

# Ohio Recreational Boating and Marine Trades 2022 Economic Impact Report

ODNR Parks and Watercraft  
Boating Economic Impact and Satisfaction  
3/6/23

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## Executive Summary

- The economic impact of Ohio's boating industry in 2022 was \$6.40 billion, accounting for 45,856 jobs.
  - The economic impact of Ohio's Recreational Boating was \$3.66 billion; 25,476 jobs.
  - The economic impact of Ohio's Marine Trades industry was \$2.75 billion; 20,380 jobs.
- IMPLAN's input/output model and two surveys formed the economic analysis (direct, indirect, and induced effects) (Fig. 3, pp. 5-10).
  - 9,729 boating households completed the 2021-2022 Recreational Boating Survey.
    - 30 financial inputs from the Recreational Boating Survey contributed to the analysis.
  - 213 boating related businesses completed the 2022 Marine Trades Survey.
    - 14 financial inputs from the Marine Trades Survey contributed to the analysis.
    - Marine trades businesses provided revenue, number of workers, type of workers, workers' compensation costs, and number of boats in inventory.
  - IMPLAN's 2021 model for Ohio in 2022 dollars was assigned 33 representative industries.
- This economic impact estimates 404,248 households in Ohio own at least one boat.
  - There were, on average, 2.72 vessels (all types) per household.
  - There were 631,563 registered boats in Ohio in March 2022.
  - There were 315,278 boating households (unique addresses).
  - Accounting for boat types, there were 241,993 additional non-registered boats in Ohio.
- 315 million annual human exposure hours in 2022.
  - 187 million annual human exposure hours for motorized boats (recreational and charters).
  - 128 million annual human exposure hours for non-motorized boats (recreational and liveries).
- The overall customer satisfaction score from 154,284 ratings across diverse questions and attributes provided by Ohio boaters was above Very Good (4.04).
  - 63.6% of Ohio boaters traveled ≤20 miles to reach a waterway (31.9% traveled ≤5 miles).
    - Ohio's waterways, overall, were rated Very Good (4.02) from 54,835 ratings.
    - Launch ramps scored 3.64 (across 16 diverse attributes); docks 3.86 (17 attributes).
    - Ohio Scenic Rivers and Ohio Water Trails were rated 3.97 and 3.93, respectively.
  - Course-taking boaters rated Safe Boater courses 4.41; hands-on scored 4.12.
  - ODNR's website was rated 3.93; online registration/renewal was rated 4.42.
  - ODNR Officers interacting with boaters were rated 4.25.
- 14.2% of boaters spend 100% of their boating time fishing.
  - Overall, including all boaters, fishing accounted for 33.6% of boating time.
- 24.3% of primary boat operators of non-motorized boats were female.
  - 5.4% of primary boat operators of motorized boats were female.
- Other reports from ODNR Parks and Watercraft 2022 Economic Impact and Customer Satisfaction Study include County Profiles, Presentations, and other supplemental reports.

## Full Report

### Preliminary

Boaters were asked how the COVID19 pandemic affected their boating activity, and 60.3% reported little to no effect. Significantly, the pandemic increased non-motorized<sup>1</sup> boating by 30%. Also, a higher percentage of boaters purchased new boats (all boat types) during the pandemic compared to the years before and after the pandemic. However, boating activity decreased for 17.2% of Ohio boaters during the pandemic. Some boaters completing the Recreational Boating survey did not boat during Ohio’s shelter in place order. These households were included in the study because they could have gone boating, and will again, but did not boat due to the pandemic.

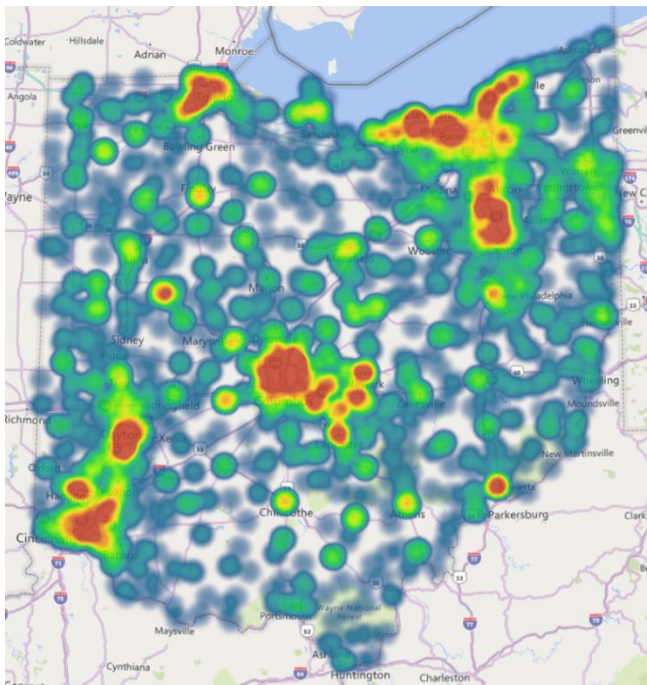
Boaters identified boat purchases as new or used—from dealers, businesses, or individuals. Some 37.2% of purchases were from individuals. Online shopping has merged the distinction between business and individual sellers and so purchases from individuals were included in economic inputs.

Data from the Recreational Boater Survey was aggregated by boat type used most often—motorized and non-motorized. Motorized boats included sailboats with motors; non-motorized boats included sail (sail only) boats.

## Methodology

### Recreational Boating Survey

*Figure 1 shows a heat map of respondents.*



There were 631,563 registered boats in Ohio in March 2022. Of these records, 315,278 were unique addresses for recreational boaters where 59,554 included an email address. For USPS mailed survey invitations, addresses were randomly selected at proportional volume against quotas based on criteria reflecting boating participation, which included the percentage of households in a county with registered boats and each county’s number of registered boats as a percentage of all registered boats in Ohio. Selected records, which included the names of boat owners, were verified as being current. The data collection took place over 23 weeks from August 1, 2022 to December 31, 2022 where 78% of responses were received between August 15 and October 2 and the last 14

<sup>1</sup> The National Recreational Boating Safety Survey Exposure Survey Final Report, October 2020, utilized aggregated boat type of motorized and “human-powered boats.”

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weeks were mostly focused on meeting quota in counties without significant bodies of water and where the percentage of registered boats per household was lower.

Responses were received from 9,729 households representing 26,462 boaters. The response rate was 20.3%. The volume of completed interviews from 9,729 households means that these data have a 98% confidence level  $\pm 1.164$  confidence interval that findings would be the same had we received interviews from all boat-owning households in Ohio.

Recreational boaters were given three options to complete questionnaires, which included online via a URL and PIN# printed on the mailed questionnaire, online via an embedded link in an email invitation, or completing and returning a paper questionnaire. Each option had specific appeal to the age-range of boaters. Most boaters, 50%, entering the URL and PIN# printed on the mailed questionnaire were aged 18-54. Most boaters, 59%, responding to the email invitation were aged 35-54. Most boaters, 50%, returning a paper questionnaire were over 65 years of age. In terms of devices utilized to complete questionnaires, 58.3% of boaters responding to an email invitation completed the questionnaire via a mobile device. For boaters completing a questionnaire entering the URL and PIN#, 70.9% utilized a PC.

The average number of boats per household in Ohio in 2022 was 2.72 indicating the existence of 241,993, accounting for boat types, additional non-registered boats. Overall, 57.3% of boat owners renewed their watercraft online. Of the 3,264 boaters accessing the online registration system, 62.0% indicated they were Very Satisfied with the system's user-friendliness. As follow-up, boaters registering or renewing online were asked for suggestions to make Ohio's online registration/renewal process better, and 4.69% took the opportunity to provide suggestions—74 operators of motorized boats and 75 operators of non-motorized boats.<sup>2</sup> Suggestions to improve the online system, in descending order of category, include "okay as is" (45.8%), lower the price of registration (15.0%), PIN issues (13.7%), technical suggestions (13.7%), process suggestions (11.8%), and decal/sticker issues (4.6%).

#### Marine Trades Survey

Utilizing three databases—an online-resourced database, a distribution list from Waterways Safety Council members, and business records from ODNR Parks and Watercraft's database—resulted in 1,394 boating-related businesses in Ohio for the Marine Trades Survey. Each business was reviewed online and categorized: 26.7% were charters, 15.9% were marinas, 15.6% were manufacturing/repair/transportation, and 13.6% were dealers. Other categories include marine services (8.5%), bait & tackle (8.4%), livery/rental (8%), and educational (3.4%). Email invitations with an embedded survey link were broadcast on May 20<sup>th</sup> and May 23<sup>rd</sup> 2022. The Marine Trades Survey achieved a 15.3% response rate. The 213 businesses responding means that the results are at a 95% confidence level  $\pm 6.2$  confidence interval.

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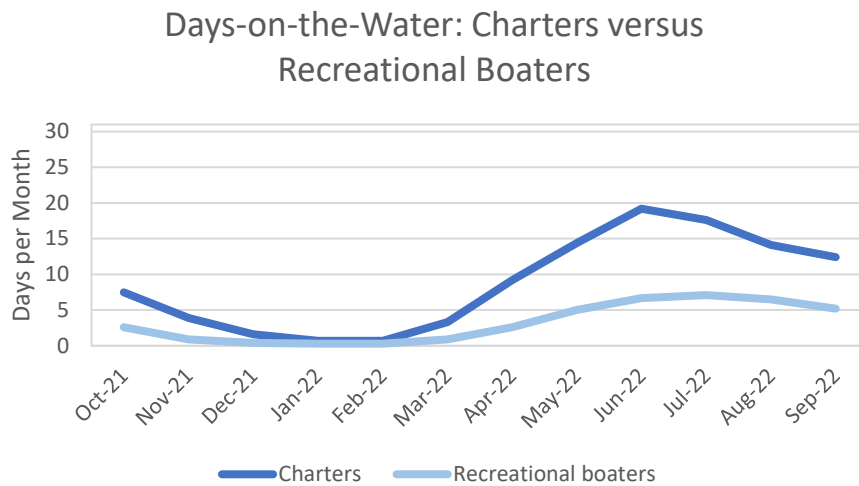
<sup>2</sup> Among operators of non-motorized boats, 17.3% indicated that they did not think human-powered boats should need registration (1.4% of motorized boat operators felt this way), which suggests unregistered boats would more likely be human-powered vessels.

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The 2022 Marine Trades Survey was conducted two years after the beginning of the pandemic and, likely as a way to survive, Marine Trades businesses in Ohio expanded vertically, blurring the lines between industry categories. For example, Charters also providing engine repair services and selling boats. Other businesses that were closed during the pandemic, were in the process of re-emerging. For example, former Charter businesses, having lost their boat, now offering guide and for-hire captain services. Due to these dynamics, the Marine Trades analysis approach was to compare and contrast with the Recreational Boating Survey findings. For the IMPLAN economic model, the Marine Trades Survey results were additional inputs (i.e., overall averages for the industry) in categories already identified by the economic impact model.

