



*Eastern Shore of Virginia
Transient & Working Waterfront
Infrastructure Needs Assessment
February 2013*

Accomack-Northampton Planning District Commission

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Eastern Shore of Virginia Transient & Working Waterfront Infrastructure Needs Assessment

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Virginia Coastal Zone
MANAGEMENT PROGRAM



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EXECUTIVE SUMMARY

The Eastern Shore of Virginia is largely dependent on its vast wealth of natural resources to support its agriculture, seafood, and tourism economies. Adequate access to the waters surrounding the peninsula is imperative for the seafood and tourism economies. These facilities providing access often are used for a variety of activities ranging from commercial to transient boating.



In order to gain an understanding of the different uses, services, and challenges facing the region's transient and working waterfronts, the Accomack-Northampton Planning District Commission (A-NPDC) conducted a survey of 21 of the 32 public and private marinas,



wharves, and harbors in Accomack and Northampton Counties. Questions gathered information on years in business, services offered, use trends, accessibility, physical characteristics, and knowledge or interest in state programs and grants.

Shoaling and flood damage were found to be the most prevalent accessibility issues for facilities in the region. Funds for dredging and bulkhead repairs were being sought by several of the respondents. In some cases, the bulkheading was more than twenty-five years old with "toothpick-sized" pilings at the mud line indicating an immediate need for maintenance and repair.

Fuel availability and lack of cell phone coverage emerged as issues for transient boaters, as well as limited lodging outside of the largest towns. In addition, restaurants and grocery stores are generally not available within walking proximity to many smaller facilities. Public transportation is not generally available to transient boaters as well.

There are currently five marinas on the Eastern Shore that have received the Virginia Clean Marina designation. Eleven others expressed interest in potentially becoming certified in the program. Several of the facilities have used the Clean Vessel Act and Boating Infrastructure Grant programs,



some expressed interest in the programs, and others were wary of perceived eligibility criteria and regulations.

Recommendations for ways to improve the Eastern Shore's boating infrastructure and the sustainability of local water-dependent industries included promoting the Virginia Clean Marina



Program, development of a dredging plan to maintain and improve navigability, identify additional lodging opportunities by soliciting private sector interest, encourage owners to consider accommodating for elevated sea level and increased flooding in facility management plans, and conduct additional research to identify legacy plans of privately-owned facilities and how government grant programs could better serve businesses.

1.0 INTRODUCTION



The Eastern Shore of Virginia is a 70 mile-long peninsula at the southern tip of the Delmarva Peninsula that is bound to the east by the Atlantic Ocean and to the west by the Chesapeake Bay. The region consists of two counties, Accomack to the north and Northampton to the south, and 19 incorporated towns including the waterfront towns of Chincoteague and Wachapreague on the seaside and Saxis, Tangier, Onancock, and Cape Charles on the bayside (see **Figure 1**).

The earliest settlements in the region were closely associated with the numerous navigable creeks and waterfront areas that provided instant and easy accessibility to the abundant natural resources present in the surrounding waters as well as accessible trade routes that economically connected the region to urban centers along the Atlantic Coast. This way of life and dependence on access to the water is an intrinsic trait of the Eastern Shore that is still prevalent today.

Historically, the region's water-based economies were based primarily on harvesting of oysters, clams, and bay scallops; commercial fishing; and recreational fishing and hunting. Over time these industries experienced changes due to overharvesting, disease, loss of submerged habitat, water quality degradation, storm events, and natural climate changes. Currently, the region's water-based economies are based primarily on cultivating clams and oysters with significantly less wild harvesting, commercial fishing, recreational fishing and hunting, recreational boating, and other ecotourism-related activities. These activities have drastic differences but they all do have one thing in common and that is adequate waterfront areas that provide access to the water. This study attempts to characterize the existing transient and working waterfront facilities in order to identify ways to enhance the boating experience for both transient boaters and commercial waterman.



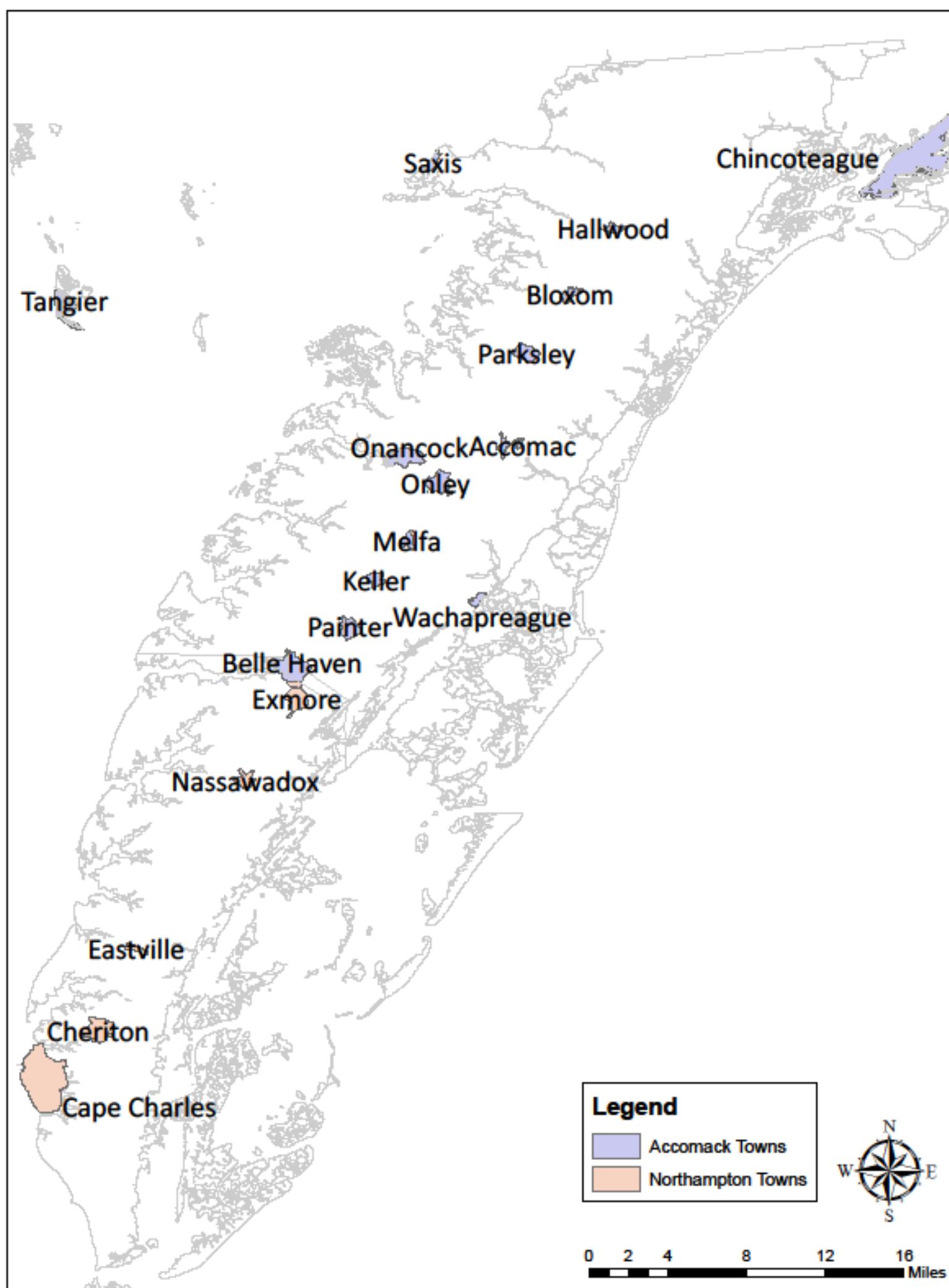


Figure 1

Vicinity Map

Eastern Shore of Virginia Marina Needs Assessment



2.0 METHODOLOGY

2.1 | SURVEYS

During 2012, the A-NPDC worked with Accomack and Northampton Counties and the Town of Chincoteague to develop a consensus definition for working waterfronts in the region. This definition guided an effort to inventory all existing facilities, properties, and businesses in the region that fit this definition. The Eastern Shore of Virginia Working Waterfront Inventory identified over 200 facilities including over 30 marinas, wharfs, and harbors.

In order to assess facility and regional marina needs, the A-NPDC contacted all marinas in the region and asked the owners, operators, harbor masters, and managers to complete a brief survey that took ten to fifteen minutes to complete. A-NPDC staff contacted each facility and offered the survey via telephone or email. Since all facilities chose to complete the survey over the phone, A-NPDC entered all information manually and later converted the paper surveys to a digital spreadsheet.



The survey was developed by consulting similar public surveys conducted by the U.S. Army Corps of Engineers in the Great Lakes region and the Pacific coast. Input from the Virginia Institute of Marine Sciences was also solicited to tailor the survey to the needs of state and federal funding programs. The survey is included in **Appendix A**.

Maps were created using ArcGIS and Microsoft Excel was utilized for data compilation and graphic illustration.

2.2 | NEEDS ASSESSMENT

Each survey completed was analyzed to identify potential government-funding assistance options for each individual participating facility. Each participating facility was provided a copy of this report, offered an opportunity to discuss project development options, and provided contact information for government staff responsible for management of various funding options. All marina facilities were advised that they would be included to participate in future A-NPDC efforts to preserve and enhance working waterfronts in the region.

The survey results were further analyzed to identify regional trends in current services and amenities and to recognize regional deficiencies and opportunities for enhancement of services

for the recreational/transient boating population and the commercial fishing/aquaculture industry.

All findings were assessed to develop a series of recommendations for individual facility owners and local, regional, and state planners on how to both preserve existing facilities and enhance the recreational and commercial boating experience on the Eastern Shore of Virginia.

3.0 RESULTS & DISCUSSION

The following sections detail the results of all completed surveys and discuss potential implications on a site-specific and regional basis.

3.1 | PARTICIPATION & GENERAL INFORMATION

The Eastern Shore of Virginia Working Waterfront Inventory identified 32 transient boating facilities including public and private marinas, wharves, and harbors. These facilities are illustrated in **Figure 2**. There are four facilities in Northampton County that cater to transient boaters compared to 28 facilities in Accomack County.

Nearly 70% (22 of 32) facilities agreed to participate in the survey. The remaining 10 facilities that did not participate were either unavailable or not interested. **Figure 3** is a table listing all facilities and those who participated in the survey.

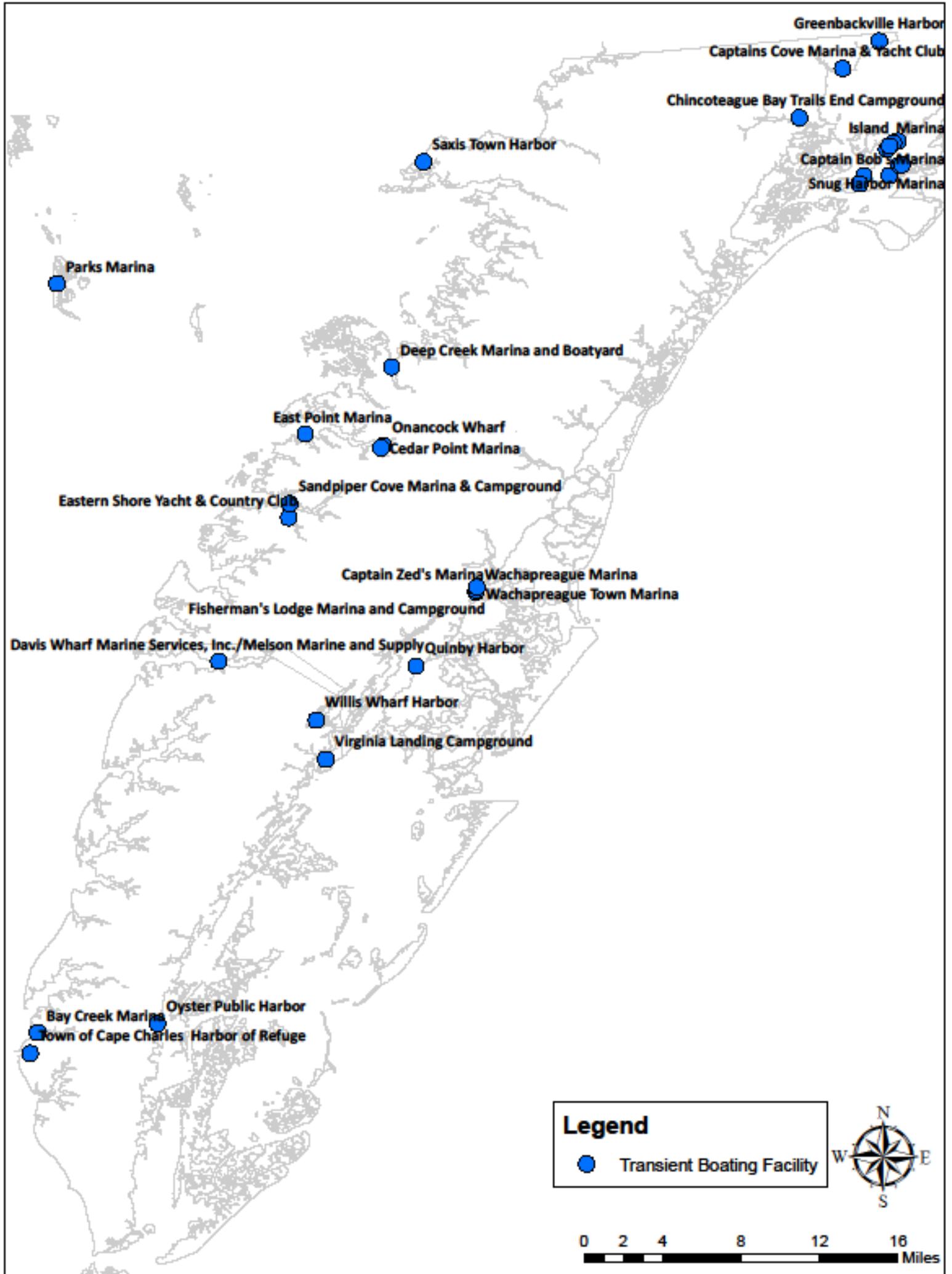


Figure 2

Transient Boating Facilities Map

Eastern Shore of Virginia Marina Needs Assessment



Figure 3 – Participating Facilities Table

Participating Facility	Town/Village	County
Bay Creek Marina	Cape Charles	Northampton
Captain Bob's Marina	Chincoteague	Accomack
Captain Zed's Marina	Wachapreague	Accomack
Captains Cove Marina & Yacht Club	Greenbackville	Accomack
Chincoteague Bay Trails End Campground	Horntown	Accomack
Chincoteague Downtown Waterfront Park	Chincoteague	Accomack
Chincoteague Inn and Marina	Chincoteague	Accomack
Curtis Merritt Harbor of Refuge	Chincoteague	Accomack
Davis Wharf Marine Services/Melson Marine & Supply	Belle Haven	Accomack
Deep Creek Marina & Boatyard	Deep Creek	Accomack
East Point Marina	Onancock	Accomack
Eastern Shore Yacht & Country Club	Pungoteague	Accomack
Greenbackville Harbor	Greenbackville	Accomack
Onancock Wharf	Onancock	Accomack
Oyster Public Harbor	Oyster	Northampton
Parks Marina	Tangier	Accomack
Quinby Harbor	Quinby	Accomack
Tom's Cove Park Campground & Marina	Chincoteague	Accomack
Town of Cape Charles Harbor of Refuge	Cape Charles	Northampton
Saxis Town Harbor	Saxis	Accomack
Wachapreague Marina	Wachapreague	Accomack
Wachapreague Town Marina	Wachapreague	Accomack
Willis Wharf Harbor	Willis Wharf	Northampton
Non-Participating Facility	Town	County
Barnacle Bill's Marina & Bait & Tackle	Chincoteague	Accomack
Cedar Point Marina	Onancock	Accomack
East Side Rentals & Marina	Chincoteague	Accomack
Island Marina	Chincoteague	Accomack
Sandpiper Cove Marina & Campground	Onancock	Accomack
Snug Harbor Marina	Chincoteague	Accomack
Virginia Landing Campground	Quinby	Accomack
Fisherman's Lodge Marina & Campground	Wachapreague	Accomack
Waterside Inn and Marina	Chincoteague	Accomack

DISCUSSION: There are four facilities in Northampton County that cater to transient boaters compared to 28 facilities in Accomack County. Twenty-one of the transient boating facilities are located on the seaside, with eleven on the bayside. There are adequate transient boating

facilities distributed throughout the Eastern Shore that allow boaters to travel from port to port in less than a day’s travel. Chincoteague has the most facilities, followed by Wachapreague, Cape Charles, and Onancock. This abundance of facilities indicates the region is well prepared to support a thriving transient boating industry.

3.1.1 | YEARS IN OPERATION

Participants were asked several questions regarding facility age and current owner/operator tenure in order to get an idea of the age of regional infrastructure and typical tenures of owners and operators. The results of these survey questions are in the table in **Figure 4**.

Figure 4 – Infrastructure Age & Owner/Operator Tenure Table

Facility	Facility Age (years)	Current Owner/Operator Tenure (years)
Bay Creek Marina	10+	10+
Captain Bob's Marina	60	20
Captain Zed's Marina	20+	2.5
Captains Cove Marina & Yacht Club	35	35
Chincoteague Bay Trails End Campground	40+	26
Chincoteague Downtown Waterfront Park	7	7
Chincoteague Inn and Marina	Unknown	Unknown
Curtis Merritt Harbor of Refuge	28	28
Davis Wharf Marine Services/Melson Marine & Supply	100+	9
Deep Creek Marina & Boatyard	17+	10
East Point Marina	64+	22
Eastern Shore Yacht & Country Club	50	50
Greenbackville Harbor	100+	20
Onancock Wharf	15	15
Oyster Public Harbor	9	1
Parks Marina	30	30
Quinby Harbor	30+	30+
Tom's Cove Park Campground & Marina	30	30
Town of Cape Charles Harbor of Refuge	50+	50+
Saxis Town Harbor	48	48
Wachapreague Marina	Unknown	Unknown
Willis Wharf Harbor	30	12
Average (years)	At least 40	At least 22

DISCUSSION: There is a large range of facility ages of over 100 years harbors and wharves typically having the greatest age and marinas generally being significantly younger. The average facility age of at least 40 years indicates an aging infrastructure that is either currently or will be in need of upgrades or increased maintenance.

There are 12 facility owners and operators who have worked over 20 years at their facility indicating a population that is nearing retirement. If the owners/operators of privately-owned facilities choose to close their facility upon retirement, this could have a significant impact on transient and working waterfronts in the region. More research is necessary to determine this potential impact.

3.1.2 | HISTORIC FACILITY UPGRADES

Participants were asked how recently funds were reinvested to upgrade or maintain the facility in order to gain insight on maintenance trends of regional facilities. The results are included in the table in **Figure 5**.

Figure 5 – Recent Facility Maintenance Table

Facility	How Recently Funds Were Reinvested to Upgrade/Maintain Facility (years)
Bay Creek Marina	1
Captain Bob's Marina	1
Captain Zed's Marina	1
Captains Cove Marina & Yacht Club	6
Chincoteague Bay Trails End Campground	Unknown
Chincoteague Downtown Waterfront Park	0
Chincoteague Inn and Marina	Unknown
Curtis Merritt Harbor of Refuge	3
Davis Wharf Marine Services/Melson Marine & Supply	0
Deep Creek Marina & Boatyard	1
East Point Marina	12
Eastern Shore Yacht & Country Club	1
Greenbackville Harbor	25+
Onancock Wharf	0
Oyster Public Harbor	1
Parks Marina	25
Quinby Harbor	1
Tom's Cove Park Campground & Marina	1
Town of Cape Charles Harbor of Refuge	1
Saxis Town Harbor	7
Wachapreague Marina	Unknown
Willis Wharf Harbor	1
Average (years)	At least 4

DISCUSSION: The vast majority of facilities surveyed have upgraded or maintained their facility within a reasonable time span. Upgrades or maintenance have occurred within at least four years on average indicating adequate ongoing maintenance in the region. The Greenbackville Harbor and Parks Marina have gone the longest without upgrades. However, Greenbackville currently has \$700,000 in Port Authority and VMRC funding to partially replace its bulkheads beginning in spring 2013.

3.2 | SERVICES OFFERED

Transient boating facilities can offer a wide variety of services to boaters that help with navigation, convenience, living necessities, environmental protection, boat maintenance and repair, and overnight lodging.

3.2.1 | FACILITY SERVICES

Facilities were asked to indicate which of a series of services were available. These services are illustrated in **Figures 6 through 19**. Maps were created for the service options that were deemed to be the most important for transient boating.

DISCUSSION: Gasoline and diesel fuel availability are included in **Figures 6 and 7**. Gasoline is available at five bayside facilities and only three seaside locations. Diesel fuel is available at four locations on the bayside and only two locations on the seaside. There are adequate fueling facilities within the region including however, additional fueling options could be beneficial on the seaside at the southern end of the Shore and on the bayside in the central and northern areas.

Transient dockage availability is shown in **Figure 8**. Eight facilities on the bayside and nine on the seaside cater to transient boaters. The remaining three facilities do not have transient slips available, of which two are private establishments and the other is the Oyster Public Harbor. There is a significant lack of transient boating facilities on the southern portion of the Shore on the Seaside between Cape Charles and Willis Wharf.

Figure 9 shows HAZMAT Cleanup Capability at only seven out of 32 facilities indicating a need for enhancement of this service in the region. Several facilities that offer fueling services do not have this capability constituting a significant environmental risk in the event of a spill. There are multiple facilities in the Chincoteague Bay area lacking this capability that poses a significant threat to the water body.

Figures 10 and 11 show four facilities that provide motor and hull repairs. One is in Tangier, two on the bayside and only one on the seaside. There is a significant need for additional motor and hull repair facilities that service larger vessels. This is especially true for the Chincoteague area.

There are only three launch ramps on the bayside (**Figure 12**) at the Town of Cape Charles Harbor of Refuge, at Onancock Wharf, and at Deep Creek Marina. There are many more on the seaside from Oyster Public Harbor north to Greenbackville Harbor. There are many more launch ramps that are not located at transient boating facilities and launch ramp availability is not a major issue within the region.

