

STATEWIDE BOATER NEEDS ASSESSMENT: A SURVEY OF TRANSIENT BOATERS IN MARYLAND

Prepared for the Maryland Department of Natural Resources by Morgan State University

2021



EXECUTIVE SUMMARY

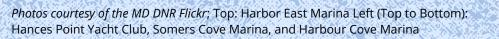
The State of Maryland with support from the U.S. Fish and Wildlife Service Boating Infrastructure Grant Program (BIG) has made investments in the state's boating industry through projects supporting construction, renovation, and maintenance of tie-up facilities with features for recreational transient boaters. Transient boating refers to using a vessel 26 feet or longer to travel to destinations for up to 15 days.

The purpose of this study was to conduct a transient boater needs assessment through surveys of Maryland transient boaters and marinas within the state. This study consisted of two surveys: 1.) A survey of transient boaters in Maryland administered via mail and internet to a sample of over 4,900 boaters with vessels 26 feet or longer in length registered in Maryland or Virginia. 2.) A survey of Maryland marinas administered via telephone and mail to a sample of over 250 marinas. Data collection for these surveys occurred from September 2020 to April 2021. This report presents results from the study. While survey findings are presented comprehensively in the full report, some of the key themes are presented in this Executive Summary on the following pages.

The purpose of this study was to conduct a transient boater needs assessment through surveys of Maryland transient boaters and marinas within the state.







AVAILABILITY OF TRANSIENT BOATING SLIPS

KEY FINDINGS:

- Very few boaters are reporting repeated challenges obtaining a slip for their transient boating trips in the previous two years
 - 65% of transient boaters reported having had *zero instances* in which they were unable to reserve a slip at a marina/yacht club due to no additional capacity (*See Maryland Boater Survey, Q8*).
 - Only 2.5% of boaters reported that they were unable to reserve a slip 5 or more times.
- In contrast to transient boaters, marinas are more likely to report space constraints
 - About 56% of marinas surveyed reported having experienced being unable to host additional transient boaters due to lack of space.
 - Of the marinas having reported being unable to host additional transient boaters, there was variation across weekdays/weekends; About 21% reported often being unable to host additional transient boaters on a typical summer weekdays; this climbed to 39% on a typical summer weekends and 58% on typical holiday weekends (*See Maryland Marina Survey, Q6*).

When obtaining a slip for transient boating, location matters

- While most boaters did not report having difficulty obtaining transient boating slips, certain geographic locations may be more challenging to reserve a slip.
- St. Michaels (bright yellow dot below) topped the list of locations where transient boaters tried but failed to reserve a slip, followed by Annapolis and Rock Hall (See Maryland Boater Survey, Q8 and Q9).



TRANSIENT BOATING DESTINATION FEATURES

KEY FINDINGS:

Restaurants and marina services are highly important destination features for transient boaters

- About 57% of boaters identified restaurants as being an extremely important or very important destination feature when considering a slip rental (*See Maryland Boater Survey, Q10*).
- Similarly, about 57% of boaters identified marina services as being an extremely important or very important destination feature when considering a slip rental
- Marinas also report that restaurants, bars, breweries, and wineries are popular activities for boaters visiting their facility (*See Maryland Marina Survey, Q13*).

Relative to restaurants and marina services, other destination features are less important for transient boaters

• Entertainment, shopping, rural/urban setting, nature-based, proximity to home/dock, and fishing/crabbing each have aggregate extremely/very important rankings of no more than about 19% (See Maryland Boater Survey, Q10).

Transient boaters willing to travel to visit on-shore destinations

• Only about 15% reported proximity to home port/dock as being very/extremely important, whereas about 58% ranked it as not at all important or somewhat important (*See Maryland Boater Survey, Q10*).

Rural destination more likely to be identified as highly important than urban setting

• About 18% of respondents reported that an rural setting is very or extremely important, compared to 6% who considered an urban setting as very or extremely important (*See Maryland Boater Survey, Q10*).

Fishing and crabbing less important to transient boaters

• 78% of transient boaters reported that proximity to fishing/crabbing is either not at all important or somewhat important when considering a destination (*See Maryland Boater Survey, Q10*).

SYNTHESIS & RECOMMENDATIONS

The findings here suggest that the current transient boating community is, in general, wellserved by the existing Maryland transient boating infrastructure. As highlighted in the Executive Summary, the vast majority of transient boaters do not have difficulties acquiring a slip for short-term rental. That said, some marinas do report a lack of short-term slip availability, which varies depending on whether it is a weekday, weekend, or holiday weekend. And further, there are clear geographic hotspots where challenges reserving a short-term slip are more likely. As appropriate, those charged with supporting transient boating infrastructure should consider allocating available funds to support improvements at Maryland geographic hotspots such as Saint Michaels, Annapolis, and Rock Hall. Funds from the US Fish and Wildlife Service Boating Infrastructure Grant Program (BIG) could also be used to support renovation projects to keep existing facilities in excellent condition for recreational transient boaters.

Ultimately, geographic hotspots attract transient boaters through some combination of onshore amenities and experiences. Findings in this report suggest that restaurants and marina services/amenities are a high priority among transient boaters. In addition, there is evidence that rural and nature-based settings are preferred by more boaters than an urban setting. When considering enhancing infrastructure at current facilities or developing new facilities that support transient boating, availability of restaurants and high quality marina services should be a top priority.

This Executive Summary highlights survey findings that are of highest relevance to directly supporting the needs of the transient boating community. The rest of this document provides a comprehensive description of survey questions and responses from boaters and marina owner/operators. Much of this information, thought not included in the Executive Summary, is also highly relevant to transient boating and provides context regarding the importance of transient boating to regional economies. Please explore this document and contact Scott Knoche at scott.knoche@morgan.edu if you have any questions.

This project was supported by the Maryland Department of Natural Resources through a Boating Infrastructure Grant (BIG) Tier 1 award from the U.S. Fish and Wildlife Service (#F19AP00300, CFDA#15.622) with the match from the state Waterway Improvement Fund.







STATEWIDE BOATER NEEDS ASSESSMENT: A SURVEY OF TRANSIENT BOATERS IN MARYLAND

2021

Morgan State University Patuxent Environmental and Aquatic Laboratory

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BACKGROUND

The State of Maryland has 3,190 miles of coastline, more coastline relative to geographic area than any other state in the U.S. This provides superb recreational boating opportunities for both residents and non-residents. Recreational boating is a major economic driver in Maryland. Lipton (2011) estimated that recreational boating in the State of Maryland had an annual economic impact of \$1.9 billion. Transient boating - defined as non-trailered boats over 26 feet long visiting marinas and other on-shore destinations for a stay of no longer than 15 days - is a popular type of recreational boating that generates economic impacts to Maryland coastal regions. To best support the transient boating community, it is important to better understand the perceptions and experiences of transient boaters.

The primary objective of this study was to examine potential unmet recreational transient boater needs in Maryland coastal waterways through a survey of transient boaters who have vessels registered in the Chesapeake Bay coastal states (Maryland and Virginia). Study findings are intended to highlight potential areas where the Maryland Department of Natural Resources (MDDNR) can better support the needs of the transient boating community. This project was supported by the MDDNR through a Boating Infrastructure Grant (BIG) Tier 1 award from the U.S. Fish and Wildlife Service (#F19AP00300, CFDA#15.622) with the required match provided by the state Waterway Improvement Fund. Additional project support was provided through Federal funds under award number NA18NOS4190145 from NOAA, U.S. Department of Commerce. The statements, findings, conclusions, and recommendations are those of the author(s) and do not necessarily reflect the views of NOAA or the U.S. Department of Commerce.

To accomplish the objective of this study, the Morgan State University Patuxent Environmental and Aquatic Research Laboratory (MSU PEARL) project team conducted two mixed mode (internet and mail) surveys to assess a range of factors influencing the transient boating experience in Maryland. The first survey effort was targeted to individuals who own a vessel 26 feet or longer that is registered in Maryland and Virginia (n = 4,922; response rate = 32.3%). The second effort was targeted to Maryland marinas (n= 255; response rate = 40%).

BOATER SURVEY

METHODOLOGY

A survey of Chesapeake Bay region transient boaters was conducted by internet and mail between October 2020 and December 2020. Boaters were contacted through a series of mailings, which included a link to the internet survey and a hard copy paper survey. This survey explored transient boater preferences, perceptions, experiences, boating activities, participation, effort, expenditures and COVID-19 impacts (see *Appendix A* for boater survey instrument). The primary objective was to understand whether there was an unmet need for additional transient boating dockage in Maryland.

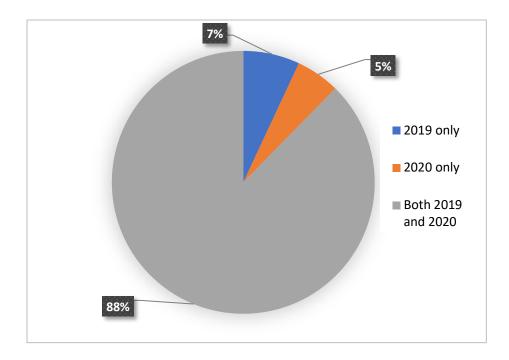
The Transient Boater Survey was developed following the Dillman approach for mixedmode internet and mail surveys (Dillman, 2011). The sample frame consisted of individuals with a vessel 26 feet or longer that was registered either in Maryland or Virginia. A previous study of transient boaters conducted in Maryland found that a key factor influencing boating location decision is the proximity to an individual's home residence (Lipton, 2005). As such, the project team opted to survey individuals with vessels registered in Maryland and Virginia to cost-effectively obtain information from the individuals most likely to engage in boating in Maryland. The project team considered surveying individuals with boats registered in other U.S. East Coast states (e.g., Delaware, Florida, North Carolina). However, previous work by Lipton (2005) suggested that such boaters have a relatively low likelihood of boating in Maryland, and as such it would be very costly to obtain generalizable information from these boaters. Contact information in the form of boater addresses was obtained from the marketing firm Info-Link Technologies, Inc.

The boater survey instrument was developed by the MSU PEARL project team in conjunction with input from the Maryland DNR. The MSU project team conducted

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survey pre-testing with Maryland transient boaters to ensure readability and comprehension. The pre-testing involved six Maryland boaters who completed the survey while on a video call with an MSU PEARL researcher. The pre-testing was conducted using both the mobile and desktop versions of the internet survey. Minor adjustments were made to the survey to improve comprehension and flow, including edits to question language and changes to font sizing/bolding.

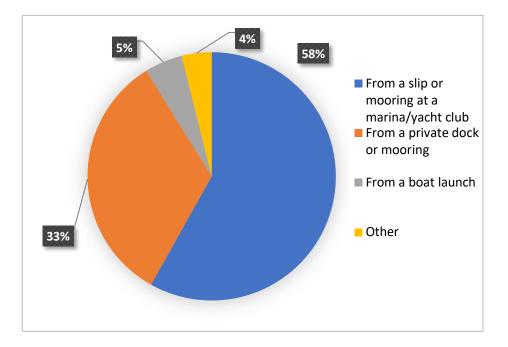
A mixed-mode (internet and mail) approach was selected as the preferred survey method. This approach helped to reduce survey costs associated with business-reply mail postage and data entry while also enabling the participation of individuals unwilling or unable to complete a web-based survey. Boaters received all contacts by mail – these letters and postcards contained a link to the online version of the survey for respondents who prefer to complete the survey by internet. A total of 4,922 (3,929 MD, 993 VA) survey contacts were sent by mail between October and November 2020. The series of mailings included an invitation letter containing the survey website address, first reminder postcard containing the survey website address, hard copy survey with postage-paid Business Reply Mail envelope (see *Appendix A*), and final reminder postcard containing the survey website address. The online survey was created using SurveyMonkey software and was compatible with completion by desktop or mobile device. A total of 1,590 surveys were completed; 488 were completed by mail and 1,102 were completed online. This represents a response rate of 32.3%.



Q1. DID YOU GO BOATING IN MARYLAND WATERS IN 2019 AND 2020?

ANSWER CHOICES	RESPONSES	
2019 only	106	7.0%
2020 only	82	5.4%
Both 2019 and 2020	1335	87.7%
Total Responses: 1523		

Q2. WHAT IS THE PRIMARY WAY YOU GAIN ACCESS TO MARYLAND WATERS FOR BOATING?