Why Charters were in Marine Trades analysis (not Recreational Boaters)

Figure 2 compares the volume of days on the water in Ohio for Charters and Recreational Boaters



### Economic Impact Analysis

The questionnaire provided 29 specific boating expenditures—18 related to equipment plus “other” capture, and nine items related to a typical boat trip plus “other” capture. Items and services may or may not have been purchased by boaters. For example, 45% of boaters purchased engine maintenance and repair services between October 2021 and September 2022—55% did not. The 55% who did not purchase engine maintenance and repair services had zero expense and zeros were entered into these data cells. Therefore, the average expense for each item would reflect the total purchase accounting for all boaters and it was these averages that became input into IMPLAN’s economic modeling software.

Figure 3 shows the direct, indirect, and induced output data from the IMPLAN model based on the financial inputs from ODNR Parks and Watercraft’s 2022 Recreational Boating Survey, the 2022 Marine Trades Survey, and the assigned industries. The Purchase Item column shows the 30 items on the Recreational Boating Survey following by 14 pieces of financial information from the Marine Trades Survey. The Impact column shows the direct, indirect, and induced effects of financial information provided by boaters and Marine Trades businesses.

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*The employment column shows direct employment, which is an overall average annual employment figure (any type of employment), indirect employment shows the number of jobs supported by any business transaction of direct employment, and induced employment shows the household spending, such as home (mortgage or rent), healthcare, and food, that direct and indirect employment would spend to support themselves and their families.*

*The labor income column shows the direct dollars, benefits, taxes supported by the direct employment for each of the purchased items or financial information, indirect labor income is the wages for indirect labor brought about by the direct labor, the induced labor income shows the household spending for each of the purchased items and financial information.*

*The value added direct is the Gross State Product (GSP) contribution of the labor income, value added indirect is the GSP for the indirect labor income, and the induced value added is the household spending contribution.*

*The output column shows results of the IMPLAN model and represents direct, indirect, and induced added together. The industry column was the industry assigned to the purchased item (for recreational boaters) or financial information (for Marine Trades) in building the model from the survey's overall averages projected to all recreational boaters and all marine trades businesses. The Recreational Boating questionnaire supplied annual and per trip spend, where per trip spending required an adjustment to annual for the model.*

Purchased Item	Impact	Employment	Labor Income	Value Added	Output	Industry
Clothing	Direct	62	\$2,512,850	\$3,904,893	\$7,478,090	Clothing stores
	Indirect	21	\$1,358,855	\$2,196,495	\$4,224,734	
	Induced	20	\$1,109,845	\$2,014,365	\$3,510,276	
Docking	Direct	1,498	\$41,286,151	\$54,141,787	\$96,223,151	Recreational centers
	Indirect	232	\$12,841,910	\$23,628,848	\$48,368,912	
	Induced	280	\$15,479,438	\$28,095,624	\$48,960,269	
Electronics	Direct	320	\$18,252,461	\$15,701,398	\$28,035,684	Electronics stores
	Indirect	75	\$4,436,951	\$7,406,650	\$14,479,291	
	Induced	117	\$6,471,266	\$11,746,529	\$20,470,282	
Engine Maintenance	Direct	957	\$63,164,283	\$69,748,241	\$102,052,408	Automotive repair
	Indirect	121	\$7,504,247	\$12,790,648	\$26,180,434	
	Induced	367	\$20,253,433	\$36,760,375	\$64,059,642	
Engine Purchase	Direct	130	\$9,894,653	\$13,970,249	\$19,486,408	Motor dealers
	Indirect	33	\$2,023,623	\$3,115,915	\$6,132,220	
	Induced	61	\$3,364,762	\$6,107,664	\$10,643,624	
Entertainment	Direct	917	\$29,736,365	\$30,313,650	\$54,900,921	Recreation industries
	Indirect	129	\$7,450,578	\$13,000,326	\$25,788,814	
	Induced	193	\$10,634,767	\$19,302,371	\$33,636,871	
Fishing equipment	Direct	503	\$14,638,437	\$22,185,872	\$38,344,485	Sporting goods stores
	Indirect	98	\$5,812,644	\$9,703,106	\$18,968,645	
	Induced	106	\$5,843,447	\$10,606,541	\$18,483,499	

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Purchased Item	Impact	Employment	Labor Income	Value Added	Output	Industry
Fishing Supplies	Direct	258	\$12,242,277	\$24,661,539	\$35,782,191	Supplies stores
	Indirect	71	\$4,213,525	\$6,788,173	\$12,939,131	
	Induced	85	\$4,689,887	\$8,513,147	\$14,835,638	
Fuel Costs	Direct	646	\$27,008,279	\$55,167,361	\$100,488,177	Gasoline stores
	Indirect	314	\$17,736,523	\$28,788,139	\$54,867,444	
	Induced	232	\$12,805,454	\$23,242,683	\$40,503,572	
Grocery, Convenience	Direct	682	\$22,398,764	\$33,649,061	\$56,663,754	Food and beverage stores
	Indirect	144	\$8,436,193	\$13,681,799	\$26,750,287	
	Induced	160	\$8,847,672	\$16,060,362	\$27,987,950	
Hull Repair	Direct	33	\$2,332,430	\$4,773,265	\$10,142,582	Ship building and repairing
	Indirect	20	\$1,313,923	\$2,124,776	\$4,058,951	
	Induced	19	\$1,038,807	\$1,885,693	\$3,286,162	
Insurance	Direct	258	\$20,196,902	\$31,834,461	\$83,570,189	Insurance agencies
	Indirect	241	\$17,035,630	\$27,584,506	\$67,949,897	
	Induced	192	\$10,615,192	\$19,269,181	\$33,580,045	
Launch ramp fee	Direct	31	\$1,647,694	\$2,133,857	\$4,430,558	Support services
	Indirect	15	\$839,765	\$1,280,277	\$2,397,842	
	Induced	13	\$711,793	\$1,292,025	\$2,251,564	
Loan payments	Direct	452	\$49,523,411	\$103,392,460	\$140,920,853	Non depository credit
	Indirect	199	\$12,289,662	\$20,839,506	\$39,429,591	
	Induced	321	\$17,757,123	\$32,233,352	\$56,172,384	
Lodging	Direct	1,985	\$76,352,037	\$139,175,344	\$235,066,170	Hotels
	Indirect	536	\$33,243,420	\$51,078,378	\$96,724,281	
	Induced	566	\$31,297,361	\$56,810,660	\$99,002,132	
Marina/club fees	Direct	265	\$19,970,226	\$40,712,082	\$69,914,692	Associations
	Indirect	123	\$8,313,930	\$17,893,451	\$29,744,921	
	Induced	146	\$8,065,564	\$14,640,859	\$25,514,302	
Other MISC.	Direct	314	\$7,959,139	\$10,832,351	\$18,532,164	Store retailers
	Indirect	47	\$2,769,809	\$4,623,670	\$9,038,834	
	Induced	56	\$3,068,907	\$5,570,294	\$9,707,021	
Other Trip MISC.	Direct	49	\$2,598,578	\$5,717,832	\$8,040,493	Personal goods
	Indirect	9	\$605,578	\$999,079	\$1,891,957	
	Induced	17	\$913,356	\$1,657,793	\$2,888,931	
Paint Boat Bottom	Direct	16	\$1,999,601	\$4,915,793	\$14,205,275	Paint manufacturing
	Indirect	19	\$1,570,173	\$2,643,433	\$5,351,680	
	Induced	18	\$1,014,421	\$1,841,381	\$3,208,923	

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Purchased Item	Impact	Employment	Labor Income	Value Added	Output	Industry
Purchase Motorboat	Direct	577	\$43,832,552	\$61,887,126	\$86,323,287	Motor dealers
	Indirect	147	\$8,964,494	\$13,803,265	\$27,165,262	
	Induced	270	\$14,905,638	\$27,056,482	\$47,150,436	
Purchase Kayak	Direct	192	\$14,561,485	\$20,559,343	\$28,677,209	Motor dealers
	Indirect	49	\$2,978,069	\$4,585,543	\$9,024,493	
	Induced	90	\$4,951,759	\$8,988,356	\$15,663,710	
Registration	Direct	57	\$6,059,541	\$7,970,823	\$15,070,365	State enterprises
	Indirect	35	\$2,492,074	\$4,211,699	\$8,324,542	
	Induced	44	\$2,432,463	\$4,415,454	\$7,694,702	
Restaurants	Direct	2,911	\$82,511,320	\$121,482,997	\$224,515,297	Restaurants
	Indirect	478	\$33,629,309	\$53,972,210	\$103,025,725	
	Induced	600	\$33,140,418	\$60,155,509	\$104,830,814	
Scuba diving	Direct	16	\$479,015	\$725,990	\$1,254,750	Sporting goods
	Indirect	3	\$190,208	\$317,515	\$620,712	
	Induced	3	\$191,216	\$347,079	\$604,837	
Storage	Direct	1,050	\$55,810,980	\$60,152,787	\$110,266,727	Storage
	Indirect	328	\$18,340,498	\$30,687,698	\$61,400,878	
	Induced	382	\$21,132,444	\$38,360,511	\$66,850,123	
Tournament /event fees	Direct	144	\$7,701,855	\$5,789,533	\$14,552,928	Reservation services
	Indirect	47	\$3,044,251	\$4,733,454	\$9,132,275	
	Induced	56	\$3,069,805	\$5,572,177	\$9,710,412	
Trailer	Direct	221	\$28,980,934	\$26,014,099	\$32,360,052	Support activities for transport
	Indirect	41	\$3,163,107	\$4,112,220	\$7,141,164	
	Induced	168	\$9,269,874	\$16,822,890	\$29,315,119	
Transport to/from boat site	Direct	901	\$69,934,335	\$82,792,353	\$179,728,661	Truck transport
	Indirect	569	\$37,236,027	\$60,712,284	\$112,108,696	
	Induced	557	\$30,759,808	\$55,829,755	\$97,290,517	
Waterskiing	Direct	40	\$1,175,380	\$1,781,394	\$3,078,835	Sporting goods
	Indirect	8	\$466,721	\$779,102	\$1,523,070	
	Induced	8	\$469,194	\$851,642	\$1,484,115	
Winterization	Direct	416	\$34,543,424	\$35,159,515	\$52,507,773	Equipment repair
	Indirect	71	\$5,023,015	\$8,210,599	\$15,022,390	
	Induced	206	\$11,348,002	\$20,596,391	\$35,891,641	