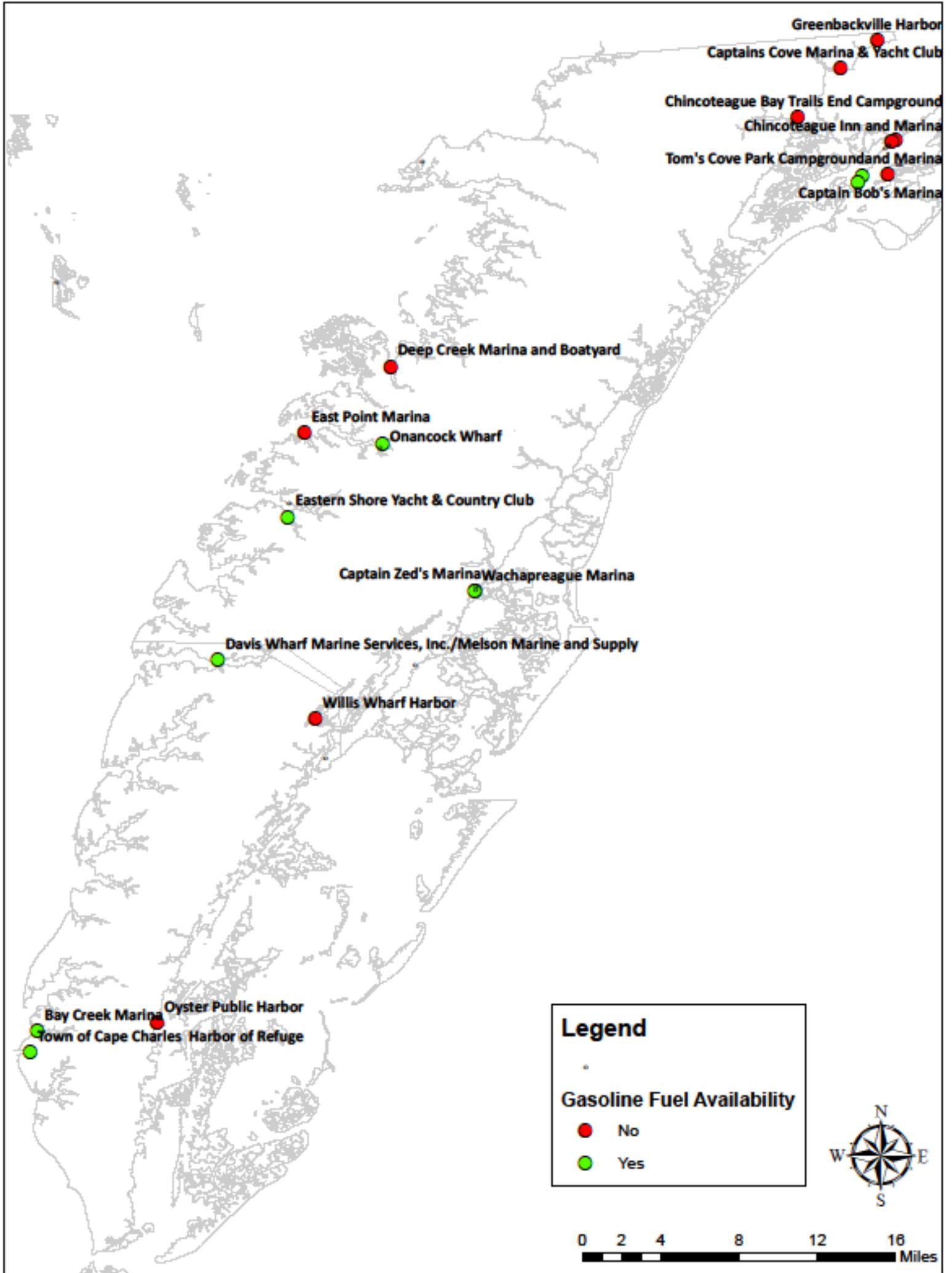


Figure 6

Gasoline Fuel Availability Map

Eastern Shore of Virginia Marina Needs Assessment



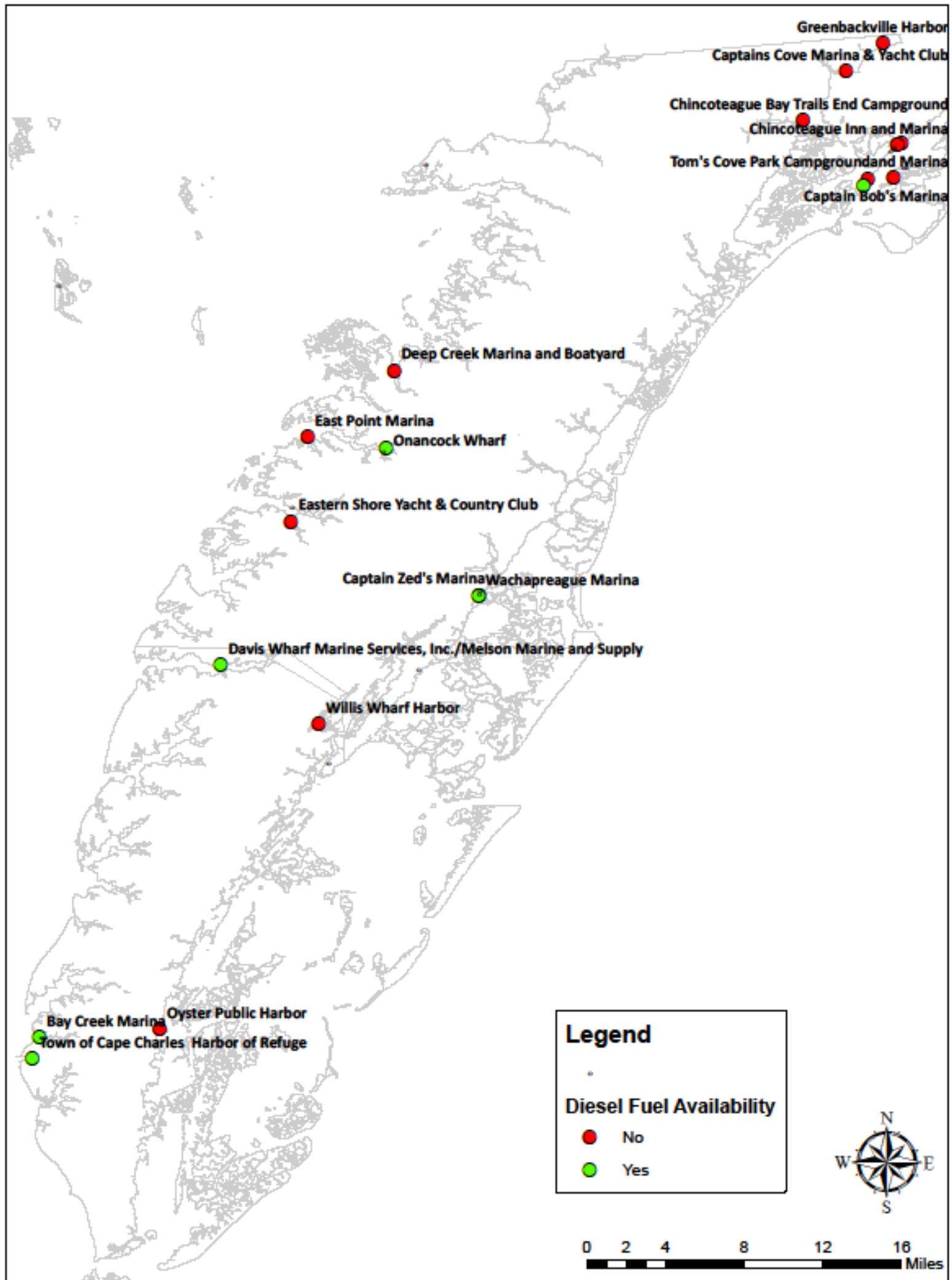


Figure 7

Diesel Fuel Availability Map

Eastern Shore of Virginia Marina Needs Assessment



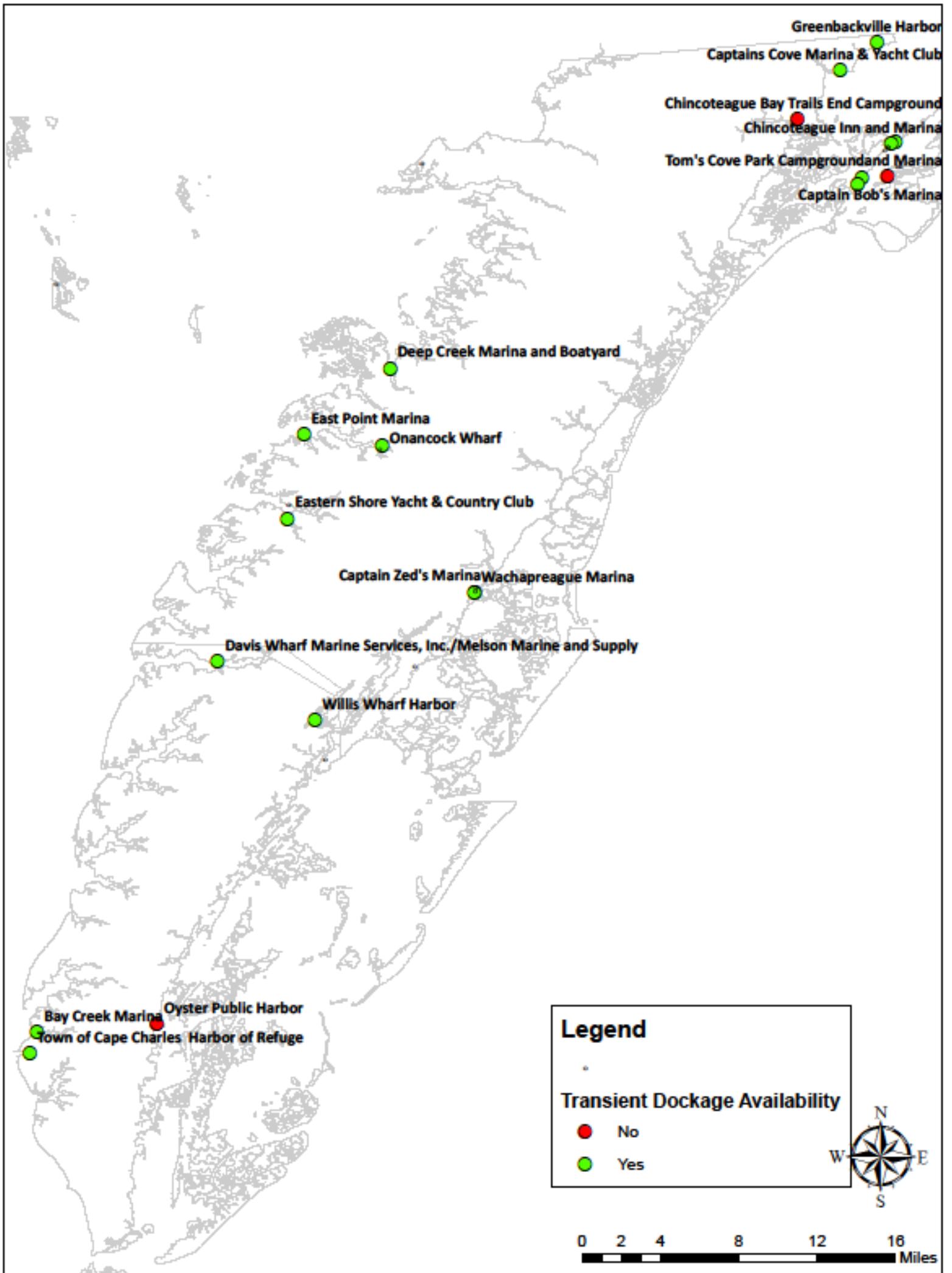


Figure 8

Transient Dockage Availability Map

Eastern Shore of Virginia Marina Needs Assessment



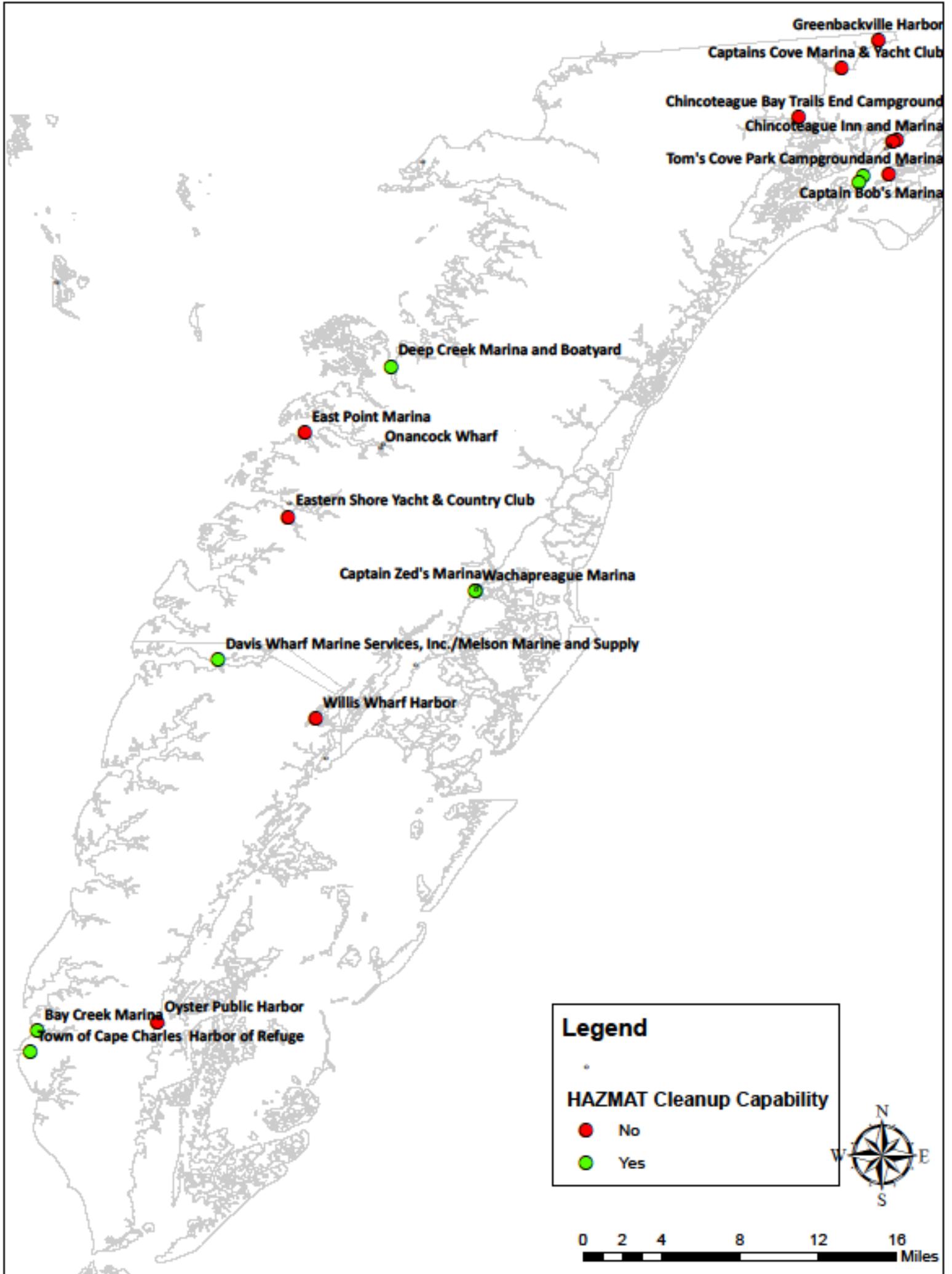


Figure 9

HAZMAT Cleanup Capability Map

Eastern Shore of Virginia Marina Needs Assessment



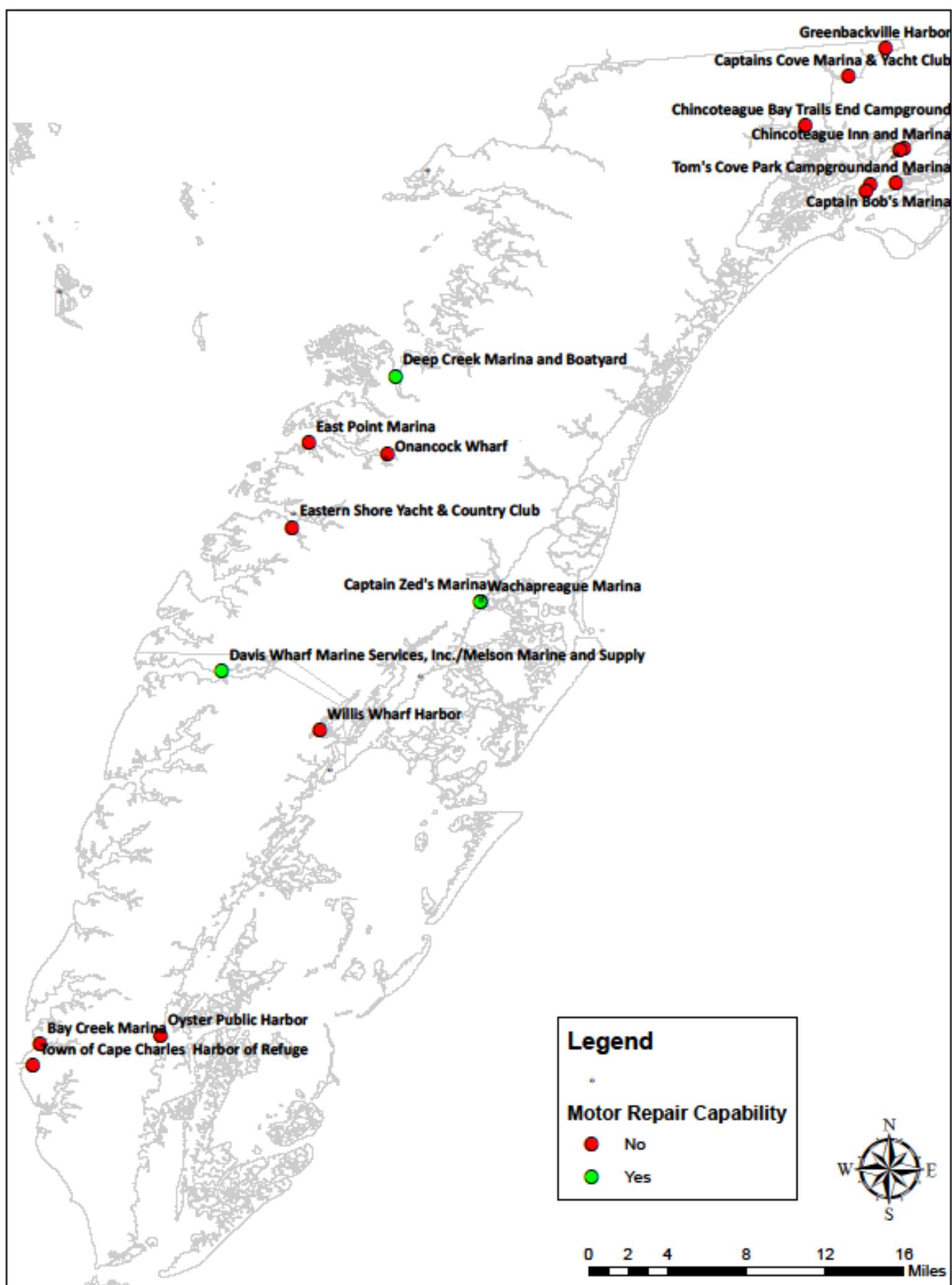


Figure 10

Motor Repair Capability Map

Eastern Shore of Virginia Marina Needs Assessment