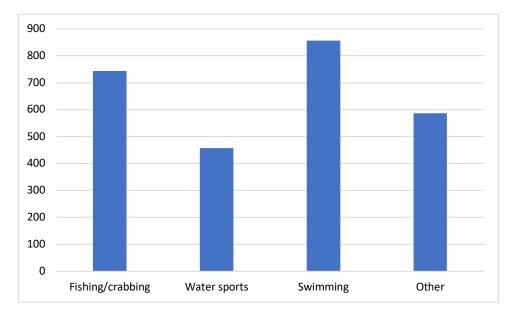


ANSWER CHOICES	RESPONSES	
From a slip or mooring at a marina/yacht club	909	58.1%
From a private dock or mooring	517	33.0%
From a boat launch	77	4.9%
Other	61	3.9%
Total Responses: 1564		

Q2. Other Responses

Boatelcommunity marinasail up from the souther bayboat launch and private dockHOA DOCKcommunity marinaMooring in Virginiacommunity marina slipFrom a private dock and from a marina
HOA DOCKcommunity marinaMooring in Virginiacommunity marina slip
Mooring in Virginia community marina slip
slip Community (private) boat dock
From marina and from private dock From Va. waters
I store my boat at a marina but drive it to
my home w a private dock By slip from Hampton, VA
Neighborhood marina From a beach
I use 2 boats. One I trailer and launch .
One I keep in the water at a private slip Up the Bay
Home Association slip Sandy Point State Park
we live on the Magothy river and have a
pier from my own dock at my home
County dock Annapolis City mooring
From Solomons Isl. or Sandy Point SP
boat launch if trailering to Annapolis Race
area, or my Dock on Lower Machodoc
Navy Recreation Center boat lunch Creek in VA
Lighthouse Point Marina Never boated in Maryland
I do not boat in Boatel
Sail in from VA 2 boats - our pier and a marina slip
sailing and o'nite anchoring Sailing from Virginia
from a boat launch and from a slip at a
marina hi and dry
Annapolis licensed private mooring Public landing
Both Slip at a Marina and a boat launch,
We have two boats Equal from private dock and marina
Both private dock and a marina Boatel forklift drop in from marina.
BOTH a Marina & Private dock, own two
boats Slip at a neighborhood marina
Both, equally - at marina and pvte dock. community marina
from the Virginia waters boat launch and private dock
mooring community marina
Have never been on Maryland waters community marina slip
From a Spa Creek City of Annapolis
mooring Community (private) boat dock
Boatel From Va. waters

Q3. WHEN ON A BOATING TRIP, WHAT ON-WATER ACTIVITIES DO YOU PARTICIPATE IN? (CHECK ALL THAT APPLY)

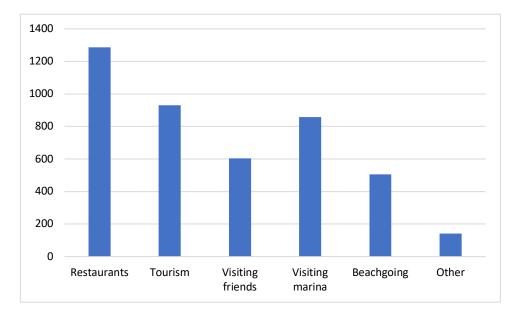


ANSWER CHOICES	RESPONSES	
Fishing/crabbing	744	36.2%
Water sports (Tubing, Water-skiing, etc.)	457	22.2%
Swimming	857	41.6%
Other (Please specify)	587	-
Total Responses: 1581		

Q3. Other Responses

WRITE-IN ANSWERS	RESPONSES
Anchor	35
Raft	24
Cruising	154
Sail	256
Camp	3
Restaurant	23
Rowing	4
Beach	2
Sightseeing	31
Birdwatching	7
Picnic	7
Race	40
Total Responses: 587	

Q4. WHEN ON A BOATING TRIP, WHAT ON-SHORE ACTIVITIES DO YOU PARTICIPATE IN? (CHECK ALL THAT APPLY)



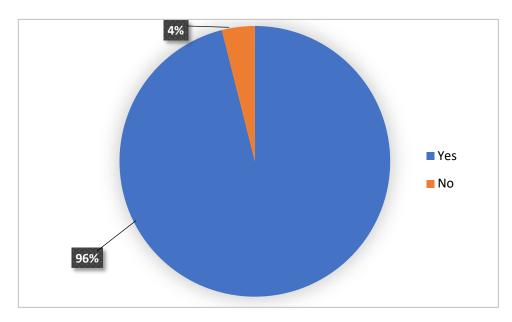
ANSWER CHOICES	RESPONSES	
Restaurants	1286	30.7%
Tourism	930	22.2%
Visiting friends	604	14.4%
Visiting marina	858	20.5%
Beachgoing	506	12.1%
Other (Please specify)	142	-
Total Responses: 1580		

Q4. Other Responses

WRITE-IN ANSWERS	RESPONSES
Sailing	11
Racing	3
Cruising	4
Anchoring	15
None	15
Camping	2
N/a	3
Shopping	5
Fishing	7
Hiking/nature walks	8
Rafting	4
Sailing	11
Total Responses: 142	

NOTE: This is a skip question. Respondents who answer "No" skip to Question 23.

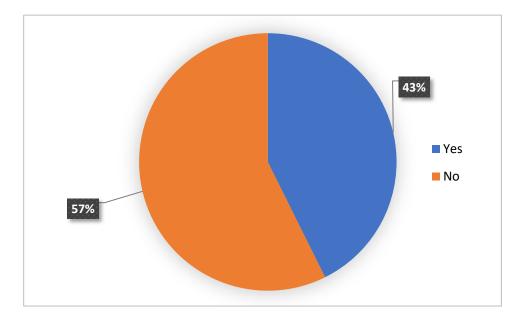
Q5. DOES YOUR HOUSEHOLD OWN A RECREATIONAL BOATING VESSEL THAT IS 26 FEET OR LONGER?



ANSWER CHOICES	RESPONSES	
Yes	1517	96.0%
No	62	3.9%
Total Responses: 1579		

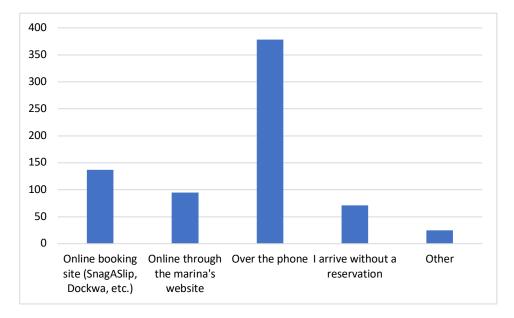
NOTE: This is a skip question. Respondents who answer "No" skip to Question 11.

Q6. WHEN OPERATING YOUR VESSEL THAT IS 26 FT OR LONGER, DO YOU EVER TRAVEL FROM YOUR HOME PORT TO MARYLAND ON-SHORE DESTINATIONS FOR VISITS UP TO 15 DAYS AND TIE UP TO A SLIP OR A MOORING?



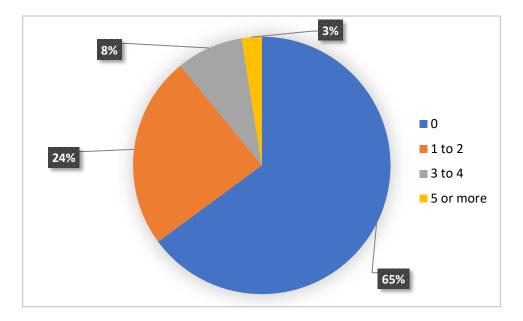
ANSWER CHOICES	RESPONSES	
Yes	646	42.7%
No	868	57.3%
Total Responses: 1514		

Q7. HOW DO YOU NORMALLY RESERVE A SLIP FOR YOUR 26 FT + VESSEL AT AN ON-SHORE DESTINATION?



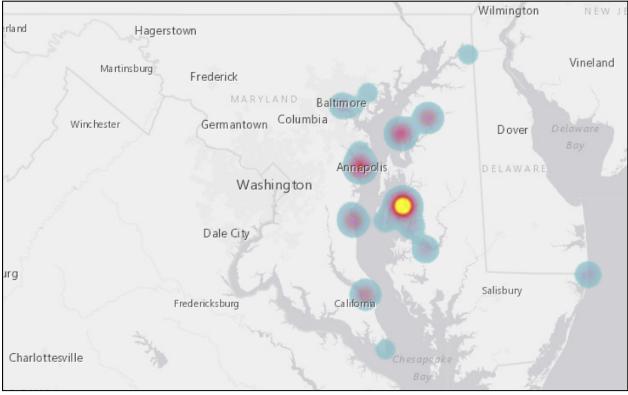
ANSWER CHOICES	RESPONSES	
Online booking site (SnagASlip, Dockwa, etc.)	137	19.3%
Online through the marina's website	95	13.4%
Over the phone	378	53.2%
I arrive without a reservation	71	10.0%
Other	30	4.2%
Total Responses: 711		

Q8. IN THE LAST 2 YEARS, HOW MANY TIMES HAVE YOU ATTEMPTED TO RESERVE OR OBTAIN A SLIP WITH YOUR 26FT + VESSEL AT A MARINA/YACHT CLUB, BUT WERE UNABLE TO DO SO BECAUSE OF NO ADDITIONAL CAPACITY?



ANSWER CHOICES	RESPONSES	
0	464	64.9%
1 to 2	173	24.2%
3 to 4	60	8.4%
5 or more	18	2.5%
Total Responses: 715		

Q8. FOR QUESTION 8, WHAT WAS THIS MOST RECENT DATE & LOCATION YOU WERE UNABLE TO RESERVE OR OBTAIN A SLIP (IF APPLICABLE).



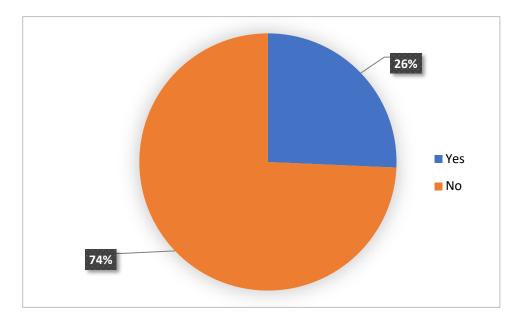
Heat map of locations where boaters reported being unable to reserve a slip due to no additional capacity.

WRITE-IN ANSWERS	RESPON	RESPONSES	
Annapolis	29	13.2%	
Baltimore	5	2.1%	
Cambridge	6	3.3%	
Chestertown	6	3.3%	
North Beach	13	6.1%	
Ocean City	5	2.1%	
Oxford	5	2.1%	
Rock Hall	22	10.5%	

Solomons	12	5.6%
Saint Michaels	86	39.0%
Tolchester	6	3.3%
Total Respondents: 222		

NOTE: This table includes locations that at least five respondents reported being unable to obtain a slip. Only respondents who reported being unable to obtain a slip in the last two years provided a response to this question.

Q9. IS THERE A SPECIFIC LOCATION IN MARYLAND THAT YOU'D LIKE TO VISIT WITH YOUR 26 FT + VESSEL BUT YOU EXPECT THERE TO BE LIMITED OR NO SLIP AVAILABILITY?

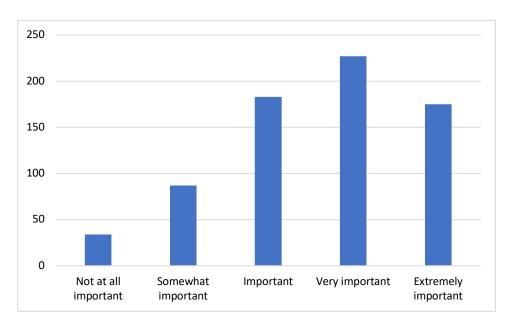


WRITE-IN ANSWERS	RESPONSES	
Yes	176	25.7%
No	509	74.3%
Total Responses: 685		

Q9. IF YES, WHAT LOCATION (CITY/TOWN) IS THIS?

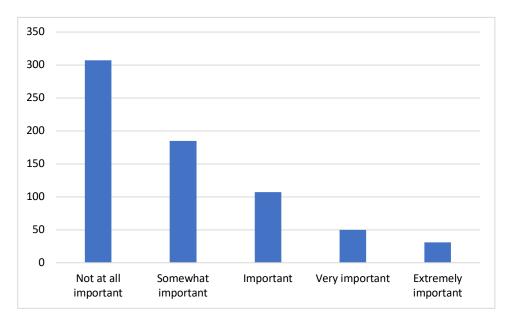
WRITE-IN ANSWERS	RESPONSES	
Annapolis	44	44.4%
Baltimore	8	8.1%
Ocean City	7	7.1%
Oxford	7	7.1%
Rock Hall	7	7.1%
Saint Michaels	26	26.2%
Total Respondents: 99		

NOTE: This table includes locations that at least five respondents reported.



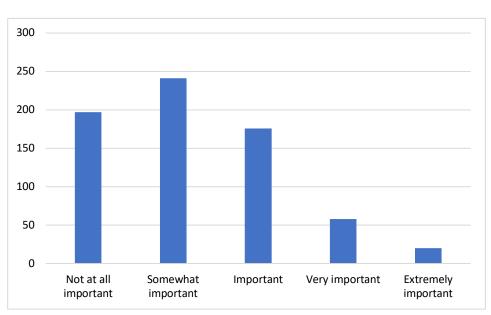
Restaurants

ANSWER CHOICES	RESPONSES	
Not at all important	34	4.8%
Somewhat important	87	12.3%
Important	183	25.9%
Very important	227	32.2%
Extremely important	175	24.8%
Total Responses: 706		



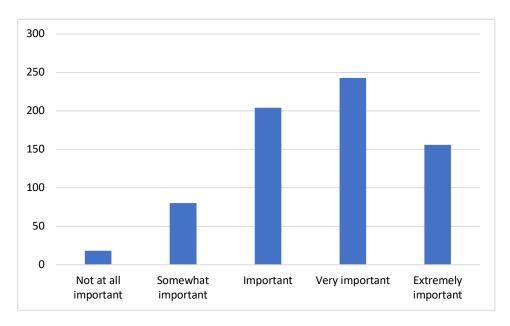
Entertainment (sport events, concerts)

ANSWER CHOICES	RESPONSES	
Not at all important	307	45.1%
Somewhat important	185	27.2%
Important	107	15.7%
Very important	50	7.4%
Extremely important	31	4.6%
Total Responses: 680		



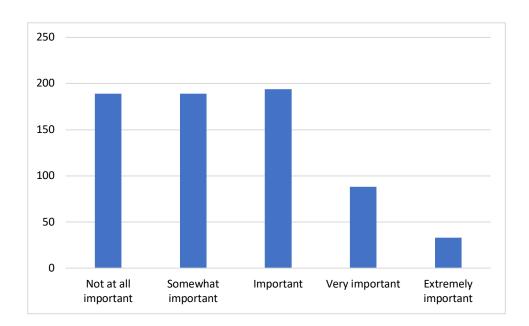
ANSWER CHOICES RESPONSES 197 28.5% Not at all important Somewhat important 241 34.8% Important 176 25.4% Very important 58 8.4% Extremely important 20 2.9% Total Responses: 692

Shopping



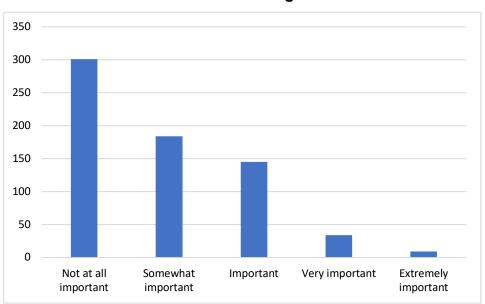
Marina services and amenities

ANSWER CHOICES	RESPONSES	
Not at all important	18	2.6%
Somewhat important	80	11.4%
Important	204	29.0%
Very important	243	34.6%
Extremely important	156	22.1%
Total Responses: 701		



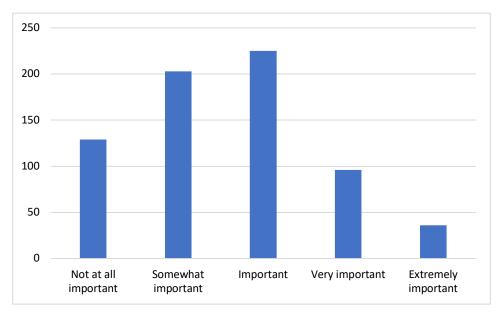
Rural setting

ANSWER CHOICES	RESPONSES	
Not at all important	189	27.3%
Somewhat important	189	27.3%
Important	194	28.0%
Very important	88	12.7%
Extremely important	33	4.8%
Total Responses: 693		



