SALISBURY/WICOMICO Metropolitan Planning Organization

Date: May 16, 2025

To: Marine Highway Program, US Department of Transportation, Maritime Administration

From: Keith Hall, Executive Director, Salisbury/Wicomico Metropolitan Planning Organization

RE: Marine Highway Route Designation Request – Wicomico River, Maryland

Description of the Wicomico River and Proposed Marine Highway Route

The Wicomico River flows from its headwaters in Salisbury, Maryland to the Chesapeake Bay, serving as a critical multimodal freight facility on Maryland's Eastern Shore. The lower portion of the River, from the Bay to north of Whitehaven, acts as a boundary separating Wicomico and Somerset Counties. The River is home to a 37-mile long Federal Navigation Channel that was completed in 1956. It is a shallow-drift river whose navigable channel is congressionally authorized to be maintained up to a depth of 14 feet (up to the Main Street Bridge and in the north and south prongs at Salisbury), with a width of up to 150 feet. The River is maintained at a depth of 12 feet in the main channel (branch channels and/or basins range from two [2] to 10 feet) through regular maintenance dredging by the US Army Corps of Engineers (USACE). To accommodate the dredging, the river is divided into an upper and lower half, with each portion being dredged approximately every two years. Dredging of the lower portion of the River (Chesapeake Bay to the Whitehaven Ferry) was most recently conducted from October to December of 2023; dredging of the upper portion (Whitehaven Ferry to Salisbury) was scheduled for late 2024, but has yet to be initiated.

The shallowness and curvature of the Wicomico River prohibits larger oceangoing vessels from accessing the Port of Salisbury; however, barges and smaller freighters are able to navigate the channel. The Port of Salisbury includes the main branch of the Wicomico River, as well as the North Prong, where the channel width (horizontal clearance) is reduced to 40 feet resulting in a small turning basin.

Two (2) drawbridges span the River in Salisbury, one across Main Street and the other across Salisbury Parkway (US 50). Vertical clearances when the bridges are in a closed position are one (1) foot and four (4) feet, respectively. Both bridges can be opened on signal with a four hour notice. As such, bridge air drafts are not considered a limiting navigational factor. One (1) overhead power cable with a 75-foot clearance exists approximately 14 miles upstream from the mouth of the River. Two (2) ferry services operate seasonally on the Wicomico River, one at Whitehaven, MD, and the other at Upper Ferry, MD. Both operate during daylight hours throughout the year.

The existing channels are marked by Aids to Navigation (ATON). National Oceanic and Atmospheric Administration (NOAA) charts for the Wicomico River depict several obstructions and wrecks. Private and public docks also occur on both sides of the River.

The proposed Wicomico River Marine Highway Route would align with, and extend beyond the existing Federal Navigation Channel, to connect to the existing M-95 Marine Highway Route in the Chesapeake Bay. This connection proposes to use Hooper Strait, a navigable water located between Bishops Head Point, at the southern tip of Dorchester County, and the north side of

Bloodsworth Island. Additionally, the proposed Wicomico Marine Highway Route is close in proximity to Marine Highway M-495, which stretches from the Potomac River into Washington DC.

Figure 1 shows the existing Wicomico River Federal Navigation Channel and the proposed Marine Highway Route with potential connections to M-95 and M-495.

The Wicomico River is one of the two busiest rivers on the Eastern Shore, averaging approximately 1,000 trips annually and carrying approximately one million tons per year in freight. This makes the Wicomico River navigation channel a key maritime asset for the City of Salisbury, which was identified as a freight hub for the southern Delmarva peninsula in the *Delaware Freight Plan* (2022). The Port of Salisbury is the largest river port on the Chesapeake Bay and the second busiest in Maryland by tonnage next to the Port of Baltimore.

There are currently six (6) maritime-based businesses and/or terminals located along the Wicomico River in Salisbury (**Figure 2**; Perdue AgriBusiness has two locations**)**. These entities play a pivotal role in supplying fuel, aggregate, agricultural commodities, and other assets, as well as providing employment opportunities to the City Salisbury and the entire Delmarva peninsula. Key commodity or activity information about each business is shown in **Table 1**. The *Maryland Freight Plan* (2022) notes that petroleum product terminals in Salisbury provide key transportation and storage links for the energy industry in Maryland. **Table 2** summarizes the total waterborne freight for the Wicomico River by commodity between 2001-2019. Gasoline (40%), sand and gravel (32%), and distillate fuel (14%) accounted for the majority of freight. Perdue AgriBusiness shifted the transport of grain and soybeans to Seaford, Delaware a couple of years ago; however, they reconstituted the use of the Wicomico River last year for shipments of these commodities due to an abundant harvest. In addition, Perdue AgriBusiness recently added a new commodity of crude soybean oil. In 2024, they launched a new barge to help modernize its supply chain which transported 4,500 tons of crude soybean oil to Salisbury where it is refined for use in food products[1].

[1] https://www.wboc.com/news/perdue-launches-miss-madeline-barge-aiming-to-cut-emissions-and-traffic/article_6972c408-a921-11ef-ab68-f359204bcde1.html

SALISBURY/WICOMICO Metropolitan Planning Organization

Figure 1. Wicomico River Federal Navigation Channel and Proposed Marine Highway Route