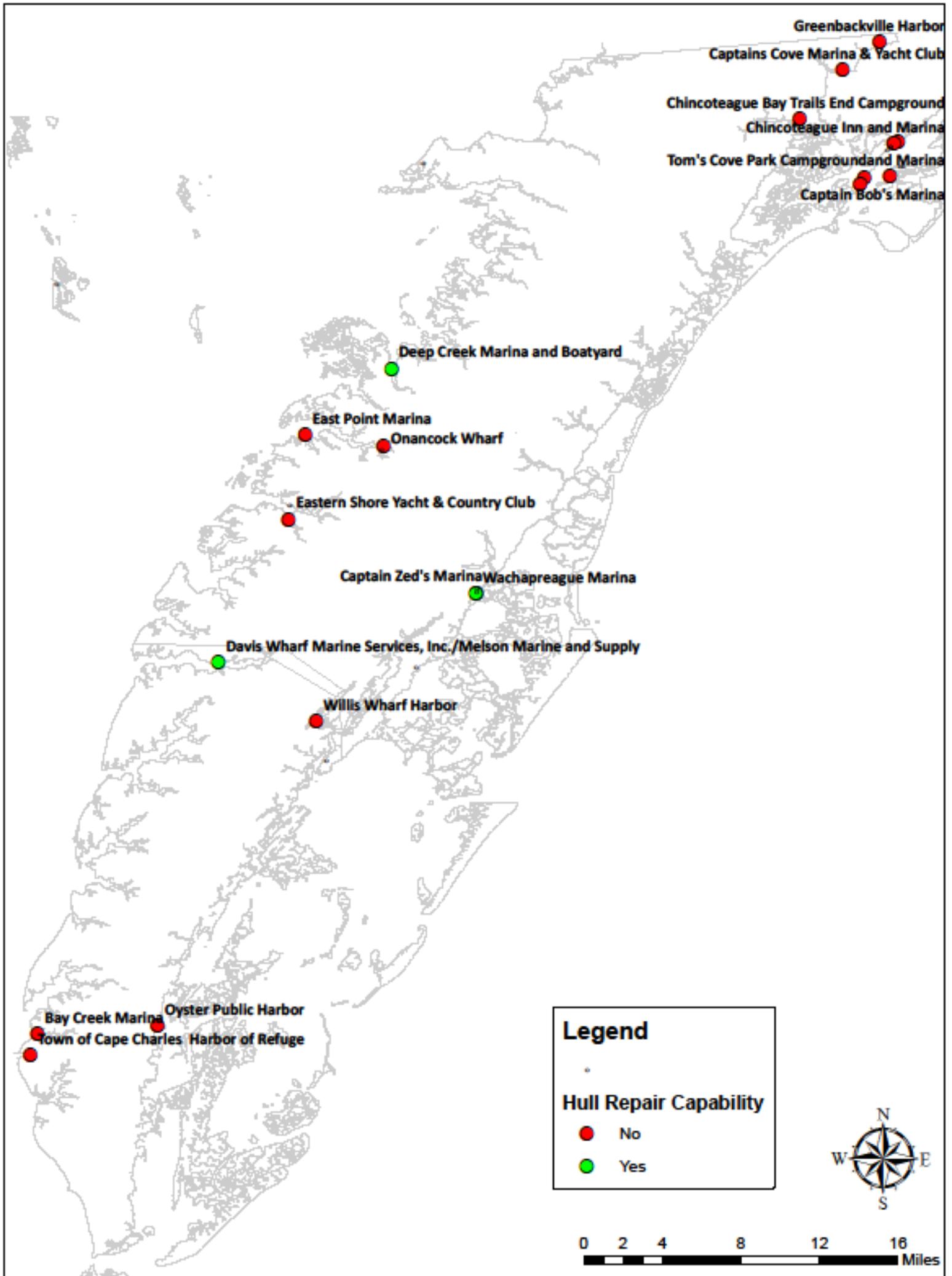


Figure 11

Hull Repair Capability Map

Eastern Shore of Virginia Marina Needs Assessment



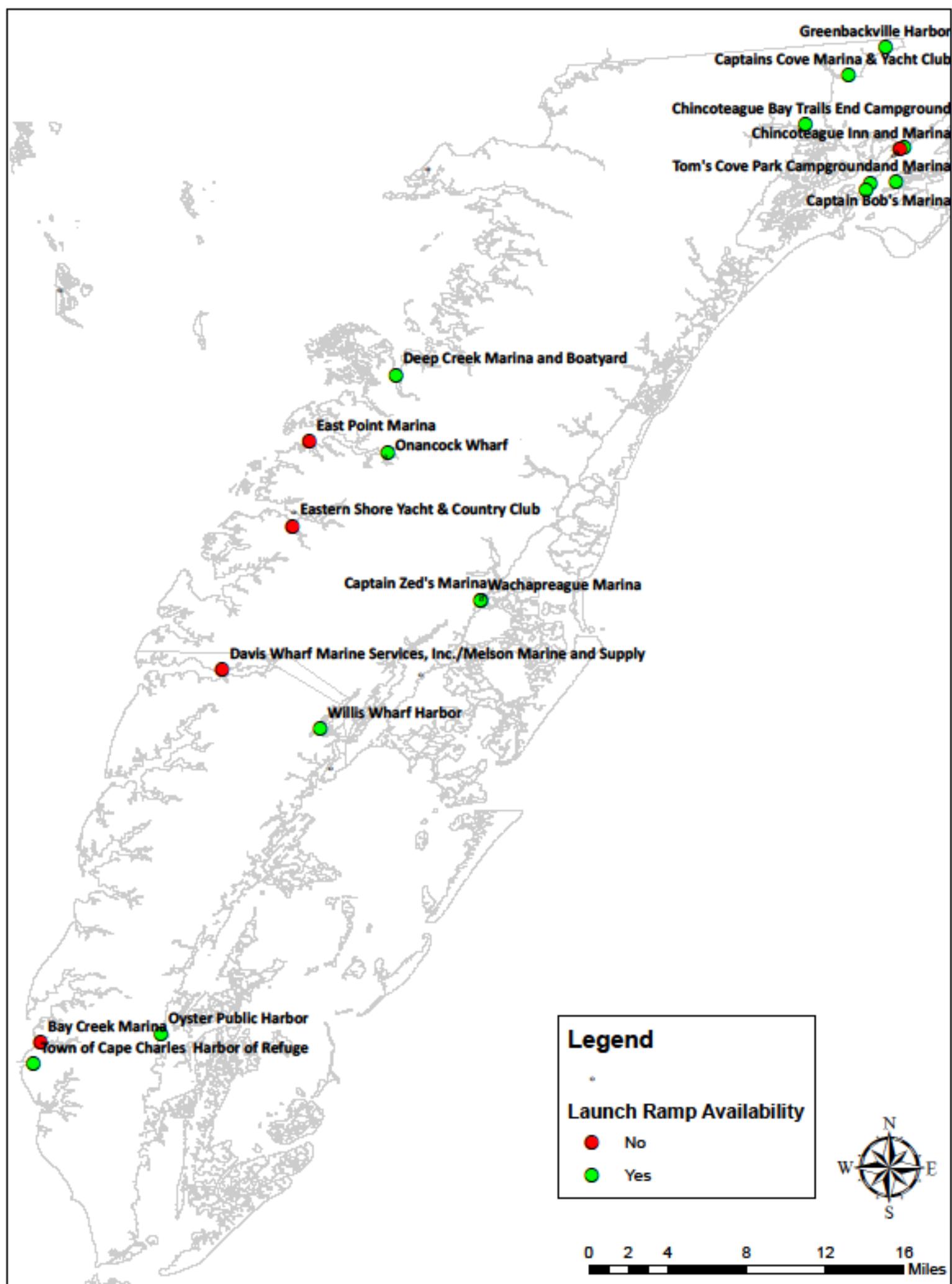


Figure 12

Launch Ramp Availability Map

Eastern Shore of Virginia Marina Needs Assessment



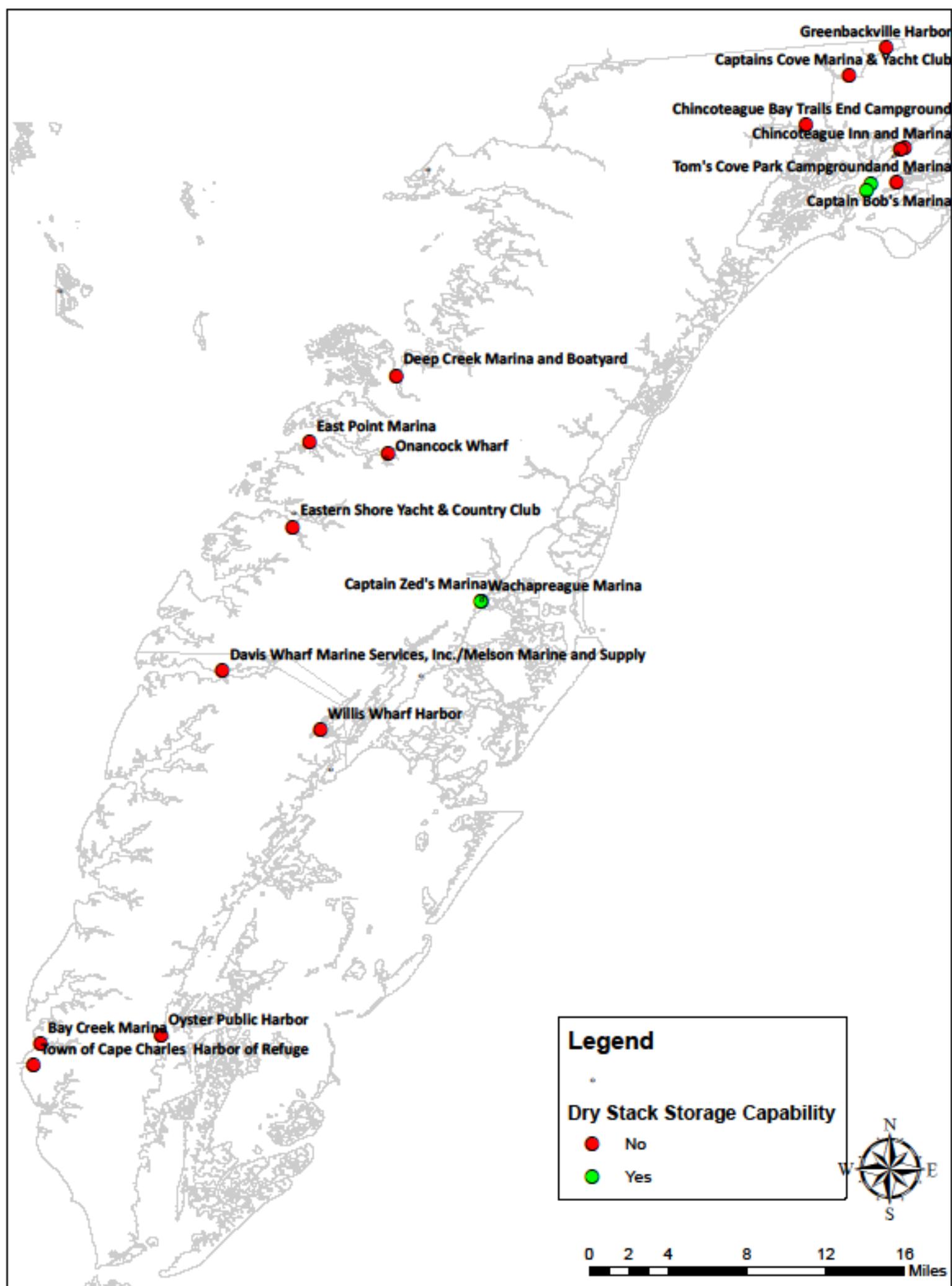


Figure 13

Dry Stack Storage Capability Map

Eastern Shore of Virginia Marina Needs Assessment



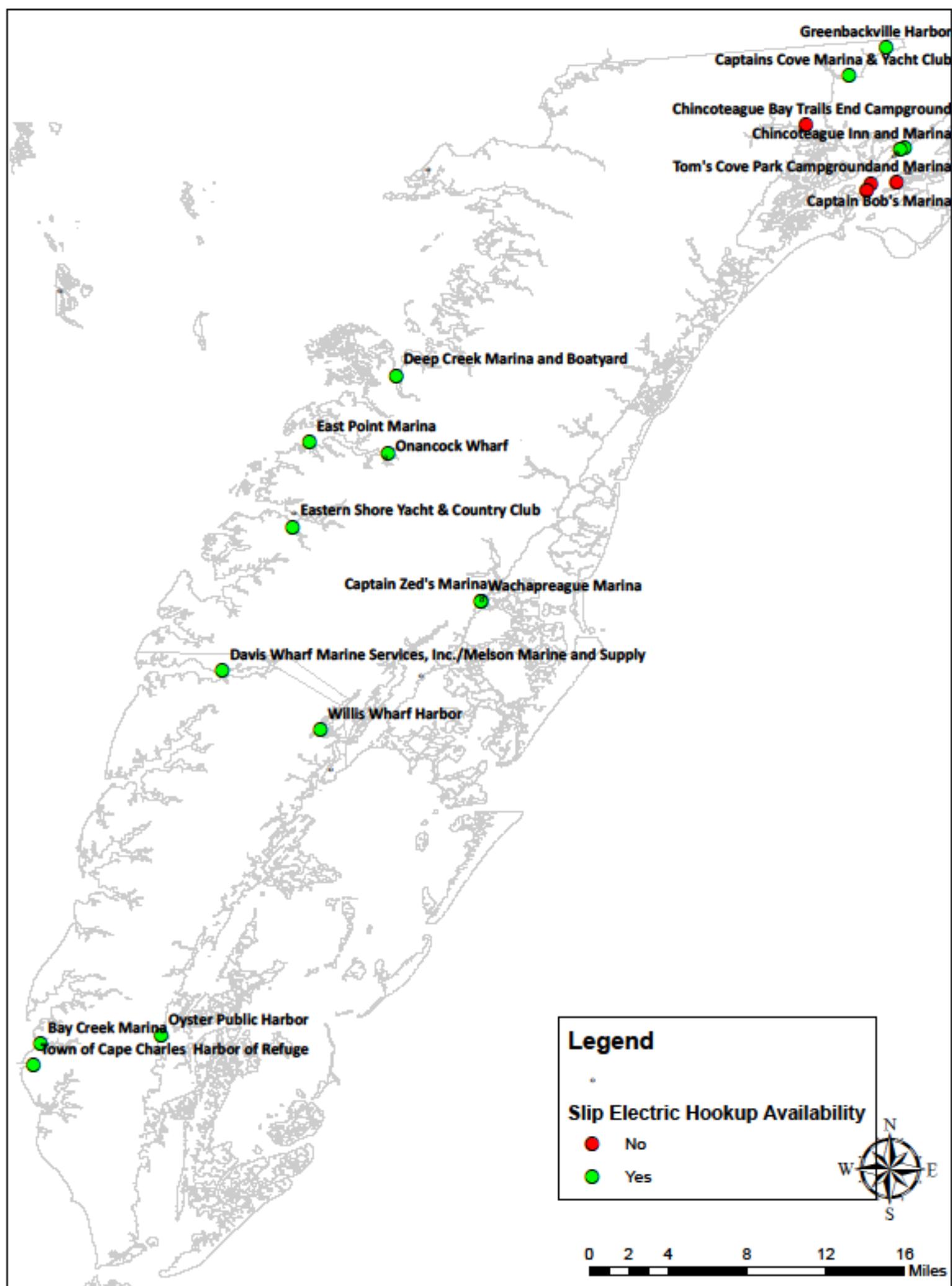


Figure 14

Slip Electric Hookup Availability Map

Eastern Shore of Virginia Marina Needs Assessment



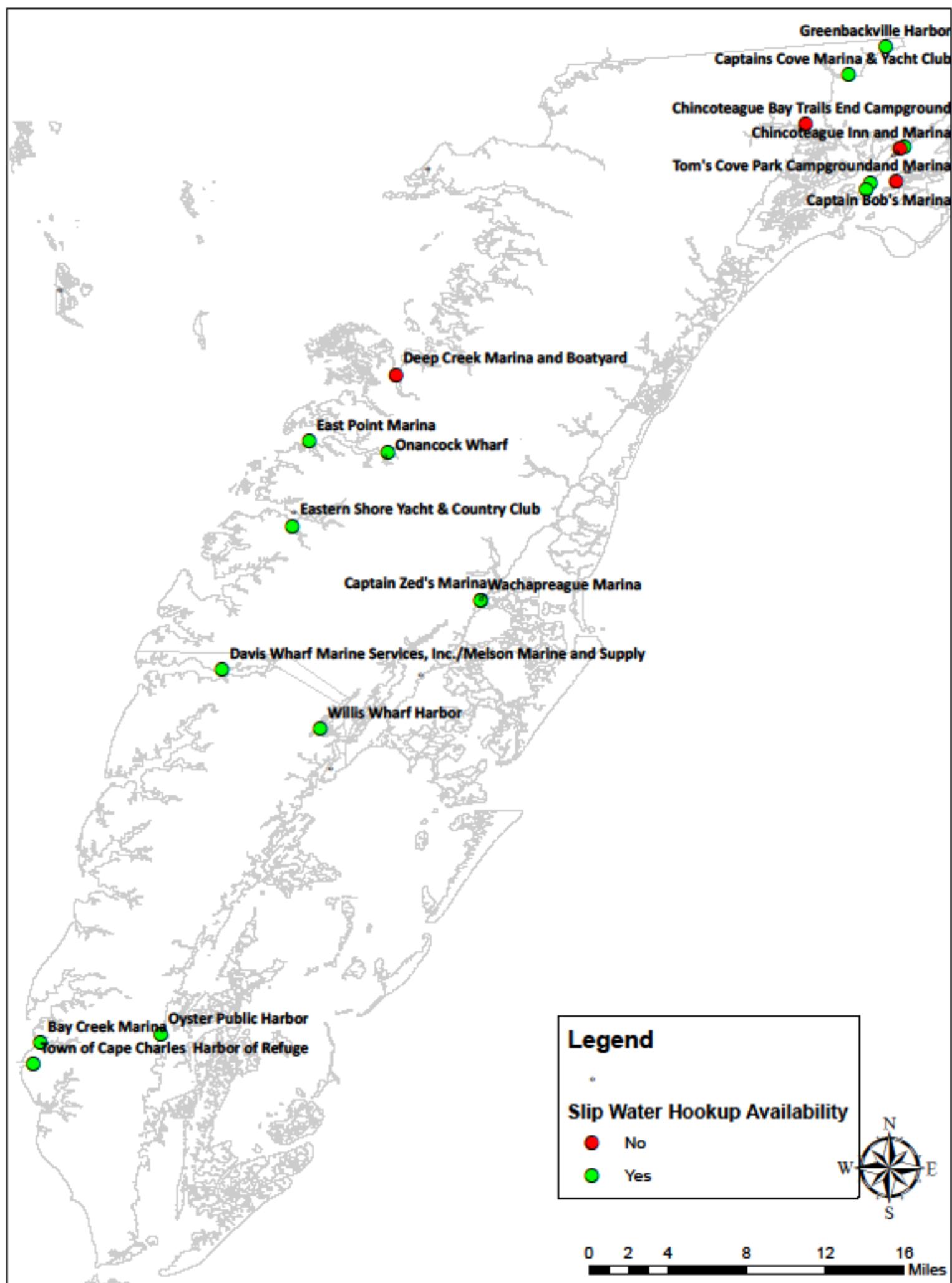


Figure 15

Slip Water Hookup Availability Map
Eastern Shore of Virginia Marina Needs Assessment