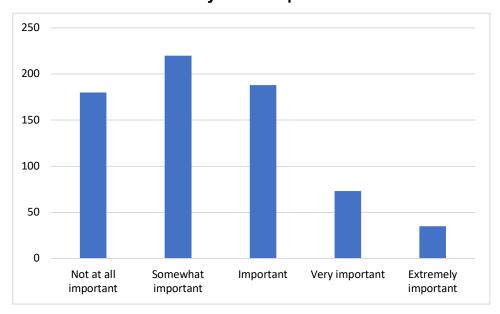
Urban setting

ANSWER CHOICES	RESPONSES	
Not at all important	301	44.7%
Somewhat important	184	27.3%
Important	145	21.6%
Very important	34	5.1%
Extremely important	9	1.3%
Total Responses: 673		



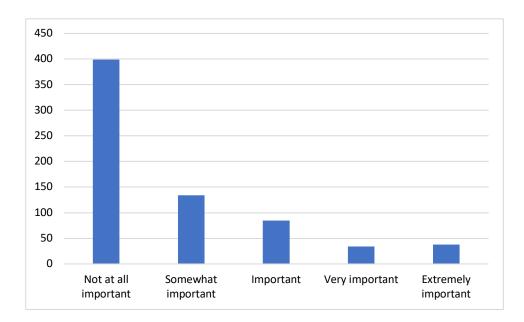
Nature-based amenities

ANSWER CHOICES	RESPONSES	
Not at all important	129	18.7%
Somewhat important	203	29.5%
Important	225	32.7%
Very important	96	13.9%
Extremely important	36	5.2%
Total Responses: 689		



Proximity to home port/dock

ANSWER CHOICES	RESPONSES	
Not at all important	180	25.9%
Somewhat important	220	31.6%
Important	188	27.0%
Very important	73	10.5%
Extremely important	35	5.0%
Total Responses: 696		



Proximity to fishing/crabbing

ANSWER CHOICES	RESPONSES	
Not at all important	399	57.8%
Somewhat important	134	19.4%
Important	85	12.2%
Very important	34	4.9%
Extremely important	38	5.5%
Total Responses: 690		

Q11. PLEASE CONSIDER YOUR MULTIPLE-DAY BOATING ACTIVITY FOR EACH TYPE OF TRIP LISTED BELOW. (IF YOU DID NOT TAKE THIS TYPE OF BOATING TRIP, PLEASE ENTER A "0".)

Multiple-day trips with your 26 ft + vessel(s) in the year 2020 that... involved visiting a Maryland on-shore destination.

of Multiple-Day Trips

SUMMARY	# OF TRIPS
Minimum	0
Q1 (25 th Percentile)	0
Median	0
Mean	2.0
Q3 (75 th Percentile)	3
Maximum	51
Total Responses: 1008	

Q11. PLEASE CONSIDER YOUR MULTIPLE-DAY BOATING ACTIVITY FOR EACH TYPE OF TRIP LISTED BELOW. (IF YOU DID NOT TAKE THIS TYPE OF BOATING TRIP, PLEASE ENTER A "0".)

Multiple-day trips with your 26 ft + vessel(s) in the year 2020 that... involved visiting a Maryland on-shore destination.

SUMMARY	# OF DAYS
Minimum	0
Q1 (25 th Percentile)	0
Median	2
Mean	5.1
Q3 (75 th Percentile)	6
Maximum	75

Q11. PLEASE CONSIDER YOUR MULTIPLE-DAY BOATING ACTIVITY FOR EACH TYPE OF TRIP LISTED BELOW. (IF YOU DID NOT TAKE THIS TYPE OF BOATING TRIP, PLEASE ENTER A "0".)

Multiple-day trips with your 26 ft + vessel(s) in the year 2020 that... did not involve visiting a Maryland on-shore destination.

#	of	Mu	ltiple	-Day	Trips
---	----	----	--------	------	-------

SUMMARY	# OF TRIPS
Minimum	0
Q1 (25 th Percentile)	0
Median	0
Mean	1.7
Q3 (75 th Percentile)	1
Maximum	51
Total Responses: 1535	

Multiple-day trips with your 26 ft + vessel(s) in the year 2020 that... did not involve visiting a Maryland on-shore destination.

SUMMARY	# OF DAYS
Minimum	0
Q1 (25 th Percentile)	0
Median	0
Mean	3.8
Q3 (75 th Percentile)	4
Maximum	60
Total Responses: 830	

Total # of Days on These Trips

Multiple-day trips with your 26 ft + vessel(s) in the year 2020 that... involved visiting an outside-of-Maryland on-shore destination.

SUMMARY	# OF TRIPS
Minimum	0
Q1 (25 th Percentile)	0
Median	0
Mean	0.6
Q3 (75 th Percentile)	0
Maximum	51
Total Responses: 1387	

of Multiple-Day Trips

Multiple-day trips with your 26 ft + vessel(s) in the year 2020 that... involved visiting an outside-of-Maryland on-shore destination.

SUMMARY	# OF DAYS
Minimum	0
Q1 (25 th Percentile)	0
Median	0
Mean	2.6
Q3 (75 th Percentile)	1
Maximum	100
Total Responses: 790	

Total # of Days on These Trips

Single-day trips with your 26 ft + vessel(s) in the year 2020 that ... involved visiting a Maryland on-shore destination.

of Single-Day Trips

SUMMARY	# OF TRIPS
Minimum	0
Q1 (25 th Percentile)	0
Median	2
Mean	6.0
Q3 (75 th Percentile)	8
Maximum	150
Total Responses: 1358	

Single-day trips with your 26 ft + vessel(s) in the year 2020 that ... did not involve visiting a Maryland on-shore destination.

of Single-Day Trips

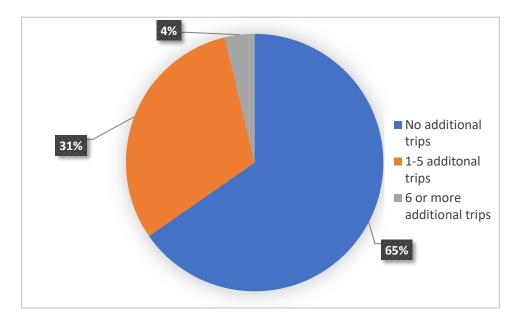
SUMMARY	# OF TRIPS
Minimum	0
Q1 (25 th Percentile)	0
Median	4
Mean	8.8
Q3 (75 th Percentile)	12
Maximum	150
Total Responses: 1277	

Single-day trips with your 26 ft + vessel(s) in the year 2020 that ... involved visiting an outside-of-Maryland on-shore destination.

of Single-Day Trips

SUMMARY	# OF TRIPS
Minimum	0
Q1 (25 th Percentile)	0
Median	0
Mean	0.9
Q3 (75 th Percentile)	0
Maximum	51
Total Responses: 1277	

Q13. DO YOU PLAN TO TAKE ANY ADDITIONAL BOATING TRIPS BETWEEN NOW AND THE END OF 2020?



ANSWER CHOICES	RESPONSES	
No additional trips	961	65.3%
1-5 additional trips	455	30.9%
6 or more additional trips	55	3.7%
Total Responses: 1471		

Multiple-day trips with your 26 ft + vessel(s) in the year 2019 that ... involved visiting a Maryland on-shore destination.

of Multiple-Day Trips

SUMMARY	# OF TRIPS
Minimum	0
Q1 (25 th Percentile)	0
Median	1
Mean	2.6
Mean Q3 (75 th Percentile)	2.6 3

Multiple-day trips with your 26 ft + vessel(s) in the year 2019 that... involved visiting a Maryland on-shore destination.

SUMMARY	# OF DAYS
Minimum	0
Q1 (25 th Percentile)	0
Median	3
Mean	6.4
Q3 (75 th Percentile)	8
Maximum	100
Total Responses: 946	

Total # of Days on These Trips

Multiple-day trips with your 26 ft + vessel(s) in the year 2019 that... did not involve visiting a Maryland on-shore destination.

of Multiple-Day Trips

SUMMARY	# OF TRIPS
Minimum	0
Q1 (25 th Percentile)	0
Median	0
Mean	2.4
Q3 (75 th Percentile)	2
Maximum	90
Total Responses: 799	

Multiple-day trips with your 26 ft + vessel(s) in the year 2019 that... did not involve visiting a Maryland on-shore destination.

SUMMARY	# OF DAYS
Minimum	0
Q1 (25 th Percentile)	0
Median	0
Mean	4.1
Q3 (75 th Percentile)	4
Maximum	90
Total Responses: 799	

Total # of Days on These Trips

Multiple-day trips with your 26 ft + vessel(s) in the year 2019 that... involved visiting an outside-of-Maryland on-shore destination.

of Multiple-Day Trips

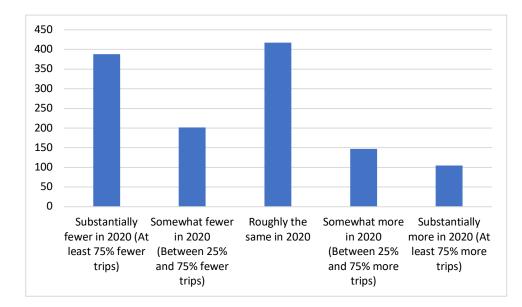
SUMMARY	# OF TRIPS
Minimum	0
Q1 (25 th Percentile)	0
Median	0
Mean	0.6
Q3 (75 th Percentile)	0
	0
Maximum	48

Multiple-day trips with your 26 ft + vessel(s) in the year 2019 that... involved visiting an outside-of-Maryland on-shore destination.

SUMMARY	# OF DAYS
Minimum	0
Q1 (25 th Percentile)	0
Median	0
Mean	3.3
Q3 (75 th Percentile)	1
Maximum	365
Total Responses: 763	

Total # of Days on These Trips

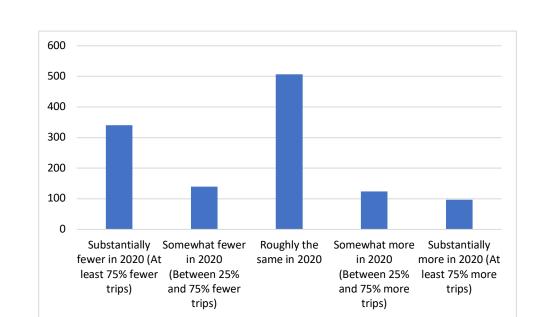
Q15. COMPARE YOUR SINGLE-DAY BOATING ACTIVITY FOR EACH TYPE OF TRIP LISTED BELOW.



Single-day trips with your 26 ft+ vessel(s) in the year 2020 compared to the year 2019 that... involved visiting a Maryland on-shore destination.

ANSWER CHOICES	RESPONSES	
Substantially fewer in 2020 (At least 75% fewer trips)	388	30.8%
Somewhat fewer in 2020 (Between 25% and 75%		
fewer trips)	202	16.0%
Roughly the same in 2020	417	33.1%
Somewhat more in 2020 (Between 25% and 75%		
more trips)	147	11.7%
Substantially more in 2020 (At least 75% more trips)	105	8.3%
Total Responses: 1259		

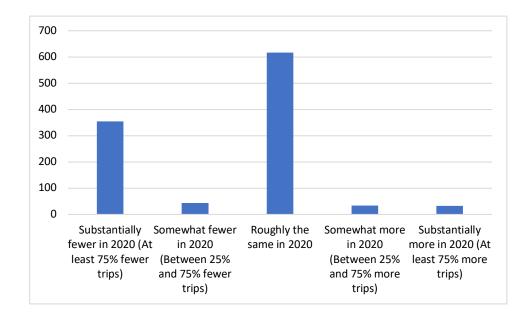
Q15. COMPARE YOUR SINGLE-DAY BOATING ACTIVITY FOR EACH TYPE OF TRIP LISTED BELOW.



Single-day trips with your 26 ft+ vessel(s) in the year 2020 compared to the year 2019 that... did not involve visiting a Maryland on-shore destination.

ANSWER CHOICES	RESPONSES	
Substantially fewer in 2020 (At least 75% fewer trips)	340	28.2%
Somewhat fewer in 2020 (Between 25% and 75% fewer trips)	140	11.6%
Roughly the same in 2020	507	41.0%
Somewhat more in 2020 (Between 25% and 75% more trips)	124	10.3%
Substantially more in 2020 (At least 75% more trips)	97	8.0%
Total Responses: 1208		

Q15. COMPARE YOUR SINGLE-DAY BOATING ACTIVITY FOR EACH TYPE OF TRIP LISTED BELOW.

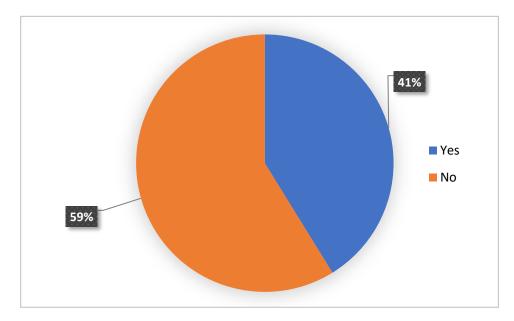


Single-day trips with your 26 ft+ vessel(s) in the year 2020 compared to the year 2019 that... involved visiting an outside of Maryland on-shore destination.

ANSWER CHOICES	RESPONSES	
Substantially fewer in 2020 (At least 75% fewer trips)	354	32.7%
Somewhat fewer in 2020 (Between 25% and 75% fewer trips)	44	4.1%
Roughly the same in 2020	617	57.0%
Somewhat more in 2020 (Between 25% and 75% more trips)	34	3.1%
Substantially more in 2020 (At least 75% more trips)	32	3.0%
Total Responses: 1081		

NOTE: This is a skip question. Respondents who answer "No" skip to Question 23.

Q16. DID YOU TAKE A BOATING TRIP WITH YOUR 26 FT + VESSEL TO AN ON-SHORE DESTINATION IN 2020?



ANSWER CHOICES	RESPONSES	
Yes	572	41.2%
No	816	58.8%
Total Responses: 1388		

NOTE: For questions 17-20, respondents are asked to consider a recent boating trip. Respondents were asked to consider either a multiple or single-day trip closest to one of the following dates: June 15, July 15, or August 15, 2020. Participants were randomly assigned which type of trip and which date to consider. For these questions, responses are reported aggregated by trip type; single-day or multiple-day trips. Respondents who did not include start and end dates for their trip or provided information on a trip longer than 15 days are not included in this analysis. The intention of this work is to explore transient boating trips – trips to a destination in a 26 feet or longer vessel traveling to a place for up to 15 days.