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Purchased Item	Impact	Employment	Labor Income	Value Added	Output	Industry
Bait & Tackle Revenue	Direct	468	\$3,802,500	\$4,563,232	\$2,191,811	Garden supplies stores
	Indirect	4	\$258,096	\$415,804	\$792,577	
	Induced	21	\$1,175,798	\$2,133,600	\$3,717,856	
Bait & Tackle Inventory	Direct	8	\$242,333	\$367,278	\$634,777	Sporting goods
	Indirect	2	\$96,226	\$160,631	\$314,018	
	Induced	2	\$96,736	\$175,587	\$305,987	
Charters Revenue	Direct	1,116	\$8,429,520	\$9,566,264	\$14,848,380	Water transport
	Indirect	56	\$4,031,964	\$6,018,443	\$10,607,085	
	Induced	65	\$3,589,037	\$6,513,521	\$11,350,360	
Charters Inventory	Direct	46	\$3,294,373	\$7,582,519	\$13,526,664	Automotive leasing
	Indirect	32	\$2,150,047	\$3,671,378	\$6,526,939	
	Induced	28	\$1,565,303	\$2,841,106	\$4,951,012	
Dealer Revenue	Direct	1,323	\$73,280,592	\$97,976,632	\$118,077,748	Motor dealers
	Indirect	202	\$12,262,129	\$18,880,866	\$37,158,142	
	Induced	447	\$24,602,172	\$44,639,770	\$77,784,589	
Dealer Inventory	Direct	386	\$29,357,717	\$41,450,124	\$57,816,725	Motor dealers
	Indirect	99	\$6,004,147	\$9,245,009	\$18,194,470	
	Induced	181	\$9,983,346	\$18,121,613	\$31,579,935	
Education Revenue	Direct	2,400	\$6,472,608	\$6,111,034	\$19,592,016	Other educational services
	Indirect	49	\$2,870,584	\$5,266,104	\$10,465,237	
	Induced	49	\$2,697,945	\$4,895,783	\$8,531,076	
Education Inventory	Direct	4	\$113,831	\$172,521	\$298,172	Sporting goods
	Indirect	1	\$45,200	\$75,453	\$147,503	
	Induced	1	\$45,439	\$82,478	\$143,730	
Livery/Rental Revenue	Direct	1,554	\$10,583,073	\$15,755,027	\$34,854,000	Consumer rental
	Indirect	79	\$5,765,425	\$9,511,781	\$16,785,703	
	Induced	85	\$4,699,154	\$8,528,711	\$14,862,217	
Livery/Rental Inventory	Direct	82	\$2,381,635	\$3,609,582	\$6,238,546	Sporting goods
	Indirect	16	\$945,702	\$1,578,669	\$3,086,148	
	Induced	17	\$950,713	\$1,725,656	\$3,007,216	
Marina Revenue	Direct	1,554	\$66,789,366	\$175,954,938	\$367,965,000	Associations
	Indirect	647	\$43,756,689	\$94,174,248	\$156,549,210	
	Induced	580	\$31,972,904	\$58,021,123	\$101,104,745	

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Purchased Item	Impact	Employment	Labor Income	Value Added	Output	Industry
MFG/Repair Revenue	Direct	2,604	\$14,011,039	\$17,171,201	\$22,099,931	Boat building
	Indirect	40	\$3,106,227	\$5,246,001	\$10,377,370	
	Induced	89	\$4,936,179	\$8,957,954	\$15,609,811	
MFG/Repair Inventory	Direct	138	\$6,989,041	\$13,194,710	\$43,398,047	Motor dealers
	Indirect	80	\$6,099,756	\$10,301,671	\$20,378,235	
	Induced	67	\$3,727,241	\$6,765,864	\$11,790,747	
Storage Revenue	Direct	2,380	\$25,036,767	\$58,371,664	\$846,589,919	Storage
	Indirect	2,518	\$140,812,022	\$235,609,568	\$471,414,779	
	Induced	860	\$47,519,637	\$86,250,263	\$150,302,601	

INDUSTRY TOTALS	Employment	Labor Income	Value Added	Output
RECREATIONAL BOATING IMPACT	25,476	\$1,330,283,187	\$2,064,187,364	\$3,657,580,713
MARINE TRADES IMPACT	20,380	\$616,550,213	\$1,101,655,381	\$2,745,971,034
BOATING INDUSTRY IMPACT OHIO	45,856	\$1,946,833,400	\$3,165,842,745	\$6,403,551,747

## Human Exposure Hours on the Water

The data show 315 million annual human exposure hours on the water in Ohio, to include 187 million human exposure hours per year for motorized boats (182 million human exposure hours for Recreational Boaters and their guests and 5 million human exposure hours for Charters and their payload) and 128 million human exposure hours per year for non-motorized boats (27 million for non-motorized boats operated by recreational boaters and their guests and 100 million human exposure hours for liveries and their payload).

Figure 4 shows data for motorized boat operators and their guests from the survey projected onto the boating activities of 404,248 boat-owning households in Ohio.

HUMAN EXPOSURE HOURS: BASE 9,729 OHIO BOATERS					
Type of Boat	Incidence	Average Days-per-year Operating	Average Hours Per Trip	Average # People Onboard Per Trip	Ohio Exposure Hours Per Year: People in Motorized Boats
Motorboat	59.9%	31.3	4.9	3	111,413,130
Pontoon	21.1%	35.1	3.8	4.3	48,920,344
Personal Watercraft	12.3%	20.3	2.5	1.8	4,542,151
Sailboat <sup>3</sup> with motor	2.2%	30.9	4.7	2.7	3,413,113
Houseboat	0.7%	35.1	20.7	6.5	13,364,008
Airboat/hovercraft	0.1%	6.8	1.8	1.7	8,412
<b>TOTAL EXPOSURE HOURS FOR HUMANS ON MOTORIZED BOATS</b>					<b>181,661,157</b>

Figure 5 shows data for non-motorized boat operators and their guests from the survey projected onto 404,248 boat owning households in Ohio.

HUMAN EXPOSURE HOURS: BASE 9,729 OHIO BOATERS					
Type of Boat	Incidence	Average Days-per-year Operating	Average Hours Per Trip	Average # People Onboard Per Trip	Ohio Exposure Hours Per Year: People in Non-motorized Boats
Kayak/canoe/inflatable boat/rowboat/paddleboard	88.6%	16.0	3.1	1.5	26,647,381
Sail (sail only)	3.3%	13.7	3.0	1.7	932,079
<b>TOTAL EXPOSURE DAYS FOR HUMANS ON NON-MOTORIZED BOATS</b>					<b>27,579,460</b>

<sup>3</sup> For the boat type aggregation, sailboat with motor was included with motorized boats; sail (sail only) was included with non-motorized boats.

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Figure 6 shows data for Charter boat operators and their payload from the survey projected onto 1,394 businesses in Ohio.

HUMAN EXPOSURE HOURS: BASE 213 MARINE TRADES BUSINESSES IN OHIO					
Type of Boat	Incidence	Average Days-per-year Operating	Average Hours Per Trip	Average # People Onboard Per Trip	Ohio Annual Exposure Hours Non-motorized Boats
<b>Motorboats</b>	<b>100%</b>	<b>105</b>	<b>6.6</b>	<b>5.1</b>	<b>4,926,814</b>

Figure 7 shows data for liveries and their daily payload from the survey projected onto 1,394 businesses in Ohio.

HUMAN EXPOSURE HOURS: BASE 213 MARINE TRADES BUSINESSES IN OHIO					
Type of Boat	Incidence	Average Days-per-year Operating	Daily Trip Hours Per Day	Average # People Onboard Per Day	Ohio Annual Exposure Hours Non-motorized Boats
<b>Liveries<sup>4</sup></b>	<b>8.0%</b>	<b>105</b>	<b>6.0</b>	<b>7.50</b>	<b>100,548,000</b>

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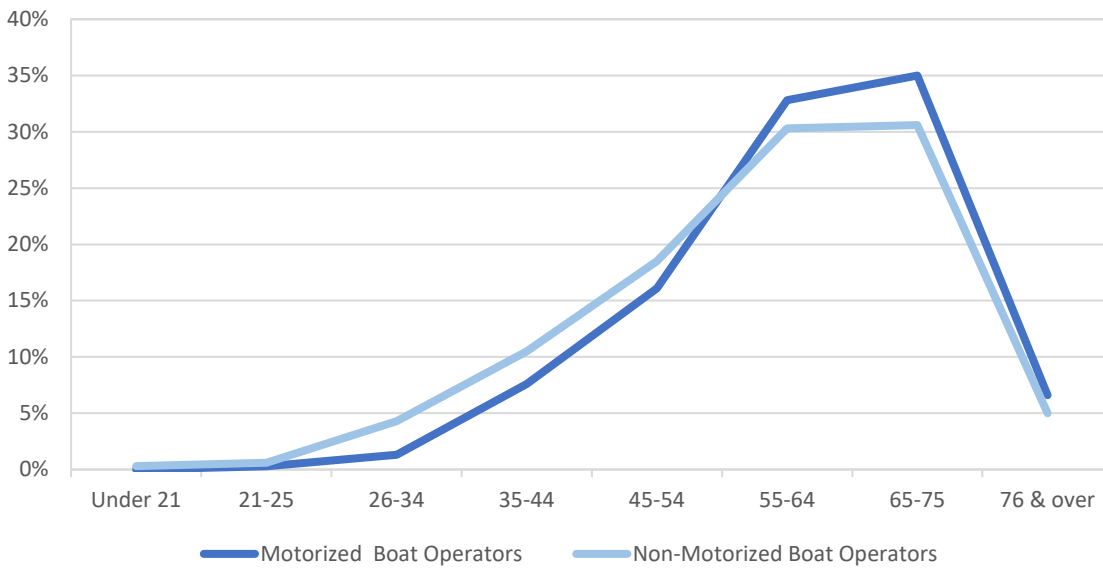
<sup>4</sup> The overall average number of non-motorized boats at an Ohio livery was 190 (some liveries had many more, some less).

## Boat-Owning Household Socioeconomic Characteristics

Ohio boaters aged 21-54 were more likely to boat in a non-motorized vessel; boaters aged 55+ were more likely to boat in a motorized vessel. These data show 16% of non-motorized boat operators were less than 45 years of age, which compares to 10% of motorized boat operators. This suggests younger boaters purchase non-motorized vessels as a first boat that offers an inexpensive introduction to the water and that they may purchase a motorboat later in life.