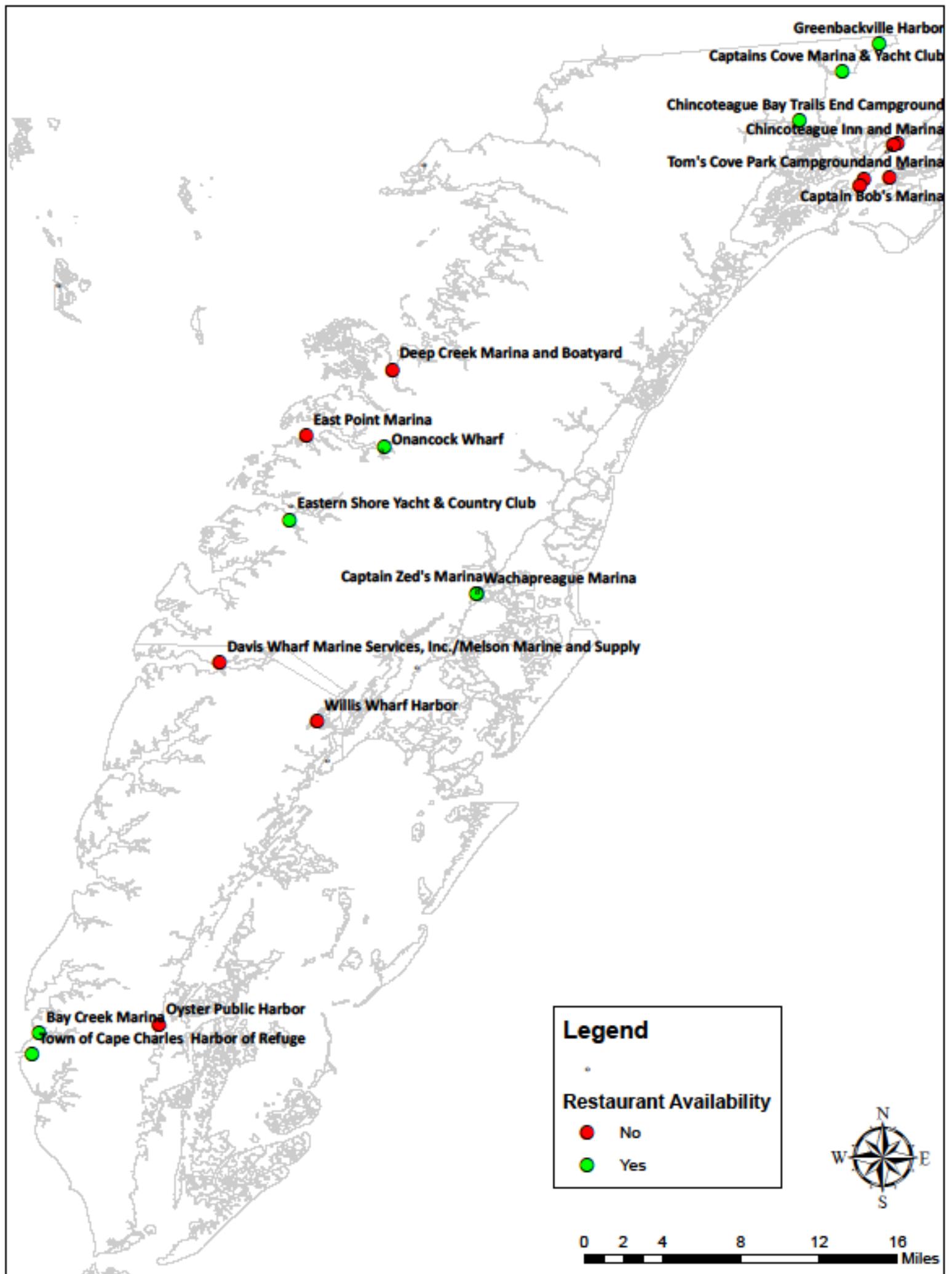


Figure 16

Restaurant Availability Map

Eastern Shore of Virginia Marina Needs Assessment



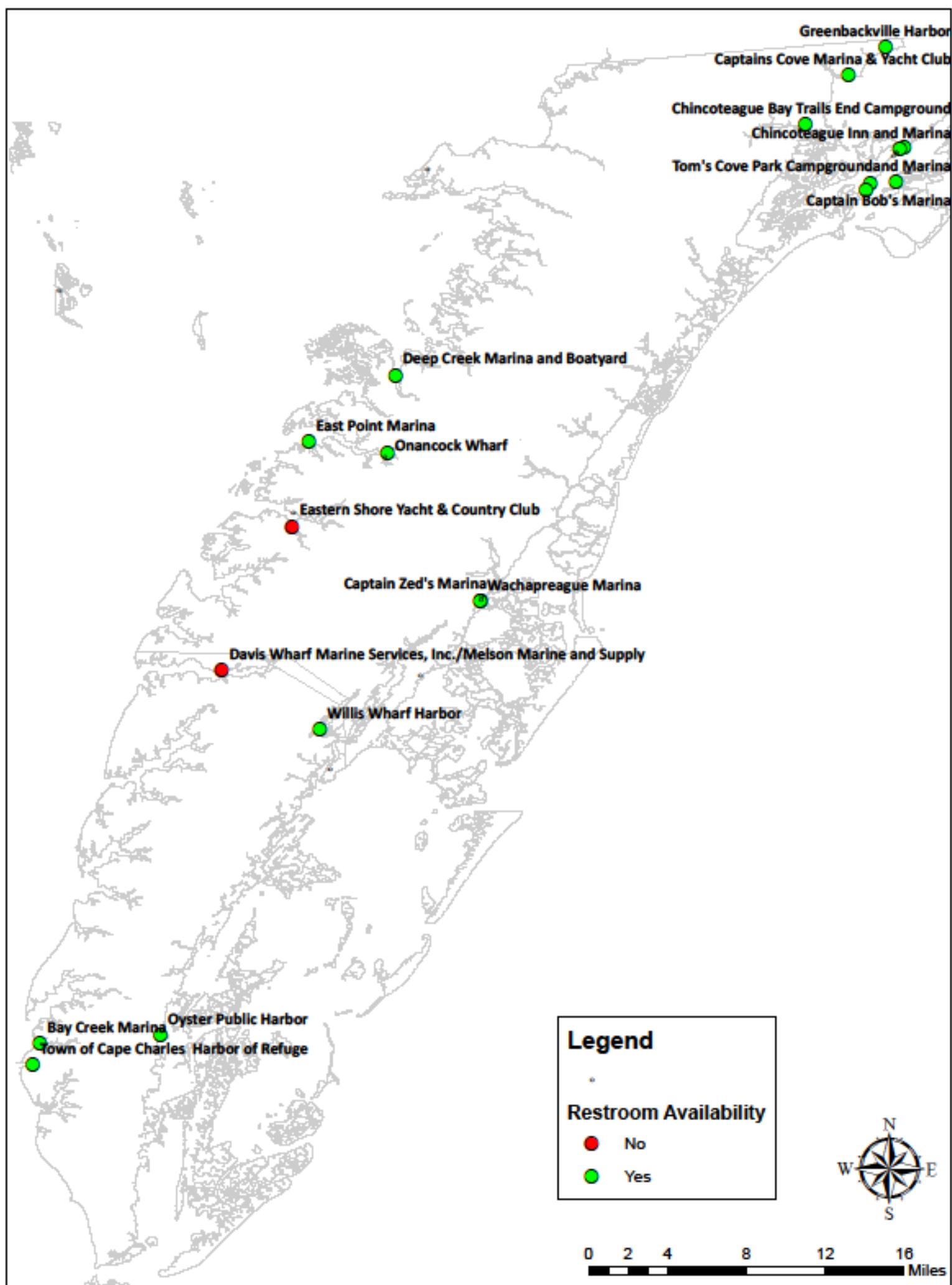


Figure 17

Restroom Availability Map

Eastern Shore of Virginia Marina Needs Assessment



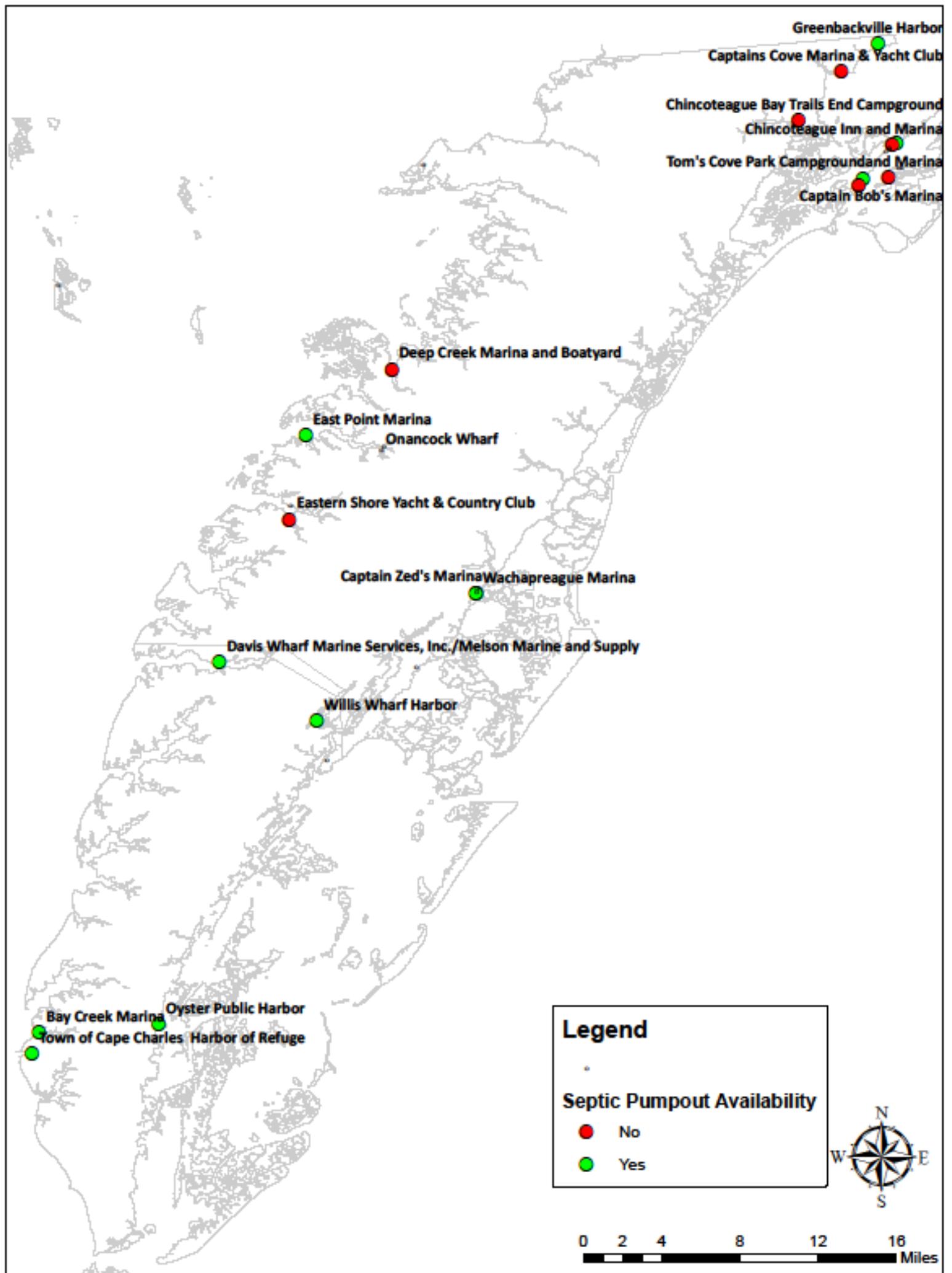


Figure 18

Septic Pumpout Availability Map

Eastern Shore of Virginia Marina Needs Assessment



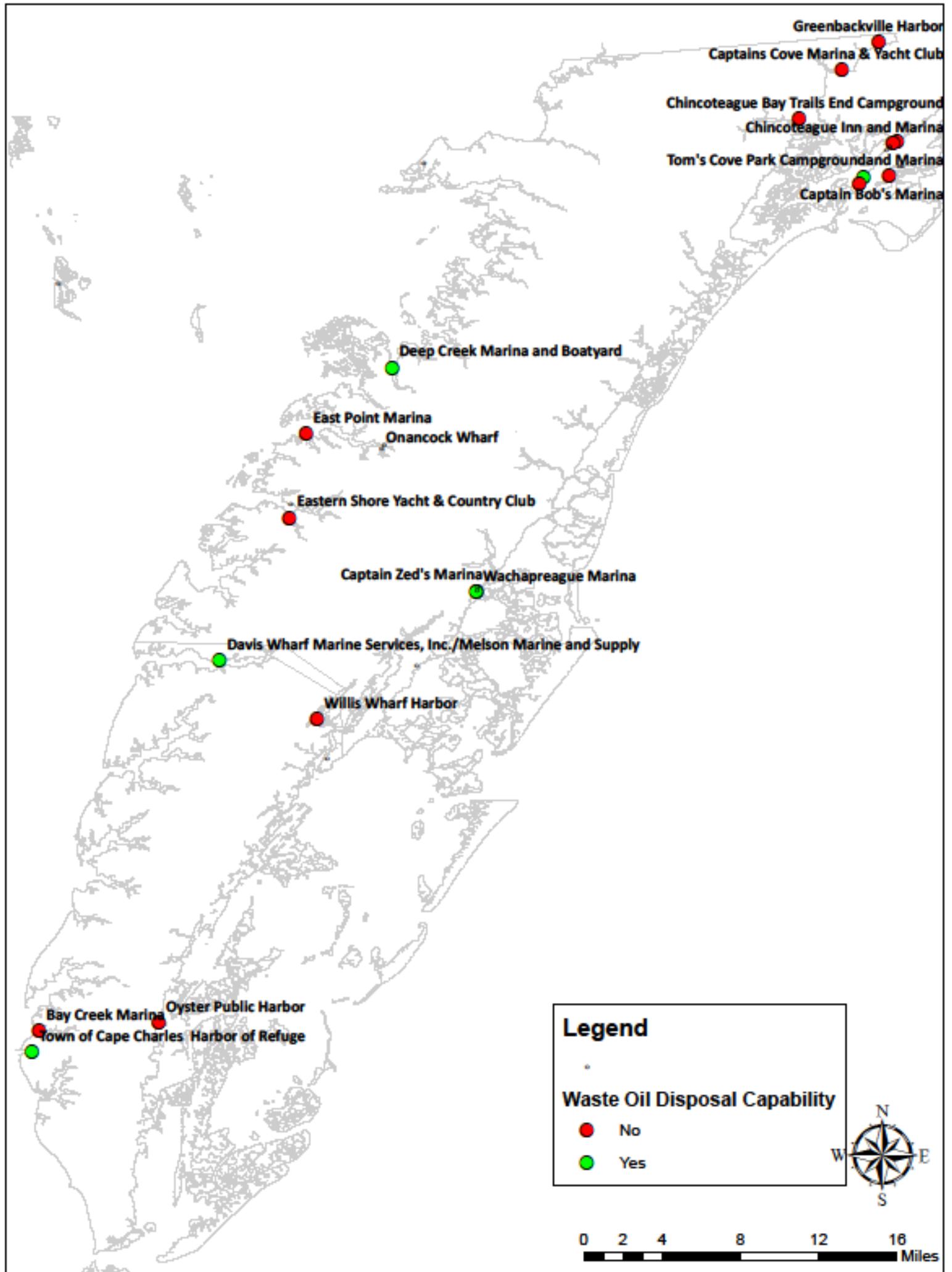


Figure 19

Waste Oil Disposal Capability Map

Eastern Shore of Virginia Marina Needs Assessment



Dry Stack Storage Capability (**Figure 13**) is limited to three facilities on the seaside in Wachapreague and Chincoteague. There is a significant need for additional services in the region, especially on the bayside.

Figures 14 and 15 show that the majority of all facilities surveyed offers slip electric and water hookups with only several in the Chincoteague area that do not. There are adequate electric and water services offered to transient boaters in the region.

Restaurant availability is shown in **Figure 16**. About 50% of the facilities either have a restaurant as part of its services or a restaurant is available nearby. There are adequate options at the facilities in or near the towns in the region. Facilities not within or immediately adjacent to towns would benefit from restaurant availability.

Figure 17 shows that the majority of the facilities surveyed have either restrooms or portable toilets for public use or are near public restroom facilities.

Septic pump out service is available (**Figure 18**) at locations on both the bayside and the seaside. All surveyed facilities in Northampton County and approximately half in Accomack County offer this service. There are five privately owned facilities near Chincoteague that could benefit from the state boating grant funding programs. Additional information is needed in the Saxis and Tangier areas on the bayside.

Figure 19 shows the locations of waste oil disposal service capability in the region. Only five of the facilities surveyed offer this service at their location. There is a need for additional waste oil disposal facilities in Chincoteague, Onancock, and the southern portion of the seaside. Additional information about availability of this service in the Saxis and Tangier areas is needed.

3.2.2 | CELL PHONE AVAILABILITY

Cell phone reception is becoming increasingly important for transient boating as captains are becoming increasingly reliant on cell phones for navigation. Cell phone reception is also necessary for business and pleasure while in port. Facilities were asked if they experienced any issues with the quality of the cell phone signal at their facility. The results are illustrated in **Figure 20**.

DISCUSSION: The survey showed that poor cell phone signal quality is an issue in several areas in the region. Adequate cell phone coverage was reported in the Onancock area, on Occohannock Creek on the bayside in Accomack County and opinions varied in the Chincoteague Bay area with some facilities in Chincoteague, Greenbackville and Trails End reporting issues with the service. Poor cell phone service is an issue in Wachapreague, Willis

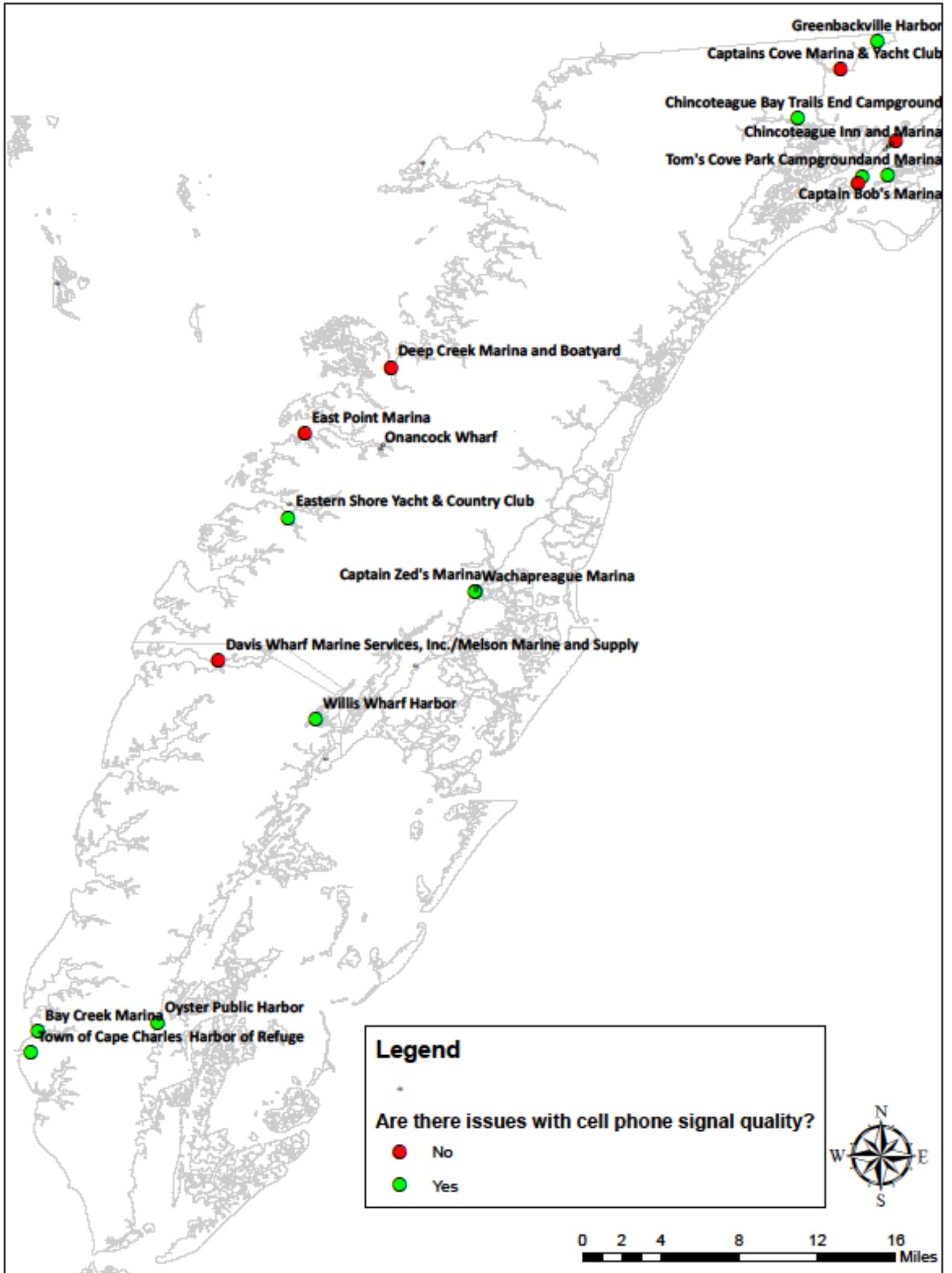


Figure 20

Cell Phone Signal Quality Map

Eastern Shore of Virginia Marina Needs Assessment



Wharf, and Oyster on the seaside as well. Facilities in the Town of Cape Charles reported poor service. Additional information is needed for the Saxis and Tangier areas and in the middle of the Bay, mouth of the Bay, and offshore in the ocean.

3.2.3 | LODGING ACCESSIBILITY

Transient boaters often prefer facilities with overnight lodging accommodations or facilities that offer transportation to nearby lodging. Participants were asked questions to determine regional trends in overnight lodging accessibility. The results are illustrated in **Figures 21 and 22**.

DISCUSSION: Two facilities in Northampton County had lodgings nearby and both are in Cape Charles. The remaining two Northampton County locations surveyed, Willis Wharf and Oyster, did not. Only the Chincoteague area, Tangier, Onancock, and Wachapreague in Accomack County have lodgings nearby. The facilities not located in or immediately adjacent to towns in the region could benefit from having lodging options provided to transient boaters (**Figure 21**).

Transportation to lodging facilities was offered at only five locations including Wachapreague (private vehicle) and on Chincoteague Island (Pony Express – summer season only). Some respondents did not know if there were any transportation options (**Figure 22**). Transportation is not a major issue on Tangier Island. Enhancement of transportation services for transient boaters would greatly benefit facilities in the region. Transient boating facilities would benefit if the regional public transit system, Star Transit, would provide service to and from the facilities in the region.

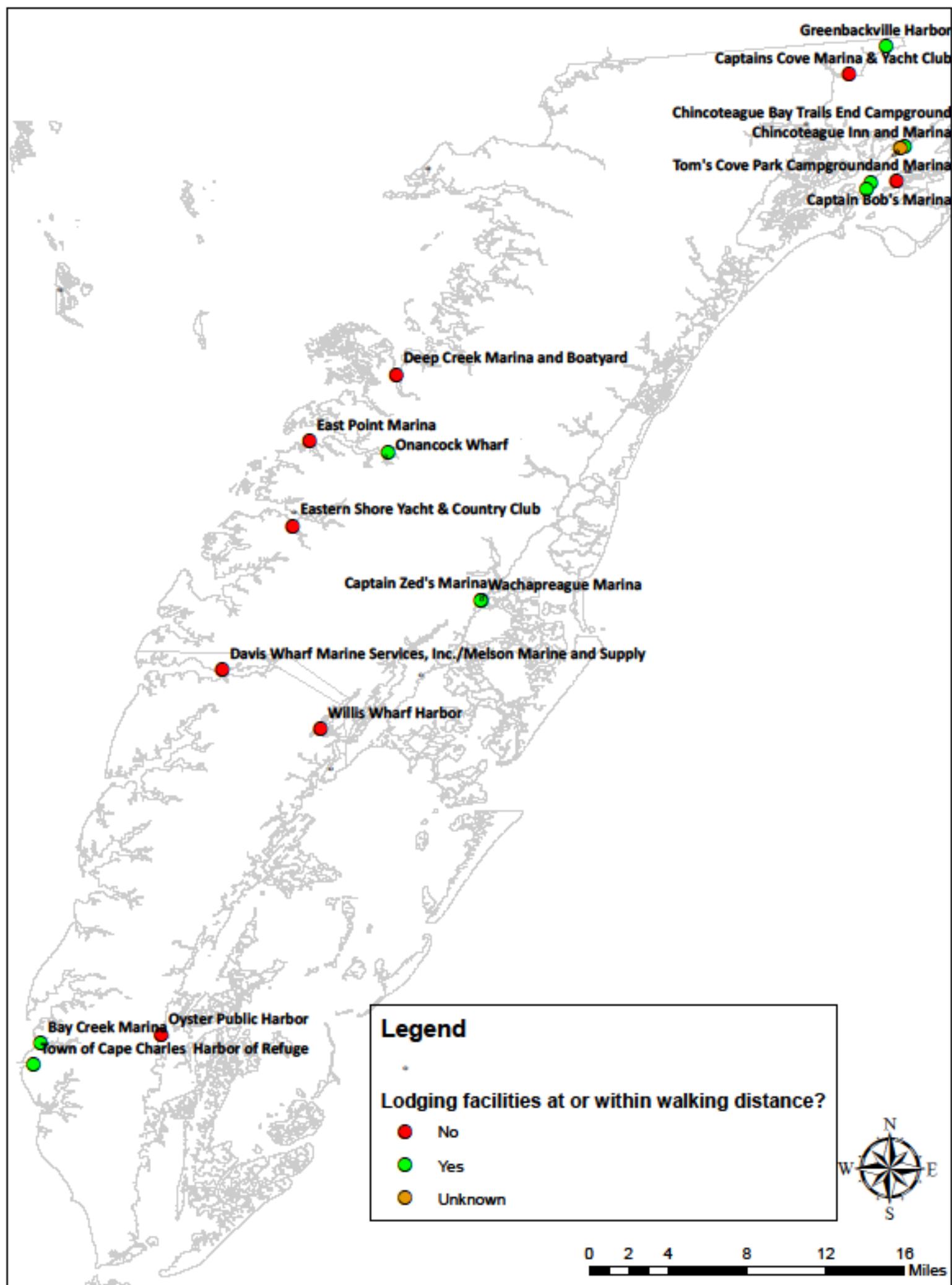


Figure 21

On-site or Nearby Lodging Map

Eastern Shore of Virginia Marina Needs Assessment



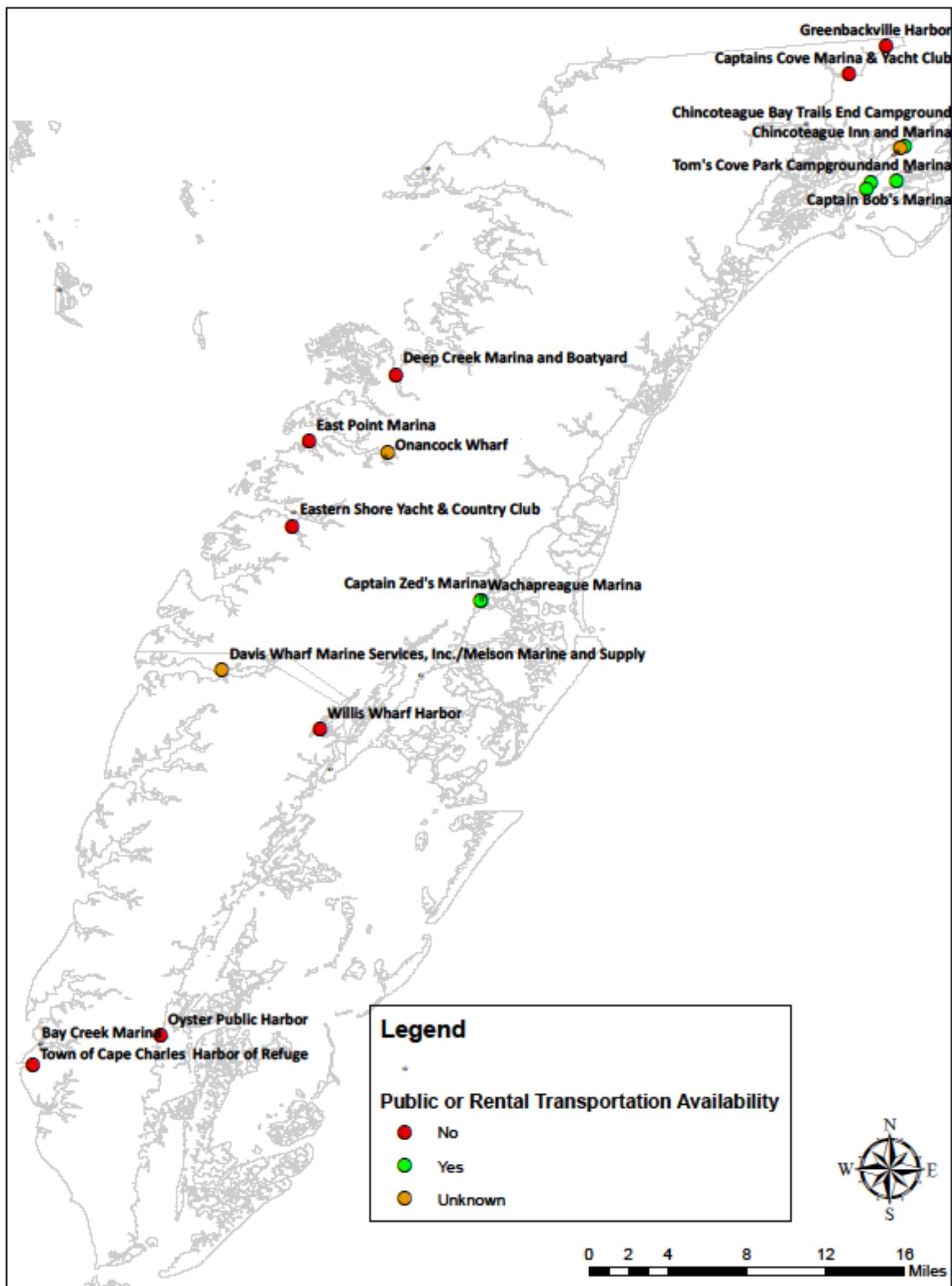


Figure 22

Public or Rental Transportation Availability Map
Eastern Shore of Virginia Marina Needs Assessment