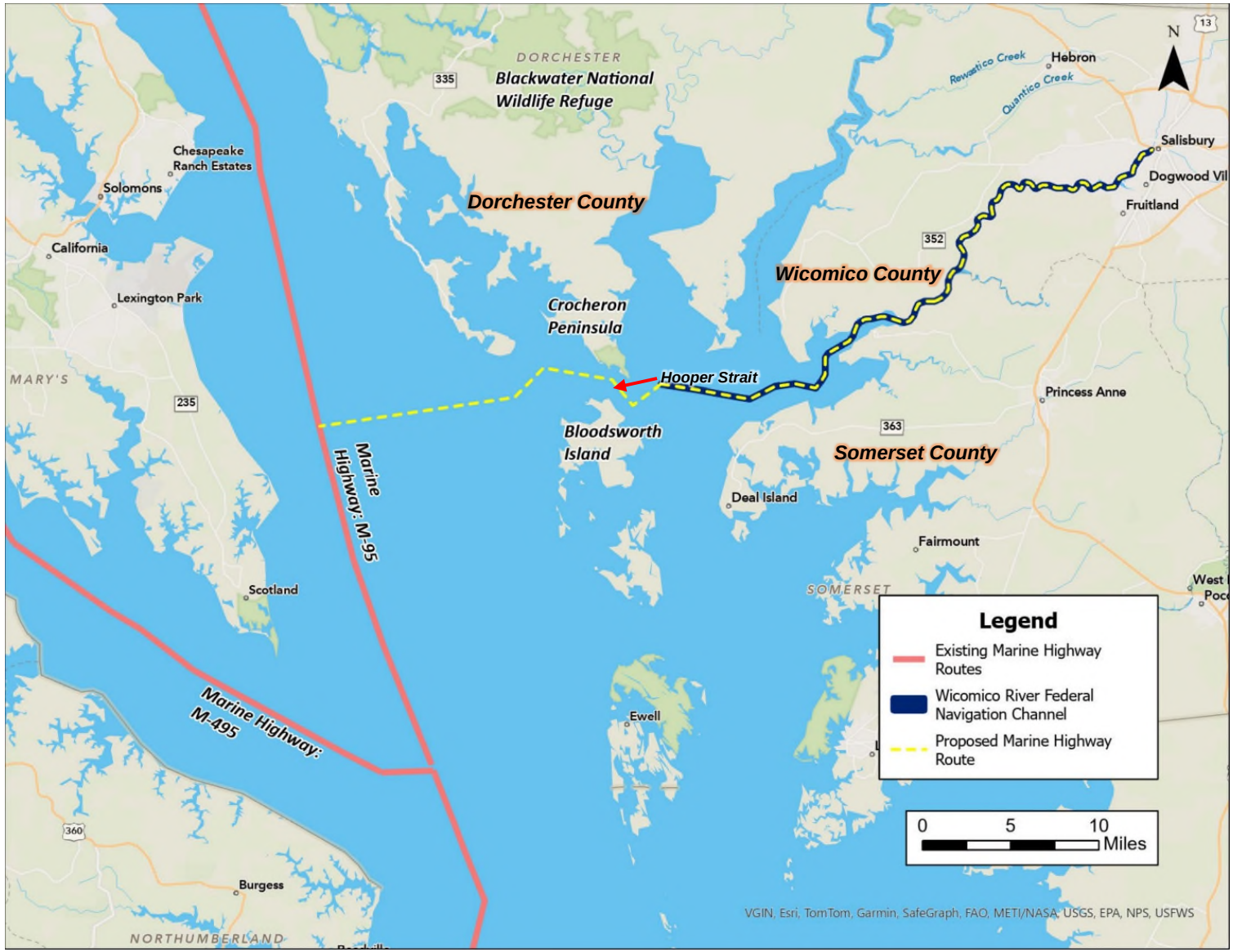
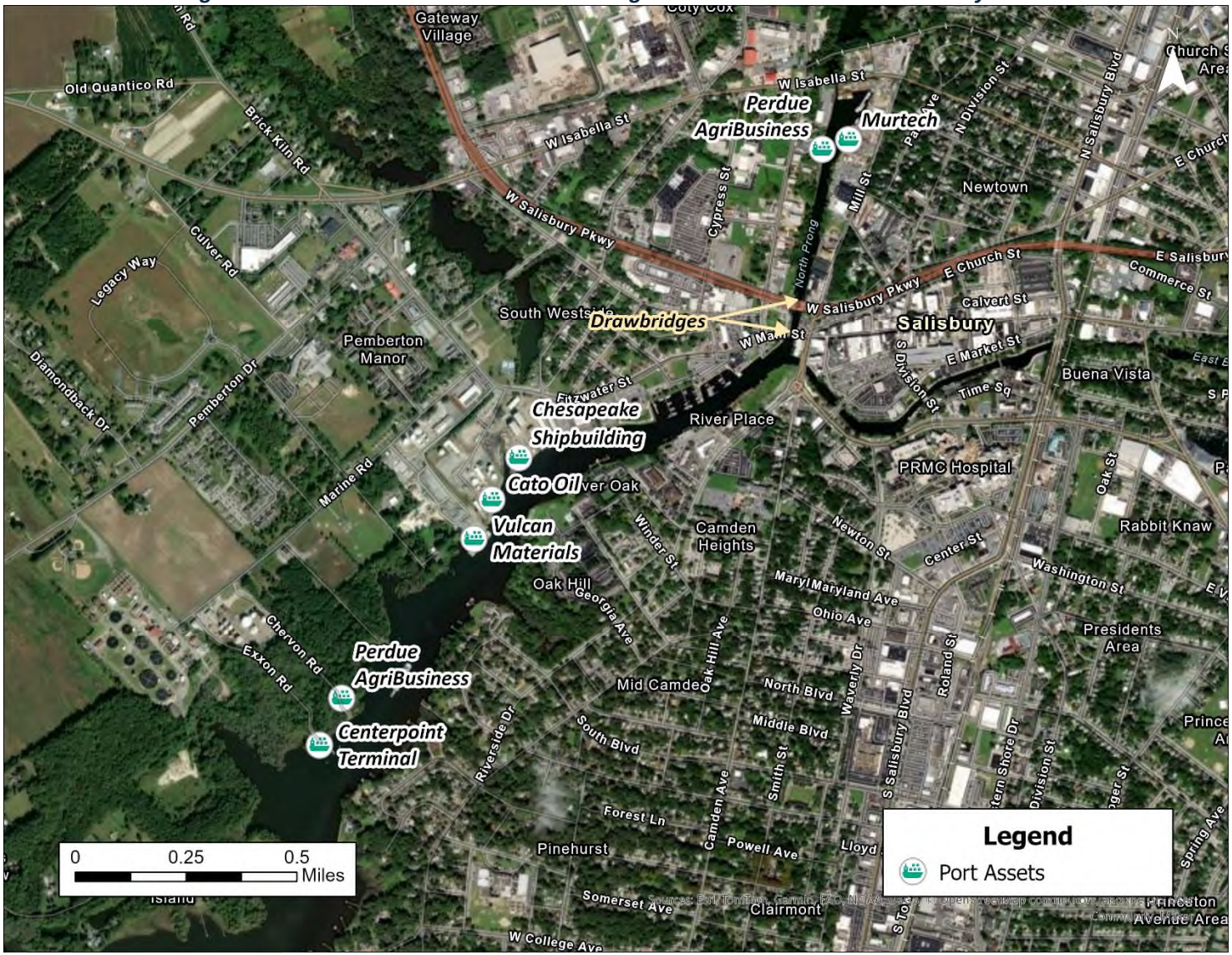


Figure 2. Maritime-Based Businesses Along the Wicomico River in Salisbury



Source: Maryland GIS data and Google Maps aerial imagery.