*Figure 8 shows the age of boaters by aggregated boat type used most often. Boaters aged 21-54 were significantly more likely to utilize a non-motorized boat; boaters aged 55+ were significantly more likely to utilize a motorized boat.*

Age and aggregated boat type used most often



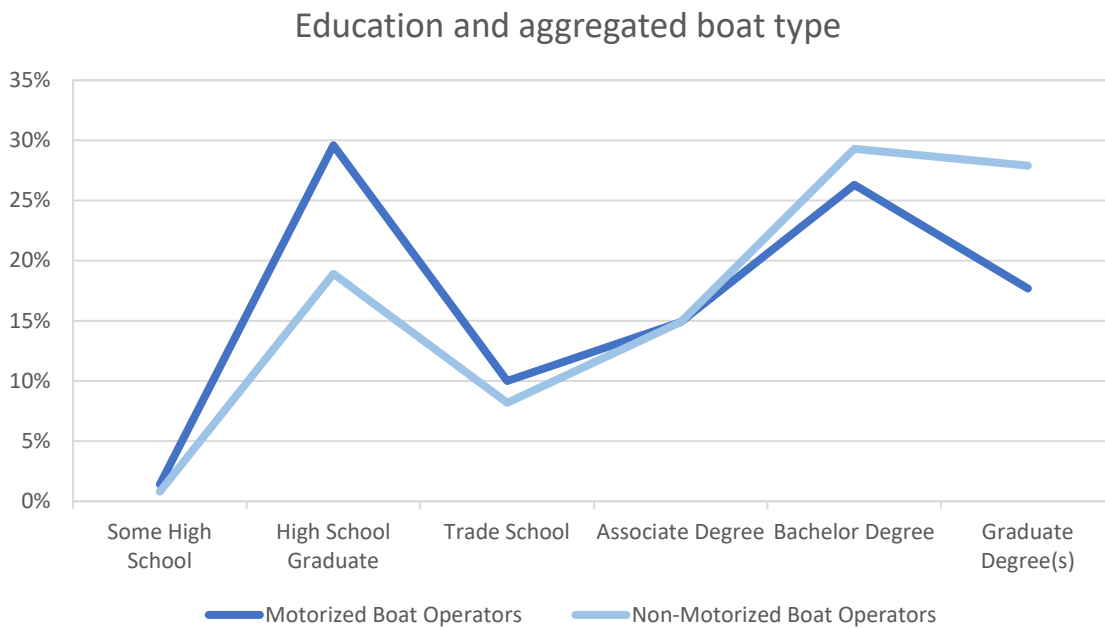
5

<sup>5</sup> For the boat type aggregation, sailboat with motor was included with motorized boats; sail (sail only) was included with non-motorized boats.

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Boaters whose highest education was high school were significantly more likely to boat in motorized vessels; boaters who attended college were more likely to utilize non-motorized vessels. Pontoons, however, have appeal to all ages. Some 29.8% of boaters whose highest education was high school preferred their pontoon; and, somewhat contradicting the chart below (Fig. 9), 47.2% of boaters who attended college preferred their pontoon.

*Figure 9 shows that boaters whose highest education was high school were significantly more likely to own a motorized boat; boaters with college degrees were more likely to own a non-motorized boat.*



### Ethnicity and Race

From the Recreational Boating Survey, 0.5% of boaters or 35 out of 5,660 completing questionnaires indicated that they were Hispanic or Latino.

Some 1.2% of recreational boaters or 71 out of 5,729 completing questionnaires indicated that they were American Indian or Alaska Native (0.9%), African American (0.6%), other (not specified) (0.5%), Asian (0.3%), Middle Eastern (0.1%), and Pacific Islander (0.1%).

From the Marine Trades survey, 0.7% of Ohio marine-businesses held an MBE (Minority Business Enterprise) certification, 2.2% held an EDGE (Encouraging Diversity, Growth, & Equity) certification, 5.1% were WBE (Women-Owned Business Enterprise), and 8.7% held a VBE (Veteran-Friendly Business Enterprise) certification.

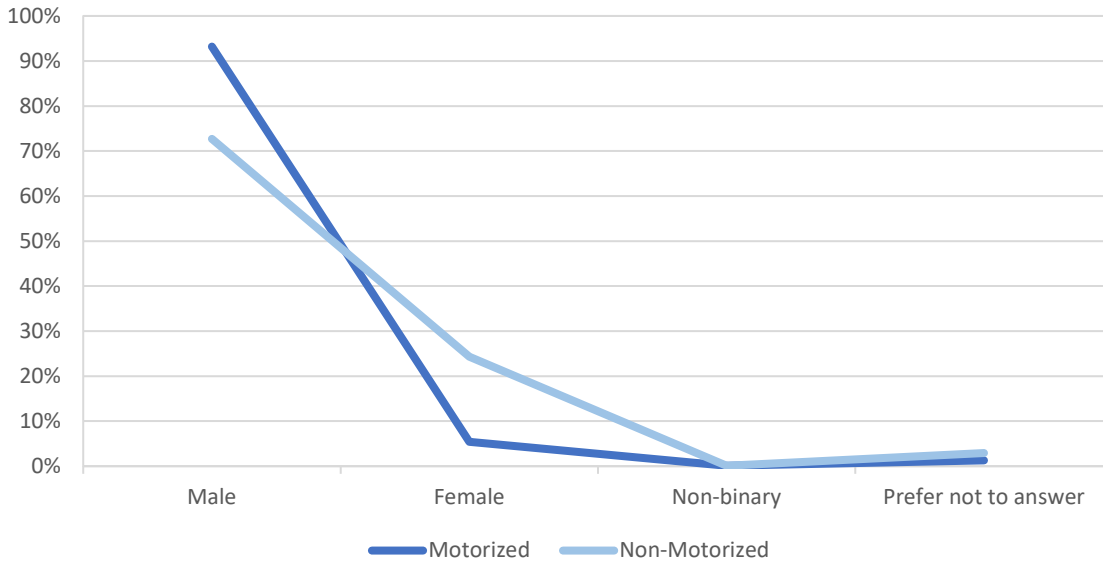
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Gender and Boat Type

Some 24.3% of primary boat operators for non-motorized boats were female; 5.4% of primary boat operators for motorized boats were female.

Figure 10 shows gender and aggregated boat type. Some 93.1%<sup>6</sup> of primary operators of motorized boats were male; 5.4% of primary motorized boat operators were female. Some 72.7% of primary operators of non-motorized boats were male; 24.3% of primary non-motorized boat operators were female.

Gender and aggregated boat type



<sup>6</sup> These percentages include 0.1% of boaters identifying as non-binary and 1.8% choosing not to answer, which is why male/female gender percentages do not add up to 100%.

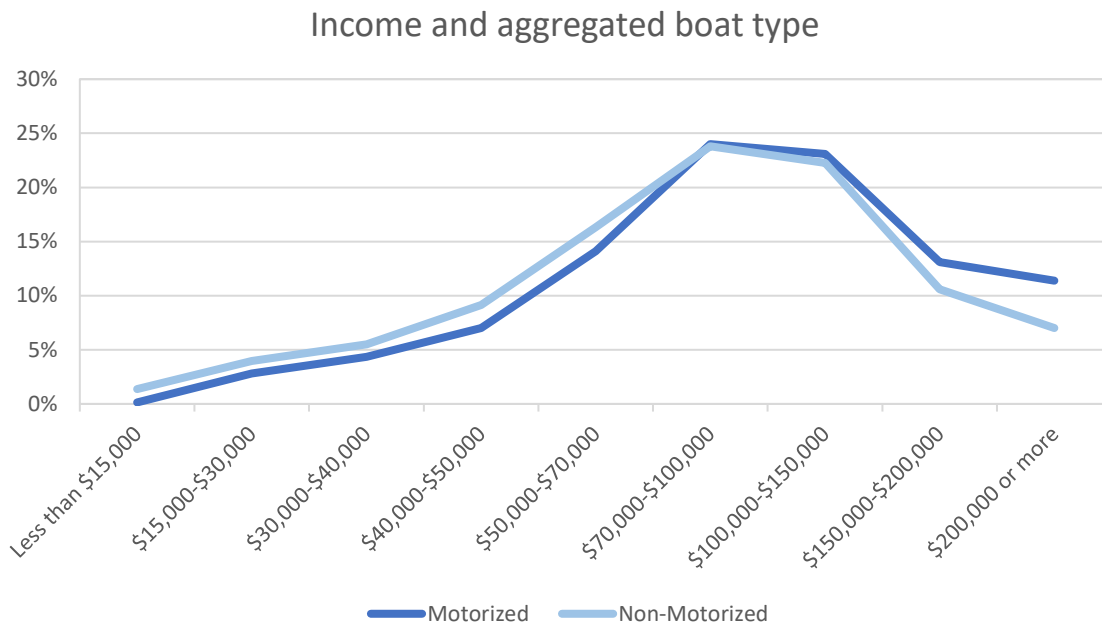
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Occupation and Income

Boat operators who prefer a motorized boat as their primary vessel were significantly more likely to have occupations such as retirees, executives, construction workers, sales, and transportation. Boat operators who prefer a non-motorized boat as their primary vessel were significantly more likely to have occupations such as professionals/technical, administrative support, educators, retail/food service workers, healthcare workers, government employees, and students.

Motorized boat operation strongly correlated to annual household income over \$150,000; non-motorized vessels had higher utilization among boaters with annual household income less than \$70,000. The data suggest non-motorized boats serve as an introduction to boating when excess disposable income may not be available. Twice as many boaters with annual income less than \$15,000 utilize non-motorized boats than motorized boats; 40% more boaters with income \$15,000-\$30,000 utilize non-motorized boats than motorized ones.

Figure 11 shows boating household income by aggregated boat type. The chart shows boat ownership strongly correlated to income.



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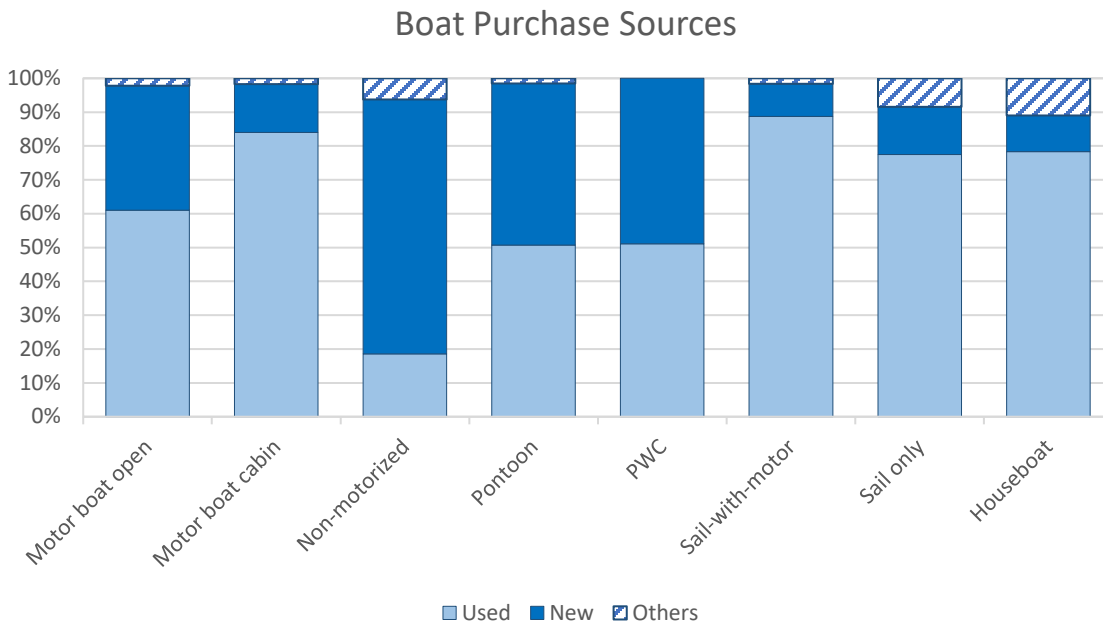
Boat Purchasing Dynamics

Motorboats (open), non-motorized boats, and pontoons account for 85% of all boats reported by survey respondents. Some 61% of motorboats (open) were purchased used, and 36.8% were purchase new from a boat dealer (1.6% were inherited, 0.2% were bartered, 0.1% were homemade, 0.1% were direct from manufacturer, and 0.2% did not specify).