3.3 | USE TRENDS

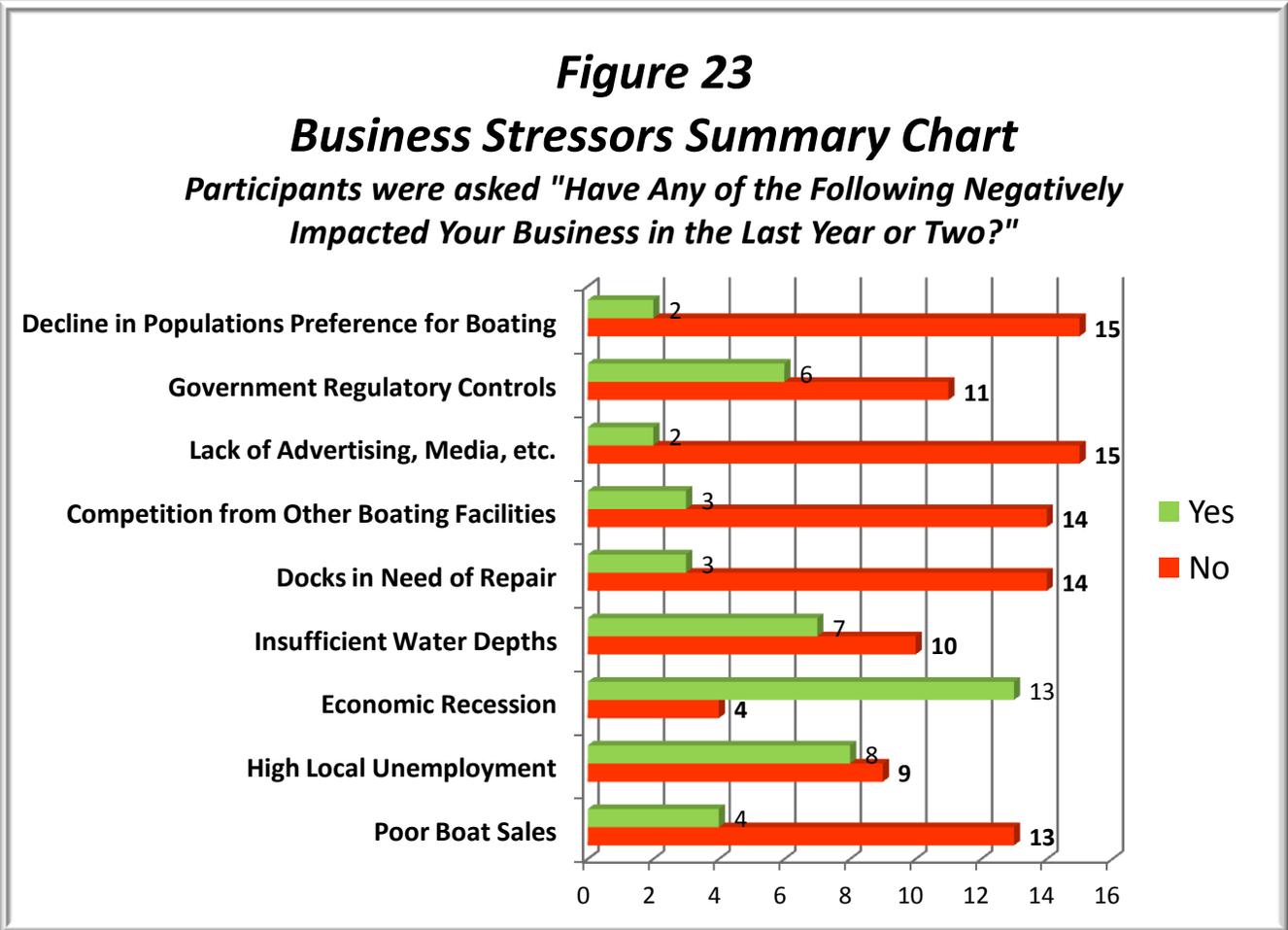
Both public and private transient boating facilities on the Eastern Shore rely on more than recreational boaters for income. Commercial boating is often allowed at these facilities and commonly is a critical component for the sustainability and viability of a facility. This section of the survey was intended to identify economic stressors facing local businesses and gauge the number of facilities allowing commercial use and the commercial activities and services allowed or offered.

3.3.1 | BUSINESS STRESSORS

Transient boating facilities are regularly impacted by a number of ever-changing factors ranging from shifting natural environments, weather patterns, degrading infrastructure, customer economics, customer boating preference, competition from other boating facilities, and government regulatory controls. Participants were asked which factors had a negative impact on business in the recent past. The results are depicted in the chart in **Figure 23**.

DISCUSSION: **Figure 23** shows that the recent economic recession was considered the most detrimental issue facing local businesses. Other concerns of significance were high local unemployment, insufficient water depths, and government regulatory controls. Owners and operators were mostly in agreement that there has not been a decline in boating activity or advertising availability, excessive competition from other boating facilities, lacking boat sales, or facilities in need of repair.

Local facilities have little control over the national economic recession or local employment opportunities, but there is a need for additional communication and cooperation with state and federal government agencies regarding dredging of shoaled waterways and regulatory controls.



3.3.2 | COMMERCIAL USES

The commercial seafood industry is one of the larger industries and larger employers on the Eastern Shore, and transient boating facilities provide critical access to the water for working watermen. It is important for local planning bodies to know which facilities permit commercial uses and monitor any changes to this use-trend over time in order to be able to take actions that can assist in sustaining water access for the seafood industry. **Figure 24** illustrates transient boating facilities that permit commercial use.

Figure 25 summarizes the results of the survey question "If commercial use is allowed, what percentage of your seasonal slips is occupied by commercial users?".

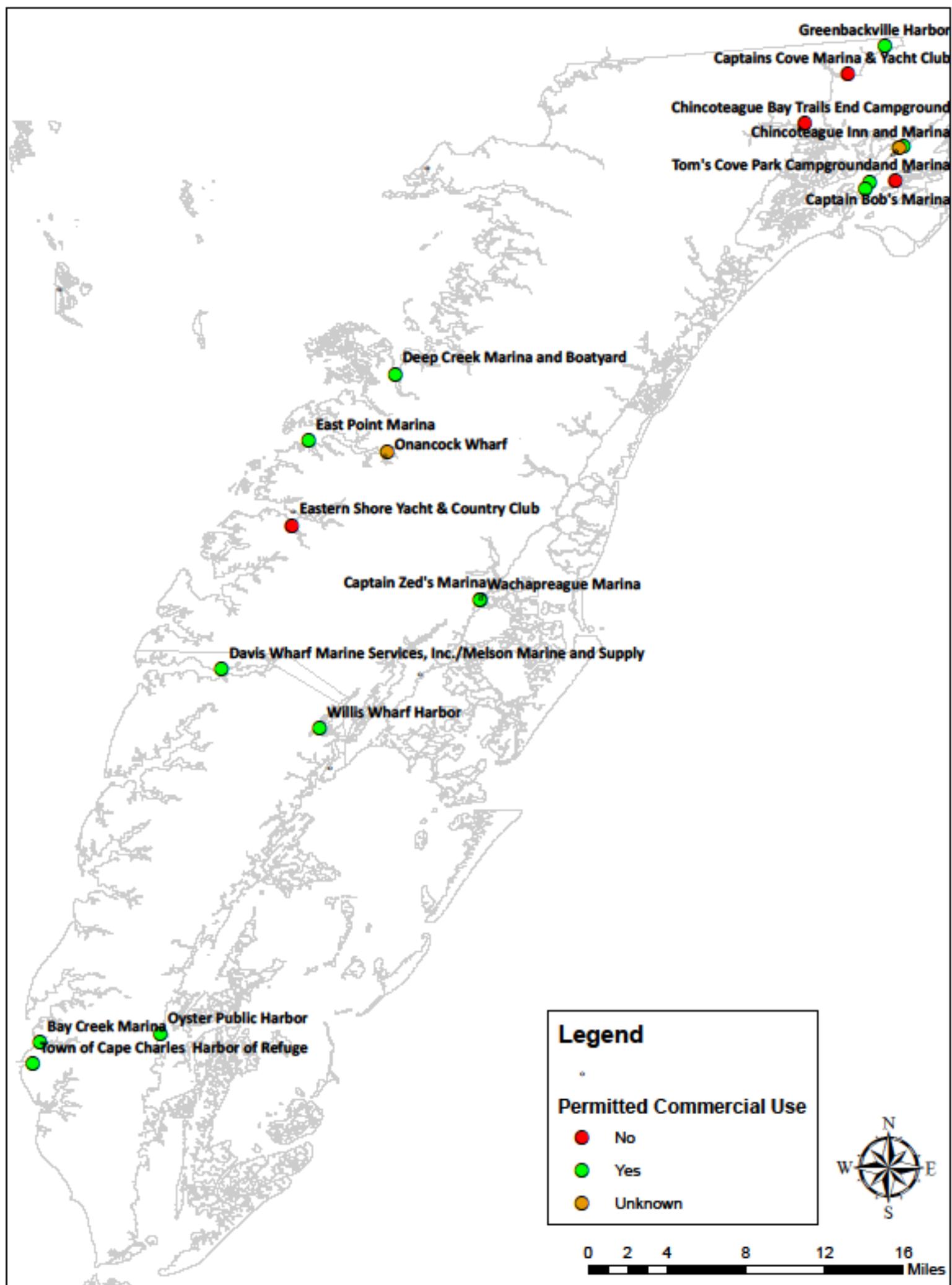


Figure 24

Permitted Commercial Use Map

Eastern Shore of Virginia Marina Needs Assessment



Figure 25 – Current Level of Commercial Use Table

Facility	Percentage of Seasonal Slips Occupied by Commercial Users
Bay Creek Marina	2
Captain Bob's Marina	1
Captain Zed's Marina	10
Captains Cove Marina & Yacht Club	Commercial Use Not Permitted
Chincoteague Bay Trails End Campground	Commercial Use Not Permitted
Chincoteague Downtown Waterfront Park	30
Chincoteague Inn and Marina	Unknown
Curtis Merritt Harbor of Refuge	Unknown
Davis Wharf Marine Services/Melson Marine & Supply	20
Deep Creek Marina & Boatyard	2
East Point Marina	2
Eastern Shore Yacht & Country Club	Commercial Use Not Permitted
Greenbackville Harbor	50
Onancock Wharf	Commercial Use Not Permitted
Oyster Public Harbor	100
Parks Marina	Commercial Use Not Permitted
Quinby Harbor	60
Tom's Cove Park Campground & Marina	Commercial Use Not Permitted
Town of Cape Charles Harbor of Refuge	Unknown
Saxis Town Harbor	75
Wachapreague Marina	<5
Willis Wharf Harbor	25

DISCUSSION: All of the publicly owned facilities allow commercial use and there is currently a decent distribution of private facilities allowing commercial use in the region. There is a wide range of percentages of seasonal slips regularly occupied by commercial users in the region from 1 to 100% indicating a dichotomy between facilities that cater more towards transient boating and facilities that cater more towards commercial users.

As the national and regional economy continues to change, it can potentially bring with it changes to water access for commercial users. Commercial users relying on water access via privately-owned facilities are subject to changes in facility use policies and changes that can accompany transfer of ownership. More information about the regional dependence of commercial watermen on privately-owned facilities is needed to understand this issue.

Figures 26 through 33 illustrate commercial activities and services offered by the transient boating facilities that permit commercial uses.

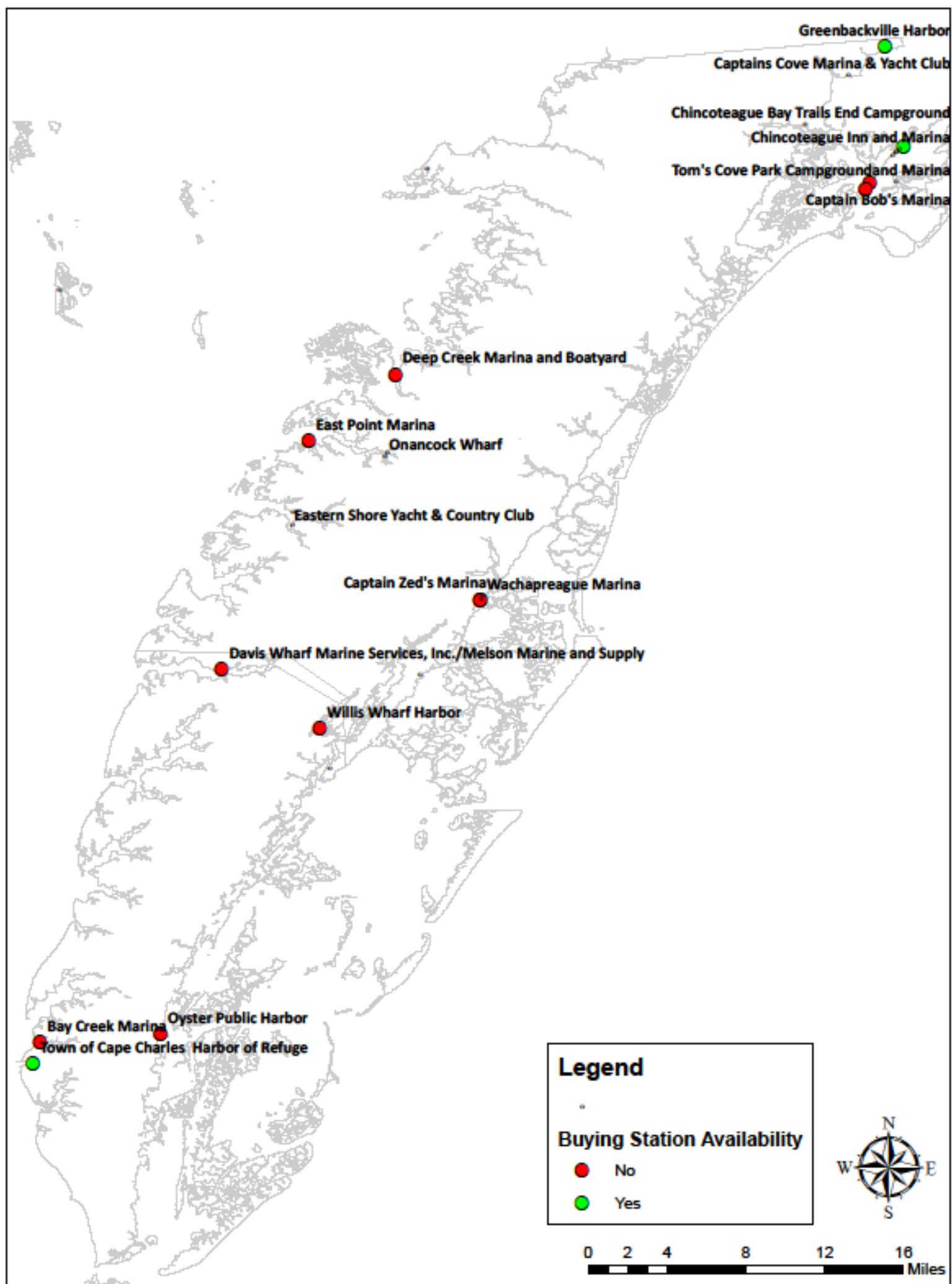


Figure 26

Commercial Buying Station Availability Map
Eastern Shore of Virginia Marina Needs Assessment



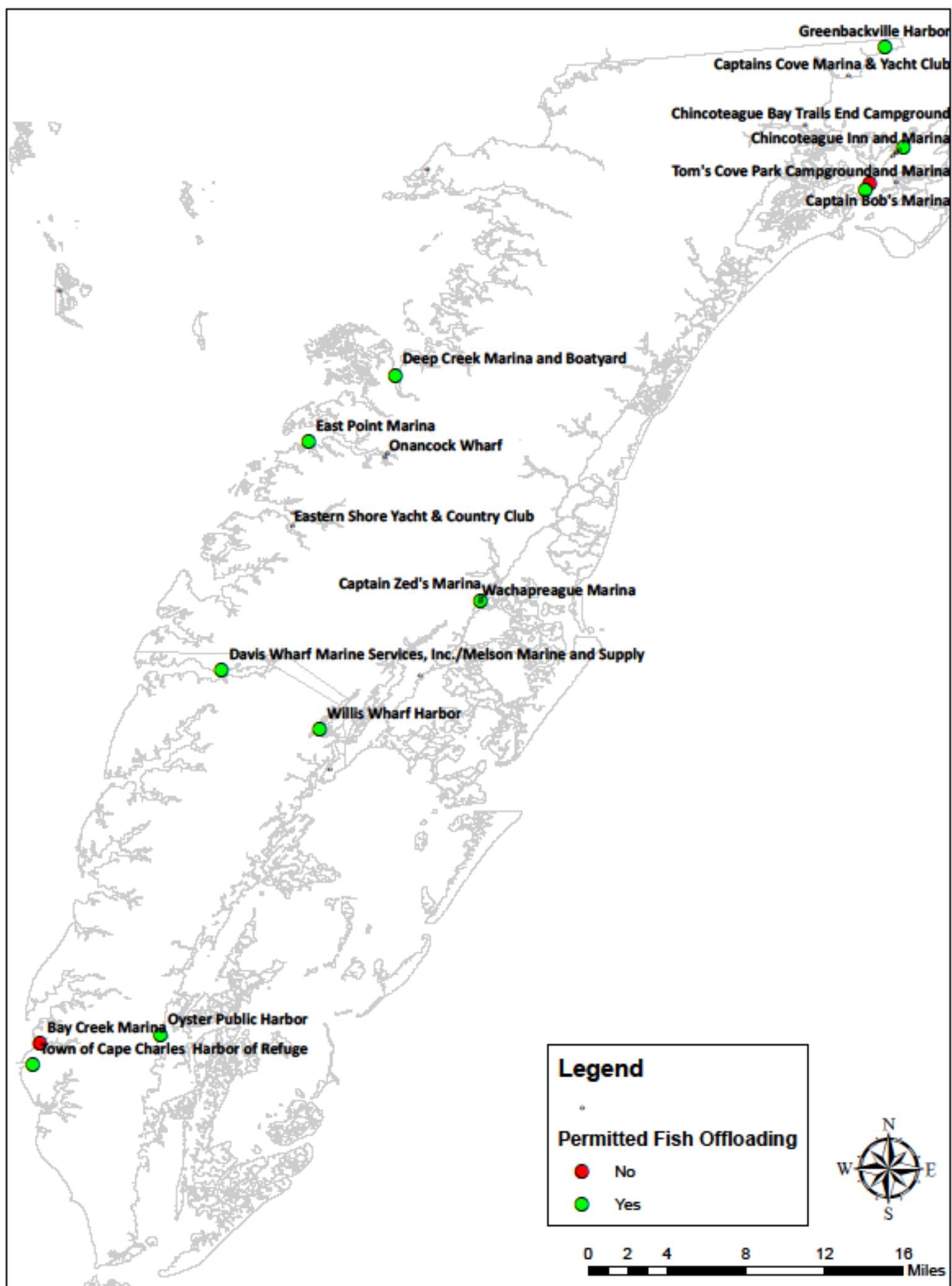


Figure 27

Permitted Fish Offloading Map

Eastern Shore of Virginia Marina Needs Assessment



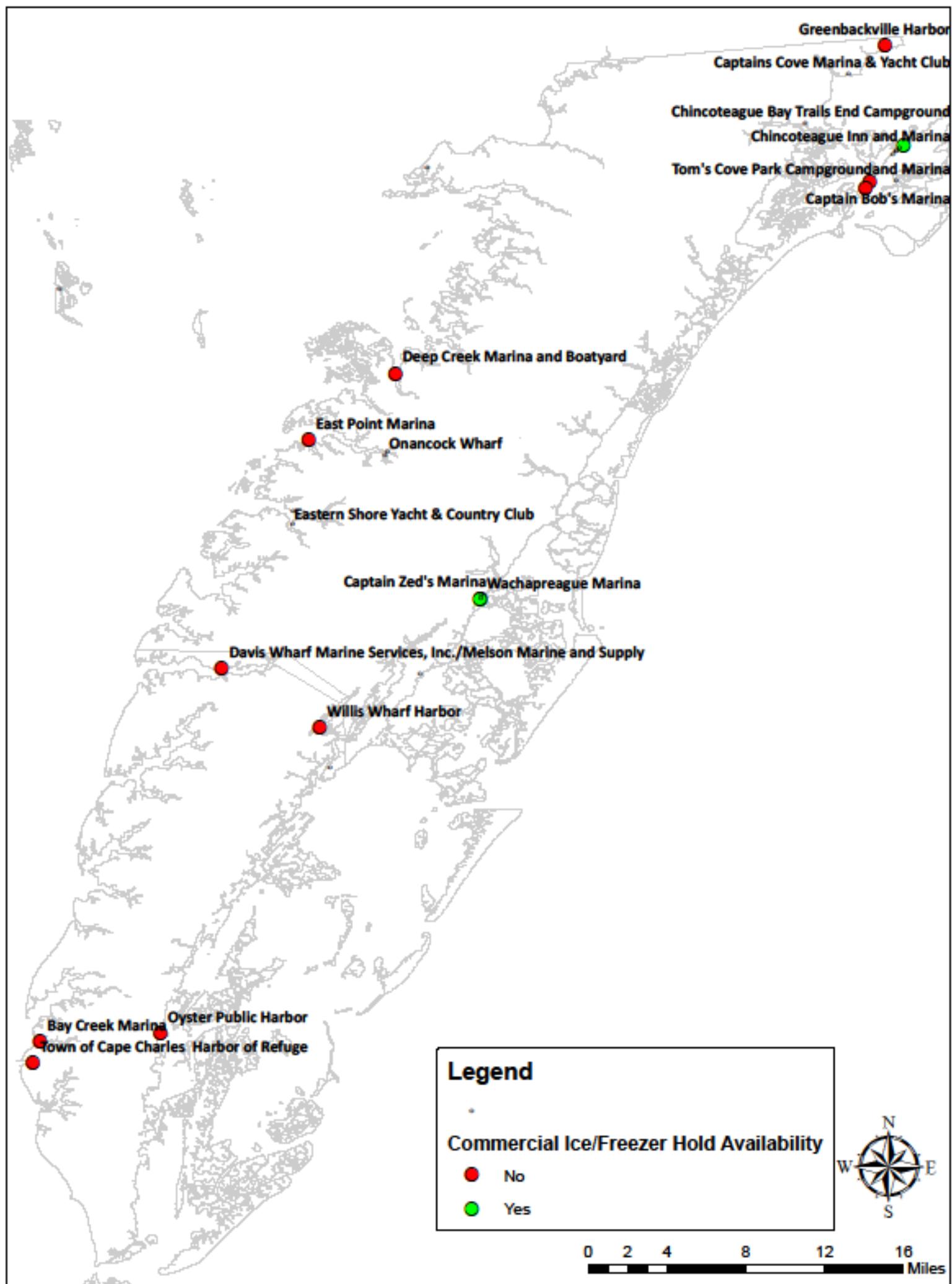


Figure 27

Commercial Ice/Freezer Hold Availability Map
Eastern Shore of Virginia Marina Needs Assessment