Table 1. Terminal/Employment Assets and Key Commodities of the Wicomico River

Terminal Name	Key Commodities or Activities
Apex Oil / Centerpoint Terminal	Gasoline, Ultra-Low Sulfur Diesel, Fuel Heating Oil
Cato Oil	Gasoline, Fuel Heating Oil
Chesapeake Shipbuilding	Ship Construction
Murtech Marine	Marine Design, Permitting, Construction, and Consulting
Perdue AgriBusiness	Agricultural Commodities
Vulcan Materials	Construction Aggregate (Stone, Sand, Crushed Rock, Cement)

Source: Salisbury Port Feasibility Study, 2021

Table 2. Salisbury's Top Waterborne Commodities, 2001-2019

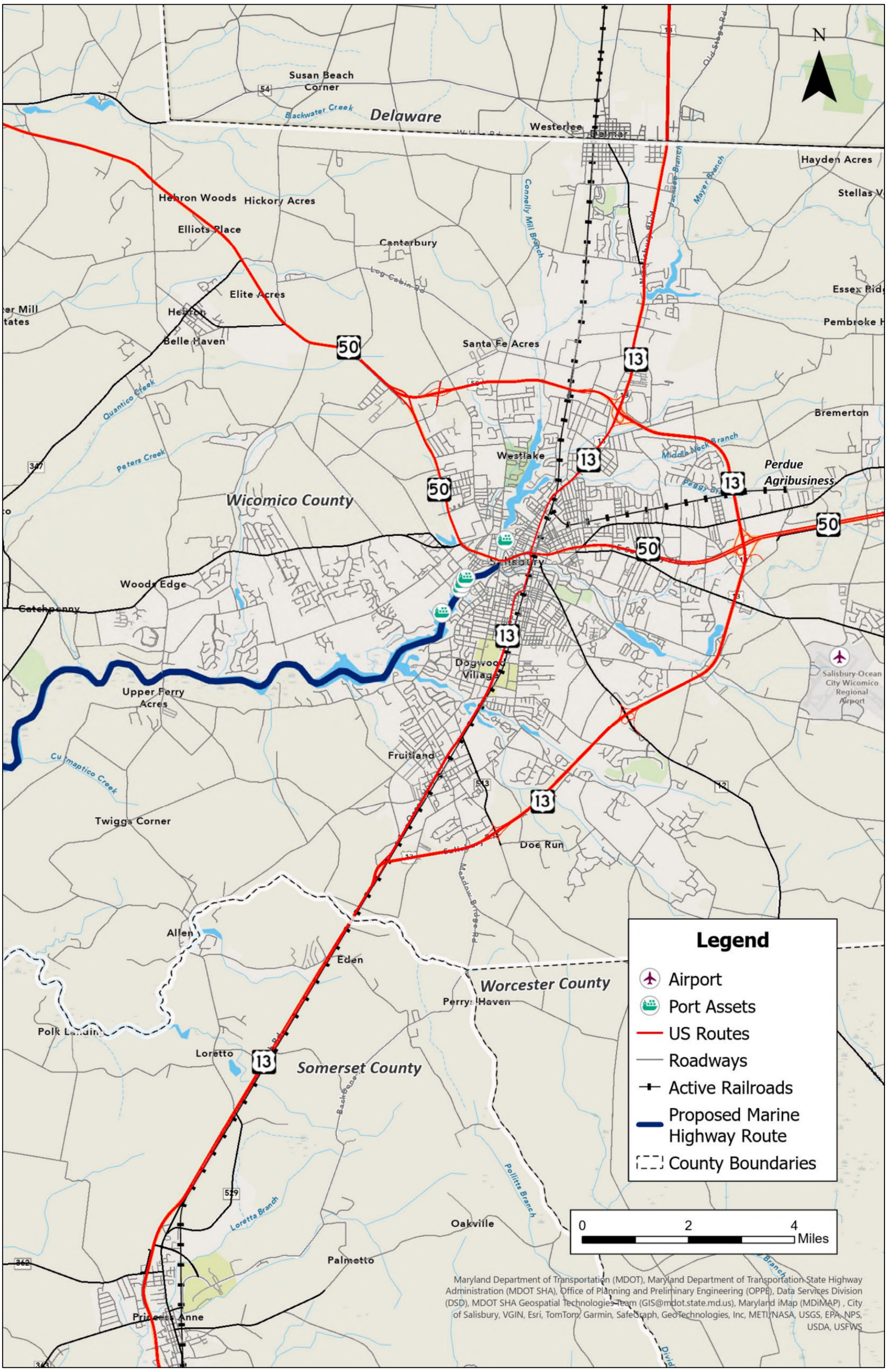
Commodity	Sum of Short Tons 2001-2019	Share
Gasoline	9,757,950	40%
Sand & Gravel	7,868,394	32%
Distillate Fuel Oil	3,423,501	14%
Corn	1,824,563	7%
Soybeans	535,465	2%
Alcohols	528,668	2%
Other	659,762	3%
Total, all commodities	**24,598,303**	**100%**

Source: Salisbury Port Feasibility Study, 2021

Surface Transportation Regions Served

The 2022 *Maryland State Freight Plan* identified the Port of Salisbury as a multimodal, critical rural freight facility on Maryland's Eastern Shore. The port provides easy highway access to both US 50 and US 13. Additional multimodal critical rural freight facilities on the Eastern Shore include railroads and public use airports. **Figure 3** displays the surface transportation infrastructure surrounding the Wicomico River and City of Salisbury.

Figure 3. Surface Transportation Surrounding the Wicomico River



Roadways

US 50

The portion of US 50 served by the Wicomico River and the Port of Salisbury is a 113-mile route critical to the Eastern Shore's farming and tourism economies and serves as a major link for jobs and the transportation of goods. US 50 connects oceanside resort areas to the Baltimore-Washington metro area, passing through the Counties of Queen Anne's, Talbot, Dorchester, Wicomico, and Worcester. According to the *Maryland State Freight Plan*, US 50 is "currently designated with intermittent sections of Critical Rural Freight Corridor (54.4 total miles)…" and "…is a vital freight link supporting agriculture, tourism, and extractive industries" (2022).

The Advanced Transportation Technologies and Innovative Mobility Deployment (ATTIMD) Program Notice of Funding Opportunity (NOFO) notes the prevailing challenges along US 50 are a lack of mobility due to extreme traffic congestion, bottlenecks, and safety concerns. US 50 averages 10,000 trucks per day and supports over $14 billion in commodity flow per year. Congestion along this route becomes especially problematic during summer months as tourism to the eastern shore increases. A portion of the roadway near the Bay Bridge (between MD 179 and MD 18) is among the top 25 truck bottleneck segments in the State of Maryland. The *Maryland Freight Plan* notes that addressing congestion on US 50 is needed on the eastern shore in order to encourage reliable travel times and efficient, cost-effective movement of goods. According to the *Maryland Roadway Performance Tool* (MRPT) 2020 data, annual delays on the Eastern Shore segment of US 50 cost truckers almost two (2) million hours which translates to $42.5 million in wasted fuel and time. Congestion on US 50 creates a barrier that divides communities, impairs emergency responder response time and mobility, restricts the movement of freight and farm-to-market deliveries, ultimately impacting jobs, productivity, and economic growth.

