By the year 2000, the likely harvest will have reached 221 million metric tons. Seafood now comprises over 15% of the U.S. household "meat" budget, up 9% from the 1980. Aqua culture endeavors in King William County include the Mattaponi Indian Fish Hatchery and Marine Science Center and the Pamunkey Indian Shad Fishery." The plan also mentions that King William has community assets and facilities, including Zoar State Park and Zoar State Forest that has public access to the Mattaponi River for canoe launching and "dipping "for the river herring in Herring Creek. Other facilities in the County include three public boat lands, the West Point Country Club and a private marina.

The only policy goals associated with working waterfront refers to improving public access to water which includes (1) : improve existing public boat ramps and increase the number of access points for public use, and (2) Ensure the provision of safe and adequate public waterfront access facilities in King William County. Beyond this, King William does not have specific policies intentions to improve working waterfronts.

KING & QUEEN COUNTY –
$6,993 in VMRC Commercial Licenses & Permits representing 35 different types of licenses (2015).
The King & Queen Comprehensive Plan provides a description of the opportunities for recreational use of natural areas and local waters for canoeing, kayaking, nature, and bike trails, scenic byways, etc. Additionally the plan maps the recreational access sites and cultural facilities. Therefore based on the Plan King & Queen County does not have specific policies about working waterfronts for the future.

MIDDLESEX COUNTY –
$70,435 in VMRC Commercial Licenses & Permits representing 80 different types of licenses (2015).
According to the Middlesex County Comprehensive plan WATERFRONT RECREATINAL/MARINAS are defined as campgrounds, marinas, yacht clubs or other waterfront depend entities and their accessory uses. These uses depend on their waterfront location and recreational natural as a major asset of their business. Beyond this statement, Middlesex County does not have specific policies about working waterfront for the future.

MATHEWS COUNTY –
$57,481 in VMRC Commercial Licenses & Permits representing 86 different types of licenses (2015).

Throughout the Mathews County Comprehensive Plan, the importance of working waterfronts is noted. For instance, A key planning theme in the Comprehensive plan is, “Increased cooperative approaches and initiatives to enhance the economy through heritage tourism, ecotourism, aquaculture, and working waterfront business development that complements the environment.” The Comprehensive Plan also identifies a variety specific policy strategies associated with working waterfronts.

Table 6

Planning / Development Policies and Strategies for Economy	
E2	**Mathews County has a proud, traditional heritage in water-based businesses. Increased efforts should be undertaken to enhance this sector of the local and regional economy.**
	1. Clarify, define and pursue County authority to regulate and manage land uses beyond the physical land area and shorelines, extending to include territorial boundaries over the water.
	2. Identify new or preserve existing sites for aquaculture and working waterfront businesses. Establish an Economic Development Team to ensure communication among interests, target compatible land/water uses, and adopt minimum development standards (e.g. Aquaculture Best Management Practices).Develop aneconomicdevelopmentstrategythatcanbeupdatedonanannualbasis.Work with the Middle Peninsula Planning District Commission, the Virginia Economic Development Partnership, Chamber of Commerce, Virginia Marine Resources Commission, and other environmental agencies.
	3. Pursue the development of a land and/or in water Aquaculture Business Park, Aquaculture Research Center or similar economic model that can enhance the economy of the County and the coastal environment. Consider financial incentives that could assist business development (e.g. special loans, incubator spaces, etc.).
	Revise the County zoning ordinance to better define “aquaculture” as a use and review regulations to ensure appropriate land use management. Strengthen regulations to encourage and protect aquaculture in appropriate areas.
	5. Develop and pursue designation of aquaculture opportunity zone(s) as a financial incentive to promote aquaculture and encourage investment. Adopt applicable local incentives and taxation options to promote aquaculture.
	6. Lobbygeneralassemblyforspecialaquaculturelandusetaxationcategoryspecific to aquaculture and water based businesses, similar to agriculture land use taxation,toencouragecontinueduseandproductionofimportantpropertiesand operations. 7. Educate the public regarding
	7. Educate the public regarding the importance of aquaculture and working waterfrontstothecommunity,regionandthestate.Developabrochure,webpage article, or other form of communication to promote increased understanding of waterbased business operations and requirements, as well as the need for excellent water quality. Work with businesses and governmental agencies to coordinateeffortsandimprovecommunicationofimportantcoastallivingissues and

	future goals and outcomes.
	8. Affirm the commitment of the County to protect the working waterfront as a priority for economic development and preserving coastal character. Improve communication regarding pending development matters, water quality monitoring/reporting, water access, etc. Consider appropriate "good neighbor practices" that enable shared information and communication regarding development activities.
	9. Consideradoptingaformalresolution/policythatpromotesandprotectsworking waterfronts in Mathews County.

Planning/Development Policies and Strategies for Public Facilities and Services	
PFS 7	**Mathews County is recognized for its natural environment and inherent recreational amenities. Public access to the water and shores enhances residents' quality of life and is fundamental to the eco-tourism segment of the County economy. The County should continue to promote public access and appropriate facilities along its waterways and shorelines.**
	1. Update the adopted 2003 Mathews County Statewaters Access Plan to assess public needs, priorities, and recommended improvements for water access. Work with the Middle Peninsula Chesapeake Bay Public Access Authority to develop a survey to assess County residents' needs for new and/or expanded public water access sites and facilities.
	2. Pursue site planning and recommended improvements to the East River Boatyard property for public recreation and access. Consider grant funding for planning and construction (e.g., Virginia Department of Conservation & Recreation, Virginia Game & Inland Fisheries, U.S. Fish & Wildlife, and EPA Brown fields).
	3. Continue to work with VIMS and other partners to plan, map, and promote the Mathews County Maritime Heritage Trail.

Development Policies and Strategies for Environment	
EN4	**The waterfront of Mathews County is a valuable ecological, recreational and scenic asset that should be available to all citizens. Use of waterfront lands should be balanced to provide reasonable access points for the public and protection of the environment, while recognizing the rights of private residential and business property owners.**
	1. Review and update the County Statewaters Access Plan at least every five years to ensure that public access and recreational needs are met. Update the 2003 Plan in conjunction with developing a Parks and Recreation Master Plan.
	2. Site any new waterfront community facilities or marinas in accordance with the checklist and criteria established by the Virginia Marine Resources Commission for Marinas and Community Facilities for Boat Mooring (1988, www.mrc.state.va.us). Coordinate locations with aquaculture and blue

	infrastructure resources to minimize land use conflicts and ensure protection of water quality.
	3. Identify desirable waterfront and off-shore locations for pursuing aquaculture. Develop a strategy for improving water quality, managing land use, and reducing development and pollution conflicts.

Development Policies and Strategies for Land Use	
LU2	**The future sustainability of Mathews County requires planning and management of not only land uses, but also the use and treatment of the surface waters surrounding the County. The land and waters are linked; one affects the other. Future land use decisions should consider effects on both the land and the water.**
	1. Pursue planning and management of uses beyond the shorelines of Mathews County. Coordinate approaches and methods with state agencies and other regional governments. Develop agreed upon procedures for reviewing development and use requests that affect land and water. Adopt applicable regulations to effectively manage uses within County territorial boundaries.
	2. Amend the Zoning Ordinance to adequately address aquaculture as a land use and amend other relevant regulations in order to protect water quality and appropriately manage aquaculture businesses/operations and surrounding land uses.

Development Polices and Strategies for Gwynn's Island	
GWYNN 1	**The future sustainability of Mathews County requires planning and management of not only land uses, but also the use and treatment of the surface waters surrounding the County. The land and waters are linked; one affects the other. Future land use decisions should consider effects on both the land and the water.**
	1. Ensure that new or expanded development appropriately addresses environmental constraints and protects water quality. Encourage design solutions that will enhance the environment and protect resources and physical investment for the long-term.
	2. Protect working waterfront operations that are important to the economy of Mathews County. Work with multiple partners to enhance water quality of the Bay and its tributaries. Cooperatively work with and educate residents and businesses on aquaculture needs and waterfront operations.
GWYNN 2	**Gwynn's Island is important to County tourism and economic development efforts. Underutilized properties within the "hamlet" should be carefully considered for rehabilitation or redevelopment. Commercial waterfront development outside of the hamlet should be limited to appropriate sites for aquaculture.**
	1. Pursue the redevelopment of the former hotel site on Gwynn's Island as

	a small resort facility. Ensure that development is low-impact, environmentally-friendly and a good neighbor.
	2. Pursue the redevelopment of underutilized waterfront sites as recommended for aquaculture development.

Development Policies and Strategies for West Mathews	
WEST 4	**Public access to the waterfront is a priority for the County. Increased public access to the waterfront should be provided in West Mathews.**
	1. Pursue development of the East River Boat Yard property as a public access point in West Mathews. Develop a concept plan for the property and coordinate it with district residents. Solicit partners and applicable grant funds for implementation. Encourage small business, as well as recreational concepts

Development Polices and Strategies for Bayside	
BAY 3	The waterfronts of Bayside host a diversity of economic businesses that serve the regional economy. Working waterfront businesses that enhance the environment are especially important to County economy and should be preserved and promoted.
	1. Work with the Mathews Aquaculture and Working Waterfront Committee to identify specific opportunities and properties for enhancing aquaculture. Collaborate with multiple agencies and coordinate with property owners and businesses to build understanding and consensus.
	2. Promote understanding among property owners of the multiple uses of waters and the waterfront, particularly with respect to the economic and environmental importance of sharing these important resources. Consider a regular newsletter or written publication to provide important information. Establish a business-citizens forum that can provide regular opportunities for discussion of conflicts or issues.

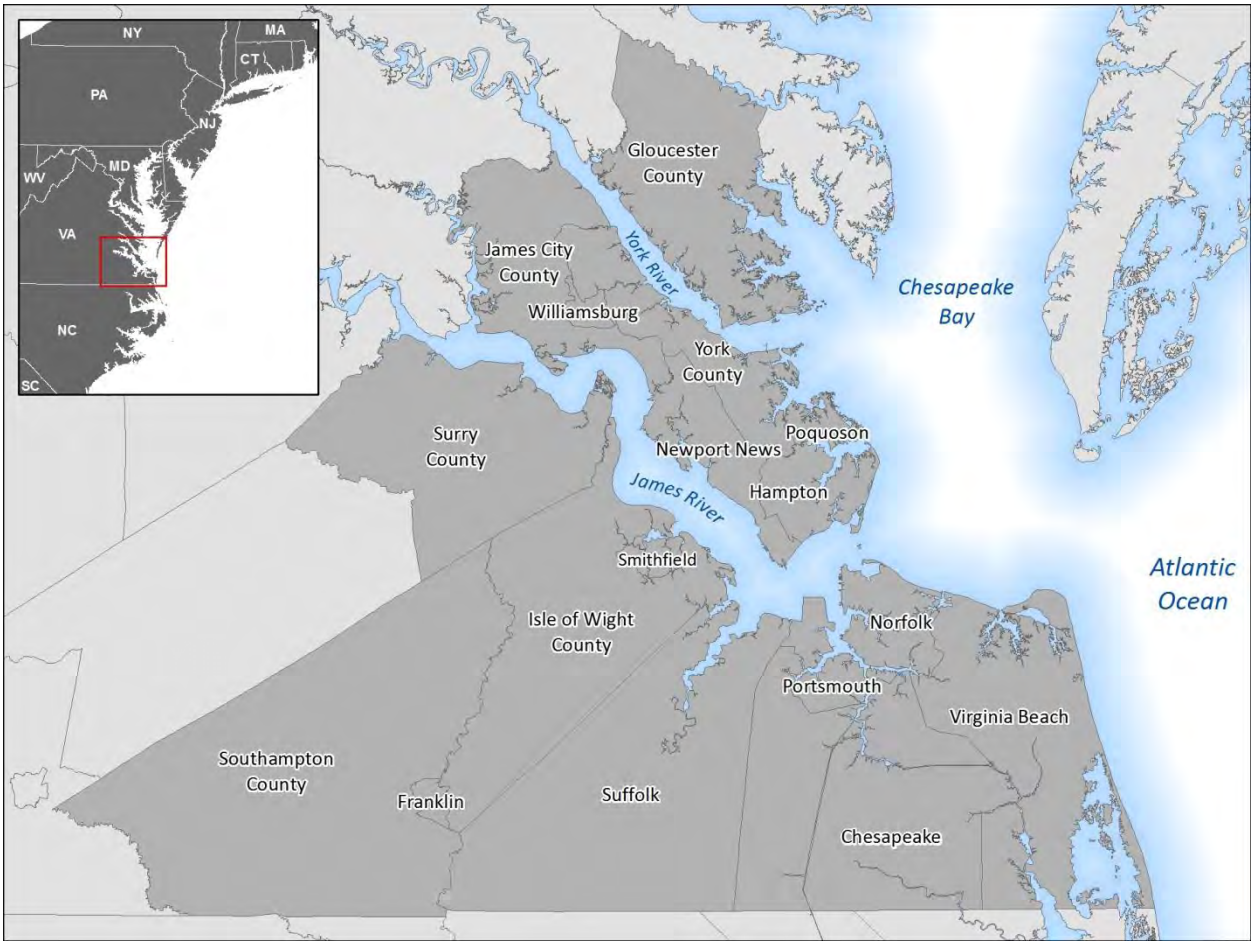
Specific opportunities indentified in the Comprehensive Plan specific to working waterfronts include:

- Aquaculture Overlay District for coastal areas of the County and applicable waters and submerged lands which are determine to be of significant value for aquaculture. Application of this district would be for the purpose of management.
- East River Boat Yard would be an excellent opportunity to improve public access to the waterfront and to encourage local business development.

The Middle Peninsula Planning District Commission, in partnership with the Middle Peninsula Chesapeake Bay Public Access Authority will continue to promote and educate elected officials, locality staff and the general public about working waterfronts in an effort to preserve them in

the Middle Peninsula. However, it is up to the individual locality to implement tools and policies to preserve working waterfronts within their jurisdiction.

Chapter VII
Hampton Roads Planning District Commission



A. Introduction

The Hampton Roads Planning District is located in the southeastern corner of the Commonwealth of Virginia at the mouth of the Chesapeake Bay. The Hampton Roads Planning District Commission includes seventeen member localities, including ten cities (Chesapeake, Franklin, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, and Williamsburg), six counties (Gloucester[8], Isle of Wight, James City, Southampton, Surry, and York), and one town (Smithfield). The region's development and commerce are directly influenced by its relationship to the water, taking its name from the sheltered anchorage that lies between the Cities of Hampton and Norfolk. In addition to the Chesapeake Bay, the region includes significant stretches of two major tributaries, the James River and York River, in addition to several other significant waterways, including the Elizabeth, Nansemond, and North

[8] Gloucester County was included in the inventories for both HRPDC and MPPDC and is covered in the Middle Peninsula PDC chapter.

Landing Rivers. In addition, the Atlantic Intracoastal Waterway passes through four cities in South Hampton Roads between the Albemarle-Pamlico Sound and the Chesapeake Bay. This passage includes two man-made canals, the Dismal Swamp Canal and the Albemarle and Chesapeake Canal, both located in the City of Chesapeake. The Dismal Swamp Canal provides a connection between the Pasquotank River and the Southern Branch of the Elizabeth River, while the Albemarle and Chesapeake Canal connects the North Landing River with the Elizabeth River.

The region's coastal areas and waterfronts are home to a diverse range of uses, ranging from areas conserved for natural resources and recreation to heavily industrialized waterfronts used for shipping, ship building and repair, and related uses. Other activities include recreational boating, kayaking, paddle boarding, and surfing, commercial fishing, and aquaculture. Hampton Roads is also home to the Port of Virginia and several coastal military installations, some of which operate major ship repair and berthing facilities.

The Hampton Roads region has economic and cultural interests in supporting and maintaining working waterfronts. As a region in many ways defined by its waterfront, the Hampton Roads region is dominated by major industrial working waterfronts and water-related industries. In particular, major naval facilities and port facilities are both significant regional employers and landowners. From a cultural and historical perspective, many of the region's communities began as working waterfronts based on fishing and trade. Those roots continue to influence the region's economy and culture. Protecting and promoting these assets, large and small, while continuing the region's development and intensification, is an officially adopted policy for several of the region's cities and counties. At the same time, improving public access to waterfronts for recreation is a major concern, one that is becoming an increasingly more important component of local land use and development plans.

B. History of Working Waterfronts in the Region

The Hampton Roads region has a long history of working waterfronts. In many ways, the region was settled and exists as it does today due to its location at meeting of the Chesapeake Bay and Atlantic Ocean and its natural harbor. While traditional working waterfront activities such as oystering and fishing were important parts of Hampton Roads communities' early economies, the most significant working waterfronts in the region were the early ports, which in several cases later became the sites for the region's major industrial and shipping facilities. Many of the region's colonial-era towns and cities, including Norfolk, Portsmouth, Smithfield, and Yorktown, were founded as ports to ship goods back to Europe or to support shipping and trade. Others, such as the waterfronts in downtown Newport News and along the Elizabeth River in Chesapeake, developed in the late 19th and 20th centuries to support the shipping of coal and other industrial materials or military ship-building needs. In addition to these industrial waterfronts, other communities, such as Poquoson and Hampton, developed as hubs for waterman fishing and shellfishing in the Atlantic Ocean, Chesapeake Bay, and tidal rivers.

Chesapeake

The area now included in the City of Chesapeake was originally settled in the early 1600s as part of what became Norfolk County. In 1963, Norfolk County and the City of South Norfolk merged to form the City of Chesapeake. In the 1800s the area was the location of two significant infrastructure projects related to working waterfronts – the construction of the Great Dismal Swamp Canal, which started in 1793 and finished in 1805, and the construction of the Albemarle and Chesapeake Canal, which was completed in 1858.[9] Both projects provided sheltered waterways for shipping between the Albemarle Sound and Chesapeake Bay. The beginning of the 20th century saw the development of the Elizabeth River's Southern Branch as industrial waterfront.[10] Historically, the city was also home to some commercial seafood businesses, but today, working waterfronts in Chesapeake are almost uniformly industrial in nature and scale.

Hampton

The merger of Elizabeth City County and the Town of Hampton formed the City of Hampton in 1952. Working waterfronts have played an important role in the city's economy and culture since its original settlement in the 1600s. Like several other communities in Hampton Roads, Hampton served as an important shipping site in the 17th and 18th centuries. The city has also historically been home to a significant commercial fishing industry, particularly with shellfish and blue crabs.[11]

Isle of Wight County

Several communities in Isle of Wight County were historically home to working watermen engaged in shipping, fishing, and shellfishing. Rushmere, originally named Ferguson's Wharf, is located on the James River and was home to fishermen and oystermen. The village was the site of a wharf used to transport lumber. Rescue, a village located on Jones Creek, was the harbor for a similar group of workers. Battery Park, located on the Pagan River close by to Rescue, was home to a shipping wharf for tobacco and a thriving oystering community.

Newport News

Newport News has a long history as both a center for the commercial seafood industry and the development of heavy waterfront industry in Hampton Roads. The Menchville area off of Deep Creek has long been the home of watermen. At the other end of the city, Newport News Shipbuilding and the city's shipping terminals have been part of the city's economic base for over a century. Newport News Shipbuilding, located on the James River, was originally founded in 1886 as the Chesapeake Dry Dock and Construction Co.

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[9] http://www.cityofchesapeake.net/Visitors/history.htm
[10] Forward Chesapeake 2026 Comprehensive Plan
[11] Hampton Community Plan

Norfolk

Norfolk has been home to a large number of working waterfronts since its earliest days. The town of Norfolk was originally established in the late 17th century as a port for shipping tobacco. As Norfolk's population grew, large-scale shipping took over as the main waterfront industry. In 1917, the facility now known as Naval Station Norfolk was established at Sewell's Point; the base is now the largest naval base in the world. Norfolk International Terminals was constructed in 1966; the port facility was later absorbed into the Port of Virginia.

Poquoson

Poquoson's working waterfront legacy started in the 1630s, when the area was home to several large farms and the wharves used to ship their products. In the early 19th century the city's economy shifted from export agriculture to seafood, which has remained an important part of the city's culture and economy ever since. Amory's Wharf, now a historic site on the Back River, was a center for the seafood industry in the late 19th and early 20th centuries.[12]

Portsmouth

Portsmouth was founded as a port town in 1752 through an act of the Virginia General Assembly.[13] The city's working waterfronts heritage is mostly tied to heavy industry. In 1767, the Gosport Shipyard was built on the Elizabeth River. I 1862, this facility was renamed the Norfolk Naval Shipyard, a name it retains to the present day.[14]

Smithfield

Smithfield was first settled in 1634 and incorporated as a town in 1752.[15] The town developed as a port for shipping products such as peanuts and ham. The town's status as a working port lessened in the early 20th century following a fire and a general decline in water-based transportation.[16]

Suffolk

Suffolk's history of working waterfronts dates back to the town of Suffolk's founding in 1742 on the site of a settlement named Constant's Wharf. Constant's Wharf was originally settled as the home, wharf, and tobacco warehouses by John Constant, an English settler, in the early 18th century.[17] The settlement played an important role in local and regional trade.[18]

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[12] http://articles.dailypress.com/1994-11-26/news/9411260027_1_historical-status-wharf-landing-pier
[13] http://www.portsmouthva.gov/history/
[14] http://www.navsea.navy.mil/Home/Shipyards/Norfolk/AboutUs/History.aspx
[15] http://www.smithfieldva.gov/content/index/view/id/32
[16] Smithfield Comprehensive Plan
[17] http://www.suffolk-fun.com/tour-and-explore/history/
[18] http://pilotonline.com/news/local/history/what-s-in-a-name-constant-s-wharf-in-suffolk/article_9123eedd-3190-52cc-b5a5-3cfba5922864.html

Virginia Beach

The city of Virginia Beach occupies the area originally known as Princess Anne County, which was created from Norfolk County in 1691. Kempes' Landing, later known as Kempsville, was established as a small port at the headwaters of the Elizabeth River's Eastern Branch and was the site of several industries related to shipbuilding and repair, including the production of pitch, tar, and turpentine.[19] The Lynnhaven River was historically a major site for oystering, but the industry disappeared due to a combination of over-harvesting, disease, poor water quality from development. Recently parts of the river were reopened to shellfish harvesting.

York

York County has a long history of being a home to working watermen that continues to the present. Yorktown was a major port for agricultural products in the 18th century, but declined in importance during and after the Revolutionary War. In the 20th century, the county became home to several military facilities on the York River which are still active.