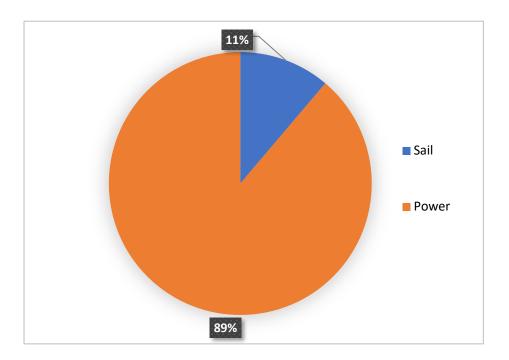
Q17. PLEASE PROVIDE THE FOLLOWING DETAILS OF THIS TRIP WITH YOUR 26 FT + VESSEL:

SUMMARY	FEET
Minimum	26
Q1 (25 th Percentile)	27
Median	30
Mean	31.4
Q3 (75 th Percentile)	33
Maximum	57
Total Responses: 197	

Length of Vessel for Reported Single-Day Trips

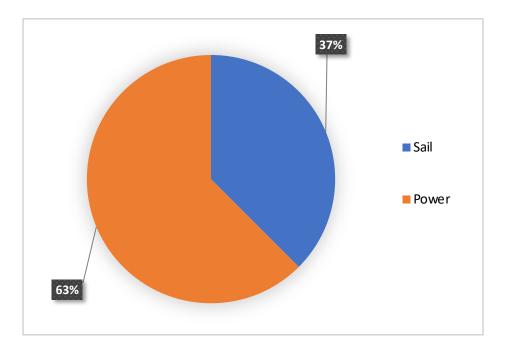
Length of Vessel for reported <u>Multiple-Day Trips</u>

SUMMARY	FEET
Minimum	26
Q1 (25 th Percentile)	31
Median	35
Mean	36.1
Q3 (75 th Percentile)	41
Maximum	60
Total Responses: 296	



Type of Vessel (Power/Sail?) for Reported Single-Day Trips

ANSWER CHOICES	RESPONSES	
Sail	22	11.2%
Power	175	88.8%
Total Responses: 197		



Type of Vessel (Power/Sail?) for Reported Multiple-Day Trips

ANSWER CHOICES	RESPONSES	
Sail	111	37.5%
Power	185	62.5%
Total Responses: 296		

Departure Location (City/Town) for Reported Single-Day Trips

WRITE-IN ANSWERS	RESPONSES	
Annapolis	30	15.4%
Edgewater	15	7.8%
Middle River	13	6.7%
Pasadena	14	7.2%
Other	123	63.1%
Total Respondents: 195		

Departure Location (City/Town) for Reported Multiple-Day Trips

WRITE-IN ANSWERS	RESPONSES	
Annapolis	50	16.8%
Edgewater	14	4.7%
Middle River	22	7.4%
Pasadena	18	6.4%
Severna Park	15	5.1%
Other	120	40.4%
Total Respondents: 297		

Primary Destination (City/Town) for Reported Single-Day Trips

WRITE-IN ANSWERS	RESPONSES	
Annapolis	37	19.4%
Rock Hall	14	7.3%
St. Michaels	16	8.4%
Other	124	64.9%
Total Respondents: 191		

Primary Destination (City/Town) for Reported Multiple-Day Trips

WRITE-IN ANSWERS	RESPONSES	
Annapolis	26	8.8%
Cambridge	11	3.7%
Oxford	10	3.4%
Rock Hall	42	14.2%
Solomons	17	5.8%
St. Michaels	61	20.7%
Other	128	43.4%
Total Respondents: 295		

Other Destination A (City/Town) for Reported Single-Day Trips

WRITE-IN ANSWERS	RESPONSES	
Other Total Respondents: 58	58	100%

Other Destination A (City/Town) for Reported Multiple-Day Trips

WRITE-IN ANSWERS	RESPONSES	
Annapolis	12	9.2%
Rock Hall	11	8.4%
St. Michaels	14	10.7%
Other	94	71.8%
Total Respondents: 131		

Other Destination B (City/Town) for Reported Single-Day Trips

WRITE-IN ANSWERS	RESPONSES	
Other	29	100%
Total Respondents: 29		

Other Destination B (City/Town) for Reported Multiple-Day Trips

WRITE-IN ANSWERS	RESPONSES	
Other	70	100%
Total Respondents: 70		

Party Size (Including Yourself) for Reported Single-Day Trips

WRITE-IN ANSWERS	RESPONSES	
1	2	1.0%
2	48	25.1%
3	16	8.4%
4	67	35.1%
5	17	8.9%
6	28	14.7%
7 or Greater	13	6.8%
Total Respondents: 191		

Party Size (Including Yourself) for Reported <u>Multiple-Day Trips</u>

WRITE-IN ANSWERS	RESPONSES	
1	9	3.1%
2	177	60.8%
3	16	5.5%
4	51	17.5%
5	11	3.8%
6	16	5.5%
7 or Greater	11	3.8%
Total Respondents: 291		

Total Round-Trip Miles on Water for Reported Single-Day Trips

SUMMARY	# OF MILES
Minimum	2
Q1 (25 th Percentile)	16
Median	25
Mean	36.1
Q3 (75 th Percentile)	45
Maximum	300
Total Responses: 177	

Total Round-Trip Miles on Water for Reported Multiple-Day Trips

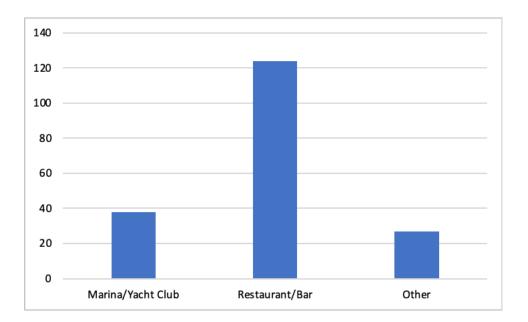
SUMMARY	# OF MILES
Minimum	4
Q1 (25 th Percentile)	35
Median	60
Mean	83.9
Q3 (75 th Percentile)	95
Maximum	2004
Total Responses: 264	

Q18. PLEASE PROVIDE THE DEPARTURE AND RETURN DATES, FOR THIS TRIP WITH YOUR 26 FT + VESSEL.

of Days for Reported <u>Multiple-Day Trips</u>

SUMMARY	# OF MILES
Minimum	2
Q1 (25 th Percentile)	3
Median	3.5
Mean	83.9
Q3 (75 th Percentile)	5
Maximum	14
Total Responses: 298	

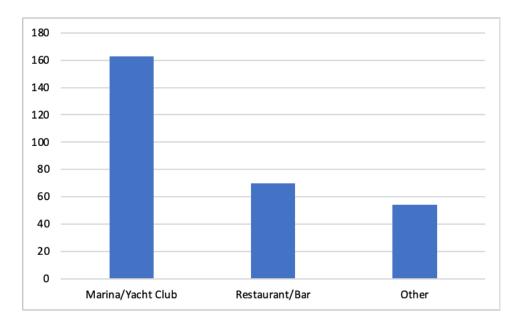
Q19. WHAT TYPE OF ON-SHORE DESTINATION(S) DID YOU DOCK OR MOOR AT? (CHECK ALL THAT APPLY)



On-Shore Destinations for Reported Single-Day Trips

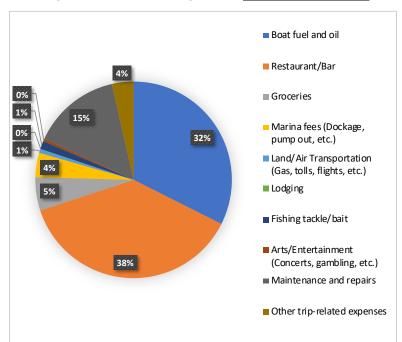
ANSWER CHOICES	RESPONSES	
Marina/Yacht Club	38	20.1%
Restaurant/Bar	124	65.6%
Other	27	14.3%

Q19. WHAT TYPE OF ON-SHORE DESTINATION(S) DID YOU DOCK OR MOOR AT? (CHECK ALL THAT APPLY)



On-Shore Destinations for Reported Multiple-Day Trips

ANSWER CHOICES	RESPONSES	
Marina/Yacht Club	163	56.8%
Restaurant/Bar	70	24.4%
Other	54	18.8%



Expenditures for Reported Single-Day Trips

SUMMARY	MEAN (\$)
Boat fuel and oil	\$ 96.11
Restaurant/Bar	\$111.27
Groceries	\$ 16.28
Marina fees (Dockage, pump out, etc.)	\$ 11.87
Land/Air Transportation (Gas, tolls, flights, etc.)	\$ 1.98
Lodging	\$ -
Fishing tackle/bait	\$ 3.99
Arts/Entertainment (Concerts, gambling, etc.)	\$ 1.28
Maintenance and repairs	\$ 43.18
Other trip-related expenses	\$ 10.55
TOTAL TRIP EXPENDITURES	\$296.51
Total Responses: 188	

Boat fuel and oil		
SUMMARY	AMOUNT	
Minimum	\$ 0	
Q1 (25 th Percentile)	\$ 20	
Median	\$ 50	
Mean	\$ 96.11	
Q3 (75 th Percentile)	\$ 110	
Maximum	\$ 700	
Total Responses: 188		

Expenditures for Reported Single-Day Trips

Restaurant/Bar	
SUMMARY	AMOUNT
Minimum	\$ 0
Q1 (25 th Percentile)	\$ 50
Median	\$ 100
Mean	\$ 111.27
Q3 (75 th Percentile)	\$ 150
Maximum	\$ 600
Total Responses: 188	

Groceries

SUMMARY	AMOUNT
Minimum	\$ 0
Q1 (25 th Percentile)	\$ 0
Median	\$ 0
Mean	\$ 16.28
Q3 (75 th Percentile)	\$ 25
Maximum	\$ 200
Total Responses: 188	

Marina fees (Dockage, pump out, etc.)

SUMMARY	AMOUNT
Minimum	\$ O
Q1 (25 th Percentile)	\$ O
Median	\$ O
Mean	\$ 11.87
Q3 (75 th Percentile)	\$ O
Maximum	\$ 450
Total Responses: 188	

Land/Air Transportation (Gas, tolls, flights, etc.)

SUMMARY	AMOUNT
Minimum	\$ 0
Q1 (25 th Percentile)	\$ 0
Median	\$ 0
Mean	\$ 3.47
Q3 (75 th Percentile)	\$ 0
Maximum	\$ 50
Total Responses: 188	

Lodging	
SUMMARY	AMOUNT
Minimum	\$ 0
Q1 (25 th Percentile)	\$ 0
Median	\$ 0
Mean	\$ 0
Q3 (75 th Percentile)	\$ 0
Maximum	\$ 0
Total Responses: 188	

Fishing tackle/bait	
SUMMARY	AMOUNT
Minimum	\$ 0
Q1 (25 th Percentile)	\$ 0
Median	\$ O
Mean	\$ 3.99
Q3 (75 th Percentile)	\$ 0
Maximum	\$ 150
Total Responses: 188	

Expenditures for Reported Single-Day Trips

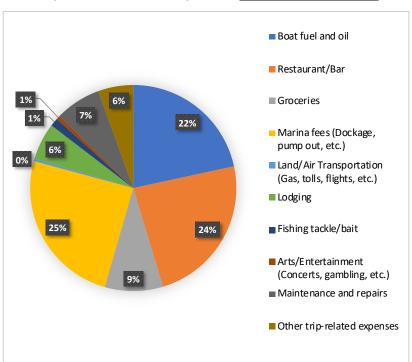
Maintenance and repairs		
SUMMARY	AMOUNT	
Minimum	\$0	
Q1 (25 th Percentile)	\$ O	
Median	\$ 0	
Mean	\$ 43.18	
Q3 (75 th Percentile)	\$ 0	
Maximum	\$ 5000	
Total Responses: 188		

Arts/Entertainment (Concerts, gambling, etc.)

SUMMARY	AMOUNT
Minimum	\$ 0
Q1 (25 th Percentile)	\$ 0
Median	\$ 0
Mean	\$ 1.28
Q3 (75 th Percentile)	\$ 0
Maximum	\$ 100
Total Responses: 188	

Other trip-related expenses

SUMMARY	AMOUNT
Minimum	\$ O
Q1 (25 th Percentile)	\$ 0
Median	\$ O
Mean	\$ 10.55
Q3 (75 th Percentile)	\$ 0
Maximum	\$ 400
Total Responses: 188	



Expenditures for Reported Multiple-Day Trips

SUMMARY	MEAN (\$)
Boat fuel and oil	\$ 196.48
Restaurant/Bar	\$ 215.49
Groceries	\$ 83.26
Marina fees (Dockage, pump out, etc.)	\$ 225.02
Land/Air Transportation (Gas, tolls, flights, etc.)	\$ 3.47
Lodging	\$ 52.74
Fishing tackle/bait	\$ 11.80
Arts/Entertainment (Concerts, gambling, etc.)	\$ 5.54
Maintenance and repairs	\$ 65.15
Other trip-related expenses	\$ 50.19
TOTAL TRIP EXPENDITURES Total Responses: 289	\$ 909.15

Boat fuel and oil			
SUMMARY	AMOUNT		
Minimum	\$ 0		
Q1 (25 th Percentile)	\$ 20		
Median	\$ 100		
Mean	\$ 196.48		
Q3 (75 th Percentile)	\$ 250		
Maximum	\$ 2400		
Total Responses: 289			

Expenditures for Reported <u>Multiple-Day Trips</u>

Restaurant/Bar			
SUMMARY	AMOUNT		
Minimum	\$ 0		
Q1 (25 th Percentile)	\$ 32.7		
Median	\$ 50		
Mean	\$ 95.8		
Q3 (75 th Percentile)	\$ 112		
Maximum	\$ 2000		
Total Responses: 289			

Groceries

SUMMARY	AMOUNT
Minimum	\$ 0
Q1 (25 th Percentile)	\$ 10
Median	\$ 50
Mean	\$ 83.26
Q3 (75 th Percentile)	\$ 100
Maximum	\$ 1000
Total Responses: 289	

Marina fees (Dockage, pump out, etc.)