Most pontoons, 50.7%, were purchased used and 47.8% were purchased new from a boat dealer (0.7% were gift/inherited, 0.4% were bartered, 0.1% were homemade, and 0.3% did not specify).

Some 75.1% of non-motorized boats were purchased new where 66.7% were bought at a boat dealer and the rest at a general retailer (non-dealer) location.<sup>7</sup>

Figure 12 shows the manner of boat purchasing in Ohio.



<sup>7</sup> Non-motorized boat retail stores include Dick’s Sporting Goods, Walmart, Costco, Menards, LL Bean, Dunham’s, Tractor Supply, Rural King, Sam’s Club, REI, Bass Pro, Cabela’s, Gander Mountain, and Amazon.

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Profile of boat types, length, purchase year, model year, make, model, horsepower, cost, and the percentage of vessels rented or borrowed (rather than owned) reveals boating purchasing activity leading up to the pandemic and continuing through the pandemic. The year before the pandemic, 2019, sail (sail only) boats and inflatable boats saw their highest purchase volume (motorboats [open and cabin] and pontoons having seen a purchasing volume increase in 2018). During the pandemic, 2020, kayaks, canoes, personal watercraft, rowboats, and houseboats saw their highest purchase volume.

*Figure 13 shows averages for boat profiles including length, horsepower, and average purchase price. Most frequently information for purchase year, model year, make, and model are shows for all boat types.*

Type of Boat	Length	Purchase Year	Model Year	Make <sup>8</sup>	Model	HP	Average Purchase Price	Rent Or Borrow
Motorboat – Cabin	28' 3"	2018	1989	Sea Ray	Sundancer	424	\$49,425	2.5%
Motorboat - open	20' 4"	2018	2000	Tracker	V	150	\$23,341	2.5%
Pontoon	22' 2"	2018	2018	Bennington	Party	92	\$23,880	9.5%
Personal Watercraft	12' 3"	2020	2021	Sea-Doo	GTX	182	\$10,713	7.7%
Sailboat with motor	29' 3'	2016	1987	Catalina	Capri	21	\$37,388	6.1%
Houseboat	54' 2"	2022	1995	Crest	-	282	\$74,100	33.4%
Charter	30' 5"	2016	2004	SportCraft	-	445	-	-
Sail (sail only)	19' 2"	2019	1979	Hobie	Highlander	-	\$8,316	8.8%
Inflatable	11' 2"	2019	2019	Sea Eagle	-	-	\$2,810	4.8%
Rowboat	12' 2"	2020	2018	Alumacraft	Jon	-	\$983	4.8%
Canoe	15' 3"	2020	2000	Old Town	Discovery	-	\$747	4.8%
Kayak	11' 3"	2018	2018	Pelican	Perception	-	\$589	4.8%
Paddleboard	11' 4"	2020	2020	Pelican	-	-	\$469	4.8%

In terms of boat type, open motorboats averaged 41 days on the water per year and cabin motorboats averaged 55 days. Similarly, sailboats with motors averaged 56 days and pontoons averaged 51 days. Houseboats averaged 80 days per year on the water, which was the highest number of days of any boat type; non-motorized boats spent 23 days on the water, which was the lowest number of days by any boat type. Personal watercraft averaged 35 days on the water and sail (sail only) were on the water for 40 days.

Overall, 63.6% of Ohio boaters traveled 20 miles or less one-way to reach their favorite body of water (451 different Ohio bodies of water were mentioned) where 31.8% traveled five miles or less. The

<sup>8</sup> Top Makes. Motorboat-open – Tracker, Lund, Ranger, StarCraft, and Sea Ray. Motorboat-Cabin – Sea Ray, Bayliner, Wellcraft, SportCraft, Four Winns, and Tiara. Pontoon – Bennington, SunTracker, Sylvan, and Sweetwater. PWC – Sea-Doo, Yamaha, Kawasaki, and Bombardier. Sailboat with motor – Catalina and Hunter. Kayak – Pelican, Old Town, Perception, Future Beach, Sundolphin, Wilderness Systems, and Lifetime. Canoe – Old Town, Grumman, Wenonah, Coleman, and Mad River. Inflatable boat – Sea Eagle and Intex. Rowboat – Alumacraft and Sears.

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overall average number of miles traveled one-way to their favorite body of water was 40 miles.<sup>9</sup> Boaters located in ODNR Parks and Watercraft's five districts had diverse average one-way trip miles. Average travel miles one-way to Lake Erie for boaters in Northwest Ohio was 30 miles, which was the least number of one-way travel miles. Average travel miles one-way for boaters in Southeast Ohio was 31 miles, where the most frequently mentioned destinations include the Ohio River, the Muskingum River, Seneca Lake, and Salt Fork Lake. Average travel miles one-way to Lake Erie for boaters in Northeast Ohio was 35 miles. In Central Ohio, boaters traveled an average of 38 miles, where the most frequently mentioned destinations include Alum Creek Reservoir, Buckeye Lake, Lake Erie, Indian Lake, and Hoover Reservoir. Average travel miles one-way for boaters in Southwest Ohio was 57 miles, where most frequently mentioned destinations include Caesar Creek Reservoir, Little Miami River, East Fork Reservoir, Cowan Lake, and Indian Lake.

The most popular boating activities were fishing (35.2%), cruising (12.7%), paddling (12.4%), and sightseeing or observing nature (12.3%). Swimming was significantly more popular in Southwest Ohio, mentioned by 6.8% compared to 4.7% overall; sailing was significantly less popular in Southeast Ohio, mentioned by 0.3% compared to 1.7% overall. Fishing and motorboats correlated such that motorboat operators spent 54.2% of their boating time fishing and cabin motorboat operators spent 31.3% of their boating time fishing. Operators of non-motorized boats spent 38.2% of their boating time paddling and 20.8% observing nature (20% of the time fishing). Houseboat operators were significantly more likely (48.2%) than all other boaters (11.4%) to spend their boating time onboard vessels docked/moored socializing with people not in their household.

During the boating season, 89.2% of non-motorized boats, 66.1% of open motorboats, and 56.6% of personal watercraft were kept on land at home. Some 86.4% of sailboats with motors, 85.7% of houseboats, 68.3% of cabin motorboats, and 57.5% of sail (sail only) boats were kept at a marina during the season. Most pontoons were either at a marina (32.3%) or in the water at home (32.2%) during the boating season. Storage during the off season moved almost all boat types to land at home except for houseboats and cabin motorboats, which remained at marinas.

Regionally, 68.1% of boating households in Southern Ohio kept their vessels on land at home during the season (68.1% in Southeast Ohio, 62.4% in Southwest Ohio [for all Ohio, 58.6% of boats were kept on land at home during the season]). Boats berthed at marinas were most popular in Northern Ohio (27.2% in Northwest Ohio, 23.5% in Northeast Ohio [for all Ohio, 19.2% of boats were berthed at marinas during the season]). Storage during the offseason on land at home was most popular in Southeast Ohio (80.2%).

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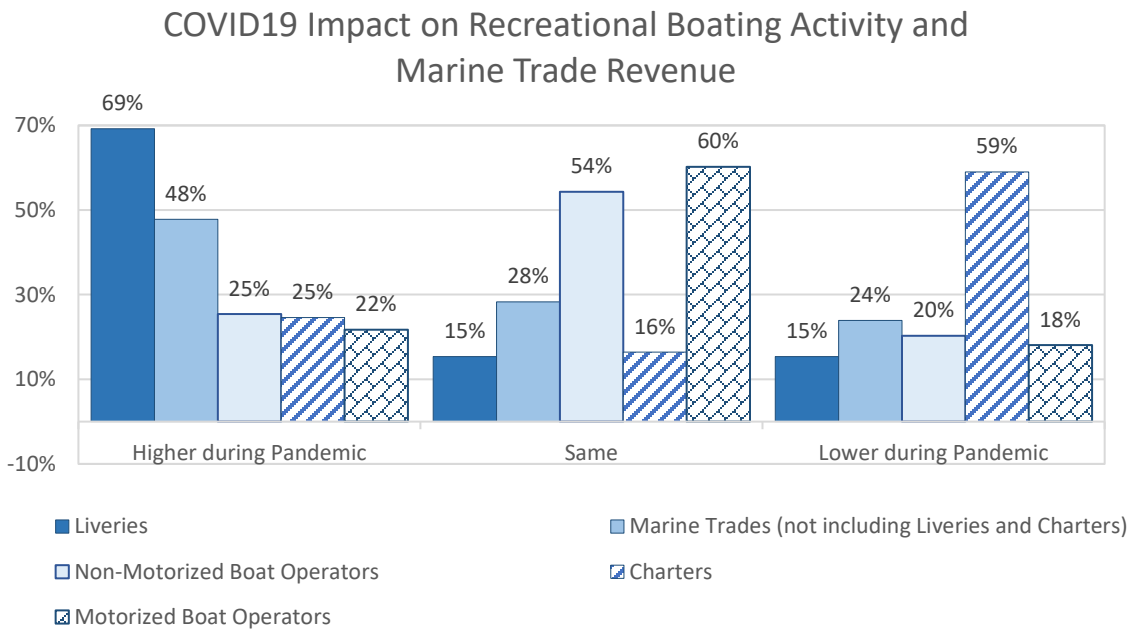
<sup>9</sup> Averages include all boat trips to diverse locations and have a high variance. For example, boaters in Hamilton County travelling 250 miles to Lake Erie. The overall average miles traveled to #1 body of water, most likely the closest, was 14 miles (see Figs. 44 and 48).

## COVID19's Impact of Ohio Boating

During the COVID19 shelter in place order, 69.2% of liveries saw increased revenue and 47.8% of Marine Trades businesses (not including charters and liveries) reported higher earnings. In descending order of success, 70% of marinas reported increased revenue during the pandemic, 60% of dealers, 51.9% of storage facilities, and 25% of bait & tackle businesses.

Most charters (59%) experienced lower revenue during the pandemic compared to pre-pandemic. However, written comments suggest that the situation had dire consequences for charters (Fig. 15).

*Figure 14 shows the impact of COVID19, in descending order of increased revenue for Marine Trades businesses and increased activity for recreational boating. Subset include liveries, non-motorized boat operators, Marine Trades businesses (not including liveries and charters), charters, and motorized boat operators. The data show liveries were the businesses most likely to experience revenue growth and non-motorized boat operators were the most likely boaters to experience increased activity during COVID19.*



Most Marine Trades businesses (except charters) expanded during the pandemic and the data suggest an advantage to businesses with online sales processes. One of four recreational boaters and charters took to the waterways during the pandemic. However, while recreational boaters stayed home, 65.7% of charters faced business failure—rather than decreased business.

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Figure 15 shows written comments from the survey where bold represents a category provided by researchers and the non-bolded percentages below show the coded comments and the percentage each contributed to the category. The column on the left, colored, shows the experience of thousands of Ohio recreational boaters during the pandemic. The middle column shows the experience of Marine Trades business (manufacturers, storage facilities, dealers, marinas, bait & tackle, and education) such that most (52.5%) used superlatives to describe their business experience during the pandemic. The column on the right shows the experience of charters where the impact was most severe in terms of losing revenue and being on the verge of fail. Note that percentage add up to more than 100% because respondents provided multiple answers.