C. Current Status of Working Waterfronts in the Region

In Hampton Roads, Virginia, working waterfronts are areas or structures on, over, or adjacent to navigable bodies of water that provide access to the water and are used for water-dependent commercial, industrial, or government activities, including commercial fishing, recreational fishing, tourism, aquaculture, boat and ship building, boat and ship repair, boat and ship services, seafood processing, seafood sales, transportation, shipping, marine construction, and military activities.

Hampton Roads working waterfronts include a variety of activities, ranging from independent watermen engaged in fishing or shellfishing to large industrial ports and shipping facilities. Working waterfronts are similarly used by a wide range of businesses, from self-employed watermen bringing daily catches directly to market to large international conglomerates with huge container and bulk vessels. Most working waterfronts in Hampton Roads are privately owned; the Seafood Industrial Park in Newport News is an exception. The diversity of working waterfronts in Hampton Roads continues to provide a wealth of economic and cultural benefits to those who work in waterfront industries and to the region as a whole. A significant part of the region's overall economy is tied to the ports and naval facilities and to the associated businesses that support those facilities, such as shipbuilders and suppliers. At the smaller scale, the local commercial seafood industry provides a small but significant part of the economy for several communities. Locally caught seafood is found on many local restaurant menus, and area cultural and historical festivals, such as the Poquoson Seafood Festival highlight the importance of the seafood industry to the region's development, providing a sense of history and place.

[19] Virginia Beach Comprehensive Plan Technical Document

Working waterfronts in Hampton Roads face a number of threats and challenges. Two of the greatest threats to these working waterfronts are poor water quality and sea level rise. Poor water quality can damage or eliminate fisheries and oyster grounds. Increasing urban development and the use of fertilizers can contribute to nutrient, sediment, and bacterial impairments, which can actively harm aquatic species populations. Bacterial impairments can result in areas being placed off limits to commercial fishing and shellfishing. This can have the same economic impact as if the populations were lost. Poor water quality and its impacts of aquatic resources are common issues identified throughout Hampton Roads communities' comprehensive plans. Even in localities that do not have large commercial seafood industries, the negative impacts of development on water quality are considered an important issue to address.

Sea level rise and recurrent flooding are also threats to the area's working waterfronts. These businesses and facilities must be located on or near the water, which makes them inherently vulnerable to more frequent flooding. Sea level is expected to rise between two and seven feet in Hampton Roads by the end of the 21st century. Many working waterfronts would be at risk under the lowest sea level rise scenarios, but higher amounts could result in significant damage to some of the region's largest working waterfront facilities. Under the lowest scenario, twelve of the working waterfronts identified in the inventory would be vulnerable to sea level rise. At the highest level, nearly all would be vulnerable.

In addition these environmental threats, the region's industrial and seafood working waterfronts face global and national-scale economic challenges. At the global scale, the region's shipping terminals are affected by issues such as the expansion of the Panama Canal, which will allow for significantly larger vessels. The Port of Virginia, through its Hampton Roads terminals, provides access to the mid-Atlantic and the Ohio River Valley for container traffic. At present, Hampton Roads is the only east coast port with congressional authorization to have a fifty-five (55) foot deep channel, which will accommodate the larger vessels. The port currently is dredged to fifty (50) feet. Although container traffic continues to drive a large portion of the port's business, coal remains a significant part. Demand for coal, whether up or down, has a significant impact on the port's overall bottom line.

At the national level, working waterfronts in Hampton Roads are significantly impacted by decisions made by the federal government. Work at federal shipyard facilities in Norfolk and Portsmouth drives the regional economy through direct employment. Federal contracts for shipbuilding, repair, and maintenance contribute to the local economies in several cities, including Newport News, Norfolk, and Portsmouth. When federal spending declines, employment at these facilities and businesses also declines, with rippling effects throughout the regional economy. Industry consolidation is also an issue in the industrial working waterfronts, with major international firms buying out local or regional firms.

In addition to environmental threats and economic challenges, working waterfronts in many Hampton Roads communities are also faced with the impacts of the region's transition from an

agricultural economy and distributed development pattern to an industrial and service economy based on urban centers and suburban neighborhoods. As the region has grown in population, waterfronts have become less of a place for employment and more of an amenity to be enjoyed. Most Hampton Roads communities appear to have addressed working waterfronts through their zoning ordinances, which in many cases allow specific working waterfronts uses. A more important issue for these communities is adequate provision of public access to waterways for recreation.

Working Waterfronts in Hampton Roads

The HRPDC Working Waterfronts Inventory completed in 2013 identified 165 working waterfront operations. These were classified into five (5) groups (Commercial, Industrial, Military, Recreational, and Seafood) and twenty-five (30) subgroups, as shown in Table 1 below.

Table 7: HRPDC Working Waterfront Inventory Classifications

Working Waterfront Groups	Working Waterfront Subgroups
Commercial	Boat Dealer Boat Repair Boat Supplies Marina Navigational Services
Industrial	Bulk Liquid Storage and Shipping Cargo Shipping/Handling Marine Construction Marine Dredging Marine Towing Petroleum Bulk Stations and Terminals Petroleum Terminal Power Generation Products and Services Ship Repair
Military	Military Ship Repair
Recreational	Boat Rental Charter Boats Cruises Fishing Pier
Seafood	Seafood Retail Seafood Wholesale Seafood Transportation Shellfishing

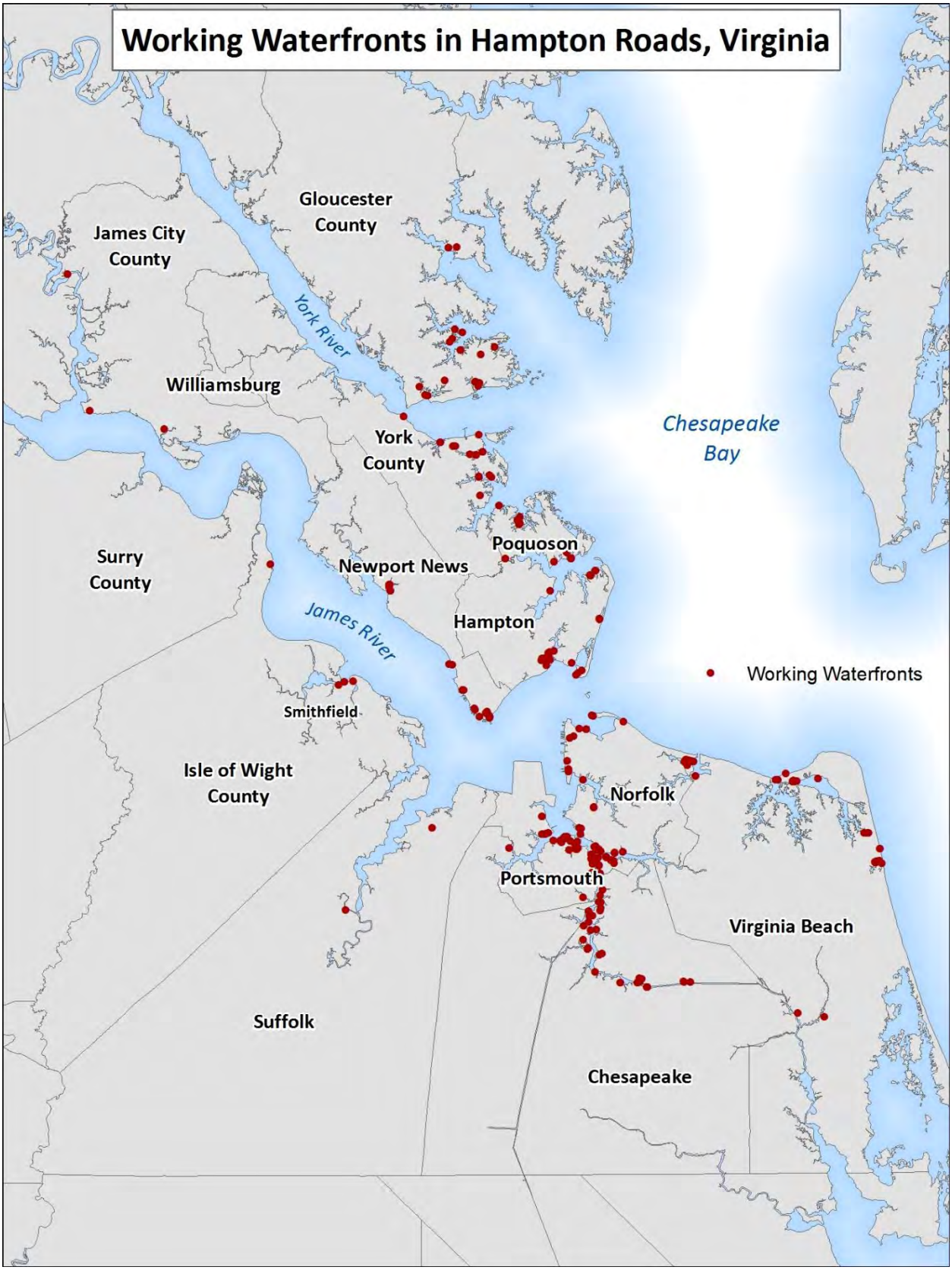
Working waterfronts were identified in twelve (12) HRPDC localities: Chesapeake, Gloucester County, Hampton, Isle of Wight County, James City County, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, and York County. The distribution of working waterfronts in each locality is shown below in Table 8.

Table 8

Locality	Commercial	Industrial	Military	Recreational	Seafood	Total
Chesapeake	4	15				19
Gloucester County	6				5	11
Hampton	16				4	20
Isle of Wight County	3				1	4
James City County	3					3
Newport News	4	2		2	8	16
Norfolk	15	16	1	2	1	35
Poquoson	3				5	8
Portsmouth	11	4	1			16
Suffolk	2					2
Virginia Beach	13	2		3	3	21
York	8	1			1	10
TOTAL	88	40	2	7	28	165

Most communities with working waterfronts have only one or two types of operations. Norfolk is the only community with all five categories present; Newport News and Virginia Beach each have four types. The inventory reflects the importance of tourism and recreation businesses as working waterfronts in Hampton Roads, as well as the long-standing presence of seafood businesses, particularly on the Peninsula. In fact, only four (four) of the twenty-eight (28) identified seafood-related working waterfronts were not found on the Peninsula (including Gloucester County).

Figure 7


Working Waterfronts in Hampton Roads, Virginia
Gloucester County
James City County
York River
Williamsburg
York County
Chesapeake Bay
Poquoson
Surry County
Newport News
James River
Hampton
Working Waterfronts
Smithfield
Isle of Wight County
Norfolk
Portsmouth
Virginia Beach
Suffolk
Chesapeake

Chesapeake

Most of Chesapeake's working waterfronts are industrial in nature and are located along the Southern Branch of the Elizabeth River, with additional businesses located along the Intracoastal Waterway. As stated in its Comprehensive Plan, Chesapeake currently has no commercial fisheries, since many of its waterways are condemned for both fishing and shellfishing. To minimize conflicts between the industrial waterfront and the city's suburban neighborhoods and other commercial areas, the city has adopted a zoning ordinance that restricts most working waterfront-related activities to areas zone for industrial uses. The zoning ordinance identifies eight (8) working waterfront-related uses:

1) Animal and Marine Fats and Oils
2) Boat Dealers
3) Canned and Cured Fish and Seafood
4) Marinas
5) Petroleum Bulk Stations and Terminals for Hire
6) Petroleum Refining and Related Industries
7) Prepared Fresh and Frozen Fish and Seafood
8) Water Transportation

Each of these uses is allowed by right (P) or with a conditional use permit (C) in some or all of the city's business and industrial districts, as shown in the table below.

Table 9

Use	B2	B5	MXD/U	M1	M2	M3
Animal and Marine Fats and Oils					C	C
Boat Dealers	C	C	C	C	P	P
Canned and Cured Fish and Seafood					C	C
Marinas	P	P	P	P	P	P
Petroleum Bulk Stations and Terminals for Hire					P	P
Petroleum Refining and Related Industries					C	C
Prepared Fresh and Frozen Fish and Seafood					C	C
Water Transportation					P	P

In recognition of the importance of the city's industrial working waterfronts to the economy, Chesapeake has also adopted a zoning classification specifically for working waterfronts, the M-3 Waterfront Industrial District. According to the city's zoning ordinance, uses in the M-3 district must be water-related and include a port or docking facility.

Hampton

Although shipping played a role in the city's early economy, today working waterfronts in Hampton are either related to seafood or to servicing recreational boaters, though several industrial uses utilize the city's waterways. Specific industries that rely on working waterfronts include commercial fishing, concrete, and petroleum. Working waterfront businesses are located on several of the city's waterways, including the Chesapeake Bay coast, the Hampton River, and the Back River. Although the city has not adopted an explicit working waterfronts zoning district, it has allowed several working waterfront activities as by-right uses in several zones. The ordinance identifies six (6) working waterfront-related uses:

1) Boat repair
2) Boat sales
3) Boat tour/charter boat docking facility
4) Boathouse, pier, dock, ramp; commercial (public or private)
5) Marina, including boat sales, rental, storage, and fuel
6) Pier, dock, seawall related to commercial or industrial water transport

Boathouses and marinas are allowed with a use permit in all of the city's zoning districts. Each of the other uses is allowed by right (P) or by permit (UP) in one or more of the city's commercial, industrial, and utility districts, as shown in the table below.

Table 10

Use	C-1	C-2	C-3	M-2	M-3	LFA-1	LFA-2	RT-1	BB-3	BB-4	BB-5	HRC-2	DT-1	DT-2
Boat Repair				P	P	P	P							P
Boat Sales	P	P	P	P		P	P	P	P	P	P	P	P	P
Boat Tour/Charter Boat Docking Facility														P
Pier, Dock, Seawall Related to Commercial or Industrial Water Transport				UP	UP									

Isle of Wight County

Isle of Wight has relatively few working waterfronts currently. Most of those are related to recreational boating or fishing and are located along or near the main stem of the James River. The County has not adopted a working waterfronts zoning designation. However, it has included four (4) working waterfronts related activities in its zoning ordinance:

1) Aquaculture

2) Marina (including Boat Repair Yards)
3) Boat Repair (included in Motor Vehicle Repair Service/Minor)
4) Boat Storage (included in Motor Vehicle/Outdoor Storage)

Each of these uses is allowed by right (P) or with a conditional use permit (C) in one or more of the county's agricultural, residential, commercial, industrial, or planned development districts, as shown in the table below.

Table 11

Use	RAC	RR	VC	NC	SE	SR	UR	LC	GC	LI	GI	GIC	PD-R	PD-MH	PD-CP	PD-MX	PD-IP
Aquaculture	P		C														C
Marina	C	C	C	C	C	C	C	C	P				C		P	C	P
Boat Repair			C					C	P						C	C	P
Boat Storage									C	P	P	P		C	C	C	C

James City County

James City County has few working waterfronts, and all of the working waterfronts documented are related to recreational boating. Two of the three working waterfronts are located on or near the James River; the third is located on the Chickahominy River. The county has not adopted a working waterfronts zoning designation. However, the zoning ordinance currently includes several working waterfront uses that are allowed by right (P) or with a special use permit (S) in several of the county's residential, commercial, and industrial zones. The ordinance identifies six (6) working waterfront uses:

1) Fish farming and aquaculture
2) Waterfront business activities
3) Yacht clubs; marinas/boat storage and service
4) Marina, boat dock or waterfront recreational facilities
5) Boat docks
6) Marine or waterfront businesses to include the receipt, storage, and transshipment of waterborne commerce or seafood receiving, packaging and distribution

Table 12

Use	A-1	R-4	R-5	R-6	R-8	LB	B-1	M-1	M-2	MU	PL	EO
Fish farming and aquaculture	S				S					P		P
Waterfront business activities	S											
Yacht clubs; marinas/boat storage and service		P				S	P	P	P	P		S
Marina, boat dock or waterfront recreational facilities			P								S	
Boat docks				P								
Marine or waterfront businesses to include the receipt, storage, and transshipment of waterborne commerce or seafood receiving, packaging and distribution							P	P	P	P		S

In addition to its more common working waterfronts, James City County is home to one end of the Jamestown-Scotland Ferry, which provides service on State Route 31 across the James River between James City County and Surry County.

Newport News

Newport News currently has a variety or working waterfront businesses, ranging from shipyards and massive shipping terminals to small and medium-sized seafood operations. These businesses are located along the James River and at its tributary inlets and creeks. The city has not adopted a working waterfront zoning district. However, the zoning ordinance currently has several working waterfront uses that are allowed by right (P) or with a conditional use permit (C) in several residential, commercial, and industrial zones in the city. The ordinance identifies eleven (11) working waterfront-related uses:

1) Boat Basin
2) Boat & Yacht Sales
3) Country/Yacht Club
4) Freight Terminal
5) Marina
6) Seafood Packing & Processing

7) Seafood Wholesale Distribution & Receiving
8) Seaport
9) Shipbuilding, Shipyard Manufacture or Repair
10) Small Boat Repair
11) Transit Terminal for Bus, Rail Boat, Ship, or Other Mass Transit

Table 13

Use	R1	R2	R3	R4	R5	R6	R7	R8	R9	P1	O1	O2	O3	C1	C2	C3	C4	C5	M1	M2
Boat Basin	C	C	C	C	C	C	C	C	P	P		P		P	P	P			P	P
Boat & Yacht Sales									C					C	C	P				
Country/Yacht Club	C	C	C	C	C	C	C	C	C	C		P		P		P	C			
Freight Terminal																C		C	P	P
Marina										C				C	C	P			P	P
Seafood Packing & Processing																				P
Seafood Wholesale Distribution & Receiving															C	P		P	P	P
Seaport																P			P	P
Shipbuilding, Shipyard Manufacture or Repair																				P
Small Boat Repair															C	P				
Transit Terminal for Bus, Rail Boat, Ship, or Other Mass Transit					C	C	C	C	C	C	C	C	C	C	C	P	C	P	P	P

Although the city has not adopted a working waterfronts zoning district, it has established the Newport News Seafood Industrial Park. The facility was initially established in the early 20th century as the Newport News Small Boat Harbor. In 1979, the City of Newport News created the Seafood Industrial Park and has continued to own and maintain it as a location for businesses related to and supporting the commercial seafood industry.

Norfolk

Norfolk currently has the greatest number and diversity of working waterfronts in the Hampton Roads region, ranging from seafood operations and recreational boating facilities to large shipping terminals and military facilities. These working waterfronts are found on every major waterway in the city, including the Elizabeth River, the James River, the Chesapeake Bay, and Little Creek. The city has adopted zoning designations specifically for working waterfronts and allows working waterfront uses in many other zones throughout the city. The city's current zoning ordinance (which is currently undergoing a comprehensive revision) identifies eighteen (18) working waterfront uses:

1) Boat Building and Repair (Small Craft)
2) Boat Ramps
3) Boat Sales and Service
4) Boatels
5) Bulk Cargo Pier; Terminal
6) Cargo Pier, Terminal
7) Community Dock
8) Cruise Ship Pier, Terminal
9) Fishing Pier
10) Fishing; Commercial
11) Marina (with Boat Repair)
12) Marinas, excluding boat repairs
13) Military Installations
14) Personal Watercraft Rental
15) Seafood Processing; Seafood Market
16) Ship Building and Repair
17) Ship Supplies
18) Yacht Club

Community docks are allowed by right (P) and yacht clubs are allowed by special exception (S) in all of the city's residential districts. Other working waterfront uses are allowed by right or by special exception in some or all of the city's office, commercial, industrial, downtown, and special purpose districts, as shown in table 14.

Table 14

Use	BC-1	BC-2	C-2	C-4	I-1	I-2	I-3	I-4	I-5	D-1	D-5	OSP	MI
Boat Building and Repair (Small Craft)								P					
Boat Ramps												P	
Boat Sales and Service			P	P	P			P					
Boatels			S					S					
Bulk Cargo Pier; Terminal									P				
Cargo Pier, Terminal									P				
Cruise Ship Pier, Terminal									P				
Fishing Pier			P										
Fishing; Commercial								P					
Marina (with Boat Repair)								P					
Marinas, excluding boat repairs			P					P		S	P		
Military Installations													P
Personal Watercraft Rental			S										
Seafood Processing; Seafood Market						P	P	P					
Ship Building and Repair									P				
Ship Supplies	P	P				P		P	P				
Yacht Club			P										

Norfolk has long recognized the importance and unique role of its industrial working waterfronts, and as a result the city has adopted two working waterfronts zoning designations. The I-4 designation is referred to as the Waterfront Industrial District, and is intended for "water-dependent activities requiring waterfront locations but not needing direct access to deep water channels."[20] The I-5 designation is referred to as the Deep Waterfront Industrial District, and is intended for "large scale maritime uses, such as shipping, shipbuilding and repair, bulk cargo transfer, and other uses requiring deep access."[21]

Poquoson

Working waterfronts continue to play an important role in Poquoson's economy and culture. The city is home to several working waterfront businesses related to both recreational boating and to the seafood industry. These working waterfronts are mostly located along the Back River and Bennett Creek, a tributary of the Poquoson River. Poquoson has not adopted a specific working waterfronts zoning district. However, the city has identified eight (8) working waterfronts related uses that are allowed in various districts. These uses are:

[20] Norfolk Zoning Ordinance Article II Chapter 7, §7-4.1
[21] Norfolk Zoning Ordinance Article II Chapter 7, §7-5.1

1) Boat sales or service
2) Commissary facilities for boats
3) Fueling stations for watercraft
4) Hull repair shops
5) Marina
6) Recreational marinas
7) Retail businesses which supply commodities such as boats, engines, and accessories
8) Small boat docks (with repair)

These uses are allowed by right (P) or with a conditional use permit (C) in five (5) of the city's zoning districts.

Table 15

Use	C-1	POSCD	PUD	B-2	G-C
Boat sales or service				C	C
Commissary facilities for boats			P		
Fueling stations for watercraft			P		
Hull repair shops			C		
Marinas			P	C	C
Recreational marinas		P			
Retail businesses which supply commodities such as boats, engines, and accessories			P		
Small boat docks (with repair)	P				

Portsmouth

Portsmouth currently has a significant number of working waterfronts, including some of the region's largest industrial and shipping facilities. Much of Portsmouth's waterfront along the main stem and Southern Branch of the Elizabeth River is dominated by large working waterfront facilities. The city has included several working waterfronts related uses in its zoning ordinance, but has not adopted a specific working waterfronts related zoning designation. The current zoning ordinance includes four (4) working waterfronts related uses:

1) Boat and marine rental and sales
2) Marina
3) Marina, pleasure boats only
4) Shipping container storage yard

These are allowed by right (P), with a use permit (U), or allowed by activity center regulations (A) in some or all of the city's zoning districts, as shown in table 16.