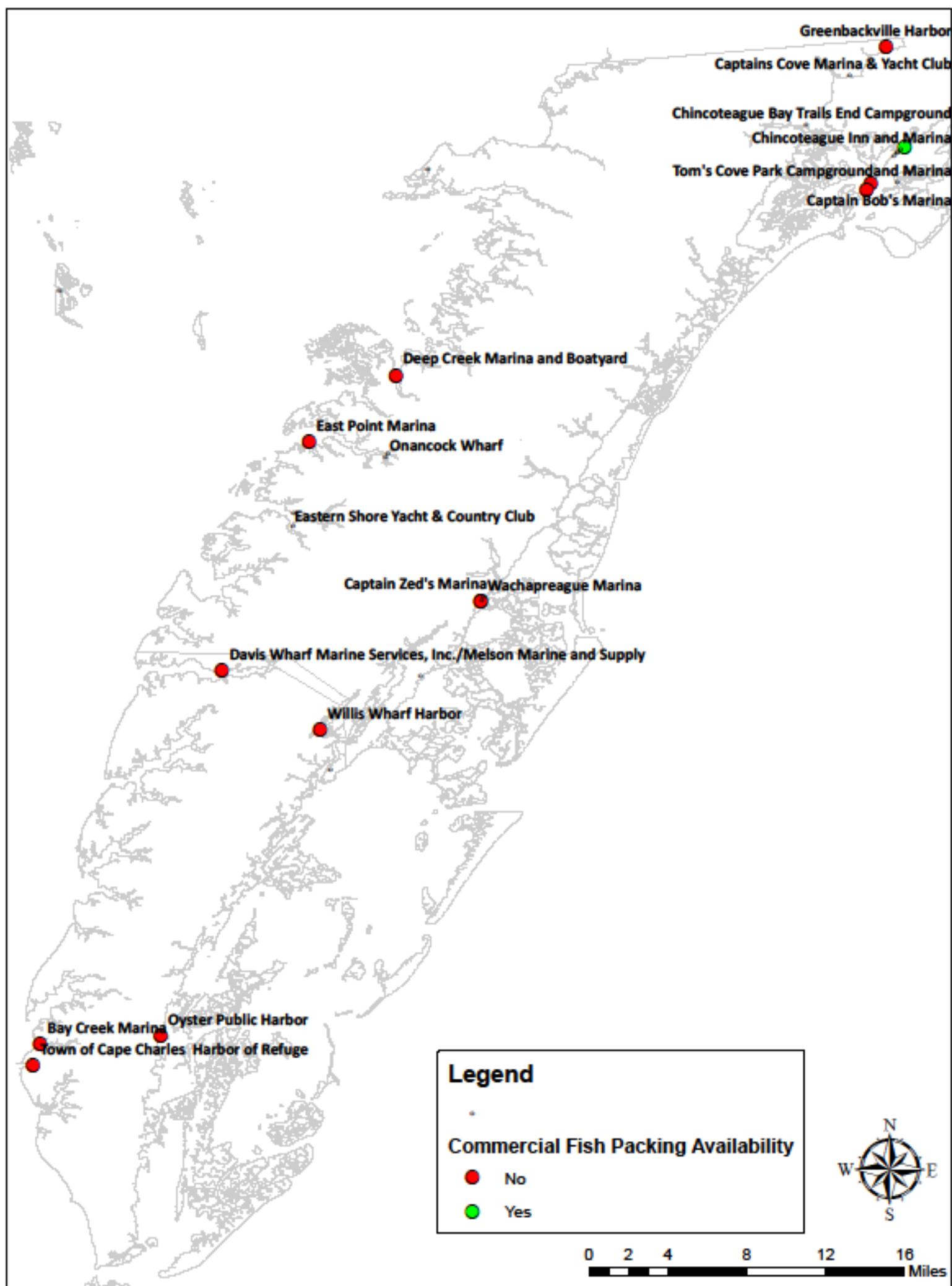


Figure 29

Commercial Fish Packing Availability Map
Eastern Shore of Virginia Marina Needs Assessment



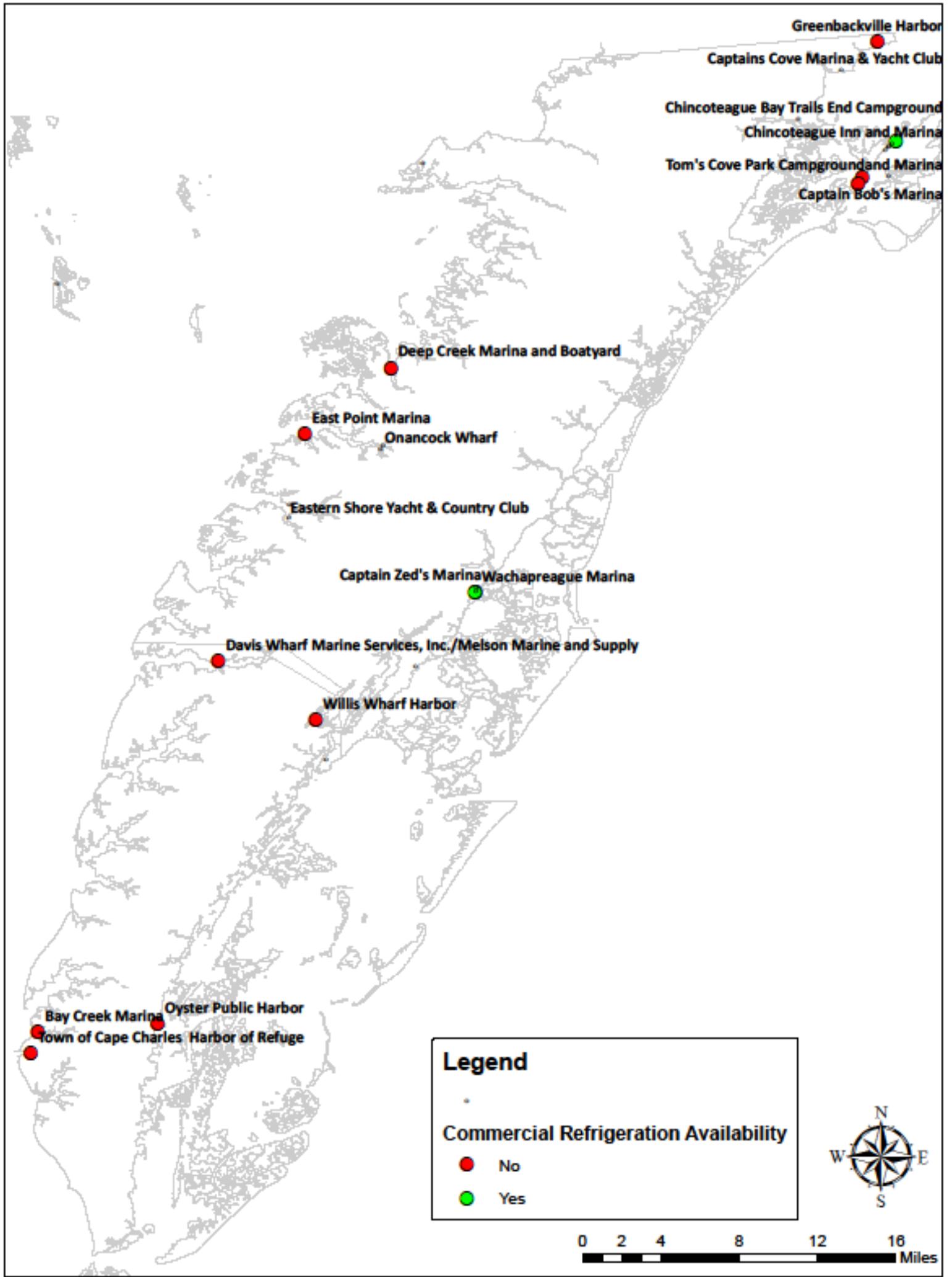


Figure 30

Commercial Refrigeration Availability Map
Eastern Shore of Virginia Marina Needs Assessment



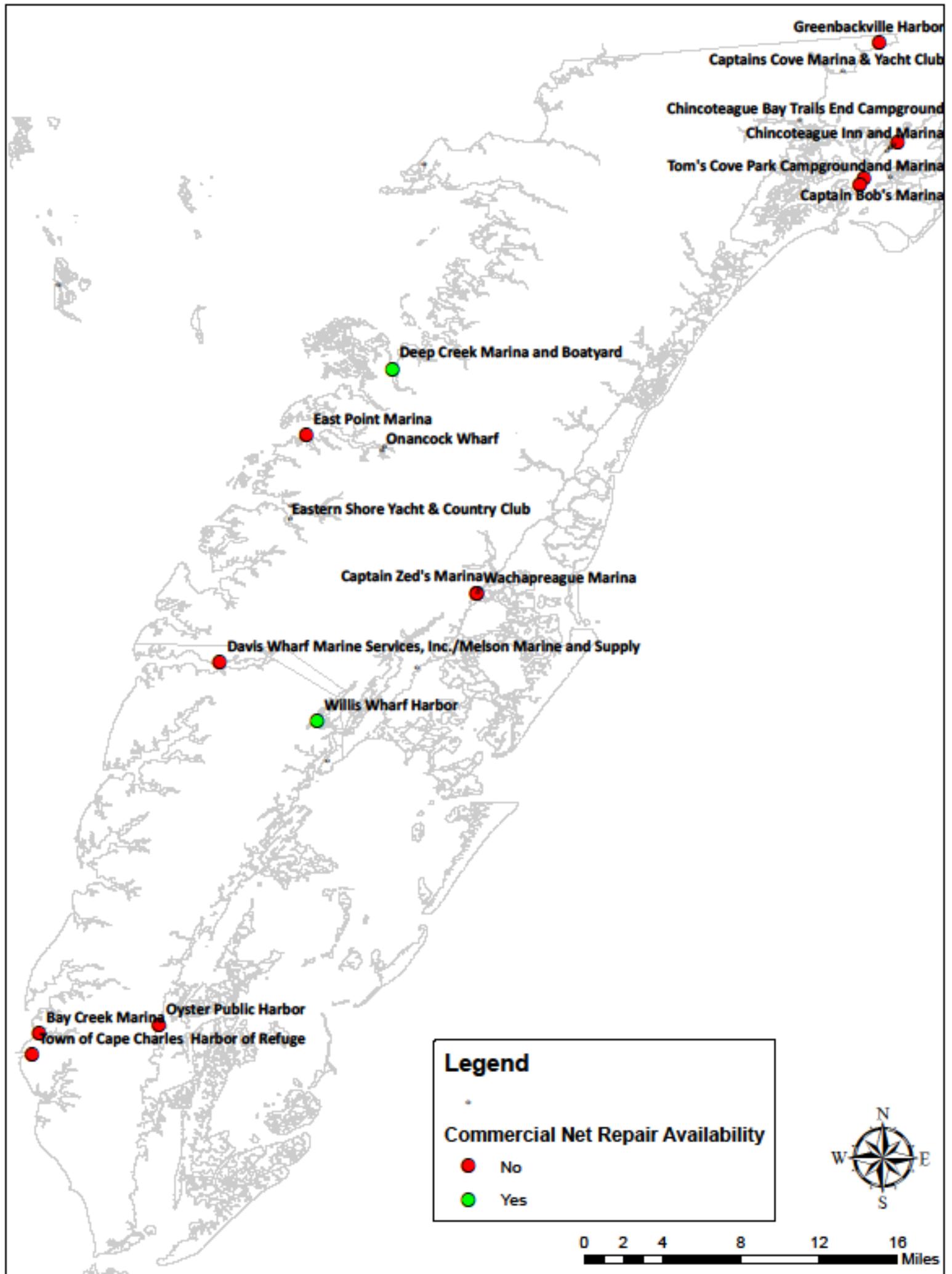


Figure 31

Commercial Net Repair Availability Map

Eastern Shore of Virginia Marina Needs Assessment



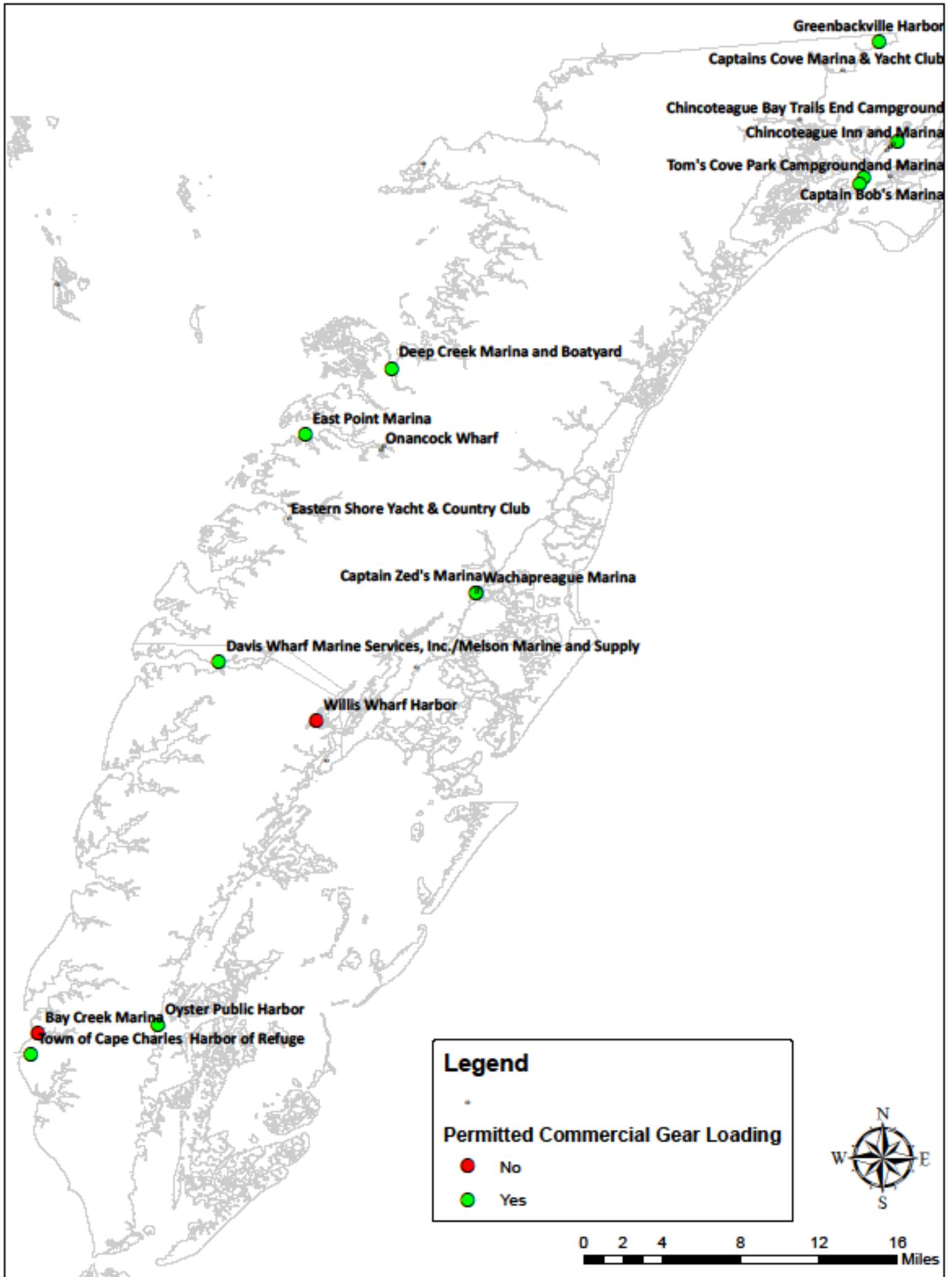


Figure 32

Permitted Commercial Gear Loading Map
Eastern Shore of Virginia Marina Needs Assessment



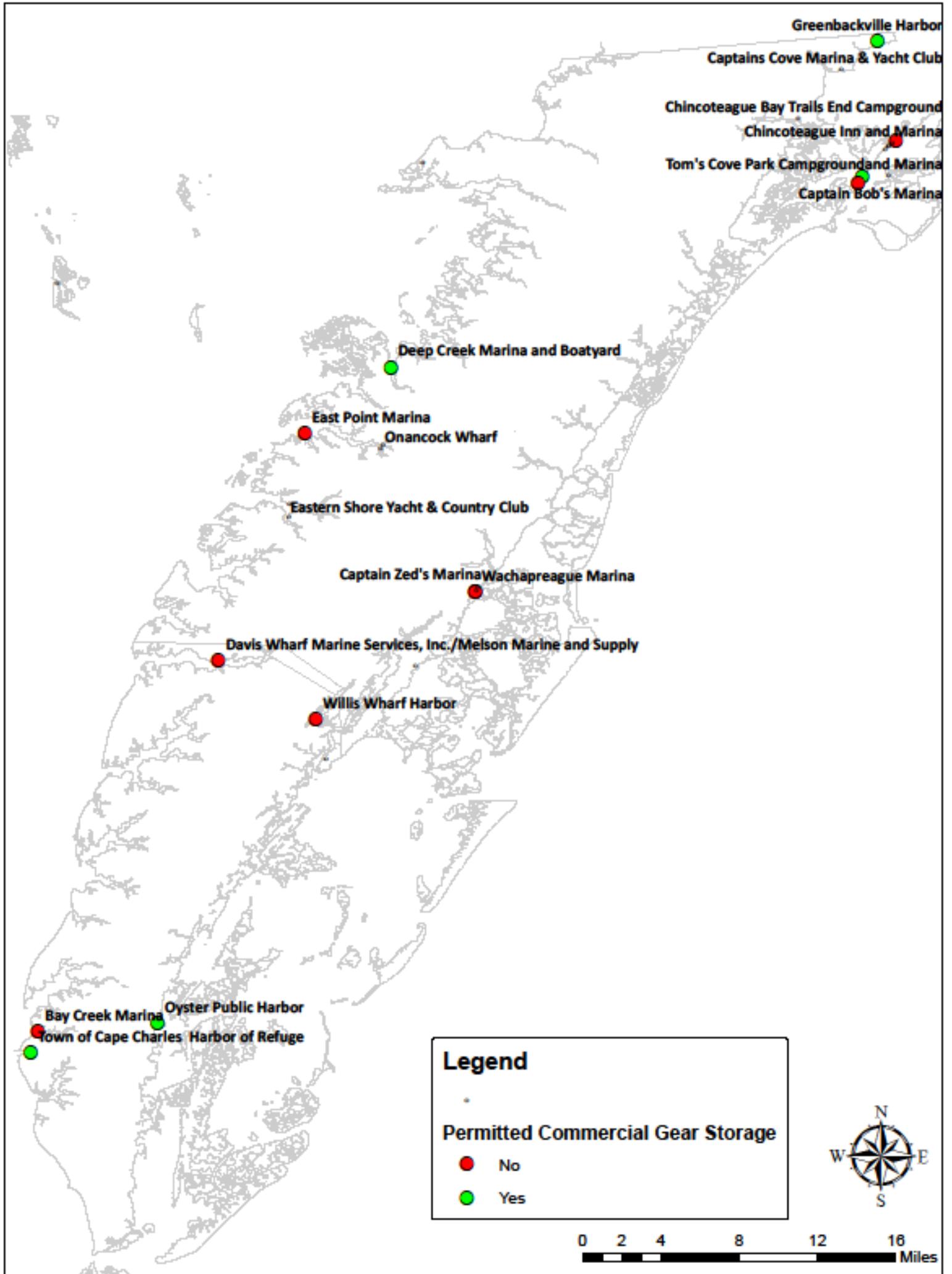


Figure 33

Permitted Commercial Gear Storage Map
Eastern Shore of Virginia Marina Needs Assessment



DISCUSSION: The most prevalent permitted uses were fish offloading and gear loading and storage at the marinas surveyed allowing commercial use. There were only three locations surveyed with buying stations, making it necessary for most watermen to transport their catch. There were only two locations (Wachapreague and Chincoteague) with commercial ice/freezer hold or refrigeration availability and only one location (Chincoteague) with commercial fish packing capability. Only two locations offer net repair, Deep Creek Marina on the bayside and Willis Wharf Harbor on the seaside.

3.4 | ACCESSIBILITY

Natural processes commonly cause impacts to transient boating infrastructure and water depths within and approaching facilities. These processes profoundly impact accessibility to transient boating facilities. Accessibility is one of the most important, if not the most critical, needs of a transient boating and is essential to a business' viability. The following sections summarize the results of the survey investigating this issue.

3.4.1 | WATER DEPTHS & NAVIGABILITY

Navigability has historically been an issue of concern for working waterfronts on the Eastern Shore. Participants were asked a series of questions to attempt to quantify these issues concerning water depths within their facilities and the access channels approaching the facilities. **Figure 34** summarizes current water depths at mean low water within and approaching facilities participating in the survey.

Figure 34 – Current Water Depths

Facility	Water Depth at Slips (at Mean Low Water)		Water Depth at Access Channel (at Mean Low Water)	
	Minimum (feet)	Maximum (feet)	Minimum (feet)	Maximum (feet)
Bay Creek Marina	7	12	6.5	10
Captain Bob's Marina	3	6	2	4
Captain Zed's Marina	6	12	2	6
Captains Cove Marina & Yacht Club	3	4.5	5	20
Chincoteague Bay Trails End Campground	3.5	5	8.5	12
Chincoteague Downtown Waterfront Park	0	4	20	25
Chincoteague Inn and Marina	Unknown	Unknown	Unknown	Unknown
Curtis Merritt Harbor of Refuge	6	9	5	8
Davis Wharf Marine Services/Melson Marine & Supply	5	6.5	5	6.5
Deep Creek Marina & Boatyard	<1	3.5	<1	3.5
East Point Marina	4.5	6	4	6
Eastern Shore Yacht & Country Club	3	6	7	10
Greenbackville Harbor	4	5.5	5	8
Onancock Wharf	4	5	9	10
Oyster Public Harbor	Unknown	Unknown	Unknown	Unknown
Parks Marina	5	8	6	9
Quinby Harbor	3	10	3	12
Tom's Cove Park Campground & Marina	1	3	Unknown	Unknown
Town of Cape Charles Harbor of Refuge	18	20.5	18	20.5
Saxis Town Harbor	2	5	2	5
Wachapreague Marina	5	10	Unknown	Unknown
Willis Wharf Harbor	1	6	3	7

Figures 35 and 36 illustrate areas and facilities within the region currently reporting shoaling issues at slips in their facilities and in the approaching access channel.