Additional challenges on US 50 include safety concerns and undesignated truck parking. US 50 has one of the state's highest proportions of fatal crashes involving heavy trucks. The *2020 Maryland Statewide Truck Parking Study* found locations along interstate routes where undesignated truck parking was clustered. This included portions of US 50 which connect to warehousing in Salisbury.

US 13

US 13 runs the length of the Delmarva Peninsula linking Wilmington, Delaware to Norfolk, Virginia and is a major route utilized by both local and interstate motorists. According to MDOT SHA GIS data[2], US 13 is the only principal arterial in Somerset County and one (1) of three (3) principal arterials within Wicomico County. Within Wicomico County US 13 is a key segment of freight transportation and is a main thoroughfare within the City of Salisbury.

Based on MDOT SHA GIS data, freight trucks comprise up to 2,218 of the average annual daily traffic (AADT) along US 13 within Wicomico County and up to 2,033 of the AADT in Somerset County.

According to the *2040 Maryland Transportation Plan*, nearly the entire stretch of US 13 within both Wicomico and Somerset Counties is expected to experience a Travel Time Index (TTI) of 2.0 by 2040. A TTI of 2.0 indicates that a trip which would take ten minutes under light traffic conditions, would take 20 minutes under heavy traffic conditions. Therefore, travel time along the US 13

[2] MDOT SHA Functional Class and AADT GIS data: MDOT SHA Annual Average Daily Traffic (AADT) Segments | Maryland's GIS Data Catalog (arcgis.com)

corridor is particularly sensitive to congestion levels. Additionally, according to the MRPT 2020 data, annual delays on the Eastern Shore segment of US 13 cost truckers just under one million hours which translates to $20.2 million in wasted fuel and time. US 13 north of US 50 near Salisbury was identified in the top 100 truck bottleneck (*Maryland Freight Plan*, 2022).

Other State Roadways

MD 349 travels north of the Wicomico River, from the southwest corner of Wicomico County to US 50 in Salisbury. The *SWMPO LRTP* identifies MD 349 as a part of the Greater Salisbury Primary Radial system because it traverses from the City of Salisbury to the surrounding towns and rural areas. It classified as a minor arterial roadway from US 50 to MD 352. MDOT SHA GIS data reports that freight trucks comprise up to 123 of the AADT along this corridor. According to the *SWMPO LRTP*, two (2) segments of MD 349 are among the top six (6) segments experiencing congestion within Wicomico County.

MD 12 runs southeast of the Wicomico River, stretching from Wicomico County to Worcester County. It is also considered a part of the Greater Salisbury Primary Radial System according to the *SWMPO LRTP*. From East Main Street to US 13, it is classified as a principal arterial roadway and then transitions to a minor arterial until it reaches US 113 in Worcester County. MDOT SHA GIS data reports that freight truck traffic comprises up to 385 of the AADT along this corridor.

Rail

The Port of Salisbury is located along the Delmarva Central Railroad Network, a subsidiary of Carload Express Inc., operating 188 miles of track between Porter, Delaware, and Hallwood, Virginia (*Maryland Freight Plan*, 2022). This includes 42 miles in Wicomico, Somerset, and Worcester Counties on Maryland's Eastern Shore. This railway includes interchanges with Norfolk Southern in northern Delaware and with the Maryland and Delaware Railroad Company in Townsend, Seaford, and Frankford, Delaware and supports the Delmarva agriculture and poultry industries. As seen in **Figure 3**, Perdue AgriBusiness has a facility located at the terminus of a Norfolk Southern rail line on the eastern outskirts of the City of Salisbury.

Involved Parties

Salisbury/Wicomico Metropolitan Planning Organization (S/WMPO)

The S/WMPO is the proposed Wicomico River Marine Highway Route Sponsor and was one of four funding sources for the *Salisbury Port Feasibility Study*. In their *Connect 2050 Long Range Transportation Plan* (2023), S/WMPO expressed support for increased freight transit by water. The plan recommended that S/WMPO should continue to evaluate strategies to increase the share of tonnage carried by water and rail modes to counter the increased use of trucks to transport freight. Support for intermodal freight movement is one way the S/WMPO can promote a more balanced freight transportation system. Intermodal connections and availability of multi-modal freight transportation options in the S/WMPO region are essential to providing a comprehensive transportation system, especially to minimize some of the negative impacts of truck freight transportation. The Wicomico River provides a critical element of the comprehensive transportation network within the region.

Wicomico County

The following goals and objectives regarding waterborne freight were identified in the 2017 Wicomico County Comprehensive Plan:

- Ensure navigable river channels through maintenance and proper dredging.
- Rehabilitate and develop the Port of Salisbury in an effort to encourage additional waterborne traffic serving the Delmarva Peninsula and strengthen Wicomico County's role as a regional marketing and distribution center.

According to the Plan, no other means of transportation can, as efficiently and cost effectively, move bulk commodities as waterborne shipping. It highlights the importance of maintained dredging cycles to facilitate travel along the Wicomico River into the City of Salisbury.

The City of Salisbury, Maryland

The City of Salisbury sponsored the preparation of the *Salisbury Port Feasibility Study* and has a vested interest in the maintenance and expansion of waterborne freight transport along the Wicomico River. Expansion of the Wicomico River's operational capacity through a Marine Highway Route designation would improve the City's economy and provide opportunities for community development and employment.

Maryland Department of Transportation (MDOT)

Investment and fortification of the Wicomico River as a waterborne freight movement channel is supported by multiple MDOT initiatives and documents. Per the *2040 MD Transportation Plan*, one objective is improving the movement of goods within and through Maryland by investing in intermodal connections and improvements to reduce freight bottlenecks. One strategy for accomplishing this objective is addressing congestion and bottlenecks on significant roadway corridors to facilitate access to major employment, freight, and activity centers. Redistribution of freight from trucks to barges on the Wicomico River would alleviate freight bottlenecks frequently experienced on the Bay Bridge (US 50/US 301).

The *Maryland Freight Plan* identified needs within the Eastern Shore region of Maryland, including potential freight opportunities in Salisbury utilizing multimodal access via Eastern Shore Rivers. The plan also noted stakeholder support for expanded opportunities for the Wicomico River through the Port of Salisbury.

Delaware Department of Transportation (DelDOT)

The Port of Salisbury is located seven miles from Delaware's southern border. The *2022 Delaware State Freight Plan* notes that port terminals in this location could enhance supply chains for fuel, aggregate, and agricultural products in Delaware, particularly in Sussex County and across the southern Delmarva Peninsula. Delaware's freight strategic plan seeks to "improve freight network connections, accessibility, and mobility to increase options for the movement of freight and enhance the integration of the state's multimodal transportation systems." One strategy for achieving this goal is multimodal expansion and connectivity with the potential expansion of the Port of Salisbury is included as an example.