Table 16

Use	GR	UR	URH	NMU	GMU	MUH	IL	IN	NAC	CAC	RAC	HLB	WF
Boat and marine rental and sales				P	P	P	P	P		A	A	P	U
Marina		U	U	U	U	U	P	P			A	U	P
Marina, pleasure boats only	U	P	P	P	P	P	P	P	A	A	A	U	P
Shipping container storage yard							U	U			U		

Smithfield

As an incorporated town, Smithfield has adopted a separate zoning ordinance from Isle of Wight County. None of the working waterfronts from Isle of Wight County included in the Hampton Roads working waterfront inventory were located within the town limits. However, the town has included working waterfronts in its comprehensive plan and zoning ordinance. The zoning ordinance identifies 9 working waterfront related uses:

1) Boat docks, boat storage, and waterfront access facilities as an accessory use to a private single family dwelling
2) Boat docks, boat storage, and waterfront access facilities, as an accessory use to uses other than private single family residential dwellings
3) Commercial boat docks, fishing piers and marinas
4) Commercial fishing and shellfishing
5) Cultivation and harvesting of shellfish and worms for bait
6) Vehicle sales, including boats and watercraft
7) Waterfront retail business activities including boat docks and piers, yacht clubs, marinas and boat service facilities, storage and shipment of waterborne commerce, fish and shellfish receiving, seafood packing and shipping, and recreational activities
8) Waterfront retail businesses and activities associated with a shopping center use, including boat docks and piers, yacht clubs, marinas, boat service facilities, and recreational uses
9) Yacht clubs and marinas

These uses are allowed by right (P) or by special use permit (SUP) in eight (8) of the town's zoning districts, as shown in table 17.

Table 17

Use	DN-R	D (DMU)	HRC	PSC	I-1	C/I	I-2	EC
Boat docks, boat storage, and waterfront access facilities as an accessory use to a private single family dwelling	P							
Boat docks, boat storage, and waterfront access facilities, as an accessory use to uses other than private single family residential dwellings	SUP							
Commercial boat docks, fishing piers and marinas								SUP
Commercial fishing and shellfishing								P
Cultivation and harvesting of shellfish and worms for bait								P
Vehicle sales, including boats and watercraft			SUP		SUP			
Waterfront retail business activities including boat docks and piers, yacht clubs, marinas and boat service facilities, storage and shipment of waterborne commerce, fish and shellfish receiving, seafood packing and shipping, and recreational activities		SUP	SUP		SUP	SUP	SUP	
Waterfront retail businesses and activities associated with a shopping center use, including boat docks and piers, yacht clubs, marinas, boat service facilities, and recreational uses				SUP				
Yacht clubs and marinas							SUP	

Suffolk

Suffolk does not currently have many working waterfronts. Those businesses that are located in the city are both located off the Nansemond River. The city does not have a dedicated working waterfronts zoning district, but the current zoning ordinance includes three (3) working waterfronts related use:

1) Aquaculture
2) Marinas
3) Concentrated aquatic animal production facility

These uses are allowed by right (P) or by conditional use permit (C) in fifteen (15) of the city's zoning districts, as shown in the table below.

Table 18

Use	C	A	RR	RE	RL	RLM	RM	RC	RU	B-1	B-2	CBD	O-I	M-1	M-2
Aquaculture	P	P	C	C										C	C
Marinas	C	C	C	C	C	C	C	C	C	C	P	P	P	C	C
Concentrated aquatic animal production facility		P													

Surry County

Surry County does not currently have any working waterfronts. The county's comprehensive plan calls for improvements to water access facilities for recreational boating and fishing. In addition, Surry County is home on one end of the Virginia Department of Transportation Jamestown-Scotland Ferry. The ferry operates 24 hours a day year round. The county's zoning ordinance identifies three working waterfront related uses:

1) Marinas (including yacht or boat clubs)
2) Boat storage (included in motor vehicle outdoor storage)
3) Boat repair (included in motor vehicle repair (minor))

These uses are allowed by right (P) or by conditional use permit (C) in eight of the county's zoning districts.

Table 19

Use	A-R	RVC	R-1	R-2	B-1	B-2	P-D	M-1
Marinas	C	C	C	C	P	P	P	
Boat storage						P		P
Boat repair	C	C				P		

Virginia Beach

Virginia Beach has the second highest number of working waterfront businesses identified in the Hampton Roads working waterfronts inventory. Most of these businesses are commercial in nature, but the city also has several working waterfronts that are engaged in the industrial, recreational, and seafood related pursuits. Most of these businesses are located on the Lynnhaven River off the Chesapeake Bay or on Rudee Inlet. A small number of businesses are also located on the North Landing River. The city has not adopted a specific working

waterfronts zoning designation, but has included several working waterfronts related land uses in its zoning ordinance. The current ordinance identifies fourteen (14) uses:

1) Aquacultural operations
2) Boat sales
3) Facilities for construction, maintenance, and repair of boats and vessels
4) Fish hatcheries and fish ponds
5) Large passenger vessels used for commercial purposes
6) Marinas, commercial
7) Marinas, noncommercial
8) Marinas, noncommercial and community boat docks
9) Personal watercraft rentals
10) Piers, wharves, and docks
11) Public marinas
12) Ship supply establishments and facilities
13) Terminals for freight or passengers arriving or departing by ship
14) Wholesale and retail establishments dealing primarily in bulk materials delivered by ship

Personal watercraft rentals are allowed with a conditional use permit in all of the city's residential and apartment districts, except for the R-5R district. Noncommercial marinas and community boat docks are similarly allowed in all of the city's residential and apartment districts with a conditional use permit. Other uses are allowed by right (P) or by a conditional use permit (C) in several of the city's zoning districts, as shown in the table below.

Table 20

Use	P-1	AG-1	AG-2	H-1	B-1A	B-2	B-3	B-4	I-1	I-2
Aquacultural operations		P	P							
Boat sales						P		P		
Facilities for construction, maintenance, and repair of boats and vessels									C	P
Fish hatcheries and fish ponds	P	P	P							
Large passenger vessels used for commercial purposes										C
Marinas, commercial				C		C	C	C		
Marinas, noncommercial	C									
Marinas, noncommercial and community boat docks		C	C							
Personal watercraft rentals	C	C	C	C	C	C	C	C	C	
Piers, wharves, and docks										P

Public marinas	P	P	P							
Ship supply establishments and facilities										P
Terminals for freight or passengers arriving or departing by ship										P
Wholesale and retail establishments dealing primarily in bulk materials delivered by ship										P

York

York County currently has a number of working waterfronts related to both the commercial seafood industry and recreational uses. For the most part these businesses are located along the York River and Poquoson River in areas such as Dandy, Seaford, and Dare. The majority of the businesses identified in the inventory are marinas; however, commercial fishing and aquaculture remain a significant part of the County's economy. The County has adopted a zoning ordinance that identifies where working waterfront businesses are allowed to operate. The ordinance identifies eight (8) working waterfront uses:

1) Bait, Tackle/Marine Supplies Including Incidental Grocery Sales
2) Boat Sales, Service, Rental, and Fuel Dispensing
3) Fish Canning, Curing, Grinding, Smoking
4) Fish, Seafood Store
5) Marina, Dock, Boating Facility (Commercial)
6) Marina, Dock, Boating Facility (Private/Club)
7) Marine Railway, Boat Building and Repair
8) Seafood Receiving, Packing, Storage

Each of these uses are allowed either by right (P) or by a special use permit (S), as detailed in the table below.

Table 21

Use	RC	RR	R20	R13	R7	RMF	GB	WCI	EO	IL	IG
Bait, Tackle/Marine Supplies Including Incidental Grocery Sales							P	P	P	S	S
Boat Sales, Service, Rental, and Fuel Dispensing							P	P		S	
Fish Canning, Curing, Grinding, Smoking								S			S
Fish, Seafood Store							P	P	P		
Marina, Dock, Boating Facility								P		P	P

(Commercial)											
Marina, Dock, Boating Facility (Private/Club)	S	S	S	S	S	S		P		P	P
Marine Railway, Boat Building and Repair								P		P	P
Seafood Receiving, Packing, Storage								P		S	P

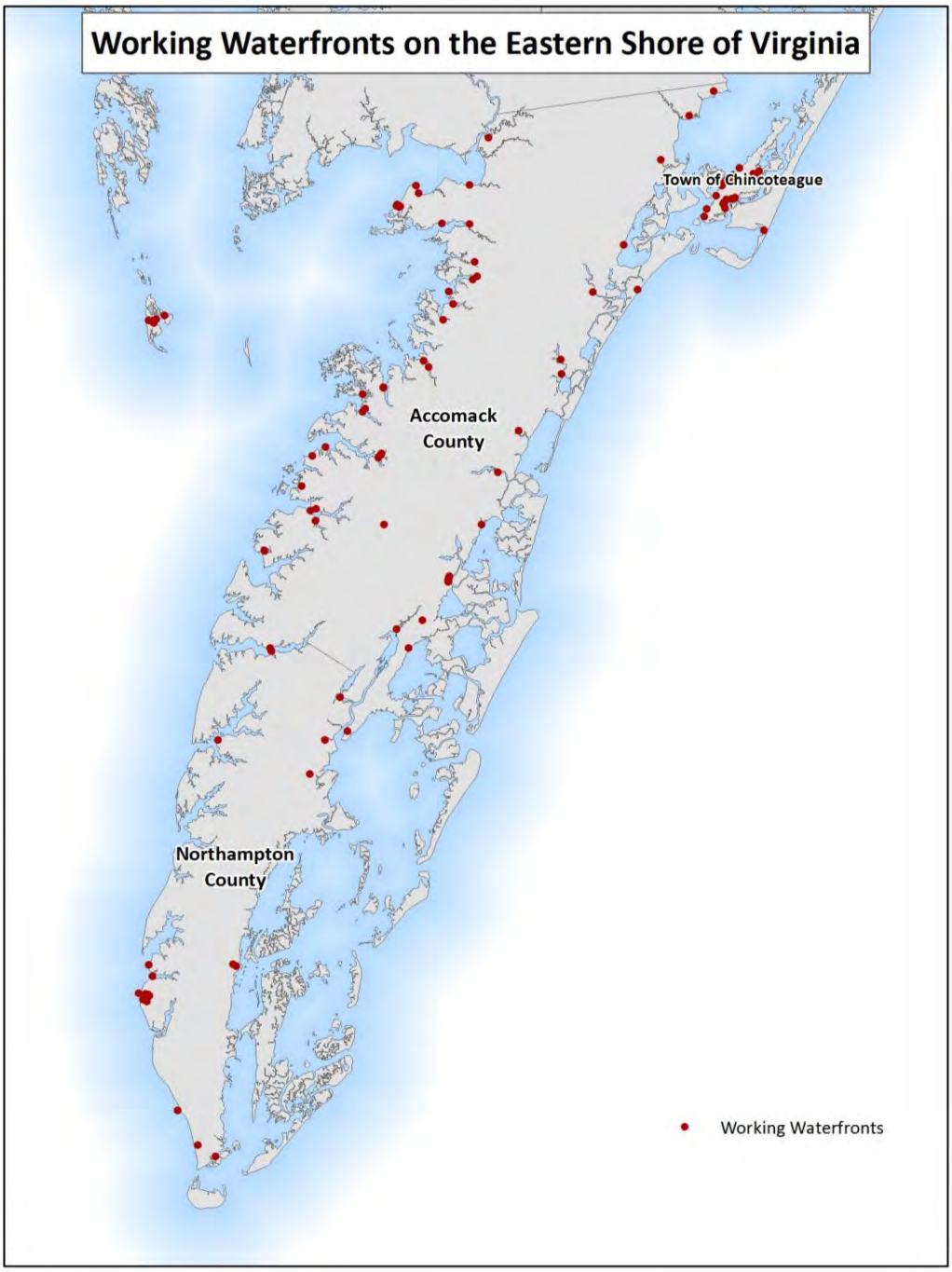
As with some other communities in Hampton Roads, York County has adopted a special zoning district for specifically for working waterfronts. The Water-Oriented Commercial/Industrial District was established "to provide opportunities for various types of activities oriented toward and requiring access to the water." [22]

Williamsburg

Williamsburg does not currently have any working waterfront businesses. However, boat repair and servicing is allowed in the City's B-2 zoning districts.

[22] Sec. 24.1-334

Chapter VIII
Accomack-Northampton Planning District Commission



A. Introduction

Created by the Commonwealth of Virginia in 1968, the counties of Accomack and Northampton and the Town of Chincoteague make up the Accomack-Northampton Planning District

Commission (A-NPDC), a regional organization. Tasked with supporting local planning and community development efforts and providing technical assistance on behalf of the Commonwealth, the A-NPDC focuses on diverse issues of regional importance to the Eastern Shore of Virginia.

The A-NPDC's role is to assist Eastern Shore communities in economic development efforts and planning for retention and expansion of existing industries, including working waterfronts. Working waterfronts have historically been and continue to be a major source of income for Shore citizens.

The Eastern Shore of Virginia is a peninsula with 77 miles of Atlantic shoreline on the eastern side and a similar number of miles on the Chesapeake Bay or western side. This is more shoreline than any of the other planning districts participating in the project, and the high number of working waterfronts identified in the Inventory reflects this extensive shoreline. Working waterfronts are situated along both the Atlantic and the Chesapeake Bay shorelines, and water resources have historically been and are currently a major source of livelihood for many citizens.

Use of the resources on the ocean and bayside of the peninsula include aquaculture of clams, oysters, and salt water fish, commercial and recreational fishing, boating, swimming, surfing, and hunting. In addition, ecotourism, national defense, public safety uses, marine research, shipping and rail yards, boatbuilding, and support for offshore energy production are conducted out of the Shore's working waterfronts.

The Eastern Shore seaside has pristine waters due mainly to the fact that it is relatively undeveloped. Fourteen barrier islands in the Shore's coastal zone are protected from development by the Nature Conservancy's Virginia Coast Reserve (VCR), in partnership with the Virginia Department of Conservation and Recreation, and the Virginia Department of Game and Inland Fisheries. Together, this partnership has created the longest continuous stretch of undeveloped Atlantic coastline in the United States. These pristine inshore waters are heavily used for shellfish aquaculture, commercial and recreational fishing, recreational boating and waterfowl hunting, and academic research. Additionally, the seaside is home to NASA, NOAA, and Navy operations on Wallops Island making the inshore waters critical for national defense.

B. History of Working Waterfronts in the Region

Before the advent of the railroad in 1884, almost all commerce on the Eastern Shore of Virginia was conducted by water. There were few interior roads. Many more working waterfronts existed in the 18th and 19th centuries, and most large farms on both the bayside and seaside had their own docks for shipping goods out to market, as well as off-loading seafood.

Numerous small towns had access to the Chesapeake Bay and the Atlantic Ocean via tidal creeks. Many of these creek landings have since silted in due to changes in land-use practices

during the 19th and 20th Centuries, and others have been inundated due to rising water levels or shoaled in by storms over time as funding to dredge them became unavailable.

Tons of oysters were hand-tonged, patent-tonged, or dredged. By the turn of the 20th century, 10 million bushels of oysters were harvested and sent to market. All had to be off-loaded at the numerous working waterfronts situated on the shoreline. Sawmills made barrels in which to pack the catch, and icehouses in Cape Charles and Tasley provided the ice needed to keep it fresh. In addition, commercial fish landings were huge until the 1950's. Commercial fishing continues today, but at a much smaller scale.

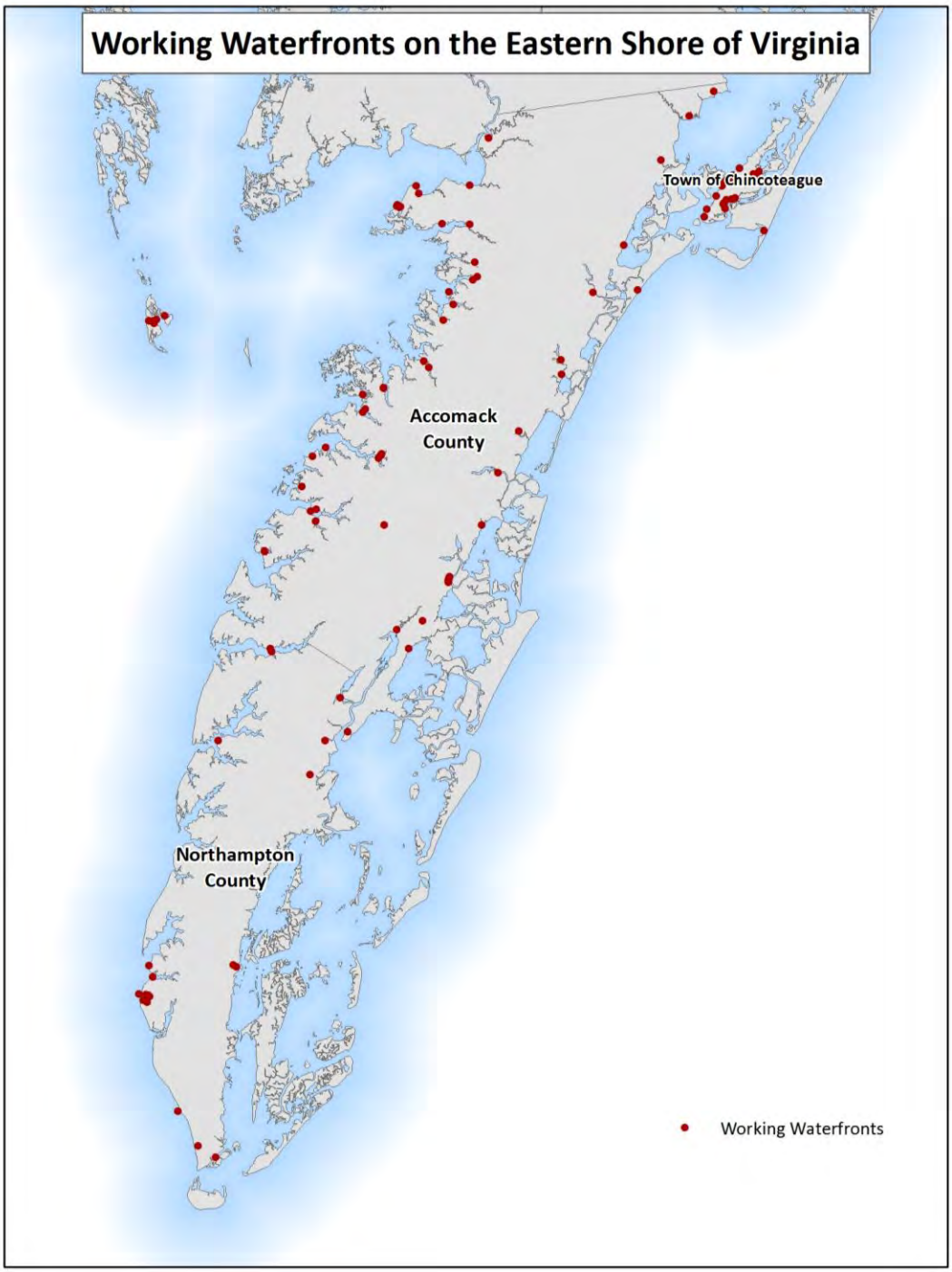
Blue crabs were packed in ice and shipped via steamer to Baltimore and Washington, as they are extremely perishable. Oysters were shipped as well, but many oysters were bound for New York City, where 100 years ago consumption of oysters was almost unbelievable by present-day standards. In New York City, the average was eight bushels per year or five oysters per day for every man, woman and child in the city of under 900,000 people (McHugh, J. L. p 49).

Today, working waterfronts on the Eastern Shore continue to be used to offload fish and shellfish, to use seed clam and oyster spat, recreational fishing vessels meet their clients, buying stations are located, shellfish are processed, and many serve as home ports for commercial fishermen and aquaculture businesses. Although working waterfronts have declined in number in the 20th and 21st centuries, the A-NPDC identified more than 200 sites that are still actively engaged as working waterfronts on the Eastern Shore of Virginia.

C. Current Status of Working Waterfronts in the Region

In Accomack and Northampton Counties of Virginia, the term `working waterfront' means real property (including support structures over and adjacent to the water or inland property engaged in significant water-related activities) that provides access to coastal waters or that supports commercial fishing; recreational fishing businesses; aquaculture; ecotourism; national defense; public safety uses; marine research; shipping and rail yards; boatbuilding; support of offshore energy production; or other commercial, recreational, and industrial business. An initial inventory of these facilities conducted by A-NPDC during 2013-2014 identified 222 working waterfronts in the region (**Figure 8**). This number represents the greatest number of working waterfronts within any region in the Commonwealth.

Figure 8



Working waterfronts have a huge economic impact to the Eastern Shore economy. In terms of shellfish aquaculture, Northampton County is a clear leader among other Virginia localities. In 2013, Northampton County shellfish farms sold over $36.7 million in clams and oysters, and commercial fishermen unloaded over $5.7 million in wild caught finfish and shellfish for a total of $42,496,494 of seafood products across the County's waterfront. The total economic impact

is estimated at $97.4 million in output that supported 987 jobs generating household and business incomes of $27.1 million (Murray, Thomas J. p.3).

On Chincoteague in Accomack County, commercial fishermen annually land millions of dollars worth of scallops, summer flounder, scup, and black sea bass, as well as many other species. Aquaculture of clams and oysters takes place in Tom's Cove and several other areas around the island, as well.

In 2015, in Accomack County, VMRC issued 727 oyster harvesting and production licenses/permits, 246 clam harvesting and raising permits, and 477 licenses for crab harvesting or shedding. In Northampton County, 380 licenses were issued for oyster harvesting or production, 293 licenses for clams, and 299 for crabs. VMRC licensing fees for all permits (including other species) totaled $359,806 which amounted to $263,418 in Accomack County, and $96,388 in Northampton County, indicating a high level of water-related business activity.