DISCUSSION: Shoaling is a major problem in many of the facilities surveyed. Shoaling at slips and in access channels continues on both the bayside and seaside. Shoaling in the access channels is reported as the biggest problem. Shoaling at the slips is an issue as well. In some cases, boats sit on the bottom at low tide (Willis Wharf), and in others, only one to two feet of water is available. Inaccurate channel markers and relocating markers were also cited as contributing to the problems of navigability and to shoaling at slips, particularly on the west

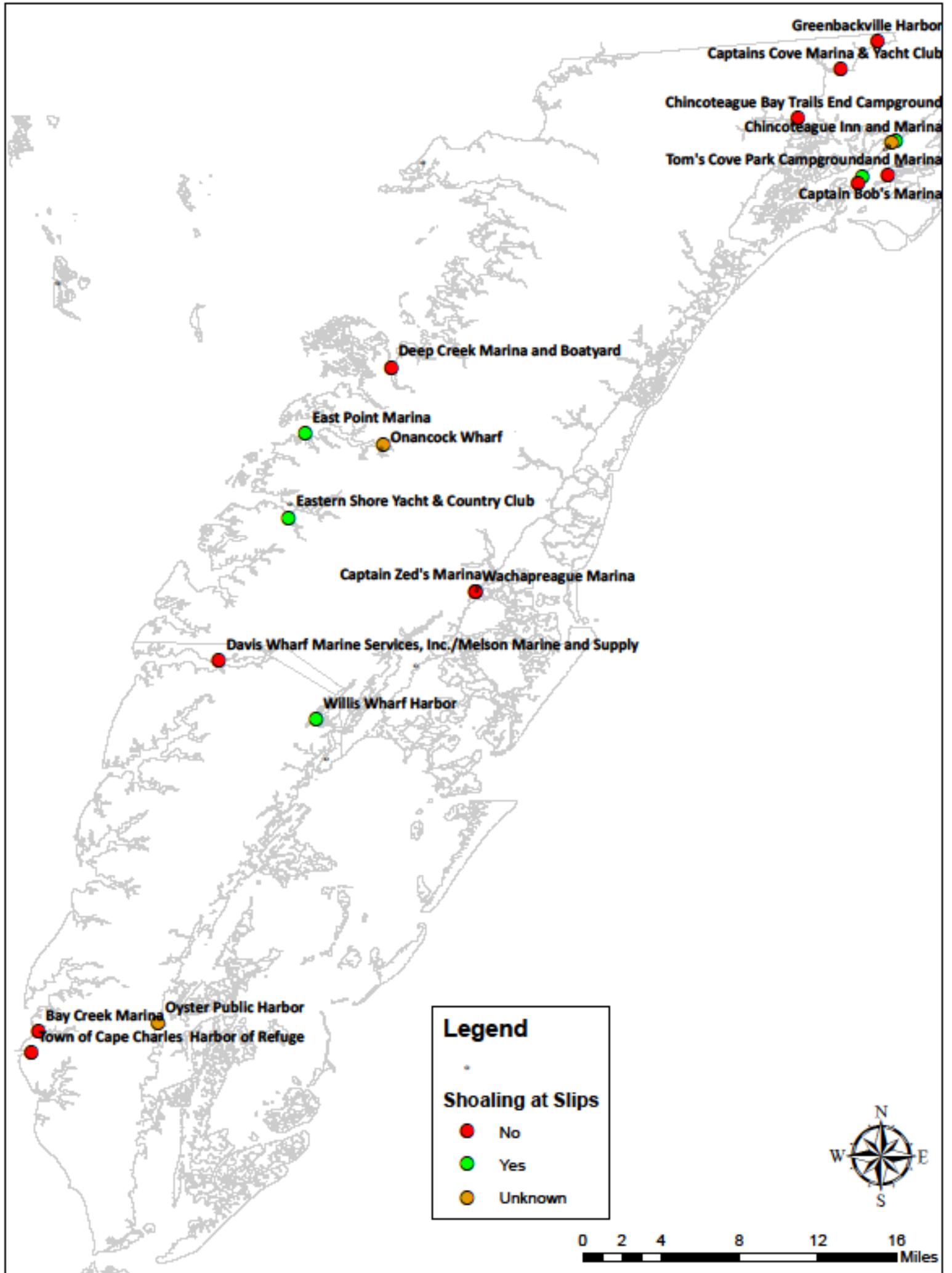


Figure 35

***Shoaling at Slips Within Facility Map
Eastern Shore of Virginia Marina Needs Assessment***



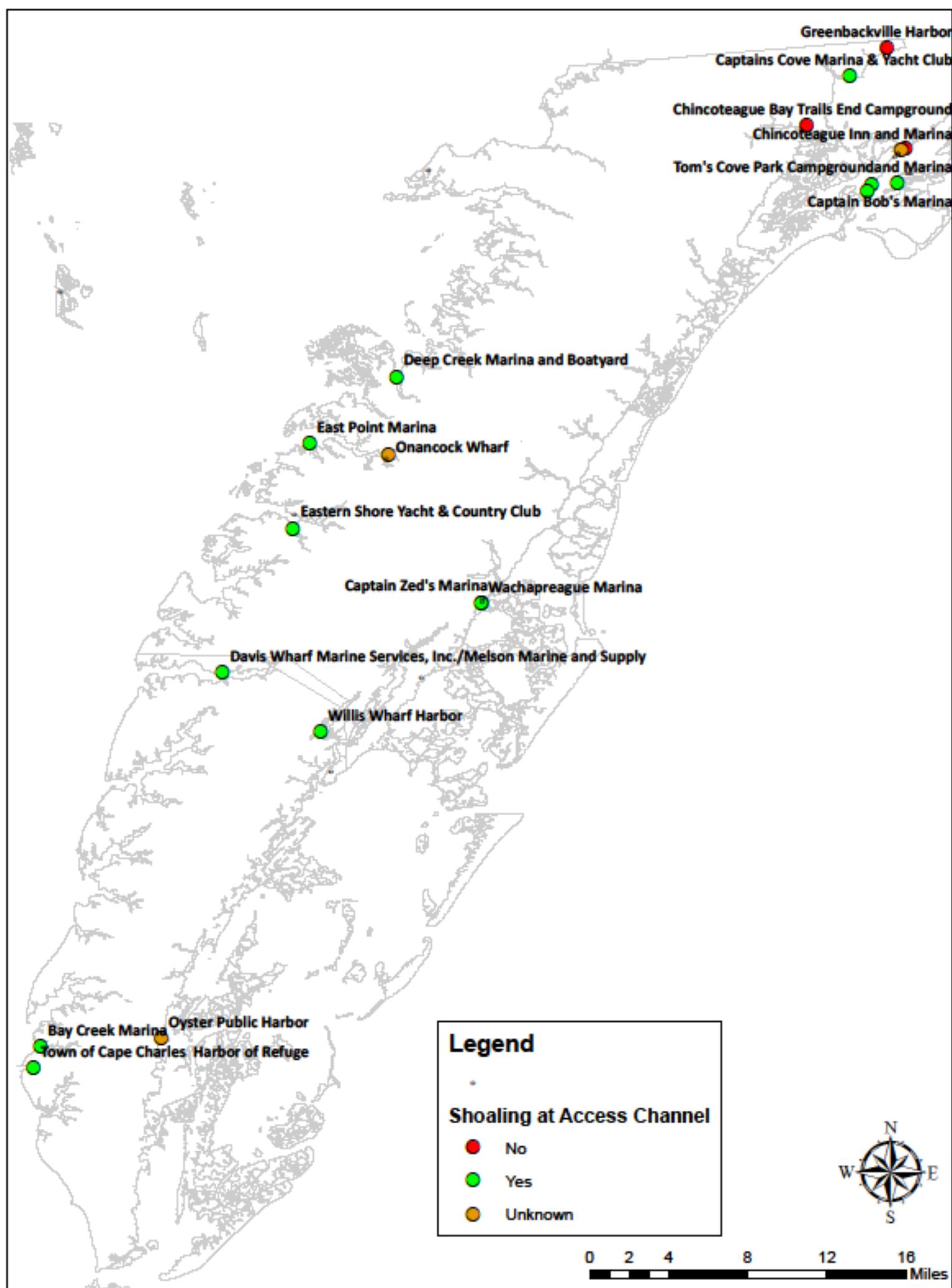


Figure 36

Shoaling at Approaching Access Channel Map
Eastern Shore of Virginia Marina Needs Assessment



side of Chincoteague Island where the markers needed to be moved to the east side of the channel.

There were several facilities that reported water depths at mean low water within slips that were inadequate (<2 feet) for even the smallest of vessels. The Cape Charles Harbor is best situated to accommodate the largest vessels followed by Bay Creek Marina in Cape Charles and several facilities in Wachapreague. While water depths within facilities in Wachapreague appear to be adequate, access channel navigability is a major problem for the area. The same is true for other areas in the region including Chincoteague/Chincoteague Bay, Onancock, Saxis, Quinby, Willis Wharf, Oyster, and the vast majority of other bayside and seaside creeks.

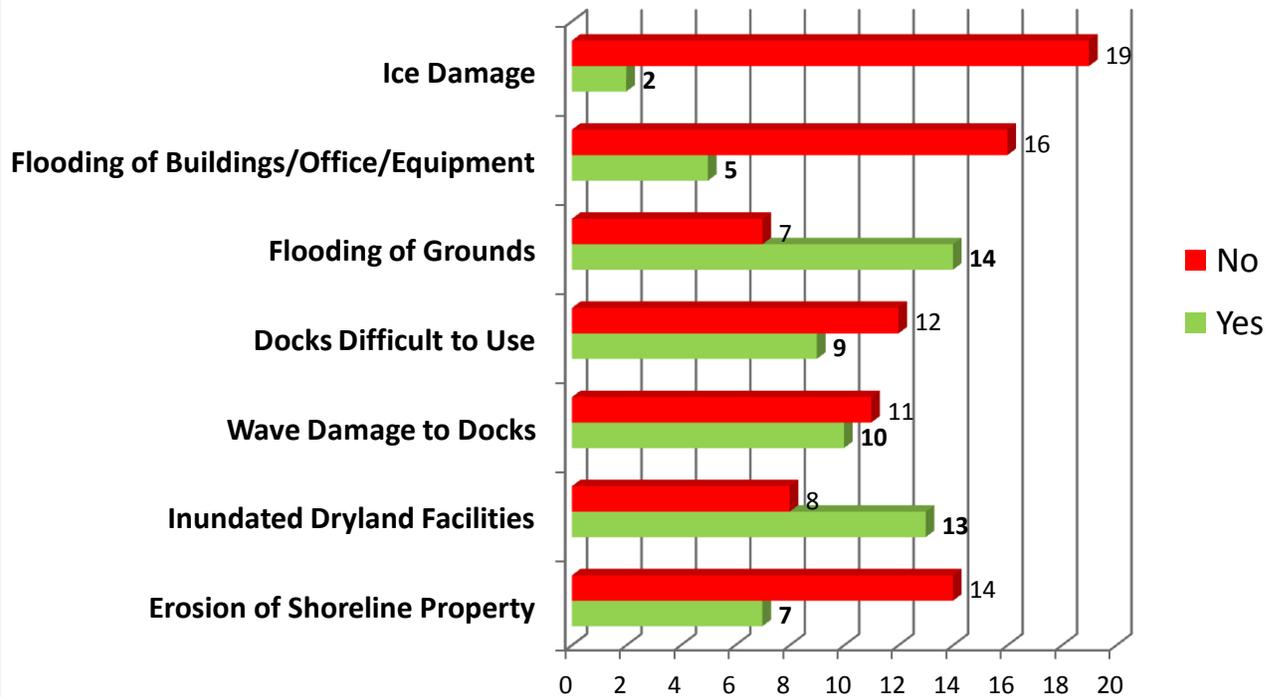
3.4.2 | NEGATIVE IMPACTS FROM FLOODING

Transient boating facilities are regularly impacted by natural hazards including coastal flooding, stormwater flooding, ice, and wave action. Participants were asked which factors had a negative impact on business in the recent past. The responses of the 21 facilities in the region that responded are depicted in the chart in **Figure 37**.

Figure 37

Natural Hazard Impacts Summary Chart

Participants were asked "For the period that you have operated this marina facility, choose the categories which best describe any impacts that affected the operation of your marina as a result of high water level"



DISCUSSION: Approximately 66% of the 21 facilities surveyed have experienced flooding of grounds and dryland facilities. Nearly half of the facilities surveyed have experienced wave damage to docks or find their docks difficult to use due to recurrent flooding. Approximately 25% of facilities surveyed reported recent flooding impacting buildings or equipment. Shoreline erosion including scouring and backwashing of bulkheads was reported by seven of the facilities surveyed. Ice damage was an issue for two facilities but did not have a significant impact for most facilities.

Flooding and wave-related damage is the greatest natural threat to transient and working waterfront infrastructure in the region. These facilities must be located on the waterfront and local zoning ordinances need to take this into consideration. There are adaptation strategies for mitigating damages from flooding that can be taken to make the regional transient and working waterfront infrastructure less vulnerable. In some places, there may be land with higher elevation that would be better suited for buildings and essential equipment. In places where

higher elevation is not available, buildings can be elevated in place or refurbished to mitigate flooding damages.

Current predictions indicate that the rate of sea level rise is likely to accelerate and storm events could become more intense and more frequent. Proper planning decisions by facility owners and operators and local governments will be essential to the long-term sustainability of the transient and working waterfront in the region.

3.5 | PHYSICAL CHARACTERISTICS

Participants were asked several questions regarding the basic physical characteristics of their facilities including dock structure type, slip rental availability, slip lengths. The results are summarized in the following sections.

3.5.1 | DOCK STRUCTURE TYPE

Participants were asked which types of dock structure types were present at their facility: fixed docks, floating docks, or a combination of both. Floating docks are typically preferable for transient and seasonal boaters as they do not require tidal range to be factored into tying up the vessel. The responses are summarized in the table in **Figure 38**.

Figure 38 – Dock Structure Type Table

Facility	Fixed Docks	Floating Docks	Combination of Fixed & Floating
Bay Creek Marina		Y	
Captain Bob's Marina	Y		
Captain Zed's Marina			Y
Captains Cove Marina & Yacht Club	Y		
Chincoteague Bay Trails End Campground			Y
Chincoteague Downtown Waterfront Park			Y
Curtis Merritt Harbor of Refuge			Y
Davis Wharf Marine Services/Melson Marine & Supply	Y		
Deep Creek Marina & Boatyard	Y		
East Point Marina		Y	
Eastern Shore Yacht & Country Club			Y
Greenbackville Harbor	Y		
Onancock Wharf	Y		
Oyster Public Harbor			Y
Parks Marina	Y		
Quinby Harbor			Y
Tom's Cove Park Campground & Marina	Y		
Town of Cape Charles Harbor of Refuge			Y
Saxis Town Harbor	Y		
Wachapreague Marina			Y
Willis Wharf Harbor	Y		
Totals (21 Participating in Survey):	10	2	9

DISCUSSION: All but two of the facilities surveyed had floating docks. The two that offered only floating docks both allow commercial use even though most commercial users prefer fixed docks. Fixed docks are more susceptible to the increased flooding and elevated sea levels that are expected over the coming decades. However, the time frame over which the increased flooding is expected to occur is beyond the typical lifespan of fixed docks. With this being the case, owners and operators of fixed docks should consider replacing docks at elevations that would accommodate any increase in sea level during any replacement or reconstruction.

3.5.2 | SLIP RENTAL AVAILABILITY

Twenty two facilities responded to questions regarding the number and size of slips available for seasonal and transient boaters. The findings for these survey questions are summarized in **Figures 39, 40 and 41**. Responses for Figure 41 – Slip Length Availability Table were limited to

six facilities. This is likely due to confusion associated with the survey technique. The length categories selected for the survey did not match those available at the facility in multiple cases.

Figure 39 – Seasonal Slip Rental Availability Table

Facility	Number of Slips Available for Seasonal Rent
Bay Creek Marina	30-40
Captain Bob's Marina	71
Captain Zed's Marina	13
Captains Cove Marina & Yacht Club	48
Chincoteague Bay Trails End Campground	0
Chincoteague Downtown Waterfront Park	0
Chincoteague Inn and Marina	16
Curtis Merritt Harbor of Refuge	99
Davis Wharf Marine Services/Melson Marine & Supply	24
Deep Creek Marina & Boatyard	24
East Point Marina	53
Eastern Shore Yacht & Country Club	18
Greenbackville Harbor	45
Onancock Wharf	4
Oyster Public Harbor	10
Parks Marina	30
Quinby Harbor	80
Tom's Cove Park Campground & Marina	0
Town of Cape Charles Harbor of Refuge	13
Saxis Town Harbor	75
Wachapreague Marina	20
Willis Wharf Harbor	30
Total (Regional):	At least 713
Total (Bayside):	At least 281
Total (Seaside):	At least 432
Maximum:	99
Average:	At least 32

DISCUSSION: There were at least 713 slips available for seasonal rent identified in the survey. Approximately 60% of these were located on the seaside. The Curtis Merritt Harbor of Refuge had the most available number of seasonal slips available (99) of the facilities surveyed in the region and the average number of available slips was at least 32.

Additional research investigating how the Eastern Shore’s season slip availability compares to other regions in the state.

Figure 40 – Transient Slip Rental Availability Table

Facility	Number of Slips Available for Transient Rent
Bay Creek Marina	80-100
Captain Bob's Marina	47
Captain Zed's Marina	2
Captains Cove Marina & Yacht Club	6
Chincoteague Bay Trails End Campground	0
Chincoteague Downtown Waterfront Park	11
Chincoteague Inn and Marina	2
Curtis Merritt Harbor of Refuge	Depends on vacancies from seasonal slips
Davis Wharf Marine Services/Melson Marine & Supply	3
Deep Creek Marina & Boatyard	2
East Point Marina	2
Eastern Shore Yacht & Country Club	Depends on vacancies from seasonal slips
Greenbackville Harbor	Depends on vacancies from seasonal slips
Onancock Wharf	12
Oyster Public Harbor	0
Parks Marina	23
Quinby Harbor	5
Tom's Cove Park Campground & Marina	0
Town of Cape Charles Harbor of Refuge	15
Saxis Town Harbor	Depends on vacancies from seasonal slips
Wachapreague Marina	20
Willis Wharf Harbor	Depends on vacancies from seasonal slips
Facilities Basing Transient Slip Availability off of Current Number of Seasonal Renters:	5 (23% of facilities surveyed)
Total (Regional):	At least 250
Total (Bayside):	At least 157
Total (Seaside):	At least 93
Maximum:	100
Average:	At least 15

DISCUSSION: Nearly a quarter of the facilities surveyed reported that the number of available transient slips available is dependent upon the number of users renting slips seasonally. This could mean that these facilities have a greater dependency on seasonal renters for income. There was approximately one-third as many slips available for transient rentals (250) compared to seasonal rentals (713). Approximately 60% of the transient slips in the region were located on the bayside, which is different from the trend for seasonal slips which were primarily located on the seaside. There were fewer transient slips available per facility (at least 15) than for seasonal slips (at least 32).

Additional research investigating how the Eastern Shore’s transient slip availability compares to other regions in the state.

Figure 41 – Slip Length Availability Table

Facility	Number of Slips That Can Accommodate		
	<21'	21'-40'	>40'
Chincoteague Inn and Marina	16	16	0
Davis Wharf Marine Services/Melson Marine & Supply	24	17	6
Onancock Wharf	16	11	3
Parks Marina	30	30	0
Quinby Harbor	20	50	15
Saxis Town Harbor	55	55	20
Averages:	27	30	7
Totals (6 Participating in Survey):	161	179	44

DISCUSSION: Additional research is needed to involve a greater number of transient facilities in order to adequately gauge the availability of slips of various lengths. Of the six facilities surveyed, there could be a lack of slips large enough to accommodate vessels greater than 40 feet.

3.6 | OTHER

One of the primary goals of the Needs Assessment was to determine historic and current levels of participation in state and federal programs including the Virginia Clean Marina Program, Clean Vessel Act, and the Boating Infrastructure Grant. The results of survey questions pertaining to participation and interest in government programs are summarized in the following sections.

3.6.1 | VIRGINIA CLEAN MARINA CERTIFICATION

Participation in the Virginia Clean Marina Program is rewarded with a state certification and additional promotion for a facility. Currently, five facilities on the Eastern Shore are certified as Virginia Clean Marinas. Two of these facilities are privately-owned and three are publicly-owned. **Figure 42** illustrates the current Virginia Clean Marina Program certification status of facilities in the region.

The survey was also interested in gauging interest among those facilities currently not participating in the program to both promote the program in the region and to determine the feasibility of potentially increasing involvement in the program. **Figure 43** illustrates that there are currently 11 different facilities interested in becoming certified as a Virginia Clean Marina.