How did the COVID19 pandemic affect your boating activity?	Describe how the COVID19 pandemic affected your business?	
<b>2,546<sup>10</sup> RECREATIONAL BOATERS</b>	<b>MARINE TRADES (Except Charters<sup>11</sup>)</b>	<b>CHARTERS</b>
<p><b>60.3% None/Little Effect</b> 58.1% Boating the same 1.6% A little effect 0.8% Refused to acknowledge COVID 0.6% Restaurants closed</p> <p><b>23.1% Increased Boating</b> 17.1% Boated more 2.2% Lakes more crowded 1.4% Kayaked more 1.1% Bought a boat 1.1% Fished more 1.0% Lake place of no contact 1.0% Bought kayak/canoe 0.8% Refuge for family 0.6% Safe outdoors 0.5% Escape from house 0.4% New boaters 0.3% Saved sanity/family 0.2% Early retirement</p> <p><b>17.2% Decreased Boating</b> 13.4% Shut it down 1.5% No one wanted 1.3% Stayed home 0.9% Had to work 24/7 0.5% Regattas cancelled 0.3% Camp closed 0.3% Canada closed 0.1% Focused on maintenance</p>	<p><b>52.5% Increased Business</b> 28.8% Incredible growth 27.1% More boating interest 10.2% Boat sales doubled 6.8% Docks/membership 3.4% Marinas open 1.7% Turned work away</p> <p><b>8.5% Lost Revenue</b></p> <p><b>13.6% Business Fail</b> 5.1% May not survive 8.5% Very difficult</p> <p><b>13.6% No Effect</b></p> <p><b>13.6% COVID penetration</b> 3.4% Hard to staff 3.4% Stopped spending 1.7% Safety struggled 1.7% Fear of getting sick 1.7% No in-person shopping</p> <p><b>15.3% Decreased Business</b> 11.9% Fewer customers 3.4% Unable to sell 1.7% Equipment sales</p> <p><b>15.3% Supply Chain Fail</b> 11.9% Supply chain issues 5.1% No parts 1.7% Kayaks for 2023 1.7% Paddles from 2020</p> <p><b>13.6% Inflation</b> 6.8% Fuel costs 6.8% MFG prices 1.7% Local only</p>	<p><b>22.9% Increased Business</b> 20.0% Incredible growth 8.6% More boating interest 2.9% Training new boaters</p> <p><b>40.0% Lost Revenue</b></p> <p><b>25.7% Business Fail</b> 20.0% May not survive 5.7% Very difficult</p> <p><b>11.4% No Effect</b></p> <p><b>8.6% COVID penetration</b> 5.7% Safety struggled 2.9% COVID cancellations</p> <p><b>2.9% Decreased Business</b> 2.9% Fewer customers 2.9% No out-of-state</p> <p><b>2.9% Inflation</b> 2.9% Fuel costs</p>

<sup>10</sup> Written comments are provided by respondents who choose to provide them.

<sup>11</sup> Statistically, there was insufficient sample to present written comments from liveries as a subset.

## Recreational Boater Safety: Participation, Awareness, and Attitude

### Safe Boater Courses

Most motorized boat operators, 54.4%<sup>12</sup>, had completed a Safe Boater Course. Some completed more than one Safe Boater Course, such that 27.7% attended a class, 22.5% took an online course, 12.8% completed a home-study exam, and 6.4% completed a Proctored Safe Boater Proficiency Exam.

Operators of motorized boats purchased recently (i.e., 1,057 motorized boat operators purchasing boats between 2019-2022) showed similar Safe Boater Course completion incidence. Overall, 55.3% of motorized boat operators who purchased a boat between 2019 and 2022 had completed a Safe Boater Course. Some completed more than one Safe Boater Course, such that 28.2% took an online course (this higher percentage of online completion in the last four years likely reflects the COVID19 pandemic shelter in place order), 22.3% attended a class, 13.1% completed a home-study exam, and 5.6% completed a Proctored Safe Boater Proficiency Exam. The percentage of motorized boat operators completing Safe Boater Courses increased to 59.8% if the boat purchased between 2019 and 2022 was new.

Some 34.8%<sup>13</sup> of non-motorized boat operators had completed a Safe Boater Course. Some completed more than one Safe Boater Course such that 16.7% attended a class, 11.4% took an online course, 10.9% completed a home-study course, and 4.1% completed a Proctored Safe Boater Proficiency Exam.

Results filtered by non-motorized boats purchased since 2019 (i.e., 435 non-motorized boat operators purchasing boats between 2019-2022) showed similar findings. Overall, 36.1% of boaters who purchased a non-motorized boat between 2019 and 2022 had completed a Safe Boater Course. Some completed more than one Safe Boater Course such that 12.2% took an online course, 15.6% attended a class, 12.0% completed a home-study exam, and 2.5% completed a Proctored Safe Boater Proficiency Exam. The percentage of non-motorized boat operators completing Safe Boater Courses decreased to 32.8% if the boat purchased between 2019 and 2022 was new.

### Safe Boater Courses Ratings

Some 5,443 recreational boaters rated Safe Boater Courses—no matter the Safe Boater Course completion status; however, boaters having completed a Safe Boater Course had significantly stronger agreement with all Safe Boater Courses rating statements. Strongly Agree percentages verify diverse perceptions about Safe Boater Courses between boaters having completed a course compared to boaters with no Safe Boater Course experience.

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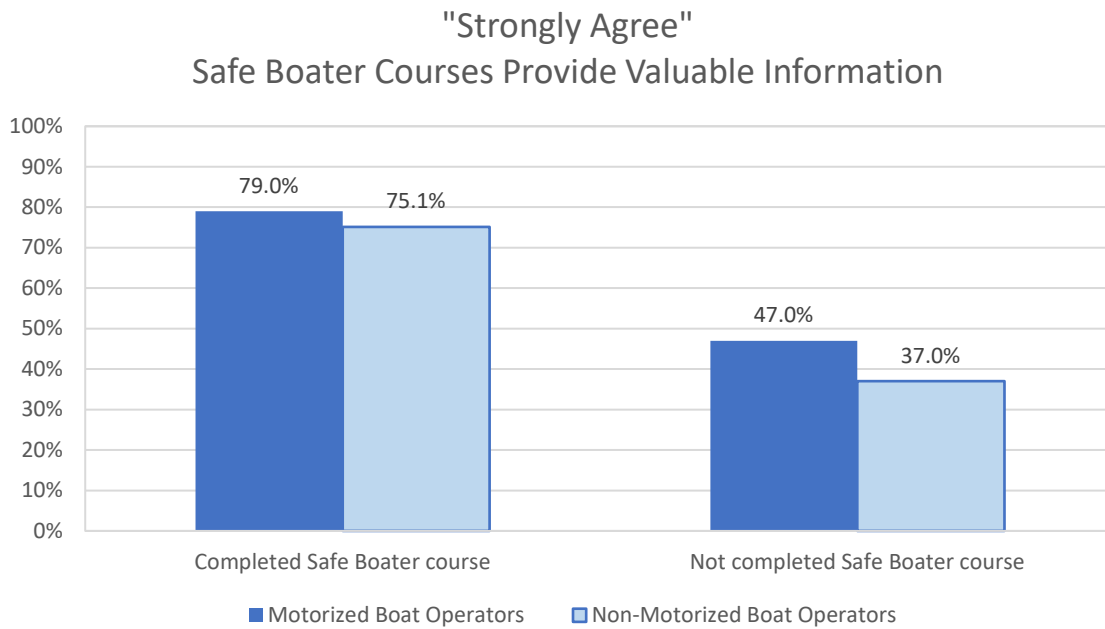
<sup>12</sup> 54.4% equals 2,224 motorized boat operators.

<sup>13</sup> 34.8% equals 644 non-motorized boat operators.

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Overall, 81.2% of all boaters agree (61.4% Strongly Agree and 19.9% Somewhat Agree) that Safe Boater Courses provide valuable information. Among boaters having completed a Safe Boater Course, 95.3% agree (78.1% Strongly Agree and 17.2% Somewhat Agree) that Safe Boater Courses provide valuable information.

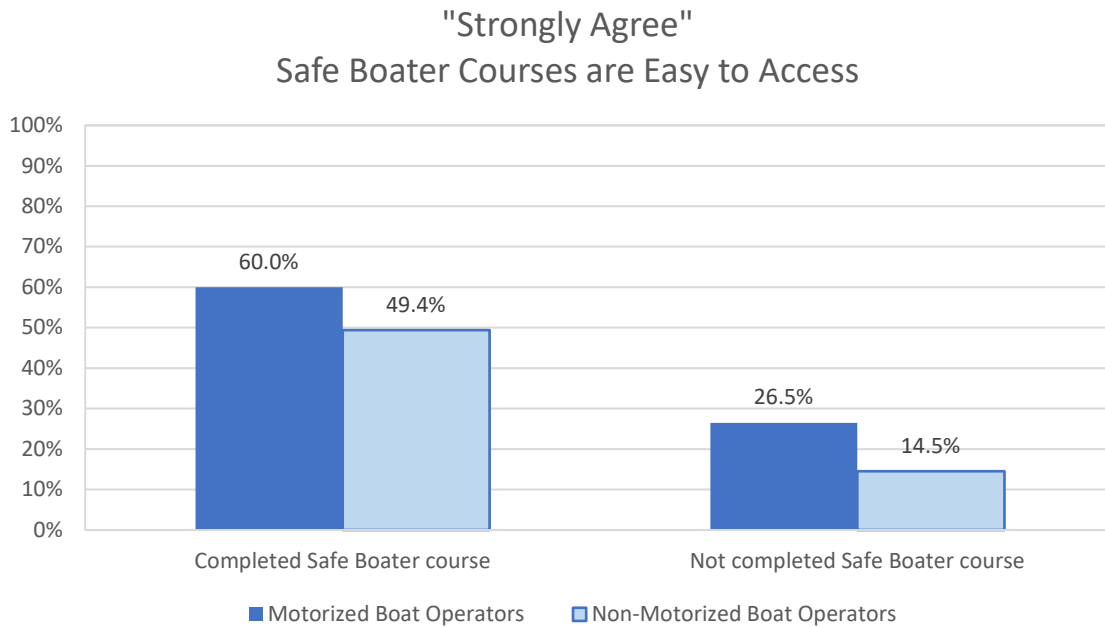
Figure 16 shows the percentage of boaters, aggregated by boat type, who Strongly Agree with the statement "Safe Boater courses provide valuable information" cross tabulated on whether or not a Safe Boater course had been completed .



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Overall, 62.4% of all boaters agree (40.5% Strongly Agree and 21.9% Somewhat Agree) that Safe Boater Courses are easy to access. Among boaters having completed a Safe Boater course, 82.6% agree (57.6% Strongly Agree and 25.1% Somewhat Agree) that Safe Boater courses are easy to access.