The Shore's working waterfronts are also used for recreational boating and fishing including but not limited to Chincoteague, Cape Charles, Onancock, Saxis , Wachapreague, Willis Wharf, Red Bank, Quinby and Oyster. Individuals also use the counties' public boat ramps for harvesting clams, oysters, crabs, and fish. In addition, water-based tourism has been enhanced by the development of the Seaside Water Trail starting at the Eastern Shore of Virginia National Wildlife Refuge and extending through the seaside coastal bays to Chincoteague and Assateague Island and the Captain John Smith National Historic Trail with landings in Cape Charles, Onancock, and Tangier.

There are several factors that have negatively affected working waterfronts on the Eastern Shore. Redevelopment pressure exists in specific locations in the region where growth and extensive tourism are occurring, including the Towns of Cape Charles and Chincoteague. Elsewhere on the Shore, the primary pressures on working waterfronts include governmental, flooding-related hazards, and shifts in seafood market economics. Governmental regulations related to declining fish stock landings impact business operations that in turn result in changes to coastal land use. Lack of flood insurance coverage is another contributing factor to the decline of working waterfronts, as many are not rebuilt after a storm.

Another factor that has negatively affected working waterfronts is navigability of the access channels to both bayside and seaside waterfronts. Many access channels have silted in due to storms, changes in land-use practices, and hard-scaping the shorelines near some channels. To address this problem, an Eastern Shore Regional Navigable Waterways Committee has been formed. The Committee will work with the US Army Corps of Engineers to identify critical needs and how to open these channels to ensure continued commercial access to working waterfronts.

Four case studies conducted in 2012 revealed examples of specific threats that continue to affect working waterfronts:

1. Thomas E. Reed Seafood – closed in recent years and was one of the last oyster shucking houses in operation on Chincoteague Island. The business is representative of a closed working waterfront with great redevelopment value owned by a waterman demographic that is reaching retirement age and interested in funding a retirement with sales from the property.

2. Tangier Island Crab Shanties – illustrates how flooding damage, rising sea levels, lack of insurance and regulations regarding crab harvesting threaten the ability of working watermen to continue their way of life. Also, rebuilding over water involves a permitting process that is regarded as prohibitive.

3. Eastern Shore Seafood Products – representative of a working waterfront not located on the waterfront that was dependent on the health of the sea clam population. This plant was closed due to a dip in sea clam populations resulting in low harvests combined with the expense of disposing of clam processing waste and reduced incomes limited by decreased permitted harvesting times.

4. King's Creek Marina, Cape Charles – an historically-commercial harbor that was recently re-developed into a world-class recreational marina. Watermen are welcome at this facility, but the slippage rates were considered prohibitive and limited wharf space made offloading inconvenient.

Preservation of working waterfronts is vital to the economies of A-NPDC member jurisdictions, Accomack and Northampton Counties and the Town of Chincoteague, because of the revenues they produce, the jobs they create, and circulation of the profits and wages in the Shore's economy. Continued access to high quality growing waters and important offshore fishing grounds is critical to maintaining the economic base developed to support the aquaculture and commercial fishing industries and continue its export base for future economic development.

D. Working Waterfront Project Background

The A-NPDC began its Working Waterfront Initiative to preserve and enhance working waterfronts in its region in 2012. The first steps of this initiative were to develop baseline datasets and identify needs. As part of its Coastal Resource Program Technical Assistance Grant from the Virginia Coastal Zone Management Program (VCZMP) and NOAA, the A-NPDC conducted a needs assessment for transient boating facilities in the region. Soon thereafter, the A-NPDC, Northern Neck PDC, Hampton Roads PDC, and Middle Peninsula PDC partnered on a VCZMP/NOAA grant to map and inventory working waterfronts in their respective jurisdictions and to organize a summit in 2014 to present their findings and recommendations for tools that have potential for preserving working waterfronts. After conducting these baseline assessments, the A-NPDC conducted case studies of working waterfront facilities that had recently ceased operations or were under significant economic duress VCZMP/NOAA funds in 2013 and conducted an additional case study looking into impacts of local ordinances and

policies upon current working waterfronts in 2015.

These projects and their outcomes are described in greater detail below:

1. *Transient Boating Marinas Needs Assessment, 2012*

   From this needs assessment, the A-NPDC made the following suggestions for future efforts to both maintain and enhance the current service level for transient and working waterfronts on the Eastern Shore:

   - Provide information to interested facilities regarding the Virginia Clean Marina Program.
   - Investigate the possibility of the Eastern Shore becoming the state's first "Clean Marina Region" in the Virginia Clean Marina Program.
   - Research how many privately-owned facilities plan to continue to operate and exist after the current owner/operator decides to retire.
   - Research why marina owners are wary of the grant programs and use the conversation for educational purposes between the agencies and the marinas.
   - Facilitate development of a dredging plan for the Eastern Shore that provides funds, sets priorities, and creates a schedule that is equitable.
   - Study locations for additional lodging opportunities and solicit private sector interest.
   - Look for solutions (perhaps wireless broadband) to solving poor cell phone coverage.
   - Encourage transient and working waterfront owners and operators to consider accommodating for elevated sea levels and increased flooding when undertaking construction to replace or upgrade dock infrastructure.

2. *Working Waterfronts Inventory and Virginia Working Waterfronts Summit, 2013-2014*

   The intent of this project was to compile an inventory of waterfront dependent industries throughout the study area of the Eastern Shore of Virginia, including the Counties of Accomack and Northampton and the Towns of Accomac, Belle Haven, Bloxom, Cape Charles, Cheriton, Chincoteague, Eastville, Exmore, Hallwood, Keller, Melfa, Nassawadox, Onancock, Onley, Painter, Parksley, Saxis, Tangier, and Wachapreague.

   One hundred and seventeen working waterfronts were completely inventoried (98 in Accomack County and 19 in Northampton County). The results of the Working Waterfront Inventory listed all infrastructure documented in the region with an ID Number and Location, maps, photos, and an information sheet detailing latitude and longitude, water depth, and equipment and services available at each location. Another 105 working waterfronts were identified, but no further information was gathered about them because of limits on staff time. The A-NPDC also plans to compare this inventory to the one Northampton County is currently developing and incorporate any additions as necessary.

At the Summit on February 26, 2014, over 150 watermen, business owners, local staff and elected officials, and others seeking information on the preservation and revitalization of the decaying working waterfronts in Virginia participated in the workshop. Guest speakers from private and public groups covered topics related to working waterfronts such as: tools and case studies, laws, economics, zoning, legacy planning, and emerging markets.

A final report from the summit recommended holding another summit in 2 years and generated the following themes:

- Working waterfront business owners and local governments need to collaborate
- Comprehensive Plans are advisory tools
- Real estate taxation policy can stifle or enhance working waterfronts
- Planning and zoning may be extremely constructive tools
- Clear distinctions should be made between water-dependent enterprises
- Legal and policy tools must be in place that anticipate emerging business models
- Man-made infrastructure beyond the shoreline must be considered
- The working waterfront culture must be recognized as an important asset
- The working waterfront community must coalesce around a shared vision
- Succession planning is essential for individual or privately owned water-dependent enterprises
- All sectors of the working waterfront community should be represented

3. *Four Case Studies – King's Creek, Cape Charles; Thomas E. Reed Seafood, Chincoteague; Tangier Island Crab Shanties; Eastern Shore Seafood Products, Mappsville, 2013*

   These case studies identified threats to working waterfronts from redevelopment (King's Creek and Reed Seafood), sea level rise and storm damage (Tangier Island Crab Shanties), and government regulations and dips in wild caught sea clam populations (Eastern Shore Seafood and Tangier Island).

4. *Willis Wharf Zoning Case Study 2015*

   This study examined the planning, zoning, and fiscal policies of Willis Wharf, Virginia with the purpose of informing state and local leaders how best to support, protect, and preserve working waterfronts. The input received from Willis Wharf property owners was synthesized with the outcomes of the assessment of current County zoning and tax policies to present recommendations for planning and policy tools.

   Recommendations included options related to leadership and zoning policies, regular review to monitor regulatory and industry-related changes, options for technical and financial assistance, and outreach. Specifically, it is recommended that Willis Wharf property owners continue to work with Northampton County on a regular basis to continue the planning process that has been in place since 1994. This process has resulted in the

implementation of measures that have ensured the longevity of working waterfront businesses in Willis Wharf. Furthermore, it is recommended that additional assessments and plans be developed with input from Willis Wharf property owners and the Willis Wharf Harbor Committee to maximize the benefit and value of parcels owned by Northampton County to ensure adequate access to the water and to adequately meet the needs of working waterfront businesses. Finally, there are fiscal policy tools available that that could potentially be used by Northampton County to meet future needs of the growing waterfront industry and ensure that waterfront infrastructure is adequately maintained for years to come. It is recommended that Northampton County consider these tools as a means of ensuring the longevity and productivity of working waterfront businesses in Willis Wharf.

Additionally, the A-NPDC has conducted other efforts that indirectly benefit working waterfronts. Projects supported with VCZMP/NOAA funding include a regional Transportation Infrastructure Inundation Vulnerability Assessment in 2015 which identified vulnerable roads and railways which working waterfronts in the region depend upon. The A-NPDC has developed and maintains two regional economic development plans: the Comprehensive Economic Development Strategy and the Stronger Economies Together Plan, which include specific strategies for enhancing water-based and dependent industries that rely upon working waterfronts. Aside from A-NPDC efforts Accomack and Northampton County adopted a joint resolution in 2015 to establish the Eastern Shore Regional Navigable Waterways Committee to coordinate with the U.S. Army Corps of Engineers on dredging, coastal restoration and coastal resilience activities.

E. The Future of Working Waterfronts in the Region

The Eastern Shore's goal is to retain its current working waterfronts, to facilitate expansion and improvement of existing locations, and to encourage development of new facilities.

The A-NPDC reviewed the twelve working waterfronts stressors identified through the project. Three of the twelve stressors were not considered to be realistic for preserving working waterfronts on the Eastern Shore: local government purchase of commercial processing facilities to retain them, decreasing local taxes to expand businesses, and stakeholder meetings on legacy planning. The tools for the remaining nine stressors were recommended. These include development of policies and regulations, zoning, planning, mapping and inventory, land conservation, transfers and acquisitions, private agreements, using the General Powers of the Counties (Code of Virginia 15.2-1200) and reinstatement of state funding and set asides for public waterfront infrastructure use to include grants and loan programs (Code of Virginia 58.1-2289 Disposition of Tax revenue generally (D)…one and one-half cents per gallon on fuel used by commercial fishing, oystering, clamming, and crabbing boats shall be paid to the Department

of Transportation to be used for the construction, repair, improvement and maintenance of the public docs of this Commonwealth used by said commercial watercraft.).

The Working Waterfronts Inventory only included detailed information for facilities with direct access to the water and these surveys were not completed for an additional one hundred five (105) facilities that were either not located on the water or did not have information readily available. A-NPDC recommends completing the inventory in the near future and using it as a baseline to plot changes the region's working waterfront facilities. The inventory would also be useful as a tool for prioritizing improvements to working waterfronts infrastructure.

The following action steps are recommended to ensure that working waterfronts remain economic drivers on the Eastern Shore of Virginia:

Short Term Recommendations:

- Establish a Public Access Authority that will preserve water access. The 2014 Virginia General Assembly passed the Eastern Shore Water Access Authority Act which is codified in the Virginia Code Section 15.2-7400-7425, which authorized both counties to form the Eastern Shore Public Access Authority. The Board of Supervisors of both counties should analyze the process for forming such an authority. The Authority would have as its objectives that which is described in the Act, including identification of each county's land, air and water territorial bounders, in order to encourage development of a master plan for public access infrastructure.
- Complete the Eastern Shore Working Waterfronts Inventory and update it as uses change to track trends involving the region's working waterfronts. Compare to Northampton County's new inventory and incorporate additions.
- Present the completed inventory to the Eastern Shore Regional Navigable Waterways Committee (ESRNWC) and to the localities as a tool to prioritize improvements to working waterfronts infrastructure.
- Respectfully request that the ESRNWC facilitate development of a dredging plan for the Eastern Shore that provides funds, sets priorities, and creates a schedule that is sensitive to commercial interests.
- Present recommended preservation and planning tools outlined by the federal initiative to A-NPDC participants' governing bodies: Accomack County, Northampton County, and Chincoteague (see www.WaterAccessUs.com for toolkit).
- Stress the need for aquaculture training on the Shore and facilitate development of a two-year associates' or certificate program at the community college or VIMS to fill this need.
- Share identified stressors developed by the Working Waterfronts Steering Committee with localities.
- Develop a stakeholders group that can be apprised of all developments and attend workshops and meetings. VMRC license holders are suggested as a starting point.

- Evaluate current policy and suggest changes to regulations that will continue to protect water quality as well as allow water-dependent industries to thrive in new and current locations.
- Develop and present to localities model comprehensive plan language that reinforces the commitment to strengthening the aquaculture industry and preservation of working waterfronts infrastructure.
- Analyze permitting processes in both counties to suggest possible opportunities for reducing turnaround times.
- Research how many privately-owned facilities plan to continue to operate and exist after the current owner/operator decides to retire.
- Research why marina owners are wary of the grant programs and use the conversation for educational purposes between the agencies and the marinas.
- Work with local state representatives to develop legislation for consideration at a future General Assembly session that would enable the creation of a Virginia Working Waterfronts Designation Program that would allow for specific **vital** uses at state, local, and privately-owned working waterfront facilities determined to be of critical economic, heritage, and cultural importance.
- Develop zoning tools such as a working waterfront district designation or a local commercial seafood overlay district that will make it easier for commercial enterprises to expand or improve their facilities to better their business prospects.
- Provide information to interested facilities regarding the Virginia Clean Marina Program and Boating Infrastructure Grant.
- Investigate the possibility of the Eastern Shore becoming the state's first "Clean Marina Region" in the Virginia Clean Marina Program.

Long Term Recommendations:

- Study locations for additional lodging opportunities and solicit private sector interest.
- Look for solutions (perhaps wireless broadband) to solving poor cell phone coverage.
- Encourage working waterfront owners and operators to consider accommodating for elevated sea levels and increased flooding when undertaking construction to replace or upgrade dock infrastructure.
- Research and present for consideration the steps similar areas have taken or plan to pursue to preserve working waterfronts including but not limited to:
    - Develop a Coastal Living Policy
    - Develop a policy to protect working waterfronts infrastructure
    - Use of legal and policy tools that anticipate emerging business models such as the growth of the shellfish industry

- Research how distinctions could or should be made between water-dependent enterprises and their activities and needs ashore as contrasted with engaging in economic pursuits in public waters
- Find ways to promote working waterfront culture so that it is universally recognized as an important asset

Chapter IX

Working Waterfront Resiliency

Working waterfronts in coastal Virginia are under increasing threats from four major natural conditions, sea level rise, subsidence, global warming and channel shoaling.

Virginia's coastlines are being impacted by natural sea level rise. Relative Sea Level (RSL) change has been occurring naturally for decades but due to several factors, the rate of sea level rise is projected to increase dramatically though the rest of this century. A recent analysis of tide gauge data within the Chesapeake Bay region by the VIMS reported RSL rise rates range from 0.11in/yr. to 0.23 in/yr. (2.9-5.8 mm/yr.) for the 10 stations monitored during the period 1976 to 2007. These values represented the highest rates reported along the U.S. Atlantic coast (Boon et al. 2010). At these historic rates sea level would rise between 1 and 2 feet over the rest of the century.

Also within the Chesapeake Bay region, land subsidence contributes to RSL change. Processes contributing to land subsidence include tectonic (movement of the earth's crust) and man-induced impacts (e.g., groundwater withdrawal, hydrocarbon removal). Land subsidence rates on the order of 0.05-0.06 in/yr. (1.2-1.4 mm/yr.) are attributed to the postglacial forebulge collapse within the Chesapeake Bay region. At a more local level, over withdrawal of groundwater is a significant factor driving land subsidence rates. Land subsidence rates within the Middle Peninsula vary between 0.09-0.15 in/yr. (2.4-3.8 mm/yr.) with maximum values being observed at West Point (Holdahl and Morrison 1974; Davis 1987). Average aquifer system compaction rates of 0.15 in/yr. (3.7 mm/yr; 1982-1995) have been reported near the Franklin and Suffolk (Pope and Burbey 2004) pumping stations and this compaction appears to correlate with groundwater withdrawal.

Based on land subsidence and eustatic sea level information, the RSL rise rate would be expected to be on the order of 0.22 in/yr. (5.6 mm/yr.) at or near West Point, VA. Extrapolating current Gloucester Point and Lewisetta rates, RSL would increase by another 0.7-0.8 ft. (21-25 cm) by 2050 and 1.4-1.7 ft. (43-51 cm) by 2100; this represents a conservative and low-end estimate. There is growing concern that RSL rise rates will accelerate in the future with projections of sea level increases in the Bay region of approximately 2.3 - 5.3 ft. (70-160 cm) by 2100 (Pyke et al. 2008).

Sea level rise and recurrent flooding pose a significant threat to Virginia's working waterfronts. Sea level is expected to rise between two and seven feet by the end of the 21st century. Many working waterfronts would be at risk under the lowest sea level rise scenarios, but higher estimates will result in significant damage to some of the State's largest working waterfront facilities. Under the lowest sea level rise scenario; twelve of the working waterfronts in the Hampton Roads region would be vulnerable. At the highest-level scenario, nearly all 592 working waterfronts in coastal Virginia would be vulnerable. There is a high potential that

working waterfronts will be inundated, which will hinder access to the water for commercial and recreational uses.

Global warming is a major contributor to the projected sea level rise over the course of this century but global warming will have other significant impacts on our working waterfronts. With global warming comes more frequent and severe weather patterns. These storms are projected to be more devastating and create more property damage over time. The August storm of 1933 was much more severe than hurricane Isabel in 2003 but the hydraulic impact was about the same. While major storms such as hurricanes and nor'easters cause extensive property damage with sea level rise, even modest storms can cause localized flooding disrupting transportation and activity at working waterfronts. The higher risk levels posed by severe weather events will place the working waterfront facilities, access roads and utilities at greater risk of damage.

There has been a significant shift in national policy related to flood insurance in recent years that will make it more costly for businesses located at working waterfront locations. With the huge burdens on the federally subsidized flood insurance program from several major hurricanes over the last decade, federal policy has changed to make the flood insurance premiums more reflective of the actual cost of the risks of damage. The result has been a significant rise in the cost of flood insurance and in some cases the inability of some property owners to get policies adequate for operation of their business. If the these policies continue and risks of damage increase as projected then the cost of doing business on the waterfront will drive a number of marine related business away from working waterfronts to inland locations.

Shoaling, or sediment build up in a waterway's riverbed, is a natural process that over time makes a waterway shallow and impassable. This is another factor that currently hinders ingress and egress into tributaries and rivers. Due to shoaling access is limited to deeper waters, which directly affect the ability of maritime industries to conduct business as normal. For instance, shoaling in Aberdeen Creek has prevented vessels from entering and navigating the waterway. Aberdeen Creek is a shallow-draft Federal navigation channel that requires dredging in order for boats to pass safely in and out the waterway. As an example, the Army Corps of Engineers dredged Aberdeen Creek in 1974 to allow for the harbors continued use, however no substantive maintenance dredging has since occurred. Today, the narrowing of the channel at the entrance to Aberdeen Creek makes it difficult for ingress and egress of commercial vessels to the public landing at the end of Aberdeen Creek Road. To compound the shoaling issue, Congress has eliminated the funding for Shallow Water Dredging Program operated by the Army Corps of Engineers required to dredge shallow waterways such as this. As this federal revenue source for dredging has disappeared, this has left federally maintained channels and harbors with no direct source of revenue to fund or initiate a much-needed dredging projects.

Shoreline erosion poses an additional threat to a few working waterfronts. As natural erosion takes place the shorelines retreat potentially exposing the land-based facilities to additional wind and wave action. As sea level rises and weather events become more severe the rates of shoreline erosion are expected to increase. Most working waterfronts are in locations that are

protected harbors but if those protecting land masses are erode away they become vulnerable to sever weather conditions. Such places as Tangier Island and Saxis are threatened because of high rates of shoreline erosion.

Because each working waterfront is unique in its location, physical conditions, exposure and use the threat from natural hazards varies greatly. To adequately plan for the future of working waterfronts from the threats of sea level rise, subsidence, more frequent and severe weather events and shoaling it will be necessary to conduct an evaluation of each working waterfront and determine the best solution for that facility. Since there are almost 600 working waterfronts in coastal Virginia it will be necessary to evaluate them on a priority basis over an extended period of time. Our major port and military facilities are currently undergoing this evaluation.

Chapter X

Conclusions and Recommendations

Historically, Virginia's working waterfronts have been the portal for commerce and trade to the rest of the world and have supported regional commerce and recreational activity for most of eastern Virginia. Working waterfronts have been the heart of Tidewater Virginia culture. Today citizens and business alike are still attracted to our shorelines for the superb quality of life and amenities that coastal Virginia offers. Working waterfronts in Virginia play an important role in supporting Virginia's and the nation's economy and naval operations. In 2014 alone, six marine related industries in Virginia generated 122,000 jobs and over $4.9 billion in wages contributing $8.5 billion to Virginia's gross domestic product. These marine industries touch the everyday lives of most Virginians. The Port of Virginia is one of the nations largest ports where Virginia's merchandise is exported worldwide and imports arrive from distant countries.

Approximately 600 working waterfronts in the four coastal Virginia Planning Districts provide valuable access to the navigable waters of Virginia. These facilities support almost every type of marine dependent activity. Recreational boaters and local citizens use these facilities to gain access to the adjacent waters. Commercial fishing operations large and small depend upon these facilities for their livelihood. Marine research and marine habitat organizations operate from these facilities. Boat and ship building, repair and maintenance operations on our waterfronts are some of Virginia's largest employers. Virginia's ports transport goods throughout Bay and to ports worldwide. The largest naval facility in the world is based in Hampton Roads. Virginia's working waterfronts are essential to the everyday life of all Virginians and most citizens of the east coast of the US.

Working waterfronts are currently under increasing pressures from a variety of sources that threaten their existence. Natural factors of sea level rise, subsidence, global warming causing more frequent and severe weather events, and shoaling of the channels leading to our navigable waters threatens the future existence and viability of our working waterfronts. Changing global economic forces and markets continue to shift economic activity away from Virginia's waterfronts to other locations in the US and worldwide. The loss over time of habitat supporting our commercial shellfish and finfish populations has reduced the demand for commercial fishing facilities located on the waterfront. When water dependent facilities go idle they are often redeveloped to less intense uses reflecting a more residential character. The conversion of the waterfront to residential use often results in conflicts between the residential users and traditional marine commercial uses. State and local policies in Virginia often are not directed at the preservation or redevelopment of our working waterfronts. Even the lack of adequate succession planning on the part of owners of marine related businesses has resulted in the conversion of our working waterfronts. All of these conditions have led to conversion over time of prime waterfront real estate from working waterfronts to uses that discourage or prohibit the continued commercial use of the waterfront and adjacent waterways.