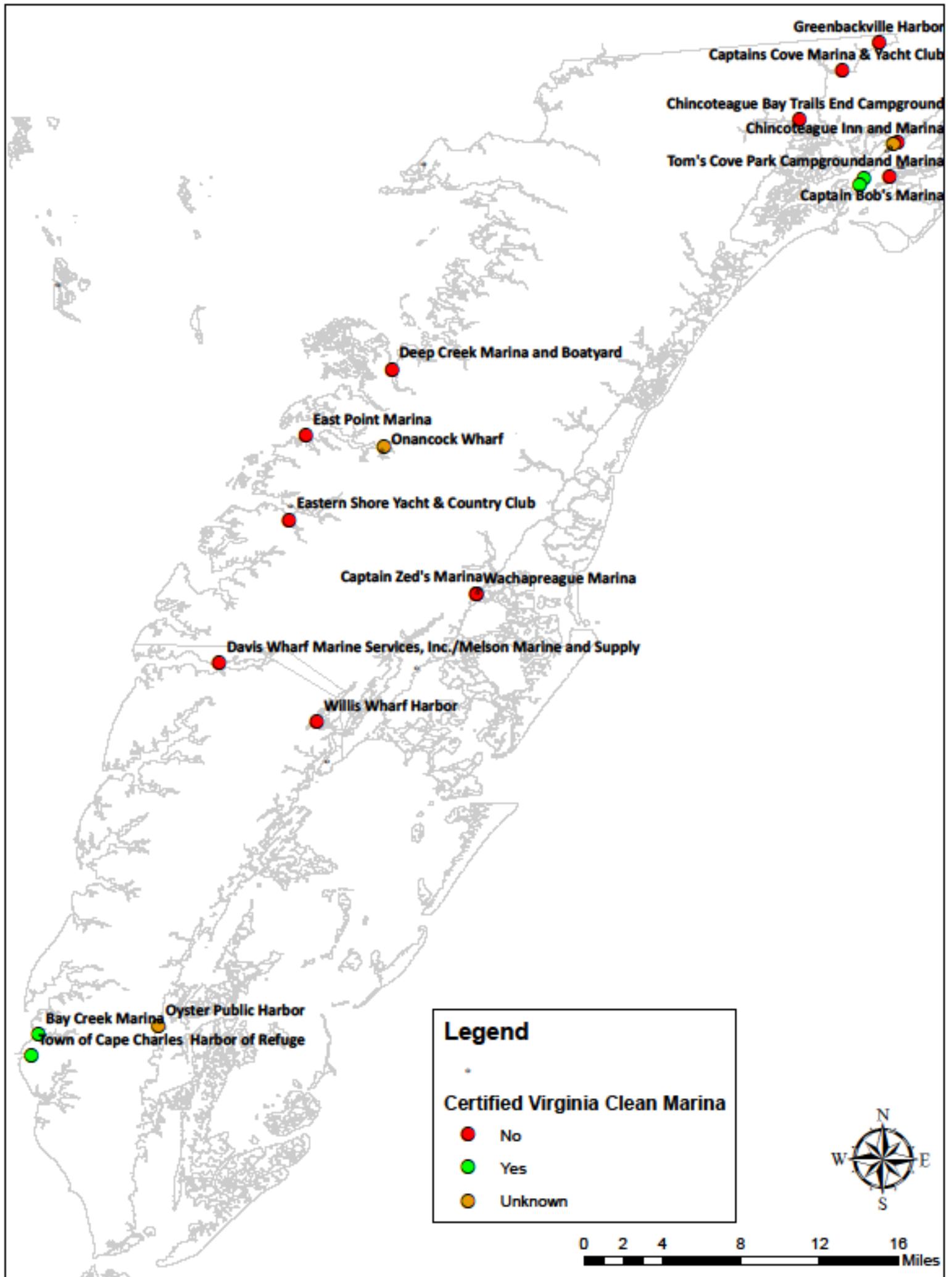


Figure 42

Virginia Clean Marina Status Map

Eastern Shore of Virginia Marina Needs Assessment



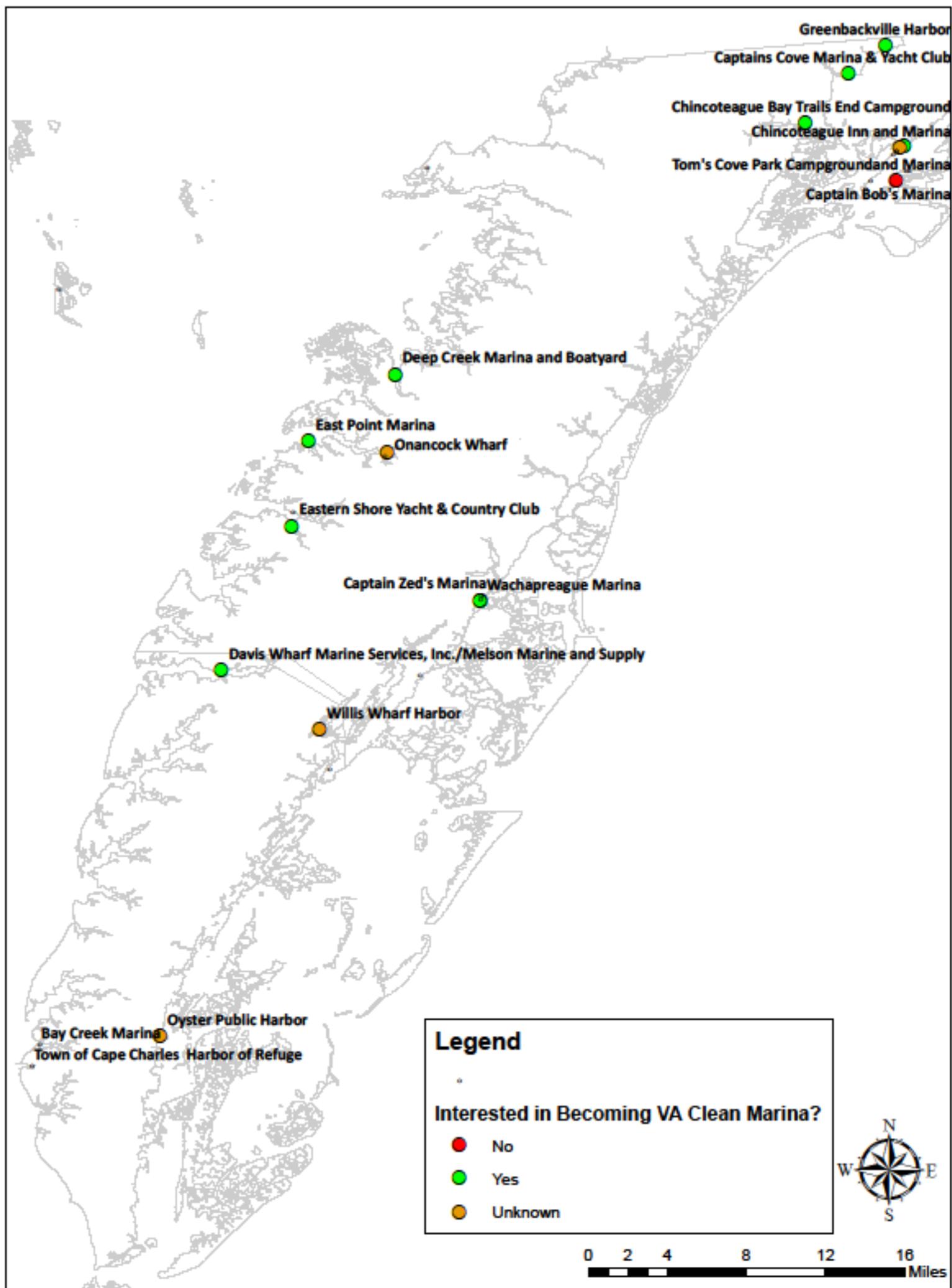


Figure 43

VA Clean Marina Certification Interest Map
Eastern Shore of Virginia Marina Needs Assessment



DISCUSSION: If all 11 facilities were to become certified, then 16 of the region’s 32 facilities would be certified as Virginia Clean Marinas. It is recommended that Virginia Clean Marina Program staff contact marinas expressing interest in becoming program certified.

If a significant number of facilities interested achieve the program certification, it is suggested that the A-NPDC and the certified Clean Marina facilities attempt to make the Eastern Shore the first “Clean Marina Region” in the state. This regional classification would be extremely beneficial to promoting the entire region as being an ideal destination for transient boaters.

3.6.2 | BOATING FACILITY FUNDING PROGRAM PARTICIPATION

The survey gauged historic interest and participation in recreational boating grant programs such as the Clean Vessel Act and the Boating Infrastructure grant. Participants were asked if they had ever applied for or received funding from any such program. Ten facilities (4 private and 6 public) in the region indicated that they had historically implemented a governmental grant funding program. These results are illustrated in **Figure 44**.

In addition, the survey asked those facilities whom had not historically participated in governmental grant funding programs if they were interested in learning more about these programs and implementing these funds to upgrade or expand services at their facility. It was noted that A-NPDC assistance may be available to assist with attaining these funds in the form of grant preparation and submission. Nine facilities responded “yes” to these questions and the results are illustrated in **Figure 45**.

DISCUSSION: Several survey participants indicated that they had researched the grant programs but had chosen not to apply due to prohibitive or restrictive grant regulations. Another participant had received a grant award but chose not to implement it for the same reason. Wariness of regulations was expressed by a number of the respondents.

3.6.3 | OTHER COMMENTS & CONCERNS

Survey participants were asked to provide any additional comments or concerns that were not captured in the survey or that could aid governments understand the challenges commonly faced in the industry. The results are summarized in **Figure 46** and offer critical insight not captured by the survey.

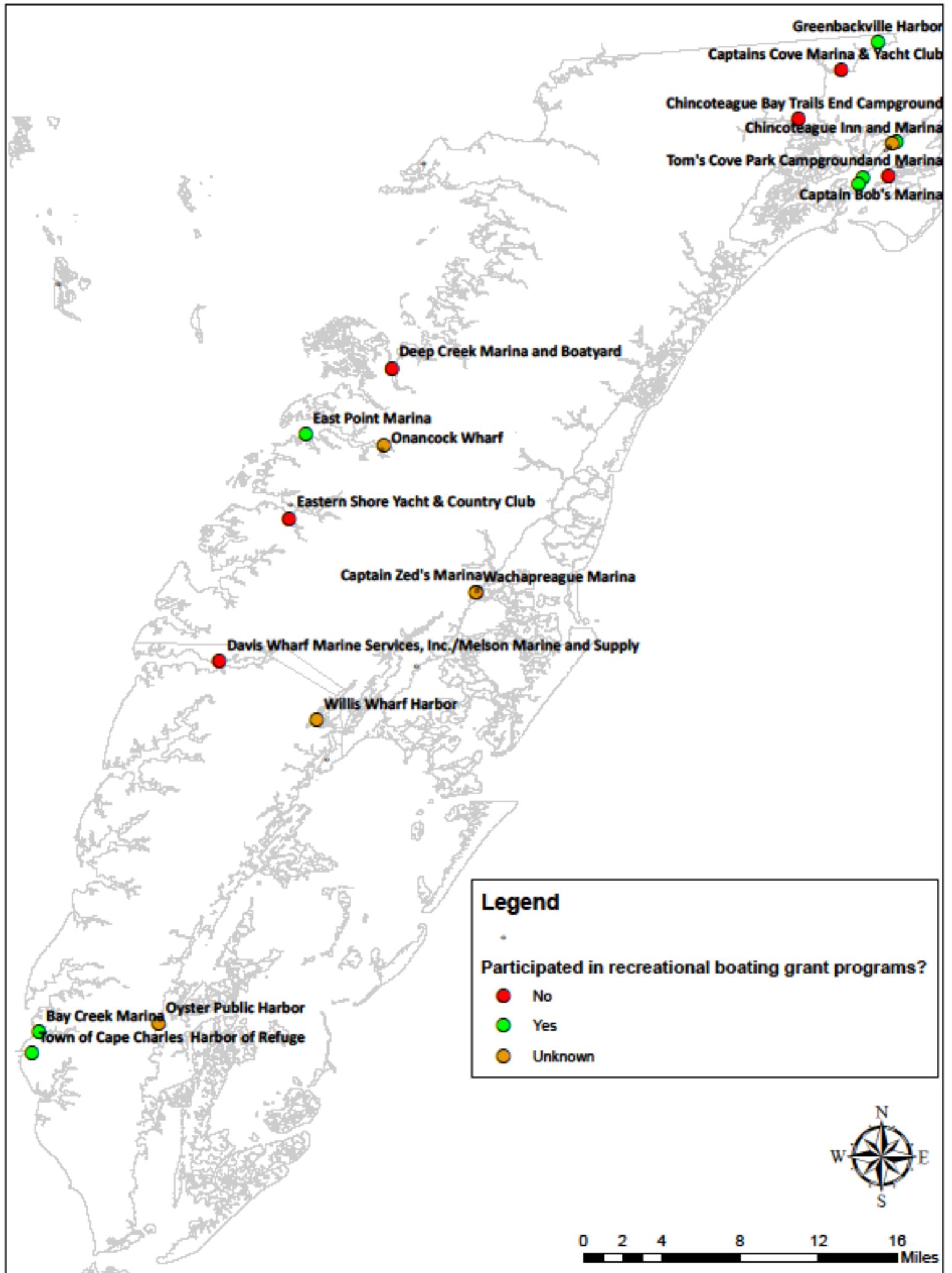


Figure 44

Historic & Current Grant Program Status Map
Eastern Shore of Virginia Marina Needs Assessment



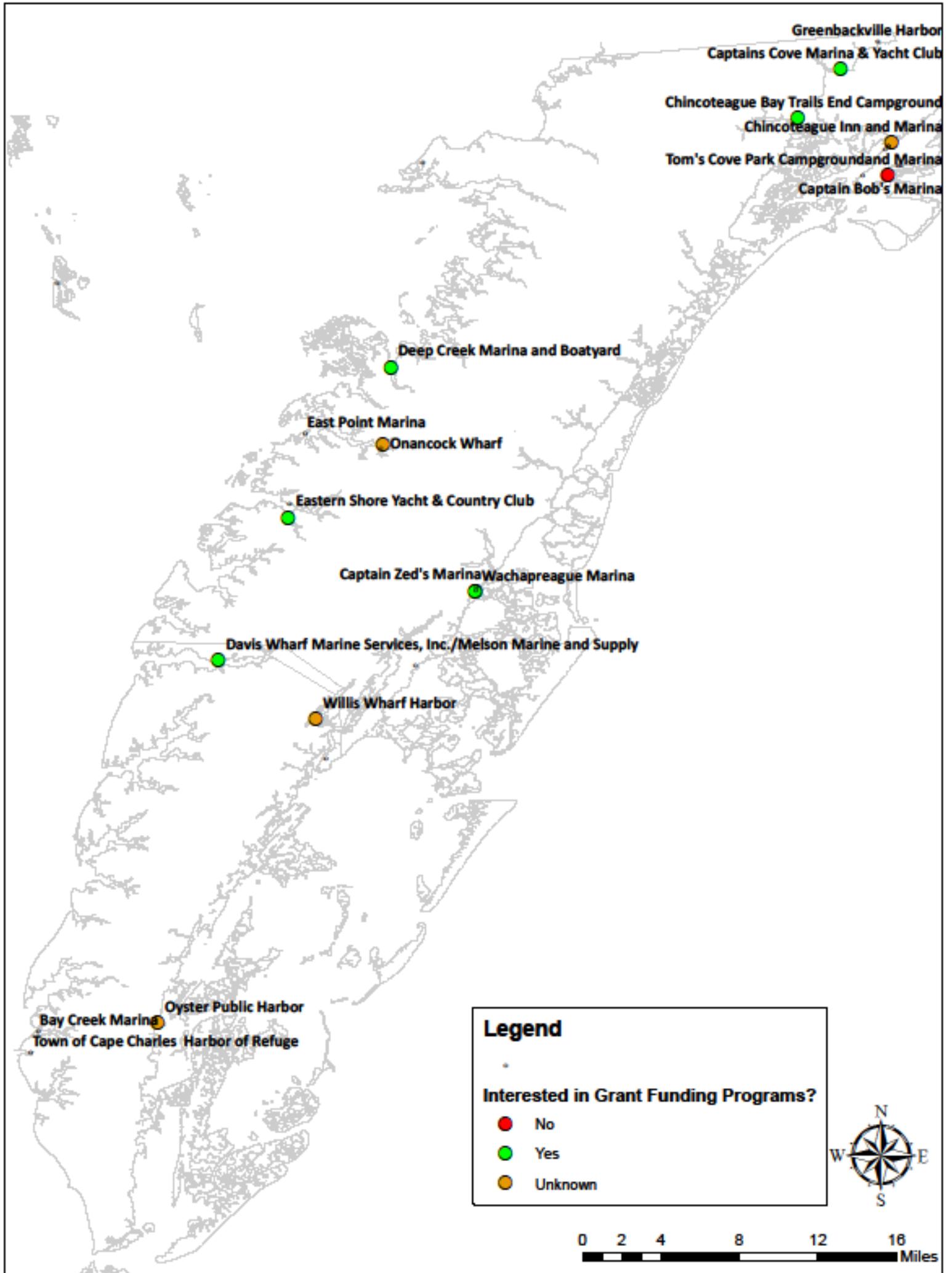


Figure 45

Grant Program Interest Map

Eastern Shore of Virginia Marina Needs Assessment



Figure 46 – Additional Comments Table

Comment
Don't use funding programs too often due to excessive red tape
Coast Guard moved channel markers closer to facility which accelerated silting within marina. Dredging was last done in 2005 and now needs it again. Another problem was created when the Town of Chincoteague replaced stormwater drainage pipes going into Fowling Creek which now drains into marina causing degradation of water quality and staining of infrastructure.
Dredging of access channel needed every 2 years.
Need for Marker #3 on Occohannock Creek to be moved since it is no longer at channel. Owner only interested in government funding programs depending on the program as he is leery of red tape involved.
Access channel does not shoal. Creek is just shallow in general.
Number of inspections required by government agencies is burdensome.
There is a lack of funding available to make the facility fully useable. Facility does have \$700,000 in VPA & VMRC grant funding to replace bulkheads, but it is not enough to do all of it.
Town has funding from VPA for a jetty that should solve shoaling problems, but they will need funding for dredging after jetty construction.
Fixed docks underwater on normal high tide creating need for floating docks and upgrading electrical and water services. Flooding of docks makes docks slippery and hazardous. Some pilings extremely weathered and need replacing.

5.0 SUMMARY & RECOMMENDATIONS

The Eastern Shore of Virginia Working Waterfront Inventory identified **32 transient and seasonal boating facilities** including public and private marinas, wharves, and harbors. Twenty-one of these facilities agreed to participate in a survey to investigate regional trends related to transient and commercial boating, impacts from natural hazards, and impacts from economic factors.

The survey discovered the following trends:

- **Fuel** is not readily available, especially on the seaside. Gasoline is available at five bayside facilities and only three seaside locations. Diesel fuel is available at four locations on the bayside and only two locations on the seaside.
- Poor **cell phone** signal quality is an issue on both sides of the peninsula. Only three marinas on the bayside and three on the seaside reported adequate coverage. All others surveyed had problems with coverage.
- **Lodging** is very limited except in the larger towns of Cape Charles, Chincoteague, Onancock, and Wachapreague.

- **Shoaling and poor navigability** is an ongoing problem everywhere. Some channels need to be dredged every two years, and shoaling at slips leaves boats sitting in the mud at low tide in Willis Wharf. Others had only one or two feet of water at low tide. Inaccurate channel markers and the relocation of markers were also cited as contributing to the problems of navigability and to shoaling.
- The primary **business stressor** was identified as the economic recession, followed closely by high local unemployment, insufficient water depths and government regulatory controls.
- **Commercial use** is greatest in public harbors and the prevalent activities are fish-offloading and gear loading/storage. There are three buying stations, two commercial ice/freezer or refrigeration holds, and one location (Chincoteague) with commercial fish packing capability. Two locations offer net repair, one on the bayside and one on the seaside.
- **Flood damage** was an issue for more than half of the respondents. They reported flooded grounds, dryland facilities, bulkhead scouring and backwash with shoreline erosion, and damaged or submerged decking. Ice damage was not a major issue.
- **Dock types** were predominantly fixed or had a combination of fixed and floating docks. Only two respondents had only floating docks. Fixed docks are the most vulnerable to recurrent flooding and sea level changes.
- The number of **transient slips** is dependent upon vacancies of seasonal slips in five of the facilities surveyed. There was approximately one-third as many slips available for transient rentals (250) compared to seasonal rentals (713). Approximately 60% of the transient slips in the region were located on the bayside, which is different from the trend for seasonal slips which were primarily located on the seaside. There were fewer transient slips available per facility (at least 15) than for seasonal slips (at least 32).
- **Interest expressed:** There was interest in the Virginia Clean Marina Program from eleven participants, and several were also interested in learning more about grants for marina improvements.

From these findings, the A-NPDC makes 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.

APPENDIX A

MARINA NEEDS ASSESSMENT SURVEY FORM



EASTERN SHORE OF VIRGINIA MARINA NEEDS SURVEY A-NDPC Virginia Coastal Zone

To help us assist marina owners and operators in identifying operational and infrastructural needs of marina facilities on the Eastern Shore so that we may support you by directing you to grant programs offering benefits that meet your needs, please complete this survey and return it to Curt Smith, Director of Planning at csmith@anpdc.org or P.O. Box 417 Accomac, VA 23301 by February 8, 2013.

General Information	
1.) Marina Name:	2.) Contact Person:
3.) Address:	4.) Title/Role:
5.) Website:	6.) Lat.: _____ Long.: _____
7.) How many years has there been a marina been at this location? _____ years	
8.) How many years have you been the operator of this marina? _____ years	
9.) When was the most recent time you reinvested funds to upgrade your facilities? _____ years	
Services Offered	
10.) <input type="checkbox"/> wet slips/moorings <input type="checkbox"/> HAZMAT response supplies <input type="checkbox"/> summer dry stack service <input type="checkbox"/> launch ramp <input type="checkbox"/> marine supplies/bait <input type="checkbox"/> boat/motor sales <input type="checkbox"/> pump-out facility <input type="checkbox"/> credit card payment	<input type="checkbox"/> gasoline fuel <input type="checkbox"/> diesel fuel <input type="checkbox"/> parking <input type="checkbox"/> hull repair <input type="checkbox"/> boat/motor rentals <input type="checkbox"/> slip water hookup <input type="checkbox"/> general store <input type="checkbox"/> other _____
<input type="checkbox"/> transient dockage <input type="checkbox"/> oil <input type="checkbox"/> internet <input type="checkbox"/> hoist <input type="checkbox"/> slip electric hookup <input type="checkbox"/> ice <input type="checkbox"/> restrooms	<input type="checkbox"/> washer/dryer <input type="checkbox"/> motor repairs <input type="checkbox"/> telephone <input type="checkbox"/> restaurant <input type="checkbox"/> fish scales <input type="checkbox"/> fish cleaning table <input type="checkbox"/> waste oil disposal <input type="checkbox"/> other _____
11.) Do you experience any issues with the quality of the cell phone signal at your facility? [] Y [] N	
12.) Are there adequate overnight lodging facilities at or within walking distance to your facility? [] Y [] N	
13.) If not, do transient boaters have access to any public transportation or car rental services? [] Y [] N	
Use Trends	
14.) Have any of the following negatively impacted your business in the last year or two? Mark all categories that apply.	<input type="checkbox"/> poor boat sales <input type="checkbox"/> economic recession <input type="checkbox"/> docks in need of repair <input type="checkbox"/> lack of advertising, media, etc. <input type="checkbox"/> decline in populations preference for boating <input type="checkbox"/> other (please specify) _____
15.) Do you allow commercial uses at your facility? [] Y [] N	
16.) If commercial use is allowed, what percentage of your seasonal slips is occupied by commercial users?	_____ %
17.) If commercial use is allowed, which of the following commercial activities and services are allowed or offered?	<input type="checkbox"/> buying station <input type="checkbox"/> ice/freezer holds <input type="checkbox"/> refrigeration <input type="checkbox"/> gear loading <input type="checkbox"/> fish off loading <input type="checkbox"/> fish packing <input type="checkbox"/> net repair <input type="checkbox"/> gear storage



EASTERN SHORE OF VIRGINIA MARINA NEEDS SURVEY

Accessibility			
18.) What are the water depths at your facility?		Minimum Water Depth (at MLW)	Maximum water Depth (at MLW)
	Water depth at slips	_____ Feet	_____ Feet
	Depth at access channel within the marina	_____ Feet	_____ Feet
19.) Are there navigability issues from shoaling at slips in your facility?		[] Y [] N	
20.) Are there navigability issues from shoaling in the access channel to your facility?		[] Y [] N	
21.) For the period that you have operated this marina facility, choose the categories which best describe any impacts that affected the operation of your marina as a result of high water levels or flooding. Mark all categories that apply.		<input type="checkbox"/> erosion of shoreline property <input type="checkbox"/> inundated dryland facilities <input type="checkbox"/> wave damage to docks <input type="checkbox"/> docks difficult to use <input type="checkbox"/> flooding of grounds <input type="checkbox"/> flooding of buildings/office/equipment <input type="checkbox"/> ice damage <input type="checkbox"/> other (please specify) _____	
Physical Characteristics			
22.) Dock Structure Type: [] Fixed docks [] Floating docks [] Combination floating and fixed docks			
23.) How many slips are located at your marina for seasonal rent?		_____ slips	
24.) How many slips are located at your marina for daily transient rent?		_____ slips	
25.) Indicate the number of slips located at your facility that can accommodate boats of the following various lengths.		< 16' 16-20' 21-25' 26-30' 40-64' >64'	
		# Slips That Can Accommodate _____ _____ _____ _____ _____	
Other			
26.) Is your marina certified as a Virginia Clean Marina?			[] Y [] N
27.) If not are you interested in becoming a certified a Virginia Clean Marina?			[] Y [] N
28.) Have you ever applied for or received funding from recreational boating grant programs such as the Clean Vessel Act or the Boating Infrastructure Grant?			[] Y [] N
29.) If not are you interested in learning more about these funding programs and implementing these funds to upgrade or expand services at your facility? (A-NPDC assistance may be available to you to help with attaining these funds)			[] Y [] N
30.) Do you have any additional comments or concerns that could aid local governments understand the challenges your marina faces that may not be captured in the survey questions above?			