Delmarva Water Transport Committee (DWTC)

The Delmarva Water Transport Committee (DWTC) is a nonprofit organization dedicated to encouraging the continued use of waterborne transportation on the Delmarva Peninsula and was

a major stakeholder in the development of the *Salisbury Port Feasibility Study*. In Wicomico County's 2017 Comprehensive Plan, DWTC estimated that a barge delivering petroleum to Salisbury is equal to 150 tractor trailer trucks. An additional 122,850 tractor trailer trucks would be needed annually or 2,363 per day if barges transporting the same commodity were halted or ceased to exist on the Delmarva Peninsula. The comparison of barge to tractor trailer truck equivalents varies depending on the type of commodity being transported; however, an updated graphic from the USACE Walla Walla District provides a comparison of cargo capacities (**Figure 4**). As shown, one barge can transport the equivalent to 134 tractor trailer (semi) trucks.

Somerset County

Somerset County is home to the Deal Life Wildlife Management Area, which is currently undergoing wetland restoration utilizing repurposed dredging material from the Wicomico River.

Private Sector

As previously discussed, there are currently five (5) maritime terminals and businesses that depend on the Wicomico River and maintenance dredging to support commodity shipments and economic viability.

Additional Stakeholders

Other organizations involved with the *Salisbury Port Feasibility* study include the Salisbury-Wicomico Economic Development Corporation, Greater Salisbury Committee, Salisbury Area Chamber of Commerce, and Tri-County Council for the Lower Eastern Shore of Maryland.

Benefits, Costs, and Impediments

In general, the designation of the Wicomico River as a Marine Highway Route would support initiatives to help maintain Salisbury and the surrounding area as a key maritime asset on the Eastern Shore and Delmarva Peninsula. The designation is anticipated to call attention to the importance of the Wicomico River in the region's economy.

In an effort to preserve industries reliant on maritime transit, the City of Salisbury explored the possibility of creating a publicly owned multi-user port terminal. The *Salisbury Port Feasibility Study* was conducted between 2020 and 2021 to determine the market demand, physical feasibility, and potential benefits of a multi-user port facility.

Following a detailed screening process, a site adjacent to existing barge terminals on Marine Road was advanced for further study. This site could accommodate anticipated commodities through two piers and a series of river cells for barge mooring and cabling, while leaving space for future expansion. The site would be accessible through a single point of entry off Marine Road. There is an existing block building on the site that could be refitted to serve as a scale house and administrative office with nearby space for maintenance equipment. The east side of the site would be designed for agricultural products while the west side would accommodate aggregates and sand, as well as other dry bulk materials. **Figure 5** presents the site concept undergoing further study.

The benefits of a Marine Highway Route designation would be realized in tandem with potential efforts to revitalize the Port of Salisbury with a multi-user port facility. The designation would support the City's initiative to expand the Port's capabilities, which would attract additional maritime-based businesses and, in turn, increase the amount of cargo transported on the River.