Our working waterfronts have shown amazing resiliency over time even given the many threats and changing economic conditions. The future of working waterfronts is hard to predict but we can be assured that new economic opportunities such as off shore energy generation will necessitate that working waterfronts adapt to these conditions. If no actions are taken in the near-term the obstacles to redevelopment of working waterfronts may be insurmountable. This will result in a shift of economic opportunities elsewhere. The future of coastal Virginia and all of Virginia is tied to the vitality of our waterfronts. Actions now will ensure that working waterfronts are viable for generations to come.

Problem: Virginia faces the loss of or threat to traditional land and water resources, working waterfronts that support business activity dependent on tidal water access

Causes of Problem:

1. **Natural – sea level rise, subsidence, global warming (increased threat of heightened natural disasters), channel siltation, shoreline erosion**
2. **Changing economic conditions and global competition**
3. **Land/water use conflicts**
4. **Inadequate institutional structures – governmental policies that pose barriers or do not adequately support working waterfront development – direct and indirect**

Actions to address the preservation of working waterfronts in Virginia have to span all levels of government, federal, state, regional and local. In addition there are actions that the private sector and individual property owners can take that will help preserve these important assets. The actions need to address the natural, economic and institutional threats to the waterfronts. The range of policy options available at each level of government includes planning and general policy declarations, fiscal policies, regulatory policies, developmental incentives and developmental institutions, education and research and data analysis. The following is a brief discussion of the most apparent policy options available at each level of governmental action - federal, state, regional, local and non-government.

Policy Matrix

Level of governmental action

- **Federal**
- **State**
- **Regional**
- **Local**
- **Private Sector**

Topic

- **Natural**
- **Economic**
- **Land/water use**

Type

- **Planning**
- **Fiscal – taxation, expenditures**
- **Regulatory**
- **Developmental – Incentives, Institutions**
- **Education**
- **Research and data analysis**

Federal Government - The federal government has played a leading role in highlighting the importance of working waterfronts on a national level and encouraging action by states and local governments to develop policies for the continued operation of these assets. NOAA and the Coastal Program have provided significant information and initial funding highlighting the importance of our working waterfronts and threats to working waterfronts. Additionally, these organizations have showcased case studies of preservation efforts and established networks where preservation experiences can be shared. There have been efforts over the years led by the Maine legislative delegation to provide direct federal funding for the acquisition and development of select working waterfronts. Virginia's former First District Congresswoman, Jo Ann Davis, introduced HR 2565, Working Waterfront Preservation Act of 2007. Congressman Wittman is currently a co-patron on HR 5277, Keep America's Waterfronts Working Act. Congress is encouraged to consider enactment of this type of legislation in the future as the threat to working waterfronts continues to increase.

The Army Corps of Engineers has traditionally been responsible for dredging of the channels of navigable waters to ensure that they are able to accommodate commercial activity on our waterways. As federal resources have diminished over the years Congress eliminated funding to the Corps for the dredging of smaller waterways that are used by watermen and commercial fishing boats. The future of our smaller working waterfronts depends on these channels being kept open. If the Corps is unable to fund these channel-dredging operations, Congress should consider creating a cost-sharing program with state and local governments to dredge priority channels.

Virginia State Government – Virginia has a large role in providing not only the tools for local governments to help preserve working waterfronts but providing the necessary funding for the improvement of those waterfront facilities. Virginia can also help working waterfront businesses flourish by establishing a friendly regulatory environment for their operation.

While several state agencies historically have supported the development of working waterfronts and communities, there has not been a program specifically devoted to working waterfront preservation and development. The General Assembly should consider enactment of a working waterfront preservation program similar to legislation that has been enacted in Maine. There are three main additional areas where Virginia State government can assist in the preservation of working waterfronts: 1) the creation of funding sources for the development of

working waterfronts and the dredging of small harbor channels, 2) enabling localities to provide tax and regulatory relief for working waterfront businesses and 3) providing incentives directly to property owners that preserve working waterfronts.

State funding of working waterfront improvements and channel dredging

The state could reinstitute the dedication of sales tax on marine motor fuels to working waterfront preservation and development. There are other marine related taxes and fees that could also be authorized for use, in part, for working waterfront development or small harbor dredging. These include the funds in the marine fisheries license fees deposited in the Virginia Marine Products Fund and the salt water fishing license fees deposited in the Virginia Saltwater Recreational Fishing Development Fund.

In addition to state funding from existing taxes and fees, the state could establish a priority for working waterfront development in the administration of a host of existing grants administered by state agencies. Transportation Alternatives Program, VDOT's HB2 funding, Community Development Block Grants, Clean Water Grants, Port and Harbor Improvement Grants are just a few examples of potential grant sources that could be taped to preserve or redevelop working waterfront areas. State agencies should be encouraged to adjust their guidelines for grant administration to specifically include working waterfront development as a priority activity.

The Port of Virginia is in the process of planning and construction of major improvements to its facilities that will maintain the Port's competitive position with other ports on the east coast. In addition to these very significant investments, the Virginia Port Authority, in years past, has made a limited number of investments in the infrastructure of some of the smaller, publicly owned harbors and working waterfronts in coastal Virginia. The Port Authority could reinstate this program of investment in select smaller harbors thus contributing to the enhanced shipment of goods from our waterfronts to market. A matching program of this nature would be able to leverage funding from a variety of other sources. Funding and investment of this type is required to improve the viability and longevity of many of our smaller working waterfronts.

Lacking federal funding for shallow channel dredging, the state should consider establishing a matching grant program for these dredging activities. Maintaining open channels in our smaller and shallower navigable waterways is critical to the survival of many marine dependent businesses. Without a reliable source of future funding numerous channels and smaller harbors throughout eastern Virginia will likely become impassable to commercial boating activity effectively closing the working waterfronts.

The General Assembly could enact a series of enabling statutes for local governments to provide additional tools for them to encourage the preservation and development of working waterfront areas. Allowing localities to designate commercial fishing boats and commercial fishing equipment as a separate class of personal property would provide an opportunity to establish a lower tax rate for these assets. Enabling localities to establish working waterfront development zones would provide an opportunity to reduce taxes and fees in these zones as

well as provide special regulatory relief to spur future waterfront development or redevelopment.

The state could also provide direct incentives to waterfront landowners and/or businesses to help preserve and encourage redevelopment of privately owned working waterfront areas. Virginia has been a leader among the states in using tax policy in pursuit of preservation. Virginia's historic tax credits and land conservation tax credits are considered a national model that has resulted in the preservation of thousands of properties statewide. A similar program could be established for the preservation of working waterfront areas. For the voluntary establishment of deed-restricted use to marine dependent activities, the state could in return provide an income tax credit to the property owner. In addition to this preservation approach, the State could offer a state income tax credit for a portion of the capital investment made at designated working waterfront areas similar to the historic tax credit approach. This would encourage reinvestment and redevelopment of working waterfront properties.

The state should expand the Port of Virginia Economic and Infrastructure Development Fund to include a broader range of types of investments at our working waterfronts. The requirements that the businesses be "basic", bringing in investment to Virginia, and that the investment be related to increasing activity through the Port of Virginia limits the applicability of this Fund for the investment in smaller harbors serving commercial marine activity. Significant investment opportunities and job creation throughout coastal Virginia could be spurred by expanding the eligibility of this program. Restructuring the Port of Virginia Economic and Infrastructure Development Fund would stimulate significant direct investment and job creation at our working waterfronts.

Encouraging employers to train or retrain workers in marine dependent industries is critical to the long-term success of our marine industries. Virginia has a long history of supporting workforce development efforts when employers wish to expand their employment base. The Virginia Jobs Investment Program has a long history of supporting the training of workers in expanding businesses throughout the Commonwealth. Historically, marine related businesses have not taken full advantage of this program. If special efforts to reach out to marine dependent industries was initiated along with a modification of some of the eligibility criteria for our smaller seafood and marine industries this program would be more extensively used by businesses located at our working waterfronts.

Working waterfronts that supported our commercial shellfish and finfish industries historically have represented a majority of working waterfronts in Virginia. With the decline of our fisheries, our working watermen now share waterfront facilities with recreational boaters. Today the majority of working waterfronts are oriented towards supporting recreational boaters with many of those facilities accommodating commercial watermen as well. The long-term viabe facilities serving commercial and recreational fishermen depends upon an adequate supply of shellfish and finfish being caught and processed annually. The historical decline in numerous species of shellfish and finfish has been the leading cause for the huge decline in the

number working waterfronts over the last 50 to 75 years. Not only has the number of working waterfronts declined but also the level of activity that is carried out at these remaining facilities declined. If the working waterfronts that support commercial fishing operations are to continue to be viable it is imperative that our fisheries be managed in a manner that will insure an increasing and sustainable supply of shellfish and finfish. VMRC and VIMS are the primary Virginia agencies having responsibility for fisheries management but a variety of state and federal agencies are tasked with maintaining the health of the Chesapeake Bay and its tributaries. Virginia and all of its partners need to continue to increase efforts to clean up the Bay and provide proper management of our fisheries to ensure an adequate supply of shellfish and finfish for our commercial and recreational fishing operations.

With the decline of natural oyster, crab and other fish populations we have seen a decline in the number of workers associated with seafood processing from the watermen, to the wholesalers, to workers in processing facilities, to workers in retail outlets. Many of the workers in the seafood industry are getting older and retiring. Unfortunately, there is not sufficient interest or background from the younger generation to pursue a career in a declining seafood industry. Given the declines in the natural stocks of shellfish, the shellfish industry has turned to aquaculture practices to fill market demand. These newer aquaculture and advanced processing practices demand newer and higher-skilled workers. Virginia's Community Colleges and the multiple Virginia agencies responsible for workforce development will need to develop, in cooperation with the seafood industries, tailored training programs to meet the need for workers within this changing industry.

Similarly, shipbuilding, repair and maintenance and a host of other marine related businesses are facing similar workforce development issues. Virginia's network of workforce development programs needs to be attuned to and responsive to these challenges and provide the worker training required.

Regional Planning and Development – The four Planning District Commissions (PDC) of coastal Virginia have taken a leadership role in the planning and preservation of our working waterfronts. Each PDC has conducted an inventory of the working waterfronts in their region, prepared case studies on the loss of working waterfronts and assisted their member local governments in developing strategies for the preservation and redevelopment of working waterfronts. Two PDCs have established Public Access Authorities to assist with ensuring future public access to our tidal waters through the acquisition and development of waterfront properties. These regional efforts must be continued and expanded if our working waterfronts are to be preserved and redeveloped. There is additional research and planning required to quantify the threats to the priority working waterfronts and the strategies that should be deployed to ensure that these properties remain available for commercial water dependent activities. The PDCs are in a unique position to conduct this research/planning or to assist their member localities to undertake the planning required.

Given the increasing natural threats to working waterfronts from sea level rise, global warming and channel shoaling there is heightened emphasis on developing a range of options to make our communities more resilient to these threats. The PDCs in concert with their locality members and coastal partners can play an important role in facilitating test demonstrations of individual resiliency options and other strategies that will preserve working waterfronts.

The Public Access Authorities that have been created for the Middle Peninsula and Northern Neck offer a unique institutional structure for the acquisition and development of select working waterfront locations similar to the Newport News Seafood Industrial Park (SIP) model that has been in operation since 1989. The SIP is one of the nation's premier seafood harbors owned and managed by the City. It is home to a number of seafood and other water-dependent companies. It provides full-service accommodations to the seafood industry, including utility hook-ups and vessel fueling, service and repair. The City leases land on a long-term basis to the companies located at the SIP. The companies own the facilities built on that land. Besides land rent, the City obtains revenue from its operation of the SIP from mooring fees. Land rent brings the City more than $481,000 per year and mooring fees have totaled more than $3.8 million since they were first collected in 1989. Businesses also pay real estate property taxes, vessel taxes and machinery and tool / business property taxes to the City.

The PDCs also have had experience in administering revolving loan funds for economic development and environmental improvement projects. These financing tools have allowed economic development projects to move forward when banks have been unable to make loans with acceptable terms allowing the projects to move forward. This financing capability could be employed to encourage the development of private sector facilities and improvements to working waterfronts. The implementation of this strategy depends upon the capitalization of the regional loan funds from outside sources.

Local Government – Local governments in coastal Virginia have an abundant array of tools that can be used to help preserve and/or redevelop Virginia's working waterfronts ranging from policy and planning, to taxation, to developmental incentives, to favorable regulatory treatment, to special developmental districts. The specific uses and characteristics of each working waterfront will determine the appropriate array of local tools that will help preserve or encourage the redevelopment of that particular working waterfront in that specific locality.

Many of the localities in Hampton Roads have specific references in their comprehensive plans and specific provisions within their zoning ordinances that support the continuation of commercial activity on their working waterfronts. These types of explicit policy discussions are not found in most of the plans and ordinances in our more rural localities. In order for our working waterfronts to be preserved it is important that the localities recognize the importance of the commercial activity in these areas and allow that activity to continue by right. Often, because of the residential character of the surrounding land uses working waterfront activity is treated as a non-conforming use or a use by special exception. These additional regulatory hurdles discourage the continued use or redevelopment of our working waterfronts. If a local

government does not have explicit policy related to its working waterfronts it should consider adopting such policy provisions to encourage the continuation of water dependent commercial activity.

Historically, local governments have not exercised their power to regulate activity on the water within their territorial boundaries. Local governments, up until recently, have viewed the regulation of water-based activity as the responsibility of the State of Virginia, most notably the VMRC. With the conflicts that have occurred between aquaculture operators and adjacent waterfront residential properties, the court has determined that local governmental powers do extend over the water and are in addition to the powers of the State. Given this decision by the court, each coastal locality should review its regulatory structure to help resolve use conflicts among competing uses of the waterways to ensure the future viability of commercial water-dependent activity.

Some local governments have taken on the responsibility of owning select waterfront areas and making them available for commercial activity. The Newport News Seafood Industrial Park (SIP) is a classic example that was discussed earlier. There are numerous areas; rights-of-ways that go to the water, public property by “right of use”, and underutilized publicly owned property, that can offer an opportunity for further development as working waterfronts. Often these areas have adjacent owners that have blocked access to or object to further commercial use of the landing or public access to these facilities. Local governments can play an important role in preserving these areas by accepting these areas, making the investments necessary for their continued use and ensuring that the local regulations support commercial use at these locations.

Localities through their taxing policies can encourage or discourage commercial marine related activity. A classic example is the personal property tax levied on boats. Some localities have had differing assessment procedures for commercial watercraft than recreational boats. Some localities have chosen to lower their personal property rates on boats to encourage their moorage in their locality. The personal property tax is but one of several taxes, real estate, Business Professional Occupation License, machinery and tools, etc., that can be adjusted to support commercial activity at working waterfronts. Localities should be encouraged to examine the full array of local taxes to support the type of development desired on their working waterfronts.

Local governments have a broad range of developmental incentive options available to encourage business development on their waterfronts. Local Enterprise Zones, Technology Zones, Community Development Authority, Tax Increment Financing and other special development districts are but a few examples of tools that can be used to fund further development along a working waterfront. Working with and through the local economic development authority, the locality can structure special incentives and financing to meet the needs of a particular development opportunity. Local governments should be encouraged to assess the development potential and desired future use of working waterfronts and structure

the best set of development incentives and financing tools to encourage the desired investment.

Through thoughtful planning, local governments have broad latitude to use a host of regulatory, financing and development tools to encourage the preservation and redevelopment of their working waterfronts. The increased tax revenues and related spin-off development that can be generated from a vibrant working waterfront should be a strong incentive for localities to institute special initiatives that would stimulate increased investment along the waterfront.

Private Sector – The citizen of the Commonwealth, particularly those living in the coastal areas, benefit daily from the activities conducted at our working waterfronts but seldom do people ever consider the contribution these resources have made to their lives thus there is not an up swell of support to take action to preserve or redevelop them. In the last couple of years the public debate over sea level rise and the treats on natural force on our coast has heightened awareness broadly of the risks that development along our waterfronts face. This heightened awareness has yet to be translated into comprehensive approaches to preserving our most important waterfront assets including working waterfronts. Concerted efforts to educate the public and more specifically commercial waterfront property owners of the treats and options for preservation need to be undertaken to generate the public will for taking long-term development strategies. There is not likely to be the resources to preserve or protect all development at risk in hazard areas thus the public will need to be educated and engaged in a dialog about what are the critical public investments that will need to be made to ensure that working waterfronts are viable in the years to come. All levels of government and the media have responsibility to significantly increase the education efforts to the decision makers and the public so better and more informed decisions could be made about the allocation of resource directed at working waterfront preservation.

Many of our working waterfronts are privately owned. Many of these critical commercial waterfront locations have been converted to non-commercial use because there was not a successor operator available to take over the business when the current owner retires. To avoid this situation form continuing a concerted effort should be made to reach out to existing waterfront businesses and encourage them to develop a plan for continuance of commercial activity on their property well into the future. This plan may include succession planning or dead restrictions or sale to other commercial ventures.

Recommendations

Federal government actions

- **Congress should adopt a national Working Waterfront Preservation Act.**
- **Congress should reinstate funding for the shallow channel-dredging program of the Army Corps of Engineers.**

- **The US Maritime Administration should designate additional America's Marine Highway Program corridors in Virginia.**
- **The National Park Service should more actively promote the Captain John Smith Chesapeake Bay Historic Trail.**

State government actions

- **The Virginia General Assembly should:**
    - **Enact a Working Waterfront Preservation Act,**
    - **Establish a legislative study commission with members representing a broad cross-section of stakeholder groups to review the long-term viability of Virginia's working waterfronts,**
    - **Establish a shallow channel dredging matching grant program,**
    - **Dedicate the marine motor fuel tax and other marine related taxes/fees to working waterfront improvements,**
    - **Enable localities to establish Working Waterfront Development Areas.**
    - **Enable localities to classify commercial fishing vessels and related equipment as a separate class of personal property,**
    - **Expand the Port of Virginia Economic and Infrastructure Development Fund to include private investment a smaller commercial harbors, and**
    - **Establish a state Working Waterfront Preservation income tax credit.**

- **The Governor should:**
    - **Issue an Executive Order establishing priority for working waterfront improvements in numerous State administered grant programs – Community Development Block Grant, Transportation Alternatives Program, Clean Water, etc.,**
    - **Establish an advisory group to evaluate the relaxation of State storm water and Chesapeake Bay Act regulations related to development at working waterfront locations, and**
    - **Charge the Commonwealth Center for Recurrent Flooding Resiliency with the long-term planning for the resiliency of select working waterfronts of regional importance.**
- **The VA Port Authority should expand funding for small port and harbor improvement throughout Tidewater Virginia.**
- **The Commonwealth should continue active fishery resource management and Chesapeake Bay cleanup programs.**
- **The Commonwealth should establish adequate workforce development programs and facilities for the changing marine related industries.**

Regional planning and development actions

- **The coastal Planning District Commissions should:**
    - **Continue research and planning for the preservation and redevelopment of working waterfronts,**
    - **Increase technical assistance to local governments towards the preservation and redevelopment of working waterfronts,**
    - **Serve as the test demonstration organization/site for working waterfront preservation methods, and**
    - **Create revolving loan funds for commercial waterfront development and equipment financing.**
- **Use the Public Access Authorities for future acquisition and development of select working waterfront sites.**

Local government actions

- **Coastal local Governments should:**
    - **Adopt a working waterfront policy as a part of the comprehensive plan or as an independent policy,**
    - **Establish permissive, by right, zoning policies for working waterfronts,**
    - **Establish local taxation policies that stimulate water dependent business development (personal property, real estate, BPOL, and machinery and tools taxes),**
    - **Extend local zoning provisions to cover land and water uses to avoid future conflicting water uses,**
    - **Establish a set of development incentives to encourage the appropriate use of working waterfronts,**
    - **Invest in the development of select working waterfronts,**
    - **Use the appropriate development districts (EZ, Technology Zone, CDA, TIF, etc.) to achieve the desired development objectives along the working waterfront, and**
    - **Plan for adaptation and resiliency of public facilities along the waterfront.**

Private sector actions

- **Education of the public, community leaders and decision makers on the importance of our working waterfronts to our economy and our culture.**
- **Conduct sufficient succession planning to ensure continuation of marine businesses.**
- **Plan for the resiliency of private waterfront businesses at our working waterfronts.**

Appendix A

12 Stressors

Based on extensive interviews with local officials and stakeholders in the coastal PDCs twelve stressors were identified impacting working waterfronts:

1. Shifting development patterns,

2. Adverse land use changes,

3. Appropriate use of zoning to ensure that the waterfront is managed in a harmonious way,

4. Additional comprehensive plan language needed,

5. Loss of commercial fish processing facilities,

6. Loss of commercial fishing facilities,

7. Maintain a network of public tie-up facilities,

8. Preservation of commercial boat slips in privately owned working waterfronts (marina owners, dock owners, fish and oyster houses etc.) that are spatially and seasonally correct,

9. Tools to expand oyster farming,

10. Tools for business legacy planning and transition planning,

11. Improved understanding of existing and new tools to protect water quality, and

12. Dedicated State funding for existing public working waterfront infrastructure.

Appendix B

Northern Neck Planning District Commission

WORKING WATERFRONT CASE STUDIES

The Northern Neck Planning District Commission (NNPDC) conducted analysis of several working waterfront locations contacted several working waterfront businesses and interviewed a former business operator. NNPDC also examined sites where a water dependent business (a marina) was approved by the local government to be replaced by a cluster development community with resident and public boat slip rentals. The following four case studies are presented to illustrate some of the factors influencing working waterfronts in the Northern Neck:

- **Keysler Brother's Inc.**
- **Coan River Marina**
- **Jennings Boat Yard**
- **Weems/Ampro Marine Railway**

Keyser Brother's Inc. - Keyser Brothers' Incorporated (locally known as Keyser's Crab House) on Honest Point Road near Lottsburg in Northumberland County supplied crabs to many restaurants up and down the East Coast during its heyday and provided a convenient offloading point for selling daily catches of crabs for Northumberland County watermen. A combination of factors led to the closing of the crab house. Fluctuations in the availability of crabs, the influx of imported crabmeat, as well as restrictions on immigrant labor were cited as some of the reasons for closing the crab picking component of the seafood business. Current owner Calvin Keyser still operates a limited oyster shucking operation, in season, but only operates two days a week, with a couple of employees.