Figure 17 shows the percentage of boaters, aggregated by boat type, who Strongly Agree with the statement "Safe Boater courses are easy to access" cross tabulated on whether or not a Safe Boater course had been completed .

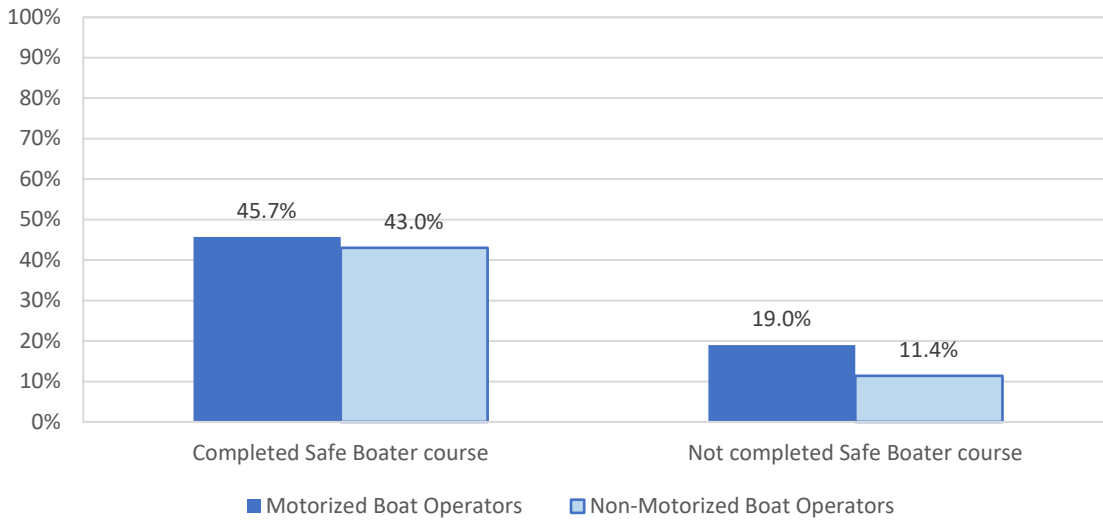


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Overall, 55.6% of all boaters agree (31.3% Strongly Agree and 24.3% Somewhat Agree) that Safe Boater Courses can be completed quickly. Among boaters having completed a Safe Boater course, 77.4% agree (45.0% Strongly Agree and 32.4% Somewhat Agree) that Safe Boater Courses can be completed quickly.

Figure 18 shows the percentage of boaters, aggregated by boat type, who Strongly Agree with the statement "Safe Boater courses can be completed quickly" cross tabulated on whether or not a Safe Boater course had been completed .

"Strongly Agree"  
Safe Boater Courses can be Completed Quickly



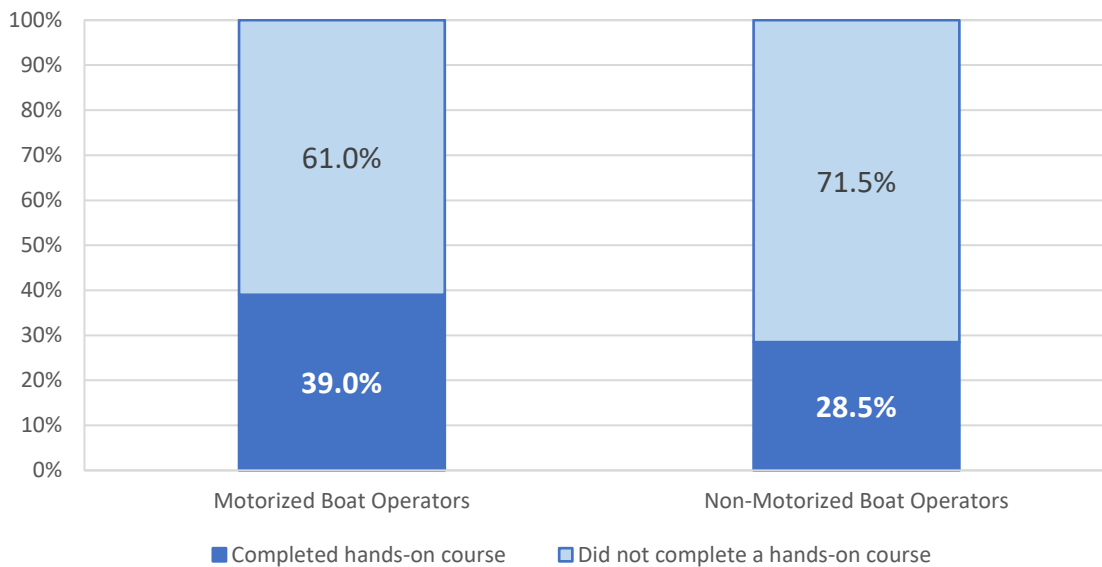
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Hands-on Courses

One in three Ohio boaters, 35.6%, completing the 2022 ODNR Parks and Watercraft Recreational Boating Survey (i.e., 2,042 boaters of 5,734) report completing a hands-on course at some point in their lives. The 2,042 boaters indicated that they or someone in their boating household had “completed” (i.e., rather than “planning to complete”) one or more canoeing, kayaking, personal watercraft, power boating, stand-up paddleboarding, sailing, navigation, global positioning and/or “other” hands-on course. For this analysis, any boater indicating that they both did not complete a Safe Boater Course and did not provide information about hands-on courses were considered to not have completed a hands-on course.

Figure 19 shows the results from 5,734 Ohio boaters responding to the question “Indicate you and your household’s participation in any of the following Boater Education and Skills hands-on courses.” Any boater indicating that they completed any hands-on course (canoeing, kayaking, personal watercraft, power boating, stand-up paddleboarding, sailing, navigation, global positioning, and other) were considered to have completed a hands-on course. Boaters indicating that they were only “planning” to complete a hands-on course were considered to not have completed a course. Boaters that indicated they had not completed a Safe Boat course and did not complete information for hands-on, was considered to not have completed a hands-on course.

Completed any hands-on course



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Hands-on Course Participation Context

Some 5,734 boaters answered either or both the Safe Boater or hands-on courses questions. Power boating was the most popular course, selected by 24.0% of boaters answering boater education questions. Stand-up paddleboarding was the least popular course, selected by 1.6% of boaters answering boater education questions.

*Figure 20, first column, shows the actual number of boaters who indicated they had completed a hands-on course. The second column shows the number of boaters who indicated that they plan to complete a hands-on course in the future. The third column shows the number of boaters with no interest in hands-on courses. The fourth column reflects the base of these data being 5,734 (respondents who answered both or either question about Safe Boater and/or hands-on courses).*

Hands-on courses	Number of boaters from survey completing hands-on course	Number of boaters from survey planning to complete hands-on course in the future	Number of boaters with no interest in hands-on courses	Totals
Power boating course	1,378	439	3,917	5,734
Personal watercraft operation	836	391	4,507	5,734
Navigation	717	609	4,408	5,734
Kayaking	474	493	4,767	5,734
Canoeing	338	253	5,143	5,734
Sailing	299	200	5,235	5,734
Global positioning	295	419	5,020	5,734
Stand-up paddleboarding	93	221	5,420	5,734
Other	76	24	5,634	5,734

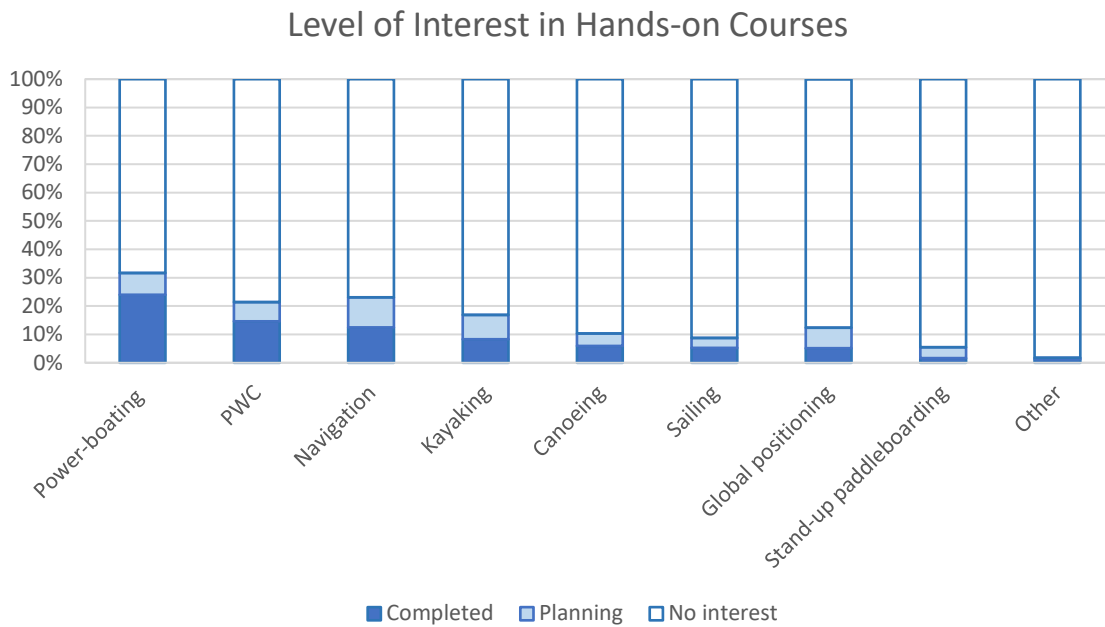
The data show that the 2,042 boaters who indicated that they or a member of their boating household had completed one or more hands-on course(s) completed, on average, 2.2 hands-on courses.

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Figure 21 shows the percentages from the numbers in Figure 20 where the base was the 5,734 respondents answering questions about boater education.

Hands-on course	Percent of boaters completing hands-on course	Percent of boaters from survey planning to complete hands-on course in the future	Number of boaters with no interest in hands-on courses
Power boating course	24.0%	7.7%	68.3%
Personal watercraft operation	14.6%	6.8%	78.6%
Navigation	12.5%	10.6%	76.9%
Kayaking	8.3%	8.6%	83.1%
Canoeing	5.9%	4.4%	89.7%
Sailing	5.2%	3.5%	91.3%
Global positioning	5.1%	7.3%	87.5%
Stand-up paddleboarding	1.6%	3.9%	94.5%
Other	1.3%	0.4%	98.3%

Figure 22 shows the data from Figure 21 in chart form to provide a visual of the level of hands-on course completion by boaters against their boat type used most often.



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Hands-on Course Drill Down: Sailing, September 2021-October 2022

Overall, 5.5% of all boaters (all boaters include 9,165 boating households) owned a sailboat; however, only 2.3% of all boaters used their sailboat most often.