Figure 4. USACE Cargo Capacity Comparisons

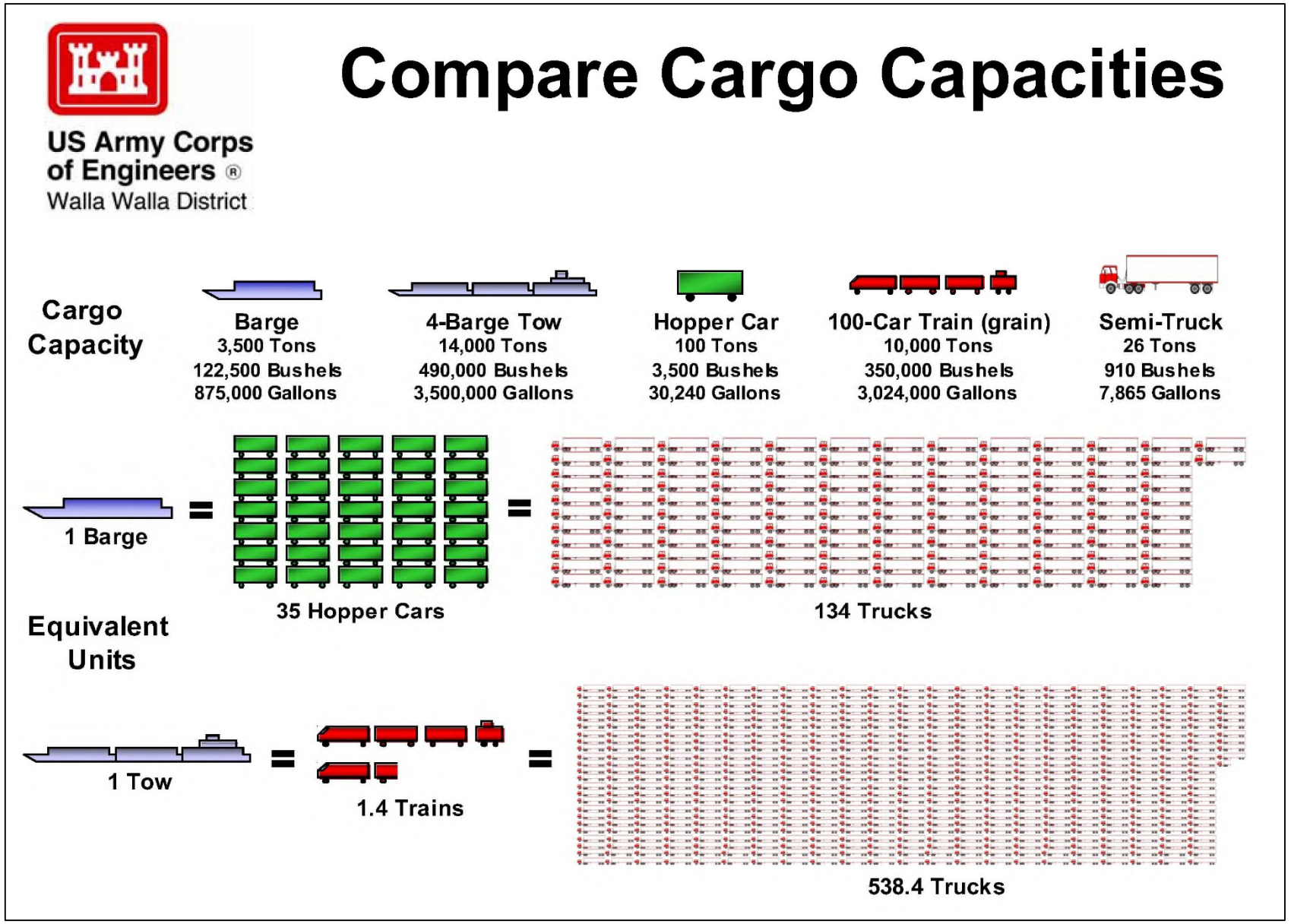
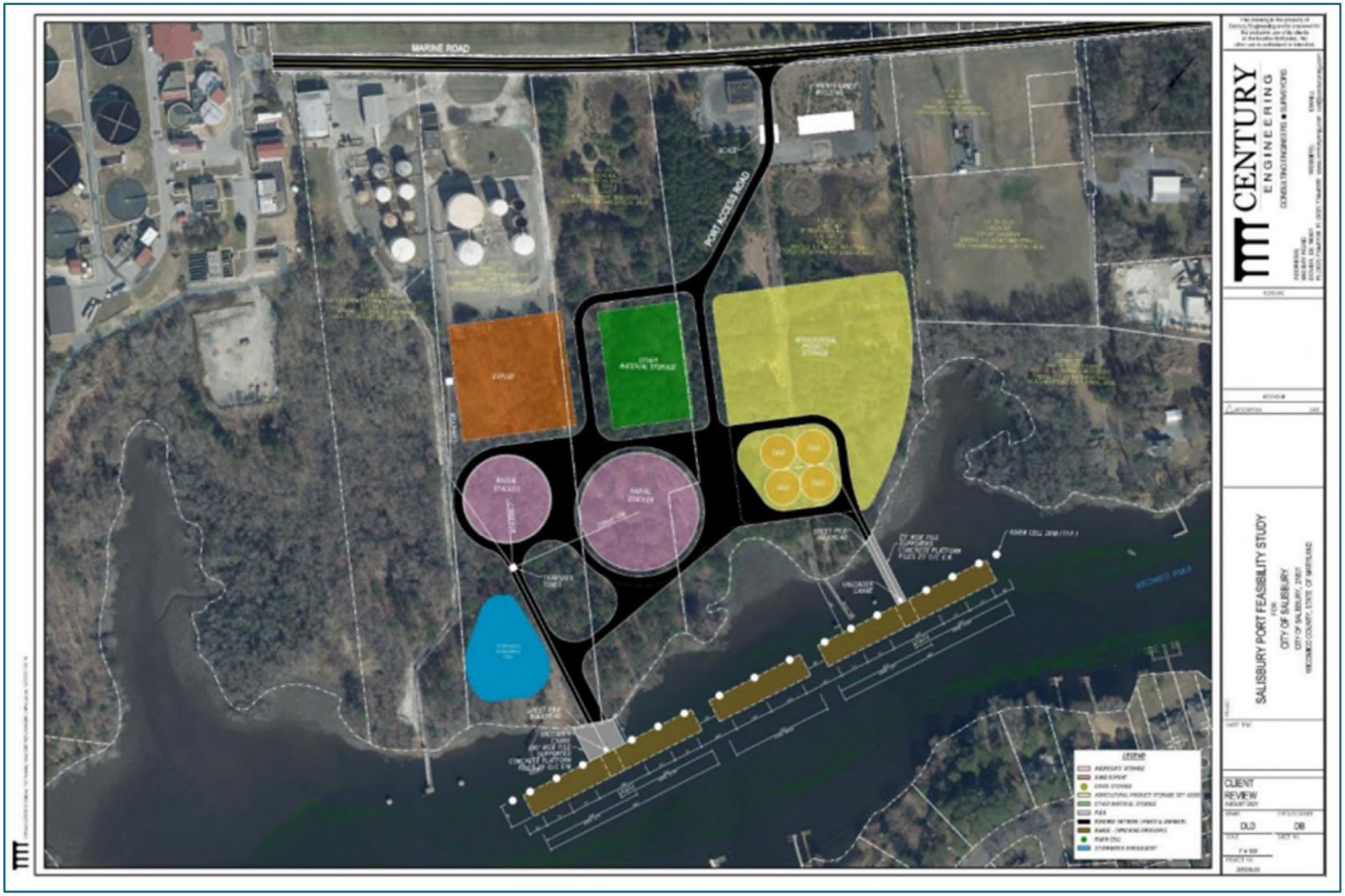


Figure 5. Multi-User Port Facility Concept



Source: Salisbury Port Feasibility Study, 2021

Transportation System Benefit

The *Salisbury Port Feasibility Study* calculated anticipated impacts of a port facility on truck and rail systems. If implemented, the creation of a multi-user port is predicted to leverage growth opportunities, particularly in terms of aggregates and agricultural products and increase the tonnage handled in Salisbury. The Port of Salisbury has the potential to handle between 1.05 and 1.13 million tons of cargo annually. This is the equivalent of 38,000 and 40,700 trucks and 9,228 to 9,910 railcars, in a "no-port" scenario. The potential new terminal alone would be equipped to handle the equivalent of 2,000 to 4,698 truck trips per year.

By increasing the amount of cargo that can be transported via barge and reducing the number of trucks needed to support vital supply chains, truck congestion on major routes, such as US 50 and US 13, could be reduced. This may also improve bottlenecks near the Bay Bridge. Congestion and bottlenecks contribute to unreliable travel times, particularly for truck traffic. Extended travel times are wasteful, leading to higher costs and added emissions. According to the MRPT 2020 data, annual congestion for both US 13 and US 50 results in just below three (3) million hours in delays, leading to a loss of $63 million worth of time and fuel. Expanding the capacity of waterborne freight movement along the Wicomico River through a Marine Highway Route designation would aid in relieving this congestion and reduce the annual cost of congestion along these roadways.

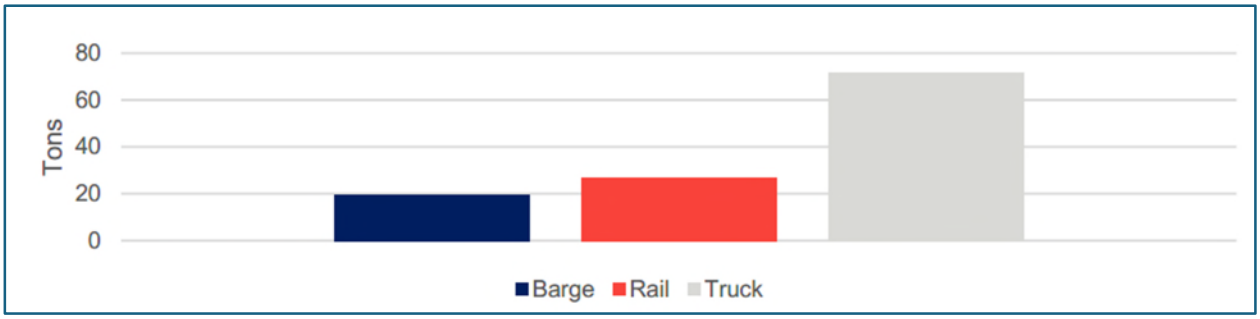
Marine Highway Route designation of the Wicomico River would positively impact public safety. Less trucks on the roadways would result in fewer truck-related accidents, including those involving hazardous materials, such as petroleum. Additionally, reduced congestion on roadways provides more reliable travel times for emergency vehicles.