While the Keyser Brothers' Crab House is located on land that is zoned by Northumberland County as Waterfront Residential (R2), seafood processing is an allowable use within the R2 zoning district. Also allowed in R2 are other water dependent business uses, boat building, boat sales and rentals. Furthermore, commercial piers and docks are a conditional use allowed in Residential Waterfront zoning upon approval by the Northumberland County Board of Supervisors. The county has been drafting revised zoning regulations, and while they are not final, one of the changes was to move seafood processing from an allowable use to a conditional use (upon approval) in the Waterfront Residential (R2) zoning district.

Issues & Needs of Name of Business

Norman and Calvin Keyser began shucking oysters in 1947. In 1955, they joined together, bought the land and built Keyser Brothers, Inc. (locally known as Keyser's Crab House) near the end of Honest Point Road in Northumberland County near Lottsburg. The two brothers were the sole owners of the business until Norman passed away in October of 2009. In the beginning,

Keyser Brothers mostly shucked oysters, then turned to crabs and crab meat production. When crabs were plentiful, they employed more than a dozen crab pickers to pick crabs for packaging fresh and pasteurized crab meat. However, fluctuations in the availability of crabs meant that longtime customers sought out other suppliers to keep their seafood restaurants and seafood re-sellers stocked with crab meat from their traditional customers. Customers wanted steady supplies of crabmeat, and at times, the Keysers could not keep up with the demand for crabmeat. Many of Keysers main customers switched crabmeat suppliers and the business that was lost was never recovered. Importation of crabmeat from the Gulf of Mexico and other countries also undermined the market for Chesapeake Bay Blue Crabs. Restrictions on the amount of immigrant workers that helped to pick crabmeat also hurt the Keyser Brothers operation. Crab picking is hard and dirty work; in the summer, it gets very hot and humid with the steaming of crabs. Local labor was not interested in working long hours for comparatively low pay, and the immigrant workers helped the Keysers maintain profitability. All of these factors, as well as Mr. Keyser's age, have resulted in the business operating at a limited capacity since 2007. In the last few years, Calvin Keyser has operated two days a week with three oyster shuckers and generates between 15 and 20 quarts of oysters a week during oyster season.

Land Use Planning Tools Associated with Closing

There was no land use planning tools that were associated with closing. The crab house is located near the end of a road on a peninsula with only a few neighbors across the road.

Lack of availability of crabs combined with the importation of crabmeat was cited as two reasons for the business ending. In addition, it was difficult to attract affordable labor (without importing seasonal worker), and this also contributed to the closing.

Legacy & Succession Planning Suggestions

Mr. Keyser stated that he expects to operate at a limited capacity for the near future. He said he has not planned for succession. He has sold some of his adjacent land for residential development.

Figure 9

Two views of Keyser Brothers, Inc. Crab House from the Coan River.

These two 2011 VBMP Aerial Photo shows Keyser Brothers, Inc. Crab House.

Coan River Marina - The Coan River Marina is located off the Coan River near Lottsburg. In June of 2007, the owner of the marina requested a conditional use permit to build a cluster development with 12 housing units. The land the marina is located is zoned Waterfront Residential, and cluster developments are not allowed by right. However, cluster developments are provided under a conditional use permit in areas zoned waterfront residential. The Board of Supervisors approved the conditional use permit for the cluster development in June of 2007 with 11 conditions applied. Two of the conditions applied are relevant to working waterfront preservation. One condition required the applicant to retain the eight existing watermen slips in the new development. Another condition was that four of the remaining slips were to be reserved for transient boat traffic. In the subsequent downturn of the economy, the development was never built and the Coan River Marina is still in operation, serving local boating interests.

Issues & Needs of Name of Business

In June 2007, the owner of the Coan River Marina, Gary Giberson applied for a conditional use permit for a cluster development to be built on the two parcels where the marina currently operates. Cluster developments are allowed by conditional use permit in the Waterfront Residential zoning district where the marina is located. The applicant was interested in building

a cluster development with six structures, containing 12 housing units on the site currently occupied by the marina. Amenities would have included a swimming pool and would make use of the marina's existing docks for residential dockage as well as for rental slips for nonresidents. Since that time, the economy experienced a downturn and the applicant never went forward with the development. The Coan River Marina still operates as a marina.

In issuing the conditional use permit the Northumberland County Board of Supervisors attached eleven conditions to the approval upon recommendation by county staff. One of the conditions was that the marina would have to retain eight slips currently in use by watermen in perpetuity. Another condition was that the development would have to reserve four slips to accommodate transient boat traffic. From these two conditions it is evident that the staff and elected officials in Northumberland County are cognizant of the potential losses to working waterfront businesses and uses from residential waterfront development, and seek to protect the shoreline for use by the seafood industry and other maritime interests while still allowing compatible development.

Land Use Planning Tools Associated with Closing

The marina is still operating as a marina, and has not closed. Cluster developments are allowed in areas zoned Residential Waterfront through conditional use permits. Marinas, however, are not allowed in Residential Waterfront Zoning District (R2), but the Coan River Marina is grandfathered as an existing use. Undoubtedly, if the economy and housing market had not experienced a downturn, the cluster development that was approved by the Board of Supervisors would have been constructed, and the Coan River Marina would have ceased to exist.

Legacy & Succession Planning Suggestions

The Coan River Marina likely will continue to operate as a marina for the foreseeable future. The one year conditional use permit issued by Northumberland County in June of 2007 is now null and void. The marina serves local as well as transient boating needs. In addition to the eight slips used by watermen (mostly crabbers, but also some oystermen), a charter boat operation is based at the Coan River Marina. The Coan River Marina has a boat launching ramp, septic pumpout station, fuel, water, electricity and restrooms available for its patrons. Haul out and repair services are also offered.

Figure 10

These two 2011 VBMP Aerial Photo show the Coan River Marina.

This 2011 VBMP Aerial Photo is zoomed in to show the infrastructure associated with the Coan River Marina.

Jennings Boat Yard - In March 2005, Jennings Boatyard requested a special exception permit to expand the marina with additional deep water mooring slips for sailboats and associated piers. The Northumberland County Board of Supervisors tabled the request due to concern of neighboring properties riparian rights. After Mr. Jennings had a riparian rights survey completed, he reduced the scale of the marina expansion. Northumberland County denied the scaled down request for marina expansion since there were two other marinas nearby with mooring slips available. Mr. Jennings appealed the request, stating that the Virginia Marine Resources Commission (VMRC) has sole authority for permitting over state-owned bottomland, not the county. The local circuit court heard the case and ruled that VMRC and Northumberland County had concurrent authority over the creeks and rivers within the boundaries of the county of Northumberland. Mr. Jennings appealed the case to the Virginia Supreme Court (Jennings v. BOS Northumberland) who affirmed the decision of the lower circuit court as well as offered a court opinion of the decision. Jennings Boatyard is currently still in business serving the needs of boaters in and around Cockrells Creek.

Issues & Needs of Name of Business

John L. Jennings, who owns Jennings Boatyard on the Cockrell's Creek in Northumberland County, a waterfront landowner with subsequent riparian rights, wanted to expand his existing marina with the construction of 46 additional deep water mooring slips for sailboats and accompanying piers. Mr. Jennings requested a special exception permit in March 2005 from Northumberland County Board of Supervisors to proceed with the expansion. When presented with the marina expansion project, the Northumberland County Board of Supervisors tabled the request, citing the need for the applicant (Mr. Jennings) to obtain a riparian rights survey. After obtaining the riparian rights survey, Mr. Jennings reduced the number of additional slips from 46 to 31 to accommodate the riparian rights of adjacent landowners. The Northumberland County zoning administrator, in a letter to Mr. Jennings, stated that the "Board felt that since there are currently three (3) marinas in the area, [including Jennings'], that have mooring slips available to boaters, there would be no justification to allow an expansion at this time.

Land Use Planning Tools Associated with Closing

Mr. Jennings filed a court action seeking declaratory relief against the Board of Supervisors. Jennings alleged that only the Virginia Marine Resources Commission (VMRC) has authority to permit placement of piers beyond the low water mark, therefore the county lacked jurisdiction to regulate through the special exception process. The Northumberland County Board of Supervisor's responded that they had the authority to regulate below the mean low water mark of the County's creeks and rivers.

Mr. Jennings moved for summary judgment. The Northumberland County Circuit Court reasoned that the "general grant of authority to zone land...necessarily and fairly implie[s] that the county ['] in zoning for a marina/boatyard[,] has the authority to regulate...piers and boat

slips which are necessarily all part of the same use." Thus the Northumberland County Circuit Court concluded that Jennings' "proposed expansion of piers and slips may be constructed only pursuant to a permit from VMRC, but [is also] subject to the Northumberland County Zoning Ordinance." The Northumberland County Circuit Court, accordingly, denied Jennings' motion for a summary judgment.

At a subsequent evidentiary hearing regarding the reasonableness of the Northumberland Board of Supervisors' denial of Jennings' application for a special exception permit, Jennings argued for the first time that Northumberland County's special exception permit ordinances, are void for lack of any "objective criteria stated." In a letter opinion, the circuit court concluded that the Northumberland County Board of Supervisors denial of Jennings' special exception permit application "was not arbitrary, capricious and unreasonable." Relying on a previous court case Bollinger v. Board of Supervisors (1976), the court concluded "that the [challenged ordinance] is not invalid for failure to state standards to be applied by the Board in the issuance of a special exception permit." Accordingly, the Circuit Court entered an order denying the relief sought by Jennings. Jennings appealed the Circuit Court judgment to the Virginia Supreme Court.

The Virginia Supreme Court affirmed the lower court's ruling, stating that the authority granted to VMRC from the Virginia General Assembly to regulate the construction of piers on state owned bottomland does not preclude, but rather contemplates that VMRS and a locality will have concurrent authority to regulate piers upon state owned bottomlands where the pier is "also erected along the waterfront of such locality". The Virginia Supreme Court, ruling on the validity of the Northumberland Special Exception permit process is not "invalid for failure to state standards to be applied by the Board in the issuance of a special exception permit."

Legacy & Succession Planning Suggestions

Jennings Boatyard likely continues to operate as a marina for the foreseeable future. No inquiries were made as to any legacy and succession planning regarding this working waterfront asset.

Figure 11

This 2011 VBMP Aerial Photo is shows the location of Jennings Boatyard in Cockrell Creek.

This 2011 VBMP Aerial Photo is shows the infrastructure associated with Jennings Boatyard.

Weems/ Ampro Marine Railway

Figure 12

Photo courtesy of NNPDC, taken on September 19, 2009.

The Ampro Marine Railway, in one form or another, has been repairing fishing and pleasure boats for more than a century in the village of Weems, located in Lancaster County on Virginia's Northern Neck, according to the long-standing Commissioner of the Revenue of Lancaster County Sonny Thomas. The following analysis will examine local planning and zoning constraints as well as local fiscal policy implications for an existing or future commercial water dependent industry.

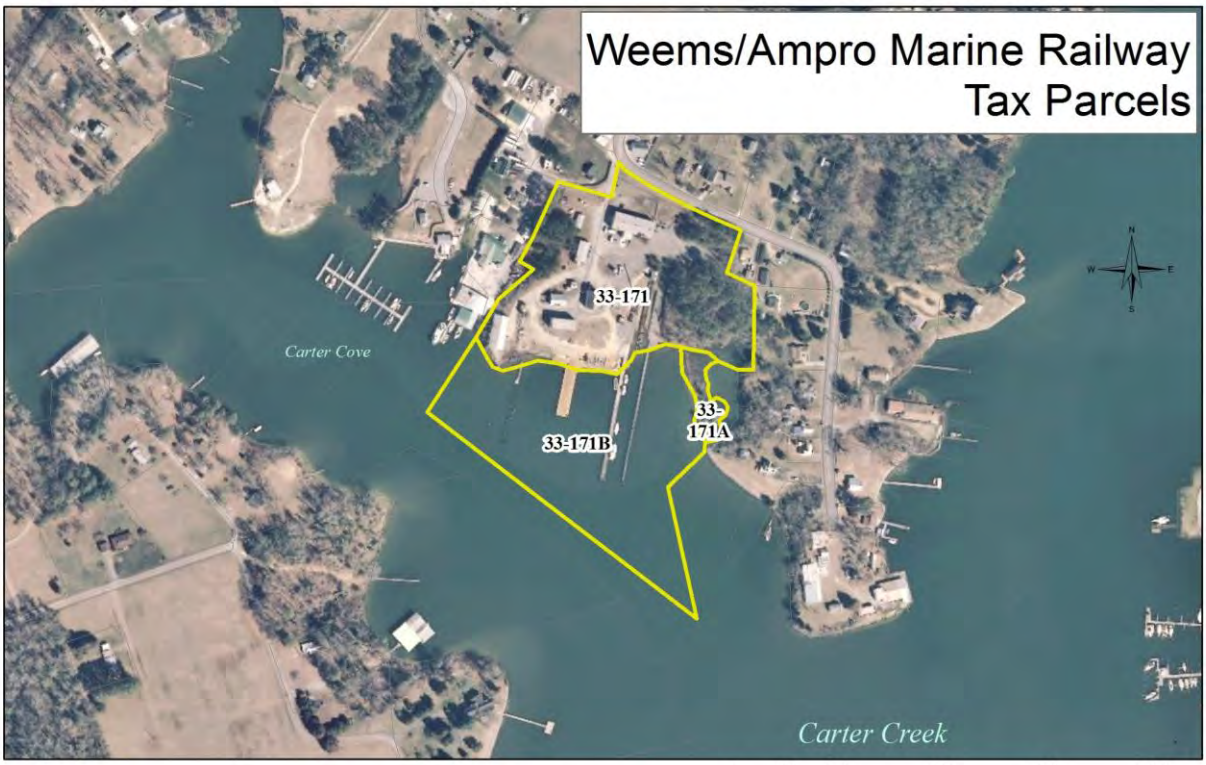
Background

The Weems/Ampro Marine Railway is located off Carter Cove, part of the western edge of Carter Creek, off the Corrotoman River in Lancaster County, Virginia. NNPDC staff traveled to Carter Cove in 2009 and took several pictures of the Weems/Ampro Marine Railway. These photos can be seen in Figure 16. There are three parcels that make up the facility. The main tax

parcel is identified as Lot 33-171 and consists of 7.842 acres of land. The second parcel is a small parcel of mostly marsh, is designated Lot 33-171A, and covers 0.09 acres adjacent to a tidal pond. This parcel is connected to the southeast corner of the larger, main parcel (33-171). The final parcel (33-171B) is a relic from the King of England Land Grants from Virginia's colonial past and is the creek bottom of Carter Cove in front of the main parcel and covers 8.00 acres of the creek (see Figure 13).

Originally, the London Company, by virtue of its royal charter, owned all lands, including those beneath navigable waters in Virginia. It has often been thought neither the London Company nor the Crown could or did make grants of subaqueous lands during the colonial period in Virginia. However, that assumption was negated by the Virginia Supreme Court's decision in the *Commonwealth vs. Morgan* in 1983. The complainants in the *Commonwealth vs. Morgan* brought suit for declaratory judgment in the Circuit Court of Lancaster County, Chancery Division, claiming that they were owners in fee simple of certain submerged lands and oyster bottoms in Carter Cove, a navigable waterbody part of Carter Creek. The defendants, the Commonwealth of Virginia and the Virginia Marine Resources Commission, had claimed state ownership of the tracts in question. Specifically, they had attempted to charge one of the complainants a royalty for an oyster shell pile and a bulkhead below mean water mark and had published notice of the application on an individual (also a defendant in the case) for a lease of the bottom of Carter Cove. The Commonwealth offered no evidence, choosing to treat the case as involving only a legal issue: whether the King of England had the authority to through his agent in Virginia, the Royal Governor, to grant the submerged lands of navigable waters to private parties. The Commonwealth argued that after the Magna Carta, the Crown no longer had the power to grant tidal water bottoms without the consent of Parliament, which was not present in this case. The trial court rejected the Commonwealth's argument and held that the plaintiffs had fee simple ownership of the submerged lands included within the colonial patents free from any ownership or other property interest of the Commonwealth. The court enjoined the defendants from "exercising or attempting to exercise ownership, dominion, or control" of the plaintiff's creek bottoms. The plaintiff's ownership interest was restricted only by the public's right of navigation and passage over the waters of Carter's Cove. The case was appealed to the Virginia Supreme Court, which upheld the lower trial court's determination on both the factual issue (whether the creek bottom was included in the land patents) and the legal issue (whether the King had the power to grant the beds of navigable water bodies).

Figure 13



This project was funded by the Northern Neck Planning District Commission and the Virginia Coastal Zone Management Program at the Department of Environmental Quality through Grant #NA14NOS4190141 of the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, under the Coastal Zone Management Act of 1972, as amended.

When property owners trace the land patents to a Kings Grant, the property owner has control and primary rights over the creek bottom within their tax parcel. While the property owner has control of the creek bottom, this does not give him exclusive rights to use the water. For instance, the public has a right to navigate over his creek bottom, since this is a tidal creek that eventually connects to the Chesapeake Bay and Atlantic Ocean. As the rivers were the transportation corridors for early Virginia, the government had good reason to maintain public navigation, so there would be no impediments to get goods back to England, even when a King's Grant conveyed the tidal creek bottom. There are, however, some differing opinions regarding the implications of fishing rights when an individual owns a section of creek bottom. Some interpret the ownership of the creek bottom to include exclusive fishing rights (both finfish and shellfish) within this area of creek bottom owned. Another interpretation is that the owner of the creek bottom has exclusive rights only to the shellfish resting on his creek bottomland, but not to the finfish that swim around in the water column of the creek. Therefore, in this interpretation, the owner must allow the public to fish above his creek bottom but can prohibit shellfishing.

Virginia Marine Resources Commission staff were contacted to determine if the Ampro Marine Railway creek bottom parcel (33-171B) in Carter's Cove was included within the *Commonwealth vs. Morgan* court decision. VMRC staff indicated that they believed the Ampro tax parcel to be included within the 1983 *Commonwealth vs. Morgan* court decision, as all waters of Carter Cover upstream from John's Neck Point and Sloop Landing Point were included in this court decision. This means that the property owner of the Weems/Ampro Marine Railway does not have to apply for a permit from the Virginia Marine Resources Commission to construct structures on the bottom (such as piers, docks, wharves, and even buildings), or place oyster shell for oyster growing operations since they own the property rights for the creek bottom within that parcel. However, although the property owner of the Weems/Ampro Marine Railway is exempt from state marine bottom laws, the owner would still need to obtain a wetlands permit from the federal government through the Army Corps of Engineers for any activities involving the creek bottom. This creek bottom parcel (33-171B) is an important asset of the Weems/Ampro Marine Railway, and since it has already been determined to be owned fee simple by the courts, the creek bottom parcel offers the property owner tremendous flexibility for future infrastructure for commercial water dependent uses.

Local Zoning Considerations

The two land parcels, 33-171 and 171A, are classified by the Lancaster County Zoning Ordinance as M1, Industrial Limited (See Figure 14). There are multiple working waterfront uses allowed in the Lancaster County M1 zoning classification, Industrial Limited. A business use allowed by right in Lancaster County's M1 zoning classification is Boat Building and Boat Repair, which is the classification that applies to the current Weems/Ampro Marine Railway operation. Subsequent owners of the property could continue to repair or build boats on this property, as the zoning conveys when the property is sold. According to the Lancaster County Zoning

Ordinance, another business that is water dependent and is allowed by right in M1 zoned areas are manufacture, compounding, processing, packaging, or treatment of seafood products, or shell. In addition a marina, which may include boat and accessory sales, boat storage, engine and boat repairs would be allowed in the M1 zoning class with a special exception by the Lancaster County Board of Supervisors. The Lancaster County Zoning administrator noted that the M1 zoning classification conveys to subsequent property owners, as the zoning classification is tied to the parcel and not the business. The Lancaster County Zoning Administrator noted that the creek bottom parcel (33-171B) is not zoned. However, on the property card at the Lancaster County Commissioner of the Revenue, the zoning category for the 33-171B tax parcel is not blank and states it is M1. For the purposes of this report, 33-171 B is considered not zoned, as the Zoning Administrator makes that determination. Technically, without any zoning limitations on the creek bottom parel, there is little constraint as to how that creek bottom is used, although, as stated earlier, Federal Clean Water and Wetland Permits must be obtained before any construction begins. Again, the creek bottom parcel, being privately owned and without zoning constraints offers tremendous flexibility to its use into the future by the owners of Tax Parcel 33-171B.

Note on Lancaster County Zoning Non Conforming Uses

While not applicable to the Weems/Ampro Marine Railway case study, it is important to note that article 12-1-3 in the Non Conforming Uses section of the Lancaster Zoning Ordinance, has unique provisions to protect certain working waterfront businesses. The article states:

> *12-1-3. If any nonconforming use (structure or activity) is discontinued for a period exceeding two years, after the enactment of this ordinance, it shall be deemed abandoned and any subsequent use shall conform to the requirements of the ordinance. For the purposes of this section, such seasonal and temporary uses as crop farming, oyster houses, oyster shucking houses, crab houses, fish and food processing activities and sawmills shall be exempted.*

As stated above, nonconforming uses such as oyster houses, oyster shucking houses, crab houses, and fish processing activities are exempt from the two year of business inactivity rule that constrains other nonconforming uses in the County. This non-conforming use exemption is one way that Lancaster County shows how much it values the county's seafood industry, and allows such nonconforming uses to continue.

Local Tax Policy

Some counties tax parcels at their highest and best use (which for waterfront property is usually residential), but the Weems/Ampro Marine Railway is taxed at its current use, according to the Lancaster Commissioner of Revenue. The taxes imposed by Lancaster County include the machinery and tool tax ($1.52 per $100 of value), merchants capital tax ($1.00 per $100 of value), and real estate taxes, which include improvements to the real estate, at $0.54 per $100

of assessed value. Lancaster County does have land use value taxation for land in agricultural use within the county, but no such program for forested areas.