SUMMARY	AMOUNT
Minimum	\$ O
Q1 (25 th Percentile)	\$ 20
Median	\$ 120
Mean	\$ 225.02
Q3 (75 th Percentile)	\$ 255
Maximum	\$ 8000
Total Responses: 289	

Land/Air Transportation (Gas, tolls, flights, etc.)

SUMMARY	AMOUNT
Minimum	\$ 0
Q1 (25 th Percentile)	\$ 0
Median	\$ 0
Mean	\$ 3.47
Q3 (75 th Percentile)	\$ 0
Maximum	\$ 100
Total Responses: 289	

	_		
Lod	gi	ng	

SUMMARY	AMOUNT
Minimum	\$ 0
Q1 (25 th Percentile)	\$ 0
Median	\$ 0
Mean	\$ 52.74
Q3 (75 th Percentile)	\$ O
Maximum	\$ 3200
Total Responses: 289	

Fishing tackle/bait	
SUMMARY	AMOUNT
Minimum	\$ 0
Q1 (25 th Percentile)	\$ 0
Median	\$ 0
Mean	\$ 11.80
Q3 (75 th Percentile)	\$ 0
Maximum	\$ 1200
Total Responses: 289	

Multiple-Day Trips

Maintenance and repairs		
SUMMARY	AMOUNT	
Minimum	\$ 0	
Q1 (25 th Percentile)	\$0	
Median	\$ 0	
Mean	\$ 65.15	
Q3 (75 th Percentile)	\$0	
Maximum	\$ 4407.64	
Total Responses: 289		

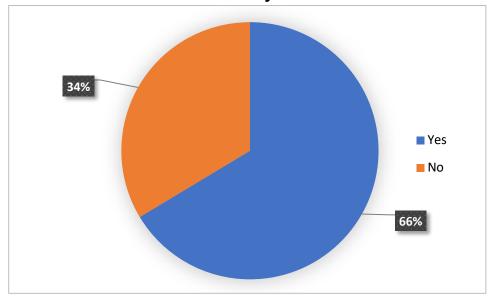
Arts/Entertainment (Concerts, gambling, etc.)

SUMMARY	AMOUNT
Minimum	\$ 0
Q1 (25 th Percentile)	\$ 0
Median	\$ 0
Mean	\$ 5.54
Q3 (75 th Percentile)	\$ 0
Maximum	\$ 500
Total Responses: 289	

Other trip-related expenses

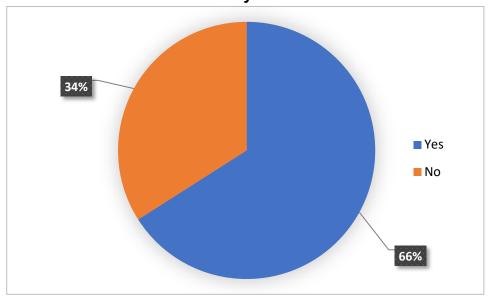
SUMMARY	AMOUNT
Minimum	\$ 0
Q1 (25 th Percentile)	\$ 0
Median	\$ 50.19
Mean	\$ 0
Q3 (75 th Percentile)	\$ 50
Maximum	\$ 1500
Total Responses: 289	

The COVID-19 pandemic affected... the number of multiple-day boating trips I took this year.

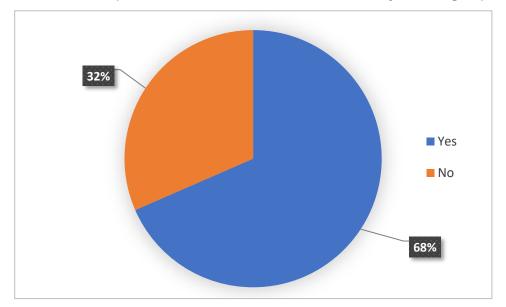


ANSWER CHOICES	RESPONSES	
Yes	539	66.4%
No	273	33.6%
Total Responses: 812		

The COVID-19 pandemic affected... the number of single-day boating trips I took this year.

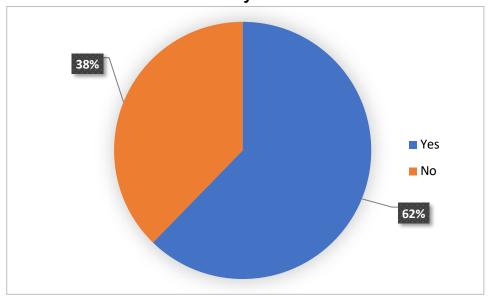


ANSWER CHOICES	RESPONSES	
Yes	541	66.0%
No	279	34.0%
Total Responses: 820		

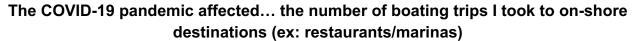


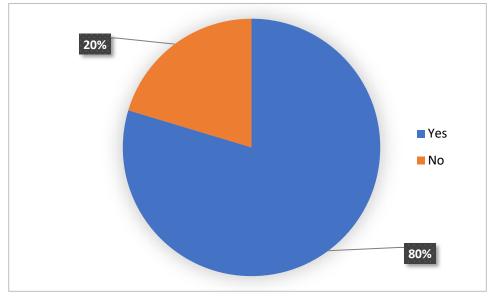
ANSWER CHOICES	RESPONSES	
Yes	560	68.5%
No	258	31.5%
Total Responses: 818		

The COVID-19 pandemic affected... how much I spent on a typical boating trip this year.

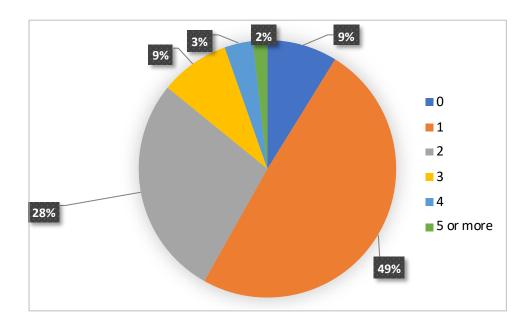


ANSWER CHOICES	RESPONSES	
Yes	507	62.3%
No	307	37.7%
Total Responses: 814		





ANSWER CHOICES	RESPONSES	
Yes	650	79.7%
No	166	20.3%
Total Responses: 816		

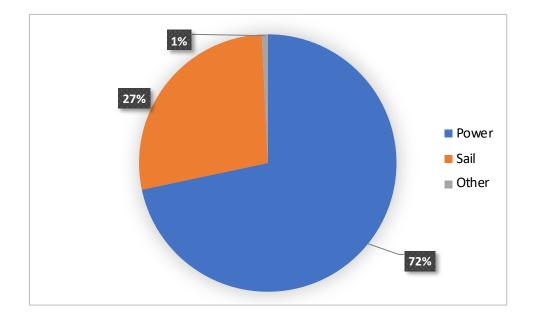


Q23. HOW MANY VESSELS ARE REGISTERED TO YOUR HOUSEHOLD IN MARYLAND?

WRITE-IN ANSWERS	RESPONSES	
0	121	8.8%
1	677	49.3%
2	380	27.7%
3	120	8.7%
4	49	3.6%
5 or more	25	1.8%
Total Responses: 1372		

Q24. TELL US ABOUT YOUR VESSELS:

Boat Used Most Often



Power/Sail/Other

ANSWER CHOICES	RESPONSES	
Power	964	71.7%
Sail	371	27.6%
Other	10	0.7%
Total Responses: 1345		

Q24. TELL US ABOUT YOUR VESSELS:

Boat Used Most Often

Boat Age

SUMMARY	YEARS
Minimum	0
Q1 (25 th Percentile)	13
Median	20
Mean	21.8
Q3 (75 th Percentile)	32
Maximum	72
Total Responses: 1307	

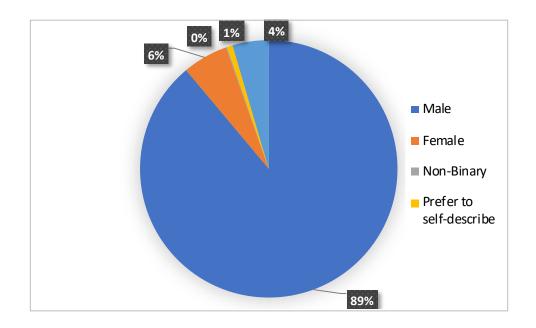
Q24. TELL US ABOUT YOUR VESSELS:

Boat Used Most Often

Years of Ownership

SUMMARY	YEARS
Minimum	0
Q1 (25 th Percentile)	2
Median	5
Mean	8.5
Q3 (75 th Percentile)	14
Maximum	55
Total Responses: 1307	

Q25. WHAT IS YOUR GENDER?



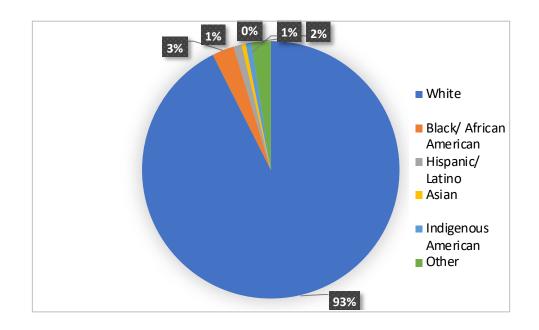
ANSWER CHOICES	RESPONSES	
Male	1250	88.8%
Female	81	5.8%
Non-binary	2	0.1%
Prefer to self-describe	10	0.7%
Prefer not to say	64	4.5%
Total Responses: 1407		

Q26. IN WHAT YEAR WERE YOU BORN?

Age

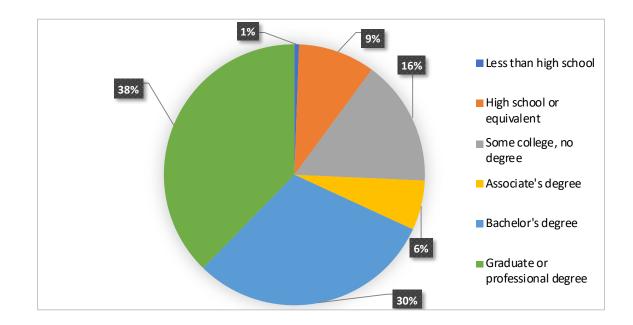
SUMMARY	YEARS
Minimum	29
Q1 (25 th Percentile)	54
Median	62
Mean	61.5
Q3 (75 th Percentile)	70
Maximum	93
Total Responses: 1341	



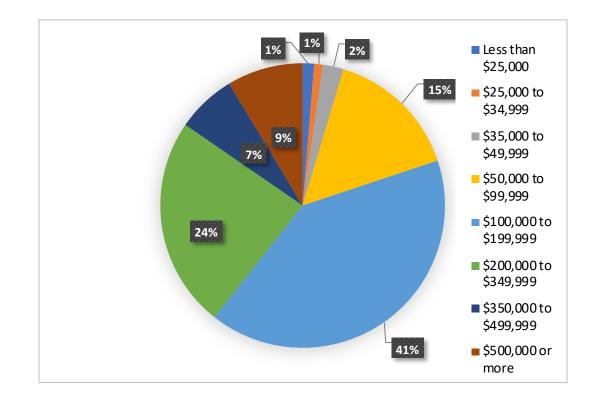


ANSWER CHOICES	RESPONSES	
White	1270	92.6%
Black/African American	38	2.8%
Hispanic/Latino	14	1.0%
Asian	7	0.5%
Indigenous American	10	0.7%
Other	33	2.4%
Total Responses: 1372		

Q28. WHAT IS THE HIGHEST DEGREE OR LEVEL OF SCHOOLING YOU HAVE COMPLETED?



ANSWER CHOICES	RESPONSES	
Less than high school	8	0.6%
High school or equivalent	133	9.5%
Some college, no degree	218	15.6%
Associates degree	86	6.2%
Bachelor's degree	425	30.4%
Graduate or professional degree	526	37.7%
Total Responses: 1396		



Q29. WHAT IS YOUR APPROXIMATE ANNUAL HOUSEHOLD INCOME?

ANSWER CHOICES	RESPONSES	
Less than \$25,000	16	1.3%
\$25,000 to \$34,999	12	1.0%
\$35,000 to \$49,999	29	2.4%
\$50,000 to \$99,999	187	15.2%
\$100,000 to \$199,999	500	40.7%
\$200,000 to \$349,999	294	24.0%
\$350,000 to \$499,999	83	6.8%
\$500,000 or more	106	8.6%
Total Responses: 1227		

MARYLAND MARINA SURVEY

METHODOLOGY

A survey of marinas located in Maryland (henceforth – Maryland Marina Survey) was conducted by telephone between September 2020 and November 2020, with a follow-up mailing occurring in April 2021. This survey requested information from marina owner/operators on the number of slips, marina amenities, planned expansions/renovations, and other aspects of their facilities (see *Appendix B* for the survey instrument).

The Maryland Marina Survey was developed following the Dillman approach for telephone surveys (Dillman, 2011). The sample frame consisted of the 540 marinas located within the state of Maryland that are listed in the MDDNR database. Contact information in the form of marina names, addresses, and telephone numbers were obtained from the MDDNR. For the Maryland Marina Survey, a telephone survey approach was selected as the preferred sampling method, as marinas are businesses that frequently use the telephone for customer service purposes. The survey instrument was developed by the MSU PEARL project team in conjunction with the Maryland DNR, with additional feedback provided by the Maryland Marine Trades Association. The MSU PEARL project team conducted survey pre-testing through a video call with a Maryland marina owner/operator to examine any issues with flow and comprehension. Minor adjustments to question phrasing were made to the survey based on pre-testing feedback.

Telephone survey contacts occurred during the months of September - November 2020. This period – after the conclusion of the busy summer boating season – was identified as an optimal time to contact marinas. All surveys were conducted by MSU PEARL research technicians who were trained by an MSU PEARL Research Associate with experience in social science survey methods. A standardized script was developed and used to administer surveys and leave voicemails if necessary. Each marina in the sample was contacted up to three times by phone. Voicemails were left after initial calls if there was an option. The voicemail script included brief information about the study and a call back number to reach the MSU PEARL project team. Follow-up phone contacts occurred on different days and at different times of day to increase the chances of a successful contact. All calls occurred on weekdays during normal business hours.