Public Benefit

Reduced Emissions and Environmental Contamination

Barge shipping is more energy efficient than rail or truck transport and it generates fewer emissions. As displayed in **Figure 6,** rail locomotives are more fuel efficient and have far lower emissions than truck freight; however, they still generate between 23 to 25 million grams of CO_2 for every mile traveled compared to the 20 million grams of CO_2 released by barge.

Figure 6. Tons of CO_2 Emissions per Million Ton-Miles



Source: Salisbury Port Feasibility Study, 2021

Other pollutants generated by truck, rail, and barge travel include Nitrogen Oxides (NO_x) and Sulfur Dioxides (SO_x). When emitted into the air, NO_x, SO_x, and other types of pollution, through a series of chemical processes, form compounds that can travel over long distances and remain in the air for years. As reported in the *Salisbury Port Feasibility Study*, these compounds make up

some categories of emissions known as Particulate Matter (PM). Considering emissions like this is important because diesel engine pollutants cause cardiovascular diseases, aggravate lung and respiratory illnesses, and increase the rate of hospitalization and premature deaths. **Table 3** provides a comparison of emissions associated with the different modes of freight in two scenarios: one without growth of the Salisbury Port ("no-port") and the other with the multi-user port facility.

Table 3. Truck, Rail, and Barge Emission Impacts (grams per mile)

GHG/ Pollutant	Truck Equivalent Impacts		Rail Equivalent Impacts		Barge Equivalent Impacts	
	Low	High	Low	High	Low	High
No-Port Scenario						
NOx	76,960	82,435	450,162	482,187	13,705	14,680
PM	35,844	38,394	12,651	13,551	234,042	250,692
CO_2	151,810,992	162,610,992	23,193,346	24,843,346	17,395,010	18,632,510
Total	151,923,796	162,731,821	23,656,159	25,339,084	17,642,757	18,897,882
Growth Scenario						
NOx	3,650	9,125	21,350	53,375	650	1,625
PM	1,700	4,250	600	1,500	11,100	27,750
CO_2	7,200,000	18,000,000	1,100,000	2,750,000	825,000	2,062,500
Total	7,205,350	18,013,375	1,121,950	2,804,875	836,750	2,091,875

Source: Salisbury Port Feasibility Study, 2021

For both the high and low estimates, investment in the multi-user port and expanding the freight capacity of the Wicomico River supported by Marine Highway Route designation would reduce emissions by approximately 184 million grams.

Additionally, rail and truck transport of hazardous materials, such as fuel oils and petroleum products, lead to greater amounts spilled per year compared to pipeline and marine transport. Spills of these hazardous materials can lead to long-term problems including serious injuries and fatalities in people and animals, as well as damage to property and the environment.

Reduced Roadway Maintenance Costs

Reduced truck traffic leads to lower wear and tear on roads and bridges. A 1990 study[3] conducted for the *Transportation Research Board* estimated an annual cost of $20.44 per mile of roadway maintenance to combat wear and tear resulting from one heavy truck. Using the annual truck traffic generation values from the *Salisbury Port Feasibility Study*, the estimated annual cost of roadway pavement maintenance due to heavy truck traffic for two scenarios are summarized in **Table 4** below. The first scenario is without investment in the Salisbury Port and the second considers the potential construction of the multi-user port identified in the *Salisbury Port Feasibility Study*.

[3] *Evaluation of Truck Impacts on Pavement Maintenance Costs* (1990)*:* 1262-006.pdf (trb.org)

Table 4. Estimated Truck Traffic Generation and Associated Pavement Maintenance Costs

Product	Tons per truck[4]	Equivalent Trucks (No-Port Scenario)		Pavement Maintenance Cost (No-Port Scenario, $/year/mile)		Equivalent Trucks (Growth Scenario)		Pavement Maintenance Cost (Growth Scenario, $/year/mile)	
		Low	High	Low	High	Low	High	Low	High
Petroleum	29	19,153	19,153	$391,487.32	$391,487.32	0	0	$0	$0
Aggregates	25	13,021	15,021	$266,149.24	$307,029.24	2,000	4,000	$40,880.00	$81,760.00
Agricultural Products	36	3,664	4,363	$74,892.16	$89,179.72	0	698	$0	$14,267.12
Alcohols (Ethanol)	29	1,524	1,524	$31,150.56	$31,150.56	0	0	$0	$0
Metallic Products	23	35	35	$715.40	$715.40	0	0	$0	$0
Others	22.5	223	223	$4,558.12	$4,558.12	0	0	$0	$0
Total	**-**	**37,620**	**40,319**	**$768,952.80**	**$824,120.36**	**2,000**	**4,698**	**$40,880.00**	**$96,027.12**

Using conservative estimates, investing in the growth of the Salisbury Port, in combination with a Marine Highway Route designation, would reduce annual pavement maintenance costs by approximately $728,000 per mile by removing approximately 37,600 trucks from the roadway. If the 39.4-mile critical rural freight corridor segment of US 50 is considered for this exercise, this would result in a reduction of about $28.7 million in annual roadway maintenance costs from truck traffic. The reduction in maintenance cost alone would cover the estimated cost of port construction ($22.8 million) proposed in the *Salisbury Port Feasibility Study* and provide net savings of approximately $5.9 million. The cost savings in today's dollars would be considerably more compared to the amounts noted in the 1990 study.

Beneficial Dredged Material Use

As previously noted, the Wicomico River is a shallow-drift river requiring scheduled maintenance dredging to maintain a navigable depth. The dredge cycles generate approximately 120,000 cubic yards in dredged material. The USACE and its partners, including National Oceanic and Atmospheric Administration (NOAA), NOAA Fisheries, U.S. Fish and Wildlife Service (USFWS), National Audubon Society, Maryland Department of Natural Resources (DNR), Wicomico County and Somerset County, decided to use the dredged materials for wetland restoration. Following the October to December 2023 dredging cycle, approximately 177,000 cubic yards of dredged materials[5] were relocated to a site in the Deal Island Wildlife Management Area. A two-year vegetation planting effort aimed at reestablishing native species and bird nesting habitat commenced in the spring of 2024. A Marine Highway Route designation would provide further opportunity for dredge spoils to be a net benefit to the environment.