Main Tax Parcel (33-171) The main tax parcel (33-171) commercial use area with structures (3 acres) is assessed at $180,000/acre, and the commercial use area without structures (4.842 acres) is assessed at $9,000/acre. This equates to a total of $583,600 for the 7.842 acres in taxes on the land value. There are 16 improvements to the parcel, ranging from a metal office building and a metal boathouse to a pole shed and several shop buildings. Also listed are chain link fencing, piers/docks, a bulkhead, and a dry dock system (the marine railway), which is assessed at $124,600 (see Appendix B for the complete list of improvements). In total, all improvements to the property add up to $416,356. Therefore the total assessed real estate tax value of $999,956 and is rounded up by the Commissioner of the Revenue to $1,000,000. With the Lancaster County real estate tax at $0.54 cents per $100, the yearly real estate tax bill equates to $5,400.

Small Tax Parcel, Southeast of Main Parcel (33-171A) This smaller tax parcel has no improvements it and the aerial photographs show the property to be tidal marshland, as it is a narrow sliver of land that divides a tidal pond from Carters Cove. The size of the parcel of land is 0.09 acres according to the land book and appears to be an unbuildable parcel of land. The value of the land of this parcel is assessed at $800, therefore the real estate tax bill for this parcel equals $4.32.

Caters Cove Creek Bottom Tax Parcel (33-171B) The creek bottom parcel covers the area offshore of the main tax parcel, and is 8 acres in total. The western edge of the parcel extends approximately 252 feet into the creek and is elongated on the eastern side and juts out further to a point, which is approximately 653 feet from the shoreline, which curves inward as you go eastward. As mentioned previously, this land has been traced back to a Kings Grant, and thus the creek bottom is privately owned. There are no improvements shown on this parcel, as the bulkhead, piers/docks and dry dock system (marine railway) is attached to and accounted for on the main parcel (33-171). The value of the 8 acres of creek bottom is assessed at $500 per acre, therefore the total assessed value is $4,000. The real estate tax bill for this parcel is $21.60.

Machinery and Tools Tax

NNPDC staff, when interviewing the Lancaster County Commissioner of the Revenue, asked whether farmers in the county are exempt from the Machinery and Tools Tax. The Commissioner of the Revenue explained that farmers are not exempt from the Machinery and Tools Tax and pay $1.52 per $100 on machinery and tools, just as all other sectors of the economy. Therefore, NNPDC staff did not investigate the Machinery and Tools taxes for the Weems/Ampro Marine Railway, as all businesses in the county pay the same taxes at the same rate.

Possible Weems Working Waterfront Economic Incentives

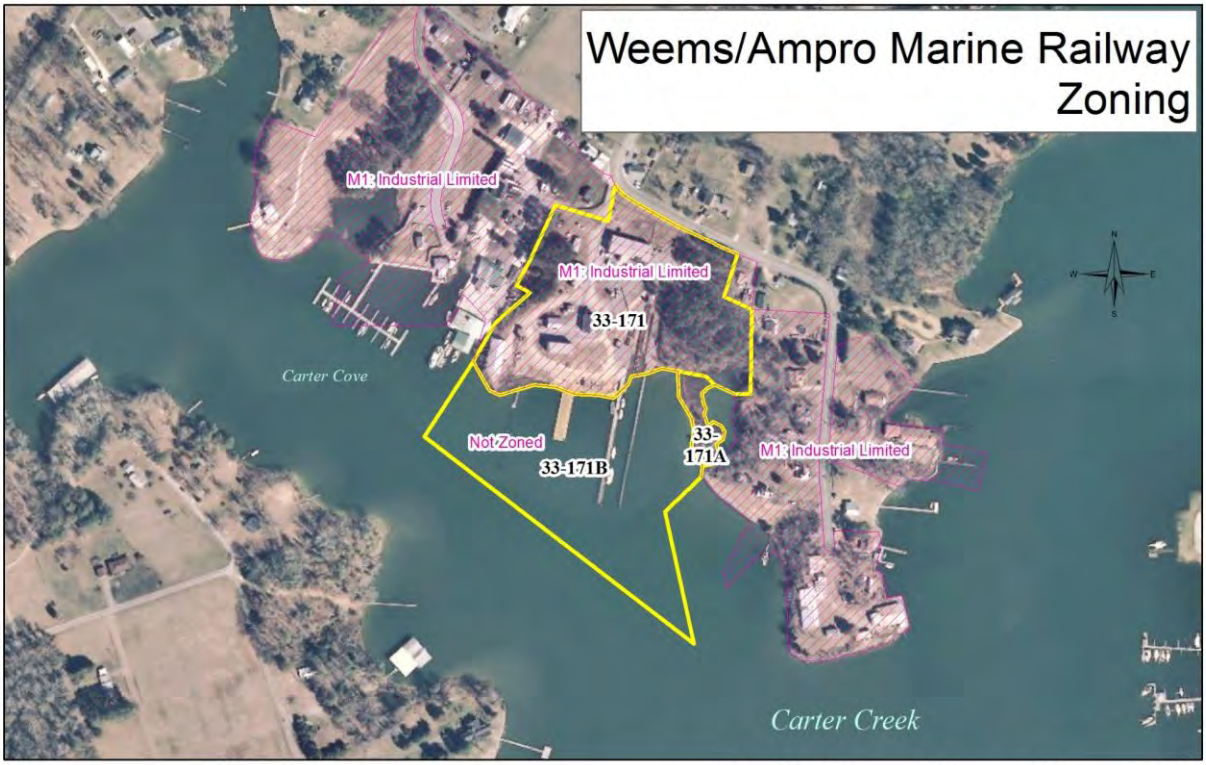
The Northern Neck Planning District Commission administers the Economic Development Authority (EDA) Enterprise Zone Program for the Northern Neck Region. Established by the General Assembly in 1982, the Virginia Enterprise Zone Program is a partnership between the state and local governments to stimulate job creation and private investment within designated areas throughout Virginia. Currently, the Northern Neck has over 11,000 acres designated as enterprise zones. Enterprise Zones offer businesses a package of state and local incentives in the form of tax relief and grants, local regulatory flexibility, and local infrastructure development.

There are two types of assistance available if a business is located in an established enterprise zone: 1) a job creation grant and 2) a real property investment grant (RPIG). In order to be eligible for the RPIG grant, a business must invest at least $100,000 to meeting the minimum threshold for investment, with grants available in amounts up to 20% of the qualified real property investment above the respective eligibility threshold (which is the amount invested that exceeds $100,000).

For example, if a business located in an enterprise zone area invested $250,000 in qualified real property investments (as determined by the Virginia Enterprise Zone criteria), the business could be eligible for a grant up to 20% of the amount of money invested over $100,000, in this case, $150,000. Multiplying $150,000 by 20%, the business could be eligible for up to $30,000 in grant funding for its investment of $250,000. It should be noted that the grant amount is subject to proration should requests exceed grant funds allocated. Detailed information regarding the RPIG grant program, eligibility requirements and the application process are available here: http://www.dhcd.virginia.gov/index.php/community-partnerships-dhcd/downtown-revitalization/enterprise-zone.html

Lancaster County currently has in place an Enterprise Zone, and has not reached the maximum acreage allowed for the countywide Enterprise Zone. NNPDC staff, at request of the Lancaster County Administrator, drafted a map of a possible addition (amendment) to the Enterprise Zone to include the Weems Working Waterfront Area in the current Lancaster County Enterprise Zone. The map in Figure 15 shows the proposed Weems Working Waterfront Enterprise Zone addition area, which consists of the majority of properties in Weems that are zoned Light Industrial, M1. Included in the proposed amendment area are the Weems/Ampro Marine Railway, an adjacent oyster company and marina. NNPDC staff are available to assist Lancaster County should the County decide to move forward with the Enterprise Zone amendment.

Figure 14



0 155 310 620 930 1,240 Feet

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Figure 15

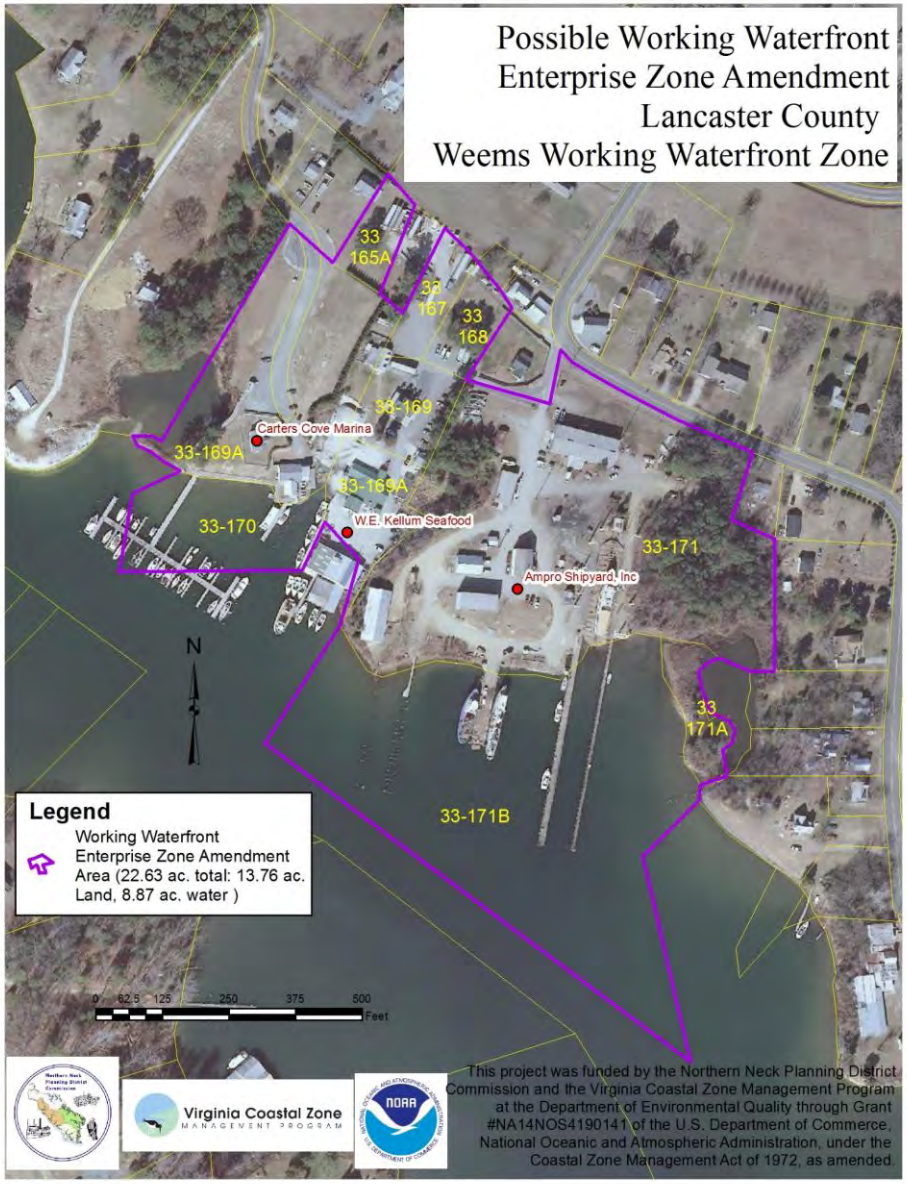

Possible Working Waterfront
Enterprise Zone Amendment
Lancaster County
Weems Working Waterfront Zone
33
165A
33
167
33
168
33-169
Carters Cove Marina
33-169A
33-169A
33-170
W.E. Kellum Seafood
33-171
Ampro Shipyard, Inc
33
171A
33-171B
N
Legend
Working Waterfront
Enterprise Zone Amendment
Area (22.63 ac. total: 13.76 ac.
Land, 8.87 ac. water)
0 62.5 125 250 375 500
Feet
Virginia Coastal Zone
MANAGEMENT PROGRAM
NOAA
This project was funded by the Northern Neck Planning District
Commission and the Virginia Coastal Zone Management Program
at the Department of Environmental Quality through Grant
#NA14NOS4190141 of the U.S. Department of Commerce,
National Oceanic and Atmospheric Administration, under the
Coastal Zone Management Act of 1972, as amended.

Figure 16 - Weems/Ampro Marine Railway Photographs

Photograph taken from Carter Cover facing Northeast, courtesy NNPDC, September 18, 2009.

Photograph taken further upstream of Carter Cove, facing Northeast, courtesy NNPDC, September 18, 2009.

Photograph of Vessels Moored at the Weems/Ampro Marine Railway, courtesy NNPDC, September 19, 2009.

Photograph of Vessels Moored with Marine Railway in the Distance, courtesy NNPDC, September 18, 2009.

Appendix C

Middle Peninsula Planning District Commission

Case Studies

The following case studies were selected to illustrate some of these factors in the Middle Peninsula Region:

- ***Gloucester Seafood, Inc.*** was representative of a working waterfront business that closed due to economic hardship and the aging of a commercial waterman.

- ***Cook's Oyster Company, Inc***. was representative of a working waterfront business that closed due to the aging of commercial watermen. Mr. Eldridge Cook owned the property and upon his retirement, he did not have a legacy or succession plan in place to continue operations. Mr. Cook also did not have plans to sell the property, nor was there any family members wanting to continue the seafood business. Mr. Cook passed away and now the property is currently for sale.

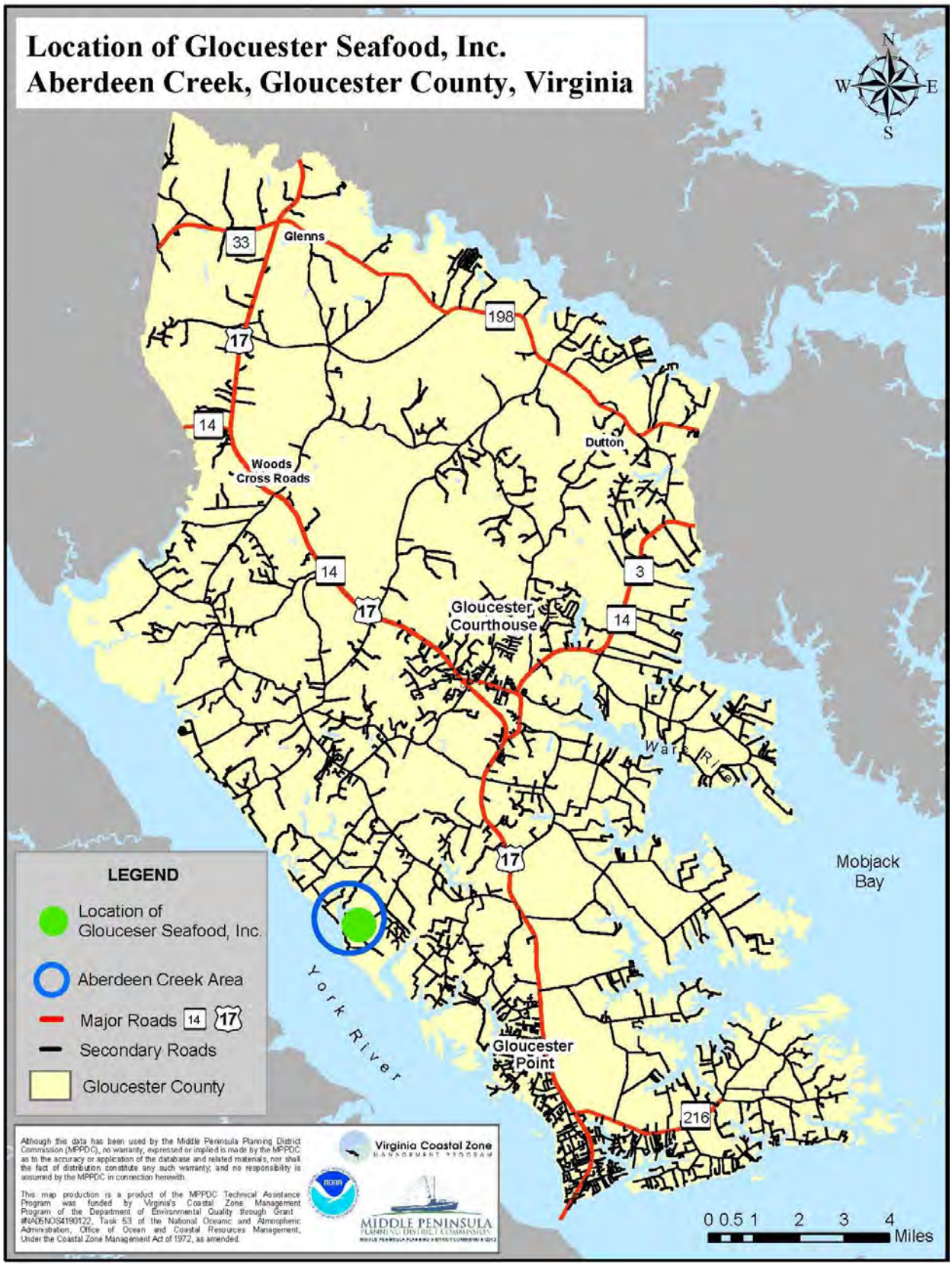
- ***International Seafood*** was representative of a working waterfront business that closed due to governmental regulations regulating the primary type of seafood product that this business harvested and processed-the Spiny Dogfish. International Seafood leased space on the property Cook's Oyster Company, Inc. owned to operate their seafood processing business.

GLOUCESTER SEAFOOD, INC.
Issues & Needs of Gloucester Seafood, Inc.

Gloucester Seafood, Inc. was a seafood processing plant located on Aberdeen Creek, just off the York River in Gloucester County, VA (Figure 17 & Figure 18). Mr. George Sterling, a lifelong resident of Gloucester County and a former county supervisor, owned the business. The plant was mainly involved in processing Virginia Blue Crab, but became embroiled in debt in 2004. The business closed its doors in 2005 when Mr. Sterling passed away, and was then sold at auction to Meadow Financial, a Washington, D.C. area lender, in late 2007.

Figure 17: Aerial view of Gloucester Seafood, Inc. location (Google Earth)

Figure 18: Map of Gloucester Seafood, Inc.



Land Use and Zoning for Gloucester Seafood, Inc.

Land use and zoning aspects of the location (Figure 19) of this business were not factors in the closing of the business, but could be factors if the present or a future owner wished to reopen the business as previously used. Gloucester Seafood was located in an area of Gloucester County zoned SF-1 or the Single Family Detached Residential Zoning District. The intent of the SF-1 district is to preserve existing residential areas and provide for future areas of similar character. To this end, development is limited to low concentration and permitted uses are limited to detached single-family dwellings providing homes for residents plus certain additional uses such as schools, parks, churches and certain public facilities that serve the residents of the district.

In the Gloucester County Zoning Ordinance, marinas, boatyards and seafood processing plants require a special exception to be granted by the Board of Zoning Appeals (BZA) in all the districts in which they are permitted to establish a new use or to expand an existing one. This zoning (SF-1) does not allow marinas or seafood processing plants by right or by special exception. This means that in order for the new owner of this property to operate a seafood processing plant, they would have to apply for re-zoning. The point is, it is not guaranteed that the historical use of the property can continue without extra steps taken by the property owner-and even then it is not guaranteed.

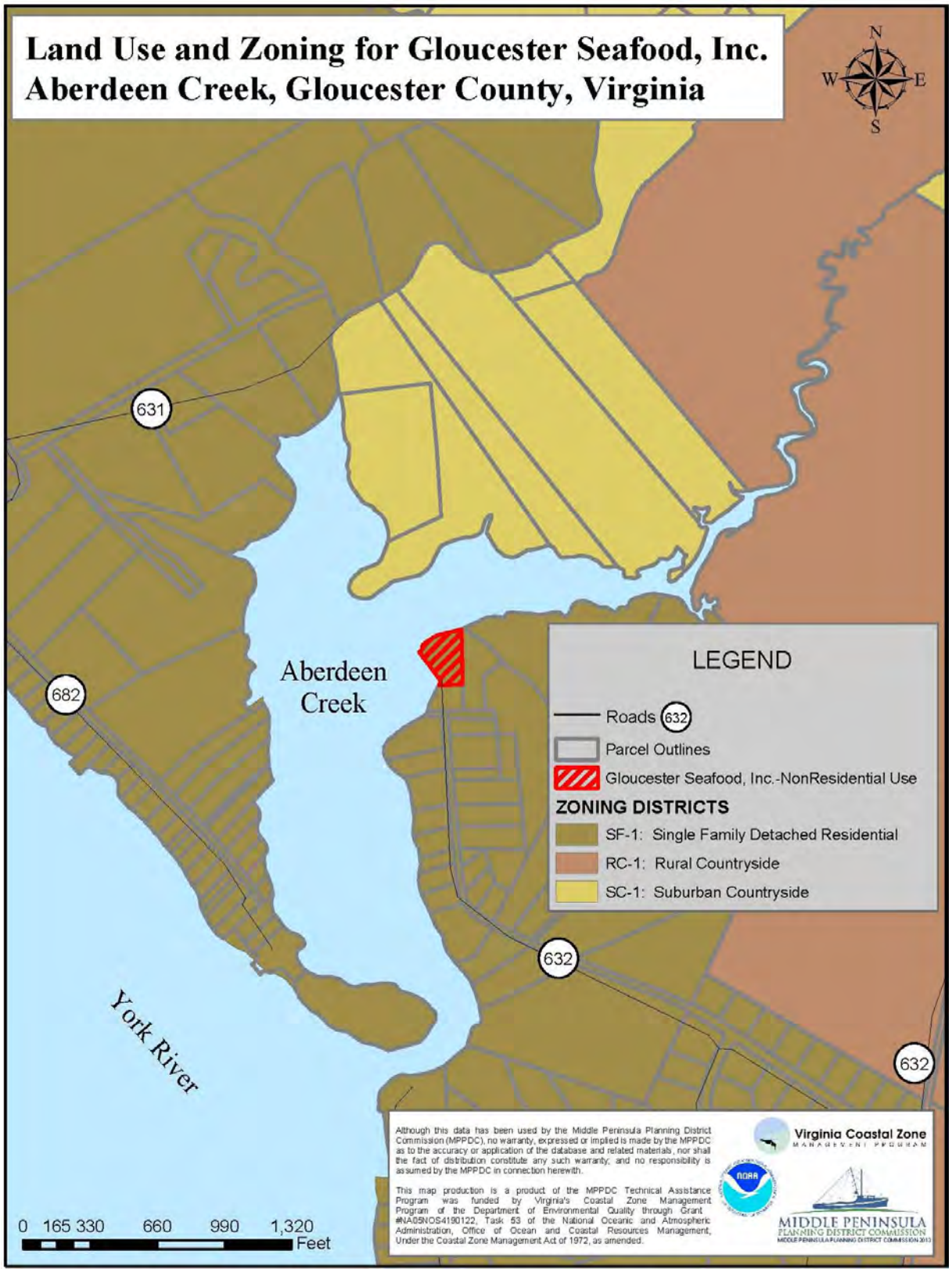
Because many of the existing waterfront industry activities occurring along the County's Rivers were in existence prior to the adoption of the county zoning ordinance, they are defined as legal non-conforming uses. The County's ordinances allow non-conforming uses to continue and expand on compliance with Article 10 of the Zoning Ordinance. Unfortunately, the setbacks imposed by subsection (3) below make expansion of some of the existing facilities by adding additional structures difficult, if not impossible. A property owner can apply for a variance to avoid meeting the setback requirements if the situation meets criteria set in the zoning ordinance.