A total of 255 Maryland marinas were randomly sampled from the sample frame of 540 marinas in the Maryland DNR marina database. During the initial telephone phase of the survey, survey personnel noted that many marina personnel stated that they were either uncomfortable or unable to answer the questions in the survey. To increase the survey response rate, the MSU PEARL project team conducted a one-time follow up mailing. This mail contact included an invitation letter describing the project, a hard copy survey, and a postage-paid Business Reply Mail envelope. A total of 102 surveys were completed; 42 were completed by telephone and 60 were completed by mail. This represents a response rate of 40%.

NOTE: A total of 26 individuals responding to this survey indicated that their facilities do not serve transient boaters and therefore did not complete the survey questions.

Q1. HOW MANY WET SLIPS ARE THERE AT THE FACILITY?

SUMMARY	# OF SLIPS
Minimum	0
Q1 (25 th Percentile)	32.7
Median	64.5
Mean	95.8
Q3 (75 th Percentile)	112
Maximum	520
Total Responses: 74	

Q2. HOW MANY WET SLIPS CAN ACCOMMODATE VESSELS... LESS THAN 26FT LONG?

SUMMARY	# OF SLIPS
Minimum	0
Q1 (25 th Percentile)	6.5
Median	21
Mean	36.1
Q3 (75 th Percentile)	39.5
Maximum	246
Total Responses: 69	

Q2. HOW MANY WET SLIPS CAN ACCOMMODATE VESSELS... BETWEEN 26 AND 40FT LONG?

SUMMARY	# OF SLIPS
Minimum	0
Q1 (25 th Percentile)	11.2
Median	28.5
Mean	52
Q3 (75 th Percentile)	64.7
Maximum	350
Total Responses: 67	

Q2. HOW MANY WET SLIPS CAN ACCOMMODATE VESSELS... BETWEEN 40 AND 65FT LONG?

SUMMARY	# OF SLIPS
Minimum	0
Q1 (25 th Percentile)	0
Median	6
Mean	19.7
Q3 (75 th Percentile)	27
Maximum	168
Total Responses: 70	

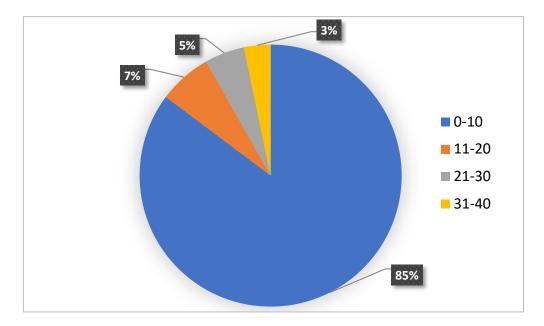
Q2. HOW MANY WET SLIPS CAN ACCOMMODATE VESSELS... GREATER THAN 65FT LONG?

SUMMARY	# OF SLIPS
Minimum	0
Q1 (25 th Percentile)	0
Median	0
Mean	3.5
Q3 (75 th Percentile)	1.5
Maximum	103
Total Responses: 69	

Q3. HOW MANY OF THE FACILITY'S WET SLIPS ARE TYPICALLY USED FOR SEASONAL RENTAL?

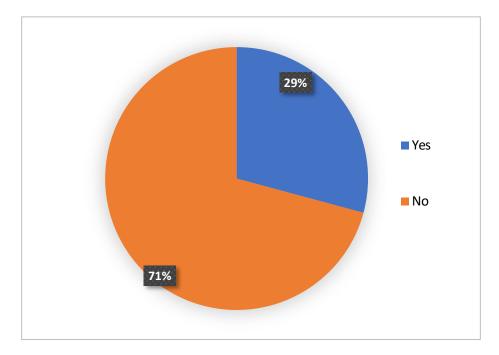
SUMMARY	# OF SLIPS
Minimum	0
Q1 (25 th Percentile)	6.5
Median	24
Mean	52.2
Q3 (75 th Percentile)	62
Maximum	375
Total Responses: 57	

Q4. IN A TYPICAL WEEK, HOW MANY SLIPS BOOKED FOR SEASONAL RENTAL BECOME AVAILABLE FOR SHORT-TERM RENTAL? (NOTE: "SHORT-TERM" REFERS TO RENTALS UP TO 15 DAYS.)



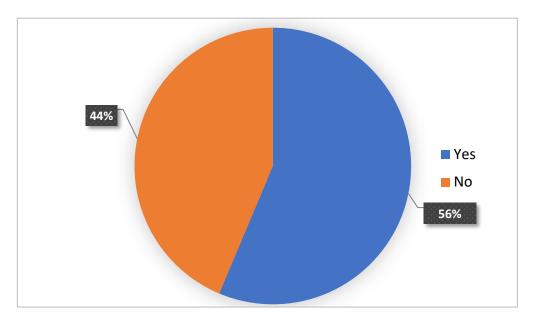
ANSWER CHOICES	RESPONSES	
0-10	50	84.7%
11-20	4	6.7%
21-30	3	5.0%
31-40	2	3.4%
Total Responses: 59		

Q5. DOES THE FACILITY ACCEPT SHORT-TERM SPACE RENTALS WHEN AT OR OVER SLIP CAPACITY?



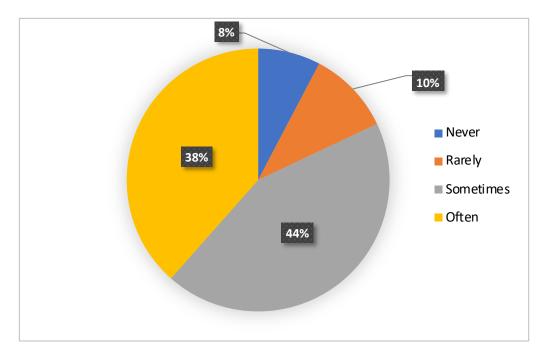
ANSWER CHOICES	RESPONSES	
Yes	21	29.2%
No	51	70.8%
Total Responses: 72		

Q6. IS THE FACILITY EVER UNABLE TO HOST ADDITIONAL SHORT-TERM RENTERS DUE TO LACK OF SPACE?



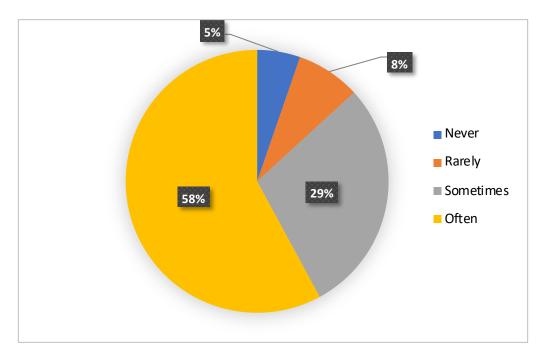
ANSWER CHOICES	RESPONSES	
Yes	39	56.5%
No	30	43.5%
Total Responses: 69		

Q6. [FOLLOW UP IF MARINA ANSWERED "YES" TO QUESTION 6] IF THE FACILITY IS EVER UNABLE TO HOST ADDITIONAL SHORT-TERM RENTERS DUE TO LACK OF SPACE, HOW OFTEN DOES THIS OCCUR ON A TYPICAL SUMMER WEEKEND?



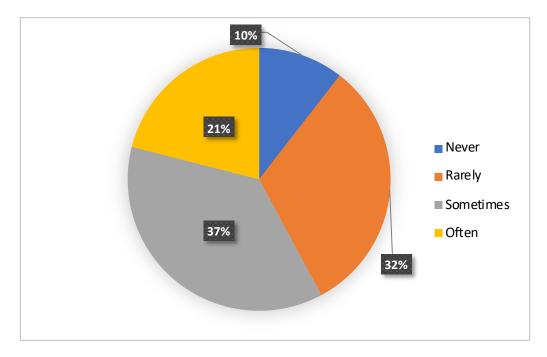
ANSWER CHOICES	RESPONSES	
Never	3	7.7%
Rarely	4	10.3%
Sometimes	17	43.6%
Often	15	38.5%
Total Responses: 39		

Q6. [FOLLOW UP IF MARINA ANSWERED "YES" TO QUESTION 6] IF THE FACILITY IS EVER UNABLE TO HOST ADDITIONAL SHORT-TERM RENTERS DUE TO LACK OF SPACE, HOW OFTEN DOES THIS OCCUR ON A TYPICAL SUMMER HOLIDAY WEEKEND?



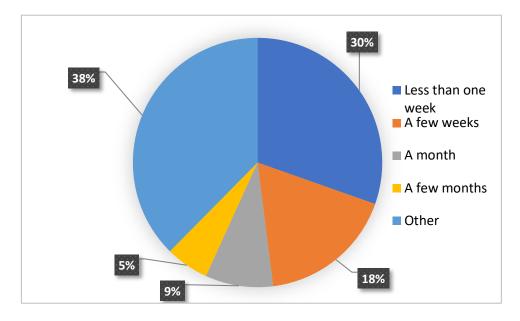
ANSWER CHOICES	RESPONSES	
Never	2	5.3%
Rarely	3	7.9%
Sometimes	11	28.9%
Often	22	57.9%
Total Responses: 38		

Q6. [FOLLOW UP IF MARINA ANSWERED "YES" TO QUESTION 6] IF THE FACILITY IS EVER UNABLE TO HOST ADDITIONAL SHORT-TERM RENTERS DUE TO LACK OF SPACE, HOW OFTEN DOES THIS OCCUR ON A TYPICAL SUMMER WEEKDAY?



ANSWER CHOICES	RESPONSES	
Never	4	10.5%
Rarely	12	31.6%
Sometimes	14	36.8%
Often	8	21.0%
Total Responses: 38		

Q7. ABOUT HOW FAR IN ADVANCE DO SHORT-TERM RENTERS TYPICALLY BOOK SLIPS? (CHECK ALL THAT APPLY)

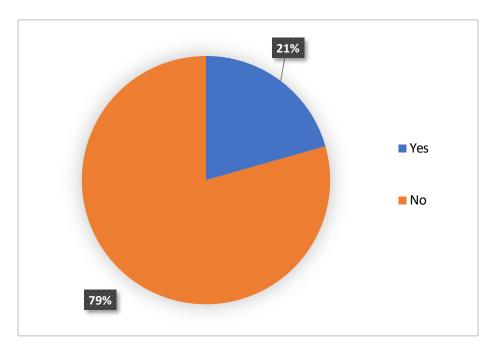


ANSWER CHOICES	RESPON	SES
Less than one week	37	30.1%
A few weeks	22	17.9%
A month	11	8.9%
A few months	6	4.8%
Other	47	38.2%
Total Responses: 68		

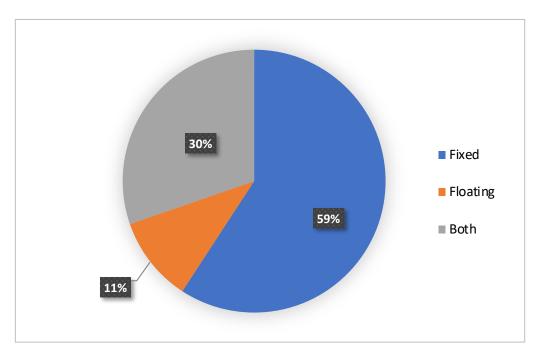
Q7. Other Responses

n/a	at least a month in advance
none	no reservations
no short term	up til the last minute
n/a	a couple days
no short term space	3 days
when needed in season	the day or day before
not offered	they don't
a few hours to a week	any time, day of or day before, they don't do a lot of transient business
for the day - a few hours, for the night - a week before	a week
24 hours	few days
on average 2 days	week or 2
48 hours	same day or week
several days, member of dockwa online reservation	a week or two
they only offer 90% yearly and 10% monthly, no short term transient dockage	n/a
a few a year, they can call the same day usually	n/a
no reservations, first come first serve basis. sometimes they call ahead	first come first served
couple months to right as it's happening, transient slips due to motor issues	couple days
a year	2-3 days
renewal slips sent out in February-March	one day to 6 months
about two to four weeks	5 minutes
n/a	a few days to a week or two to a month
a day or two	n/a
n/a	n/a

Q8. DOES THE FACILITY USE A WAITING LIST FOR SHORT-TERM SLIP RENTALS?



ANSWER CHOICES	RESPONSES	
Yes	13	20.6%
No	50	79.4%
Total Responses: 63		



Q9. ARE THE FACILITY'S DOCKS FIXED, FLOATING, OR BOTH?

ANSWER CHOICES	RESPONSES	
Fixed	45	59.2%
Floating	8	10.5%
Both	23	30.3%
Total Responses: 76		

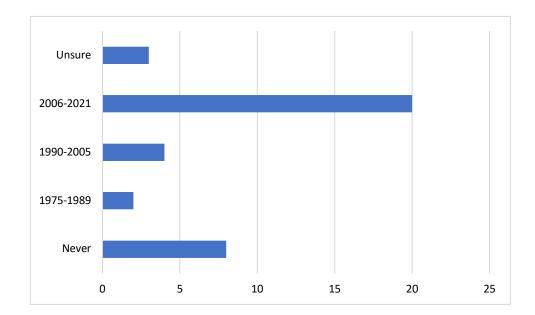
Q10. WHAT IS THE DEPTH OF THE CHANNEL AT MEAN LOWER LOW WATER? (FEET)

SUMMARY	DEPTH (FEET)
Minimum	1
Q1 (25 th Percentile)	5.2
Median	8
Mean	9.8
Q3 (75 th Percentile)	12
Maximum	60
Total Responses: 59	

Q10. WHAT IS THE DEPTH OF THE SLIPS AT MEAN LOWER LOW WATER? (FEET)

SUMMARY	DEPTH (FEET)
Minimum	1
Q1 (25 th Percentile)	4.4
Median	5.7
Mean	6.9
Q3 (75 th Percentile)	8
Maximum	20
Total Responses: 47	

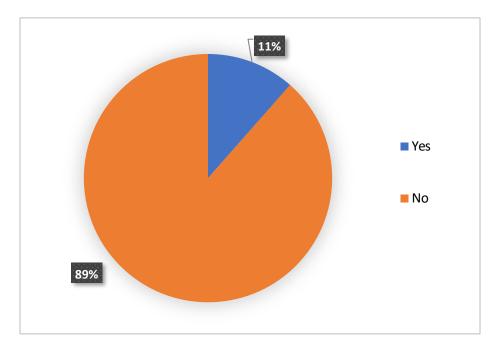
Q11. WHAT WAS THE LAST YEAR THE FACILITY'S CHANNELS WERE DREDGED?