Land Use Impacts

In terms of land use, a Marine Highway Route designation and commitment to the multi-user port facility proposed in the *Salisbury Port Feasibility Study* would make space along the North Prong

[4] These values were sourced from the *Salisbury Port Feasibility Study* and are the number of trucks needed to address the Port's demand in no-port and growth scenarios.
[5] https://www.dredgingtoday.com/2024/06/07/video-wicomico-river-maintenance-dredging-marsh-planting/

of the Wicomico River available for development or land preservation through the relocation and consolidation of existing port facilities. Commercial redevelopment has the potential to better use the City of Salisbury's resources and encourage higher value economic activities, such as waterfront real estate. Increased development in the area has the potential to create new jobs in Salisbury while also leading to increased property values and tax revenue for local governments. The consolidation of freight handling efforts would also alleviate the surrounding neighborhoods' exposure to pollution and truck congestion.

Economic Impacts

Marine Highway Route designation would ensure the port is able to maintain the levels of cargo required to retain federal support for maintenance dredging. Should cargo rates continue to decline, federal funding of more than $4 million per year may be lost, requiring the City and/or Port stakeholders to cover these costs to maintain navigability of the river.

Other industries rely on river maintenance but may not contribute to the movement of cargo that directly trigger USACE reporting and federal investments in waterway maintenance. For instance, Chesapeake Shipbuilding Corporation, as a major Salisbury-based employer, depends on the dredging of the Wicomico River to sustain employment, but does not generate freight movement activities. However, maintained dredging of the River provides potential for the firm to import other commodities for use in its business.

Waterborne public transit is another example of this type of industry. Additionally, the *Draft Somerset County Comprehensive Plan* notes that their county is served by the two ferries operated by the Wicomico County Department of Public Works. These ferries cross the Wicomico River into Somerset County and make approximately 200,000 trips per year transporting both passengers and vehicles, though they are not included in the estimates of freight movement activities.

Several industries critical to sustaining the economy on the Eastern Shore are dependent on access to barge transport, which is more cost-effective than rail or truck transport. Increasing capacity of water freight transit would have a positive impact for these industries and within Salisbury where communities along the river are designated sustainable communities and enterprise zones where economic development is needed.

Marine Highway Route designation would also provide additional justification for continued investment in the Port of Salisbury, In addition, the designation would help sustain employment within the Salisbury area, as well as jobs within the transportation industry and other industries supported by the port.

Impediments

Dredging Implications

Although the USACE is using dredged material of the Wicomico River to restore wetlands at the Deal Island Wildlife Management Area, the act of dredging does temporarily impact several environmental resources. Disturbing the bottom of the channel would increase the water's turbidity temporarily. Benthic organisms and shellfish in the areas of the dredged channel would be destroyed; however, would recolonize within approximately two years. Other wildlife such as finfish and waterfowl would be temporarily displaced during construction activities. As such, maintenance dredging projects are subject to analysis in accordance with the National Environmental Policy Act (NEPA).

As Deal Island Wildlife Management Area cannot accept all of the dredged material from the Wicomico River for all of the future dredging cycles, USACE would need to continue to work with local organizations to secure appropriate dredge material disposal sites.

Recreational Impacts

The communities surrounding the Wicomico River have several public water access points to enjoy a variety of recreational opportunities along River, such as motor boating, kayaking, canoeing, fishing, and competitions. Notably, the Chesapeake Cowboys, a group of skilled boaters, tour waterways of the Chesapeake Bay showing off their extreme docking prowess. On September 7, 2024, they visited the Port of Salisbury for their 16th year in a row[6]. This event occurs north of the proposed multi-user port facility and has had no issues with present freight operations in the past; however, Marine Highway Route designation may increase barge traffic which could result in the need for more coordination than in past years.

With increased boat and barge traffic, paddlers and motor boaters' experience along the Wicomico River could change. Given the narrow and curvy nature of the River, recreational users must be especially aware of larger vessels and ensure they are at a safe distance. The noise generated by the barges could also temporarily, but more frequently, impact the paddlers and motor boaters' experience along the River.

Limited Access and Cargo Type

As previous sections have mentioned, the Wicomico River is a shallow drift and winding channel. This limits the vessel sizes that can navigate the waterway, preventing larger oceangoing vessels from accessing the City of Salisbury, which in turn limits the type of cargo the Wicomico River can accept. Fuel cargo has historically made up the bulk of the Wicomico River's tonnage, but recent trends show a decline in this commodity as reliance on internal combustion engines continues to decline. Reduction in overall tonnage could result in the loss of USACE dredging support necessary for freight movement along the River. The Salisbury multi-user port facility is a strategy to address this impediment, but expansion projects are dependent on private development. Marine Highway Route designation could support investment into the port and eventually diversify the cargo the Wicomico River can accept.

Bloodsworth Island

Bloodsworth Island is an active Navy range owned and operated by Naval Air Station Patuxent River. While the Navy continues to voluntarily cease impact operations at the Bloodworth Island Range, unexploded ordinance can be found in near-shore waters[7]. Federal law (33 CFR 334.190) prohibits trespassing in waters within 75 yards (225 feet) of land. The Wicomico River Marine Highway Route is proposed to pass on the north side of Bloodsworth Island. While the route would exist well beyond the prohibited area, coordination with the Navy may be needed to ensure vessel safety should military operations resume at this location.

[6] https://www.wmdt.com/2024/09/16th-annual-salisbury-extreme-boat-dockin-competition/

[7] https://ndw.cnic.navy.mil/Installations/NAS-Patuxent-River/Operations-and-Management/Administrative-Services/NAS-Public-Affairs-Office/Bloodsworth-Island-Range/

Summary

The Wicomico River has gained recognition as a key freight connection to alleviate landside congestion and unreliability by a range of organizations such as MDOT, DelDOT, S/WMPO, Wicomico County, and others. A Marine Highway Route designation of the River aligns with the interests of these organizations and would also support efforts to plan and invest in the Port of Salisbury. The results would be realized by a reduction in emissions; landside congestion; and infrastructure maintenance costs, as well as providing opportunities to restore wetlands, and improve and expand the local economy.

The Wicomico River supports both economic and environmental interests (USACE, 2022). Several maritime-based businesses rely on continued maintenance dredging of the River to continue operations. Maintenance dredging allows commercial vessels and boats to traverse the River to sustain commerce, while the resulting dredge spoils support the restoration and maintenance marsh habitats for vegetation, fish, and wildlife. Marine Highway Route designation would ensure continued maintenance of the Wicomico River, enabling restoration efforts such as these.

The Port of Salisbury provides easy highway access to both US 50 and US 13 and could connect to M-95 and M-495 via a Marine Highway Route designation of the Wicomico River. This connection would help to expand the marine highway network and improve regional transportation system redundancy while providing public benefits, such as reduced air emissions and improved roadway safety.

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