Also, if the use is discontinued for more than two (2) years, it is no longer considered a legal non-conforming use and must go through the special exception process (mentioned above) to be re-established. This is a concern for those facilities whose owners have passed away where there may no longer be anyone willing or able to continue the businesses within the two year period.

Legacy and Succession Planning for Gloucester Seafood, Inc.

There were no known legacy or succession plans in place for this business. Financial hardship and the death of the owner were the major factors in the closing of this business and the sale of the property.

Figure 19: Land Use and Zoning for Gloucester Seafood, Inc.



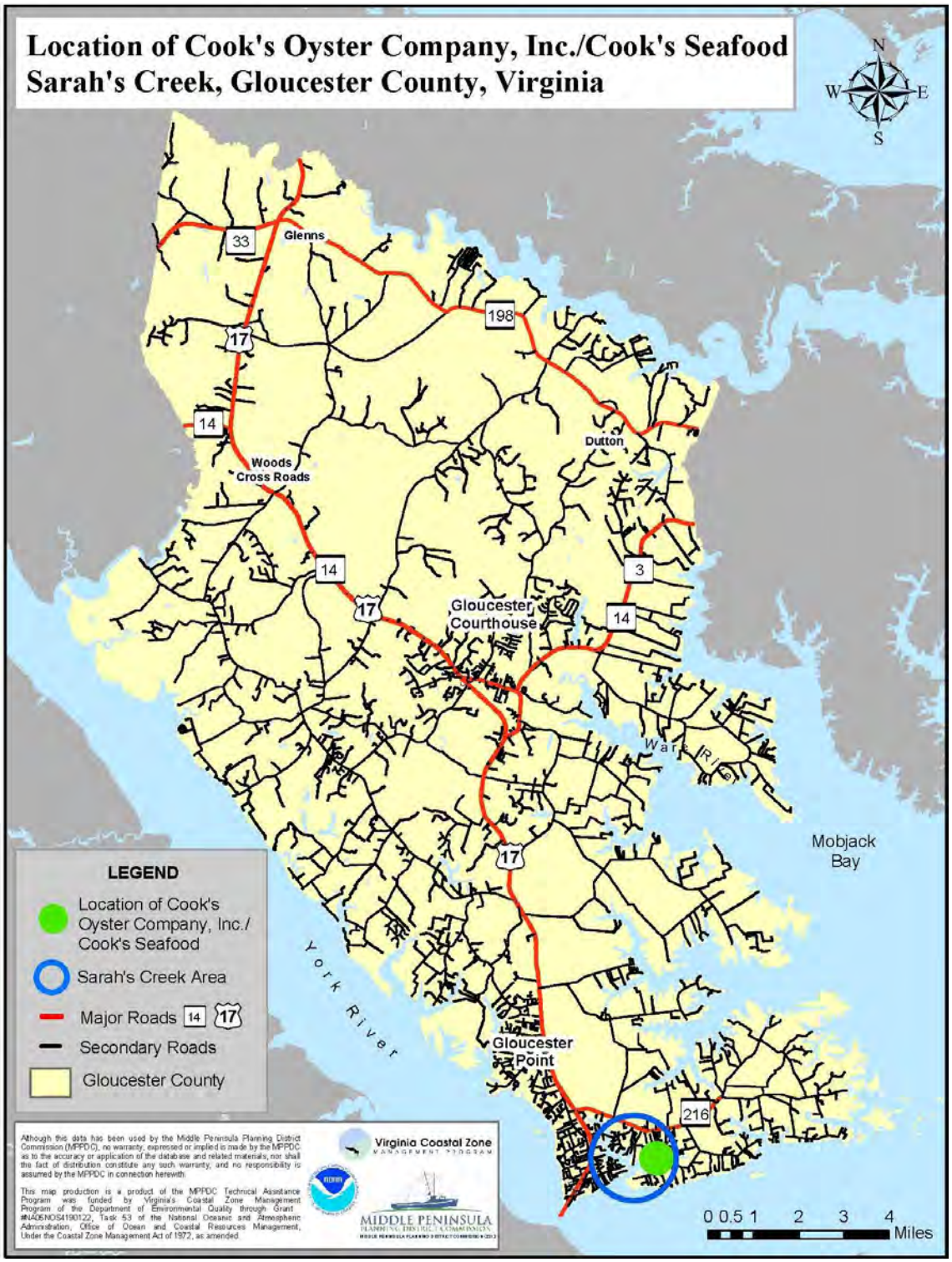
COOKS OYSTER COMPANY, INC.

Issues & Needs of Cook's Oyster Company, Inc./Cook's Seafood

Eldridge Cook, founder and owner of Cook's Seafood, began hauling seafood to New York, Baltimore, Philadelphia, and Savannah in 1932, when he was just 17 years old. In 1939, he purchases 10 acres on Sarah's creek (Figure 20 & Figure 21) and, in the early 1950's started processing seafood. The processing plant once employed up to 250 workers and delivered seafood from Virginia to California as well as overseas to Europe. In 2010, after more than 70 years, Mr. Cook decided to retire. Though he still owned the property, he had no family to take over the business and he did not have any plans to sell the business or the property. Therefore, the 15 or so commercial seafood boats that docked at Cook's Seafood were displaced and were forced to find dockage elsewhere. In 2014, Mr. Cook passed away and currently the property is for sale.

Figure 20: Aerial of Cook's Seafood (Red Circle) on Sarah's Creek. (Google Earth)

Figure 21: Location of Cook's Oyster Company, Inc./Cook's Seafood.



Land Use and Zoning for Cook's Oyster Company, Inc.

Land use and zoning aspects of the location (Figure 22) of this business were not factors in the closing of the business, but could be factors if the present or a future owner wished to reopen

the business as previously used. Cook's Seafood is located in an area of Gloucester County zoned RC-1 or the Rural Countryside Zoning District. The intent of the RC-1 district is to conserve farm and forest land and to encourage agricultural activities, thereby helping to ensure that commercial agriculture and silviculture will continue as long term land uses and viable economic activities within the county. The RC-1 district is also established to preserve natural features and the rural landscape, while allowing low density, clustered residential development. Residential development is to be permitted only when it is located and designed to minimize its impact on agricultural land, farming and silviculture, and sensitive environmental features; to create attractive rural developments; and to respect existing features of the rural landscape.

In the Gloucester County Zoning Ordinance, marinas, boatyards and seafood processing plants require a special exception to be granted by the Board of Zoning Appeals (BZA) in all the districts in which they are permitted to establish a new use or to expand an existing one. This zoning (RC-1) permits a limited amount of low density residential development and low density residential subdivisions with an emphasis on clustering to protect natural resources. RC-1 allows a seafood processing plant by special exception.

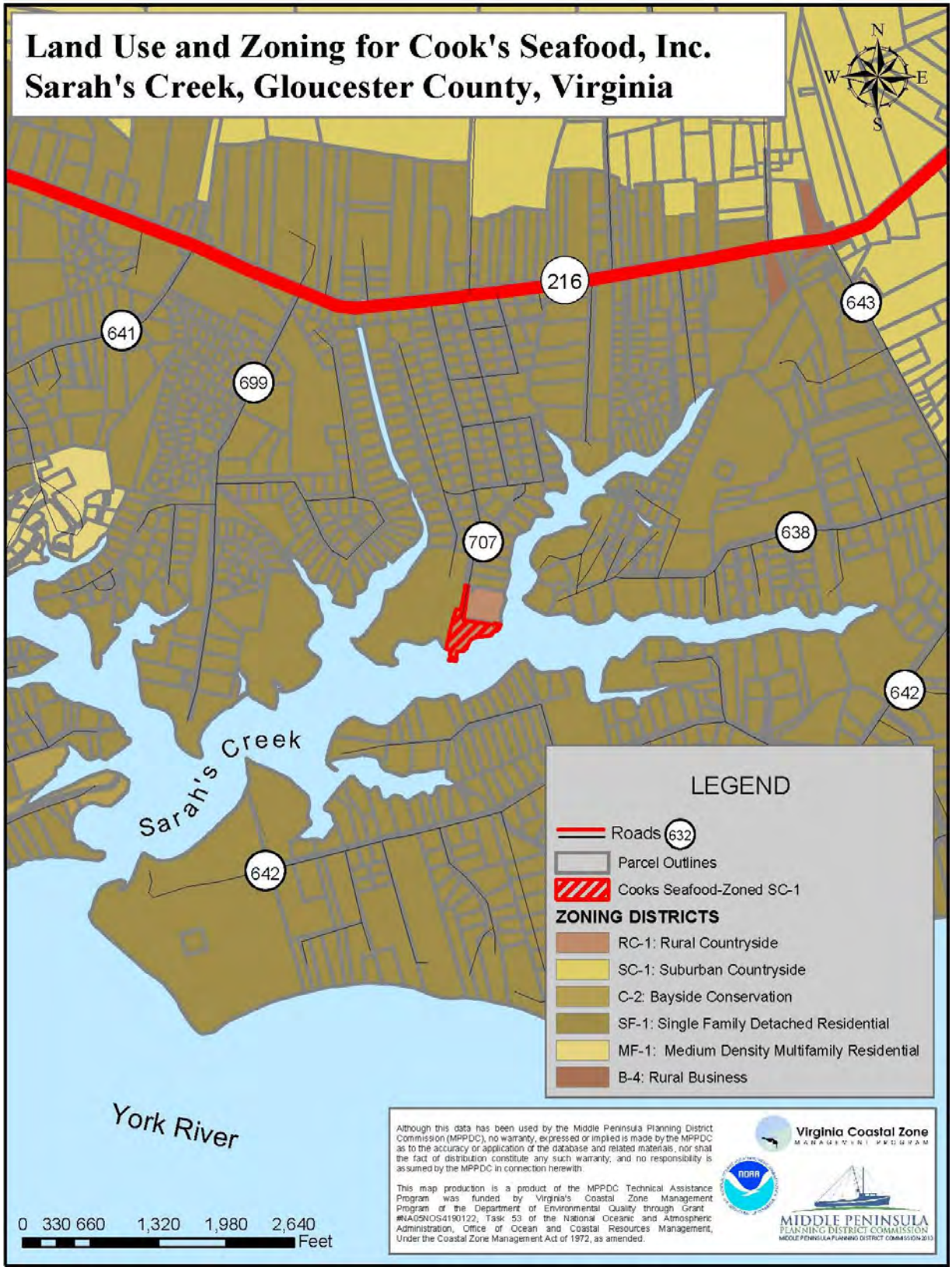
Because many of the existing waterfront industry activities occurring along the County's rivers were in existence prior to the adoption of the county zoning ordinance, they are defined as legal non-conforming uses. The County's ordinances allow non-conforming uses to continue and expand on compliance with Article 10 of the Zoning Ordinance. Unfortunately, the setbacks imposed by subsection (3) below make expansion of some of the existing facilities by adding additional structures difficult, if not impossible.

Also, if the use is discontinued for more than two (2) years, it is no longer considered a legal non-conforming use and must go through the special exception process (mentioned above) to be re-established. This is a concern for those facilities whose owners have passed away where there may no longer be anyone willing or able to continue the businesses within the two year period.

Legacy and Succession Planning for Cook's Oyster Company, Inc.

There was no planning for legacy or succession for Cook's Oyster Company, Inc. Mr. Cooked passed away in 2014 and the property is currently for sale.

Figure 22: Land Use and Zoning for Cook's Oyster Company, Inc.



INTERNATIONAL SEAFOOD

Issues & Needs of International Seafood

International Seafood was founded in 1988 as a family business (father and son). They were located on the Cook's Seafood property on Sarah's Creek in Gloucester Point, Virginia (Figure 23 & Figure 24). They did not own the property, but they were tenants. The primary fish processed at the facility was spiny dogfish, but they also processed scallops and conch. In April 1998, the National Marine Fisheries Service (NMFS) declared spiny dogfish overfished, which resulted in the development of the federal Fishery Management Plan (FMP) for spiny dogfish. International Seafood had not anticipated the closing of the fishery and had no secession plan in place. In anticipation of the closing of the spiny dogfish fishery (which did happen in August of 2000 – NCDMF, 2008), International Seafood closed. The father retired and the son started another business. The new business was not a water dependent business but seafood related (dealing with the regulations on the import of seafood), and was enticed to open in another location, outside of the Middle Peninsula, to take advantage of "business incubator" incentives.

Figure 23: Aerial of Internaitonal Seafood's previous location (Red Circle) on Sarah's Creek. (Google Earth)

Figure 24: Location of International Seafood.

Land Use and Zoning for International Seafood

Land use and zoning aspects of the location (Figure 25) of this business were not factors in the closing of the business at this location in Gloucester County, but could be factors if the present or a future owner of the property wished to reopen the same type of business there. International Seafood, like Cook's Oyster Company, was located in an area of Gloucester County zoned RC-1 or in the Rural Countryside Zoning District. The intent of the RC-1 district is to conserve farm and forest land and to encourage agricultural activities, thereby helping to ensure that commercial agriculture and silviculture will continue as long term land uses and viable economic activities within the county. The RC-1 district is also established to preserve natural features and the rural landscape, while allowing low density, clustered residential development. Residential development is to be permitted only when it is located and designed to minimize its impact on agricultural land, farming and silviculture, and sensitive environmental features; to create attractive rural developments; and to respect existing features of the rural landscape.

In the Gloucester County Zoning Ordinance marinas, boatyards and seafood processing plants require a special exception to be granted by the Board of Zoning Appeals (BZA) in all the districts in which those types of uses can be permitted by, to establish a new land use of that type or to expand an existing one. This zoning (RC-1) permits a limited amount of low density residential development and low density residential subdivisions with an emphasis on clustering to protect natural resources. The RC-1 zoning district does allow a seafood processing plant by special exception.

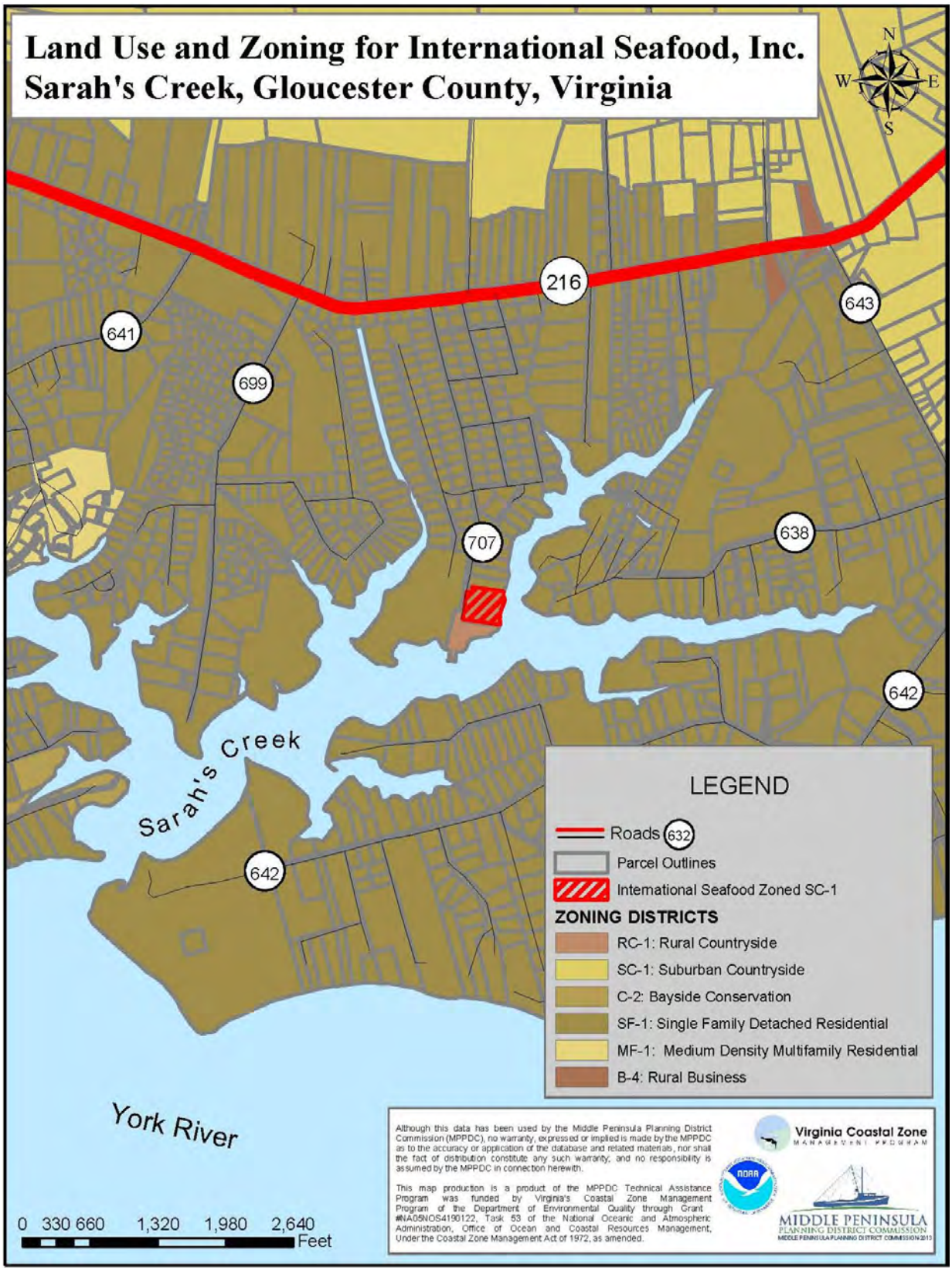
Because many of the existing waterfront industry activities occurring along the County's rivers were in existence prior to the adoption of the county zoning ordinance, they are defined as legal non-conforming uses. The County's ordinances allow non-conforming uses to continue and expand on compliance with Article 10 of the Zoning Ordinance. Unfortunately, the setbacks imposed by subsection (3) below make expansion of some of the existing facilities by adding additional structures difficult, if not impossible.

Also, if the use is discontinued for more than two (2) years, it is no longer considered a legal non-conforming use and must go through the special exception process to be re-established. This is a concern for those facilities whose owners have passed away where there may no longer be anyone willing or able to continue the businesses within the two year period.

Legacy and Succession Planning for International Seafood

International Seafood, as mentioned in Section 4.7.1 above, did not have a legacy or succession plan in place prior to their main product, the Spiny Dogfish, being taken off the market by regulations prohibiting the harvesting and processing of that resource.

Figure 25: Land Use and Zoning of International Seafood.



Due to the factors listed previously, the Middle Peninsula is slowly losing its working waterfronts- an issue that may have long-term consequences for local economies, the environment, the coastal heritage, and quality of life.

Appendix D

Sample Adoption Resolution

RESOLUTION

To accept the Virginia Working Waterfront Master Plan

WHEREAS, `working waterfront' is defined in the [name of locality/region] as *real property (including support structures over water and other facilities) that provides access to coastal waters to persons engaged in commercial fishing, recreational fishing businesses, boatbuilding, aquaculture, or other water dependent, coastal-related business and is used for, or that supports, commercial fishing, recreational fishing businesses, boatbuilding, aquaculture, or other water dependent, coastal-related business [Definition would be the one used in the PDC's]; and*

WHEREAS, working waterfronts provide critical access to Virginia coastal waters for people engaged in commercial and recreational fishing, seafood processing, boat building, ship and boat repair/maintenance, aquaculture, port activity, and other water-dependent businesses; and

WHEREAS, some coastal communities are experiencing increased demand for waterfront properties along Virginia's coast that result in an increase in property values and higher costs for traditional waterfront businesses resulting in Virginia slowly losing its working waterfronts – an issue that may have long-term consequences for local economies, the environment, coastal culture and quality of life; and

WHEREAS, other coastal communities are experiencing decreasing real-estate values, out migration of citizens, and decreased economic activity;

WHEREAS, natural factors of increasing sea level rise, increasing frequency and magnitude of coastal storms, shoaling of navigable channels and shoreline erosion pose increasing threats to the existence of working waterfronts;

WHEREAS, a loss of Working Waterfronts constitutes a potential loss of jobs for watermen (e.g. fishers, shellfish farmers) and the agriculture industry (timber and grain barges); a loss of the identity of the region; and a loss of support industry jobs (boat building, transport, seafood processing, etc.);

WHEREAS, Virginia's coastal Planning District Commissions and the Virginia Coastal Zone Management (CZM) have worked to address threats and loss of working waterfronts since FY 2011, these entities have collaborated to develop a Virginia Working Waterfront Master Plan; and

WHEREAS, some coastal communities have seen an increase in donations of waterfront land for public use presenting opportunity for new public working waterfront enhancements; and

WHEREAS, the Virginia Working Waterfront Master Plan synthesizes the work completed to date under the CZM Cumulative and Secondary Impacts strategy (FY 11-FY15) and provides communities with a comprehensive understanding of what Virginia working waterfronts are; where existing water-dependent commercial infrastructure is located; discussion of the long-term impacts associated with the loss of working waterfronts; and lastly recommends policy actions and tools which the Commonwealth, regional organizations, local governments and the private sector should consider to better manage these important assets and ensure the preservation of Working Waterfronts as important economic drivers and cultural resources for rural, suburban and urban communities well into the future;

NOW, THEREFORE BE IT RESOLVED that the [Insert locality/planning district commission name] accepts the Virginia Working Waterfront Master Plan as a policy document to help preserve and encourage the redevelopment of working waterfronts throughout coastal Virginia.

This the _____ day of _____, 2016

ATTEST _____ _____

(Clerk or Secretary) **(Chairman)**