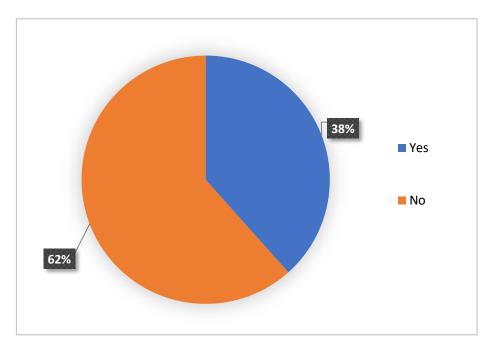
ANSWER CHOICES	RESPONSES	
Never	8	21.6%
1975-1989	2	5.4%
1990-2005	4	10.8%
2006-2021	20	54.1%
Unsure	3	8.1%
Total Responses: 37		

NOTE: Of the facilities who reported a year for the last channel dredging, the mean was 9.7 and the median was 5 years since the last dredging.

Q11. DOES THE FACILITY HAVE ANY UPCOMING DREDGING PROJECTS PLANNED?

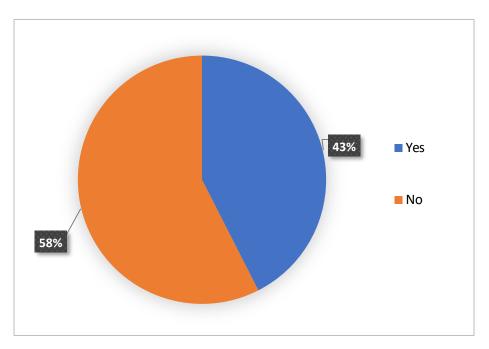


ANSWER CHOICES	RESPON	RESPONSES	
Yes	7	11.5%	
No	54	88.5%	
Total Responses: 61			



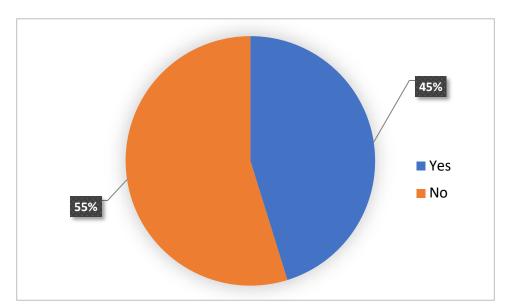
Q12. DOES THE FACILITY HAVE A MAINTENANCE OR REPAIR STATION?

ANSWER CHOICES	RESPONSES	
Yes	30	42.3%
No	41	57.7%
Total Responses: 71		



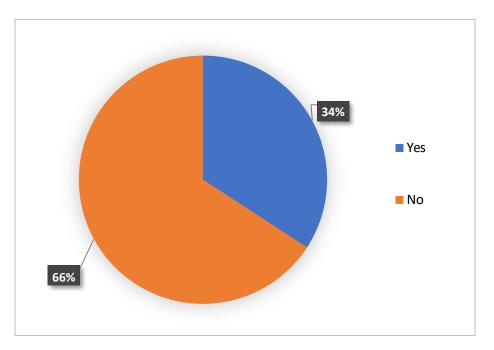
Q12. DOES THE FACILITY HAVE A SUPPLY SHOP?

ANSWER CHOICES	RESPONSES	
Yes	31	42.5%
No	42	57.5%
Total Responses: 73		



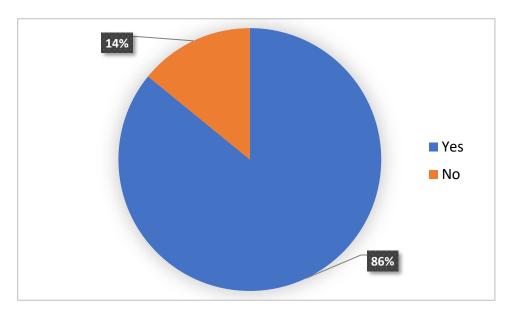
Q12. DOES THE FACILITY HAVE GAS AVAILABLE ON-SITE?

ANSWER CHOICES	RESPON	RESPONSES	
Yes	33	45.2%	
No	40	54.8%	
Total Responses: 73			



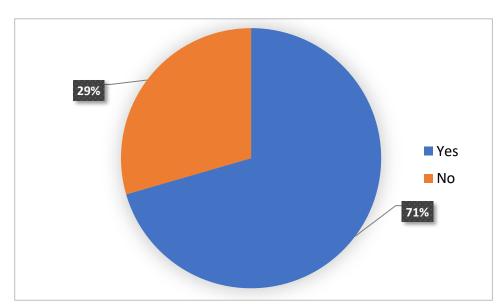
Q12. DOES THE FACILITY HAVE DIESEL AVAILABLE ON-SITE?

ANSWER CHOICES	RESPONSES	
Yes	25	34.2%
No	48	65.8%
Total Responses: 73		



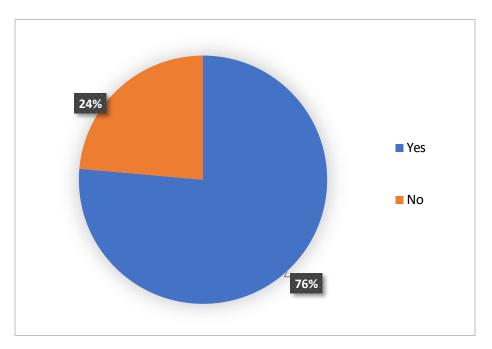
Q12. DOES THE FACILITY HAVE DOCKSIDE ELECTRICITY?

ANSWER CHOICES	RESPON	RESPONSES	
Yes	62	86.1%	
No	10	13.9%	
Total Responses: 72			



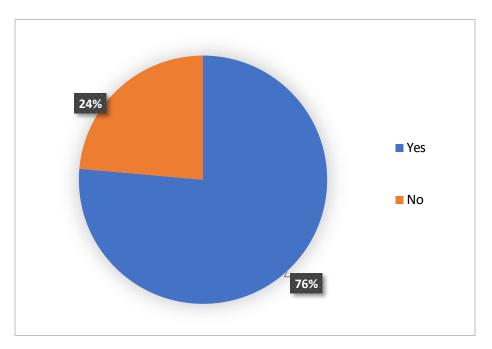
Q12. DOES THE FACILITY HAVE A PUMP OUT?

ANSWER CHOICES	RESPONSES	
Yes	51	70.8%
No	21	29.2%
Total Responses: 72		



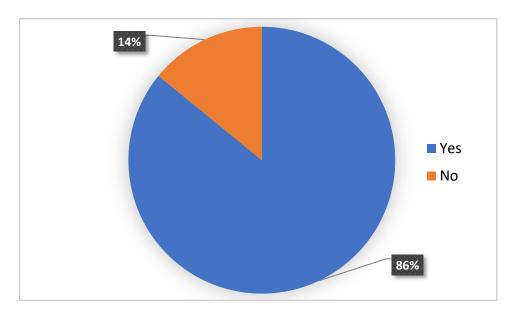
Q12. DOES THE FACILITY OFFER POTABLE WATER?

ANSWER CHOICES	RESPONSES	
Yes	55	76.4%
No	17	23.6%
Total Responses: 72		



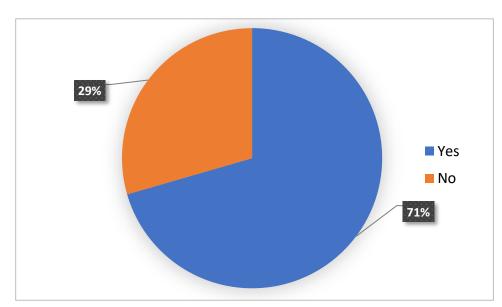
Q12. DOES THE FACILITY OFFER POTABLE WATER?

ANSWER CHOICES	RESPONSES	
Yes	55	76.4%
No	17	23.6%
Total Responses: 72		



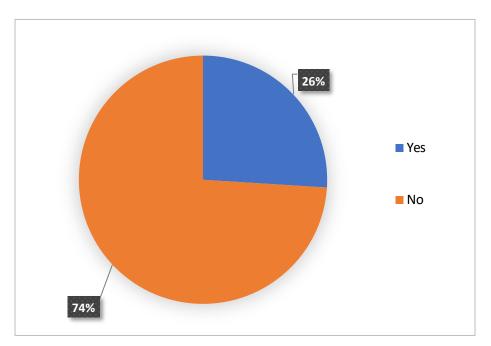
Q12. DOES THE FACILITY HAVE RESTROOMS?

ANSWER CHOICES	RESPON	RESPONSES	
Yes	62	86.1%	
No	10	13.8%	
Total Responses: 72			



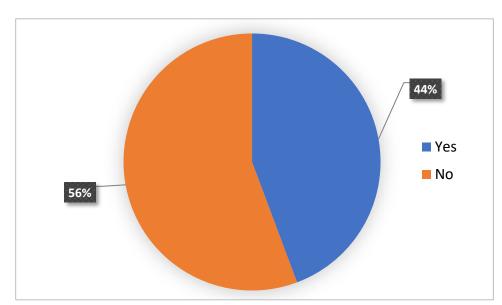
Q12. DOES THE FACILITY HAVE SHOWERS?

ANSWER CHOICES	RESPONSES	
Yes	52	71.2%
No	21	28.8%
Total Responses: 73		



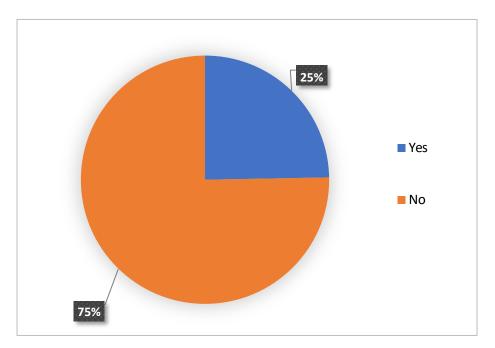
Q12. DOES THE FACILITY HAVE GATED ACCESS?

ANSWER CHOICES	RESPONSES	
Yes	19	26.0%
No	54	74.0%
Total Responses: 73		



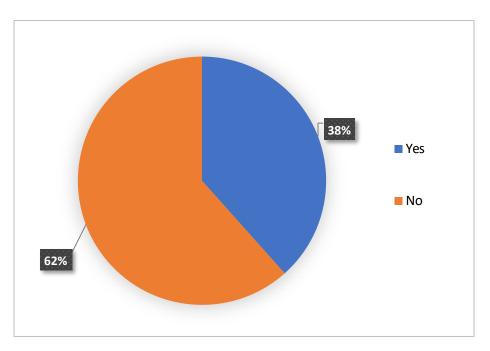
Q12. DOES THE FACILITY HAVE CAMERAS?

ANSWER CHOICES	RESPONSES	
Yes	32	43.8%
No	41	56.2%
Total Responses: 73		



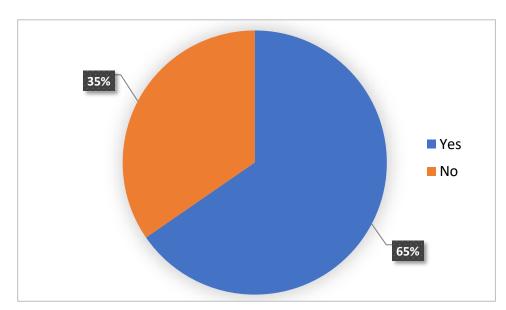
Q12. DOES THE FACILITY HAVE ROUND-THE-CLOCK STAFF?

ANSWER CHOICES	RESPONSES	
Yes	18	24.7%
No	55	75.3%
Total Responses: 73		



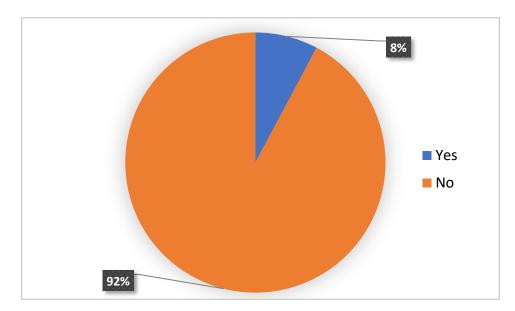
Q12. DOES THE FACILITY HAVE A SWIMMING POOL?

ANSWER CHOICES	RESPONSES	
Yes	28	38.4%
No	45	61.6%
Total Responses: 73		



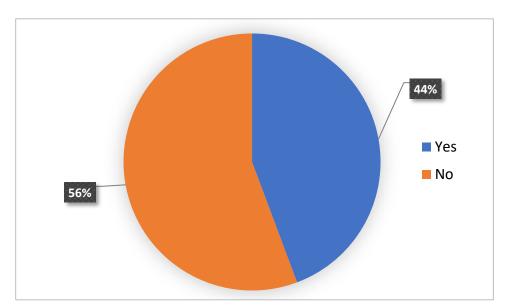
Q12. DOES THE FACILITY HAVE WIRELESS INTERNET?

ANSWER CHOICES	RESPONSES	
Yes	47	65.3%
No	25	34.7%
Total Responses: 72		



Q12. DOES THE FACILITY HAVE LODGING ON-PREMISES?

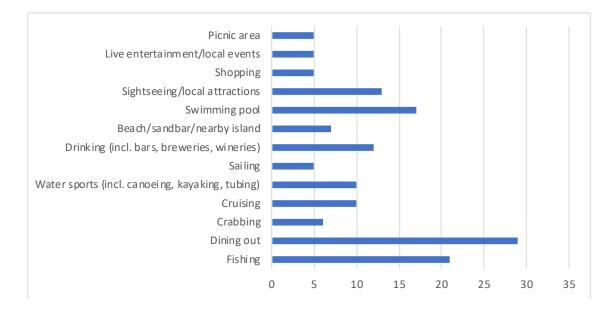
ANSWER CHOICES	RESPONSES	
Yes	6	8.5%
No	65	91.5%
Total Responses: 71		



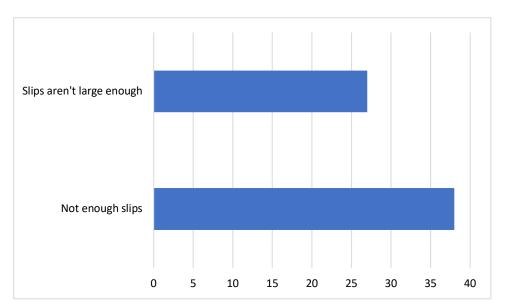
Q12. DOES THE FACILITY HAVE LODGING OFF-PREMISES?

ANSWER CHOICES	RESPONSES	
Yes	32	44.4%
No	40	55.6%
Total Responses: 72		

Q13. WHAT ARE SOME OF THE MOST POPULAR ACTIVITIES FOR BOATERS VISITING THE FACILITY?



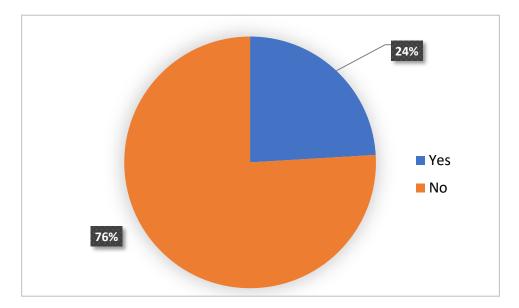
WRITE-IN ANSWERS	RESPON	ISES
Fishing	21	14.5%
Dining out	29	20.0%
Crabbing	6	4.1%
Cruising	10	6.9%
Water sports (incl. canoeing, kayaking, tubing)	10	6.9%
Sailing	5	3.4%
Drinking (incl. bars, breweries, wineries)	12	8.3%
Beach/sandbar/nearby island	7	4.8%
Swimming pool	17	11.7%
Sightseeing/local attractions	13	9.0%
Shopping	5	3.4%
Live entertainment/local events	5	3.4%
Picnic area	5	3.4%
Total Responses: 145		



Q14. IF THE FACILITY IS LOW ON SPACE, IT IS BECAUSE ...?

ANSWER CHOICES	RESPONSES	
Slips aren't large enough	38	58.5%
Not enough slips	27	41.5%
Total Responses: 65		

Q15. DOES THE FACILITY HAVE ANY UPCOMING PLANS TO ADD OR EXPAND SLIPS?



ANSWER CHOICES	RESPONSES	
Yes	17	24.3%
No	53	75.7%
Total Responses: 70		

Appendix A – Boater Survey Instrument

Maryland Recreational Boating Survey

We need your help!

Please complete the Maryland Recreational Boating Survey and return it in the postage-paid envelope.

YOUR input is needed even if you did not go boating in the previous year.

Your participation in this survey is greatly appreciated and entirely voluntary. The results will be used by state managers to enhance Maryland recreational boating opportunities. We need your help because you are part of a small, scientifically selected sample, designed to be representative of boaters with 26 + ft or longer vessels in the Chesapeake Bay region.



If you have misplaced your postage-paid envelope, please return survey to:

Dr. Scott Knoche Morgan State University Patuxent Environmental and Aquatic Research Laboratory Box <SURVEY_ID> 10545 Mackall Road Saint Leonard, MD 20685

THANK YOU!





Boating Activities

1.	Did you go boating in Maryland waters in 2019 and 2020?				
	2019 only 2020 only Both 2019 and 2020				
_					
2.	What is the primary way you gain access to Maryland waters for boating?				
	From a slip or mooring at a marina/yacht club From a private dock or mooring				
	From a boat launch Other (Please specify:)				
3.	When on a boating trip, what on-water activities do you participate in? (Check all that apply)				
	Fishing/Crabbing Water Sports (Tubing, Water-skiing, etc.)				
	Swimming Other (Please specify:)				
4.	When on a boating trip, what on-shore activities do you participate in? (Check all that apply)				
	Restaurants/Bars Tourism/Sightseeing Visit Friends/Family				
	Visit Marina/Yacht club Beachgoing Other (Please specify:)				
5.	Does your household own a recreational boating vessel that is 26 feet or longer?				
	Yes Proceed to the next question				
	No Skip to question 23				

Dockage and Mooring

6.	When operating your vessel that is 26' or longer, do you ever travel from your home port to Maryland on-shore destinations for visits up to 15 days and tie up to a slip or a mooring?				
	Yes Proceed to the next question				
	No Skip to question 11				
7.	How do you normally reserve a slip for your 26 ft + vessel at an on-shore destination?				
	Online booking site (SnagASlip, Dockwa, etc.)				
	Over the phone I arrive without a reservation				
	Other (Please specify:)				
8.	In the last 2 years, how many times have you attempted to reserve or obtain a slip with your 26 ft + vessel at a marina/yacht club, but were <u>unable to do so</u> because of no additional capacity?				
	□ 0 □ 1 - 2 □ 3 - 5 □ 6 or more				
Ļ	For question 8, what was this most recent date & location you were unable to reserve a slip (if applicable).				
	Date: Location				
9.	Is there a specific location in Maryland that you'd like to visit with your 26 ft + vessel but you expect there to be limited or no slip availability?				
-	Yes No				
6	If Yes, what location (City/Town) is this?				
10.	Please consider a possible slip rental aboard your 26 ft + vessel and rate the following destination features from "Not at all Important" to "Extremely Important".				

	Not at all Important	Somewhat Important	Important	Very Important	Extremely Important
Restaurants/Bars					
Entertainment (sport events, concerts)					
Shopping					
Marina services and amenities					
Rural setting					
Urban setting					
Nature-based amenities (parks, hiking trails)					
Proximity to home port/dock					
Proximity to fishing/crabbing					

2020 Boating Trips

FOR THIS SURVEY, consider the following definitions:

- <u>Single-day trip</u>: Leaving your home port and returning on the same day.
- *Multiple-day trip*: Leaving your home port and returning on a different day.
- **On-shore destination:** A developed on-shore facility (ex: restaurant, marina).

11. Please consider your multiple-day boating activity for each type of trip listed below. (If you did not take this type of boating trip, please enter a "0".)

Multiple-day trips with your 26 ft + vessel(s) in the year <u>2020</u> that	# of Multiple- Day Trips	Total # of Days on These Trips
involved visiting a Maryland on-shore destination.		
<u>did not involve</u> visiting a Maryland on-shore destination.		
involved visiting an outside-of-Maryland on-shore destination.		
12. Please consider your single-day boating activity for each type of trip did not take this type of boating trip, please enter a "0".)	listed below	. (If you
Single-day trips with your 26 ft + vessel(s) in the year <u>2020</u> that		# of Single- Day Trips
involved_visiting a Maryland on-shore destination.		
<u>did not involve</u> visiting a Maryland on-shore destination.		
involved_visiting an outside-of-Maryland on-shore destination.		
13. Do you plan to take any additional boating trips between now and the	e end of 2020	?
No additional trips 1-5 additional trips 6 or m	nore additional tr	ips

2019 Boating Trips

14.

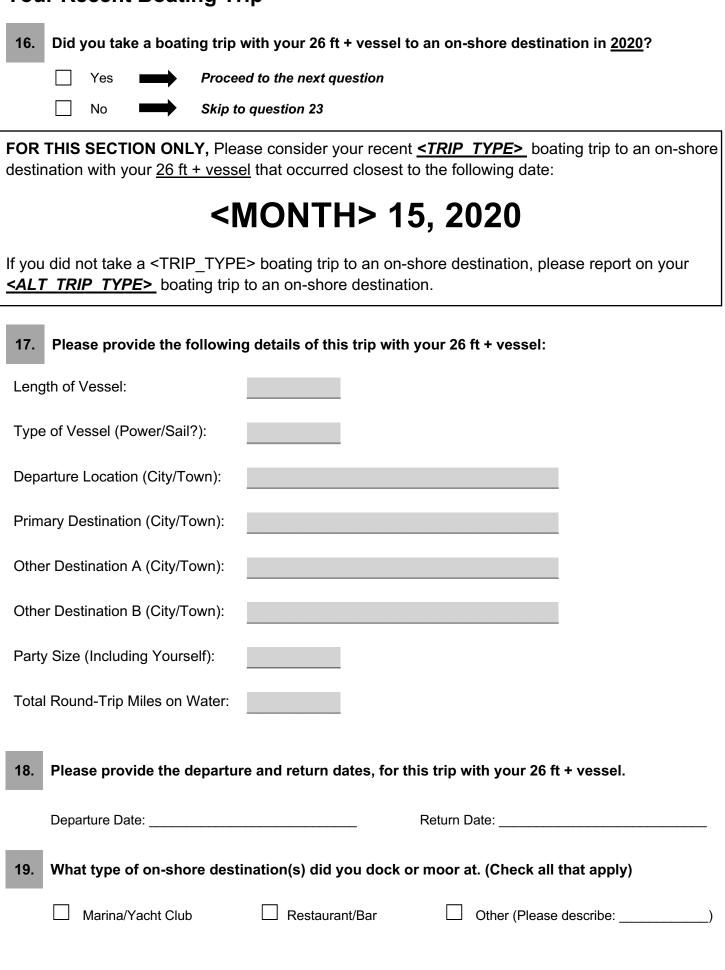
FOR THE YEAR 2019, please consider your multiple-day boating activity for each type of trip listed below. (If you did not take this type of boating trip, please enter a "0".)

Multiple-day trips with your 26 ft + vessel(s) in the year <u>2019</u> that	# of Multiple- Day Trips	Total # of Days
involved visiting a Maryland on-shore destination.		
did not involve visiting a Maryland on-shore destination.		
involved visiting an outside-of-Maryland on-shore destination.		

15. Compare your single-day boating activity for each type of trip listed below.

Single-day trips with your 26 ft + vessel(s) in the year 2020 - <u>compared to the year 2019</u> - that	<u>Substantially</u> <u>Fewer in 2020</u> (At least 75% fewer trips)	<u>Somewhat</u> <u>Fewer in 2020</u> (Between 25% and 75% fewer trips)	<u>Roughly the</u> <u>Same in 2020</u>	<u>Somewhat</u> <u>More in 2020</u> (Between 25% and 75% more trips)	<u>Substantially</u> <u>More in 2020</u> (At least 75% more trips)
involved_visiting a Maryland on- shore destination.					
<u>did not involve</u> visiting a Maryland on-shore destination.					
involved visiting an outside of Maryland on-shore destination.					

Your Recent Boating Trip



20. FOR THE SAME TRIP ON THE PREVIOUS PAGE, please enter the dollar amount of your trip expenditures for each category below. Please be as accurate as possible – If unsure, provide your best estimate. If you made no expenditures for a category, please enter a "0".

Expense item	Cost: (\$)
Boat fuel and oil	
Restaurant/Bar	
Groceries	
Marina fees (Dockage, pump out, etc.)	
Land/Air Transportation (Gas, tolls, flights, etc.)	
Lodging	
Fishing tackle/bait	
Shopping	
Arts/Entertainment (Concerts, gambling, etc.)	
Maintenance and repairs	
Other trip-related expenses	

2020 Boating

21. Consider the impact of the COVID-19 pandemic on your 2020 boating activities.

The COVID-19 pandemic affected	Yes	No
the number of multiple-day boating trips I took this year.		
the number of single-day boating trips I took this year.		
where I took my boating trips.		
how much I spent on a typical boating trip this year.		
the number of boating trips I took to on-shore destinations (ex: restaurants/marinas)		

22. In a sentence or two, how did COVID-19 impact your 2020 boating season?

PLEASE TURN PAGE OVER TO COMPLETE THIS SURVEY

About Your Vessel(s)

23. How many vessels are registered to your household in Maryland? _____

24. Tell us about your vessel(s):

	Length (in feet)	Draft (in feet)	Power/Sail/Other	Model year	Year purchased
Boat Used Most Often					
Other Boat 1					
Other Boat 2					
Other Boat 3					

About You: Summaries of the following questions help us represent the boating activities of all types of boaters. Individual answers are CONFIDENTIAL.

25.	What is your gender?		
	Male	Non-binary	Prefer to self-describe:
	Female	Prefer not to say	
26.	In what year were you born?		
27.	What is your race/ethnicity?		
	White	Hispanic/Latino	Indigenous American
	Black/African American	Asian	Other:
28.	What is the highest degree o	or level of schooling you have co	mpleted?
	Less than High School	Some College, no degree	Bachelor's Degree
	High School or equivalent	Associate's Degree	Graduate or Professional Degree
29.	What is your approximate ar	nual household income?	
	Less than \$25,000	\$35,000 to \$49,999	to \$350,000 to \$499,999
	\$25,000 to \$34,999	\$50,000 to \$99,999	to \$500,000 or more

Appendix B – Marina Survey Instrument

Facility	ity:		Zip code:
1.	How many wet slips are there at the faci	ility? slij	DS .
2.	 How many wet slips can accommodate a. less than 26 feet long? slip b. between 26 and 40 feet long? c. between 40 and 65 feet long? d. greater than 65 feet long? 	ps slips slips	
3.	Of the facility's wet slips, how many are	e typically used	for seasonal rental? slips
4.	In a typical week, how many slips book slips	ed for seasonal	rental become available for short-term rental?
5.	Does the facility accept short-term space yes	e rentals when a no	at or over slip capacity?
6.	Is the facility ever unable to host addition yes	onal short-term no	renters due to lack of space?
a.	(If applicable), During a typical summe never rarely	er weekend, hov sometimes	v likely is this? often
b.	What about on a typical summer holiday never rarely	y weekend? sometimes	often
c.	And on a typical summer weekday?		
	never rarely	sometimes	often
7.	About how far in advance do short-term less than one week a few months	renters typical a few weeks	ly book slips? (Check all that apply) a month other:
8.	Does the facility use a waiting list for sh yes	nort-term slip re no	entals?
9.	Are the facility's docks fixed, floating, of fixed floating	or both? both	

PLEASE TURN PAGE OVER TO COMPLETE THIS SURVEY



10. What is the depth of the:

- a. channel at the Mean Lower Low Water? _____ feet
- b. slips at the Mean Lower Low Water? _____ feet

11. When was the last time (year) the facility's channels were dredged?

- a. Does the facility have any upcoming dredging projects planned? yes no
- **12.** Does the facility offer the following utilities/amenities? (check all that apply)
 - □ Maintenance or repair station
 - □ Supply shop
 - □ Fuel station

➤ (If applicable), Gas, diesel, or both? _____

- □ Dockside electricity
- Deprivation Pump-out
- Potable water
- Restrooms
 - □ (If applicable), Showers
- □ Security
- □ Swimming pool
- □ Wireless internet
- □ Lodging nearby

➤ (If applicable), Is it part of the facility or off-premises?

13. What are some of the most popular activities for boaters visiting the facility?

14. Does the facility have any upcoming plans to add or expand slips?

- (If applicable), Could you share details?
- **15.** In general, if the facility is low on space, is it more commonly because there aren't:
 - \Box enough slips?
 - □ slips large enough to accommodate vessels?
- **16.** Does the facility have any upcoming plans to add or expand any other utilities or amenities?
 - (If applicable), Could you share details?