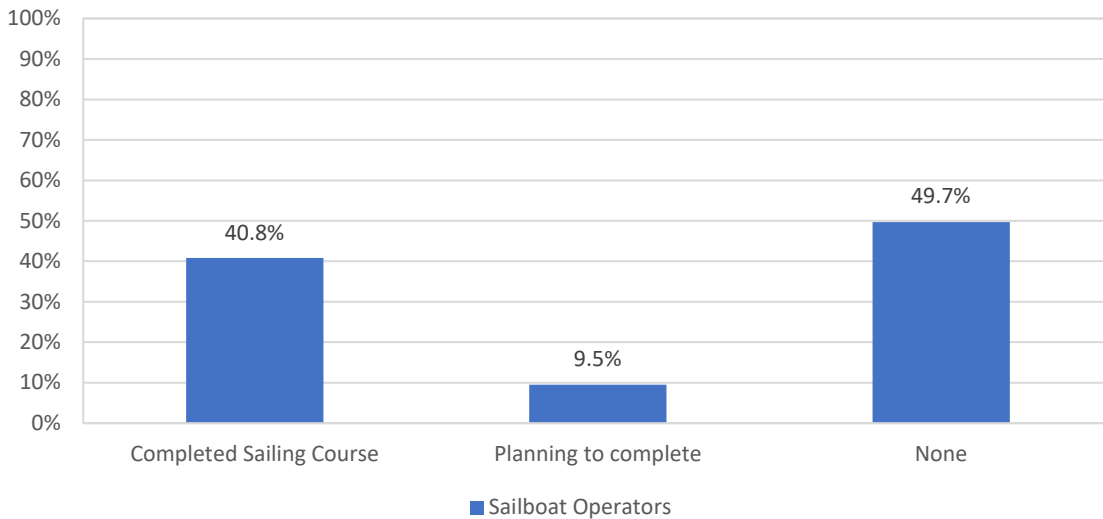
While 60.2% of all sailboats owned were sail (sail only), only one in four households used their sail (sail only) boat most often. On the other hand, sailboats with motor were 39.8% of all sailboats owned; however, two of three were used most often. These data indicate that 74.8% of sail (sail only) boats in Ohio have specialized or infrequent use.

Some 5.2% of boaters (i.e., 299 boaters out of 5,734 boaters) answering boater education questions completed a hands-on sailing course, even though a sailboat was not necessarily their most frequently used vessel.

The results show that 50.3% of respondents who identified their most frequently used vessel to be a sailboat had an interest in a hands-on sailing course. The data show 40.8% of sailboat operators in October 2021 to September 2022 had, at some point in their lives, believed themselves to have completed a hands-on sailing course.

Figure 23 shows the percentage of interest in hands-on sailboat courses from sailboat operators who utilize their sailboat most often and answered boater education questions.

Hands-on Sailing Course Participation by Boaters Operating  
Sailboats Most Often (211 boaters)



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Hands-on Course Drill Down: Power Boating, September 2021-October 2022

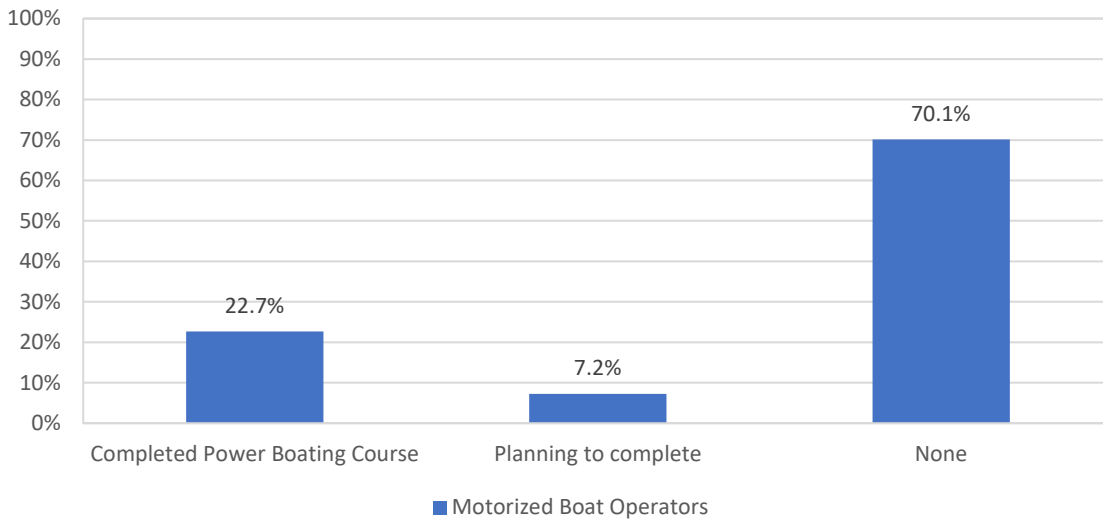
Overall, 73% of all boaters (all boaters include 9,165 boating households) owned a motorized boat; and 66.8% of all boaters used their motorized boat most often.

Hands-on power boating courses were completed by 24.0% of all boaters (i.e., 1,378 boaters out of 5,734 boaters) answering boater education questions, whether or not a motorized boat was their most frequently used vessel.

The results show that 29.9% of respondents who identified their most frequently used vessel to be a motorized boat had an interest in a hands-on power boating course. The data show 22.7% of motorized boat operators in October 2021 to September 2022 had, at some point in their lives, believed themselves to have completed a hands-on power boating course.

*Figure 24 shows the percentage of interest in hands-on power boating courses from motorboat operators who utilize their motorboat most often and answered boater education questions.*

Hands-on Power Boating Course Participation by Boaters  
Operating Motorized Boats Most Often (6,082 boaters)



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Hands-on Course Drill Down: PWC, September 2021-October 2022

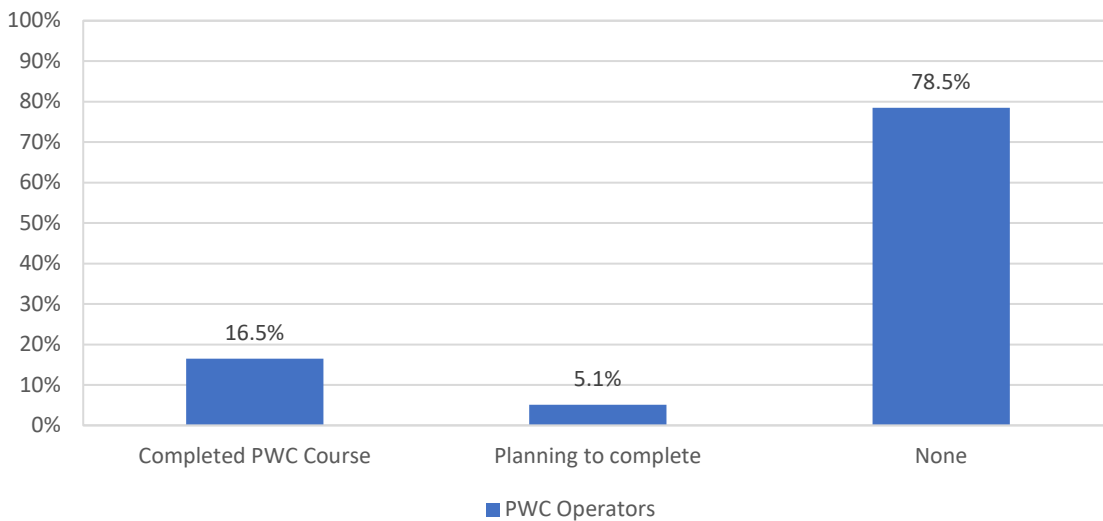
Overall, 12.3% of all boaters (all boaters include 9,165 boating households) owned a personal watercraft (jet ski, etc.); and 2.6% of all boaters used their personal watercraft most often.

Hands-on personal watercraft courses were completed by 14.6% of all boaters (i.e., 836 boaters out of 5,734 boaters) answering boater education questions, whether or not a personal watercraft was their most frequently used vessel.

The results show that 21.6% of respondents who identified their most frequently used vessel to be a personal watercraft (jet ski, etc.) had an interest in a hands-on personal watercraft course. The data show 16.5% of personal watercraft (jet ski, etc.) operators in October 2021 to September 2022 had, at some point in their lives, believed themselves to have completed a hands-on personal watercraft course.

*Figure 25 shows the percentage of interest in hands-on personal watercraft courses from PWC operators who utilize their personal watercraft most often and answered boater education questions.*

Hands-on Personal Watercraft Course Participation by  
Boaters Operating PWC Most Often (237 boaters)



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Hands-on Course Drill Down: Kayaking, September 2021-October 2022

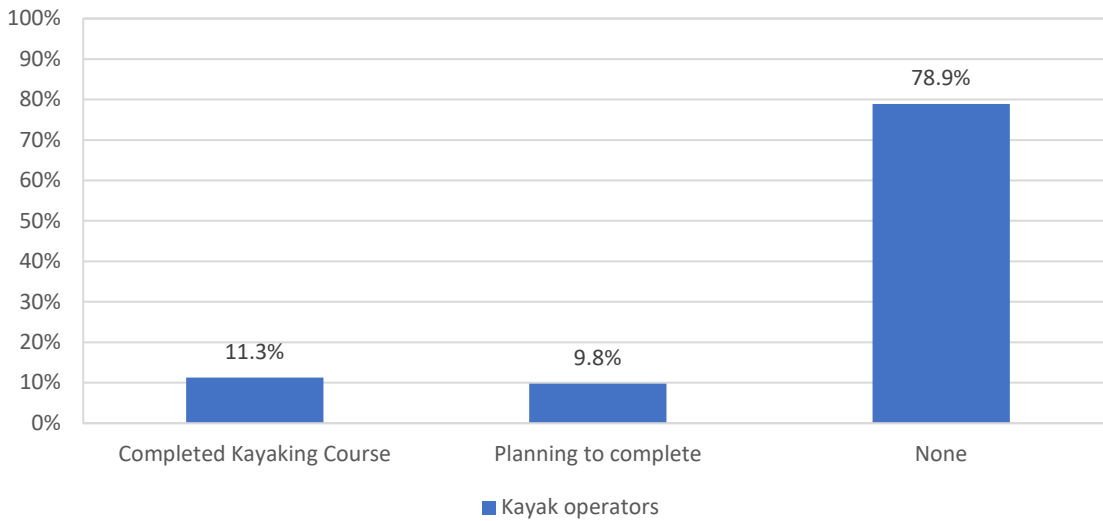
Overall, 46.4% of all boaters (all boaters include 9,165 boating households) owned a kayak; and 25.4% of all boaters used their kayak most often.

Hands-on kayaking courses were completed by 8.3% of all boaters (i.e., 474 boaters out of 5,734 boaters) answering boater education questions), whether or not a kayak was their most frequently used vessel.

The results show that 21.1% of respondents who identified their most frequently used vessel to be a kayak had an interest in a hands-on kayaking course. The data show 11.3% of kayakers in October 2021 to September 2022 had, at some point in their lives, believed themselves to have completed a hands-on kayaking course.

Figure 26 shows the percentage of interest in hands-on kayaking courses from kayak operators who utilize their kayak most often and answered boater education questions.

Hands-on Kayaking Course Participation by Boaters  
Operating Kayaks Most Often (2,310 boaters)



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Hands-on Course Drill Down: Canoeing, September 2021-October 2022

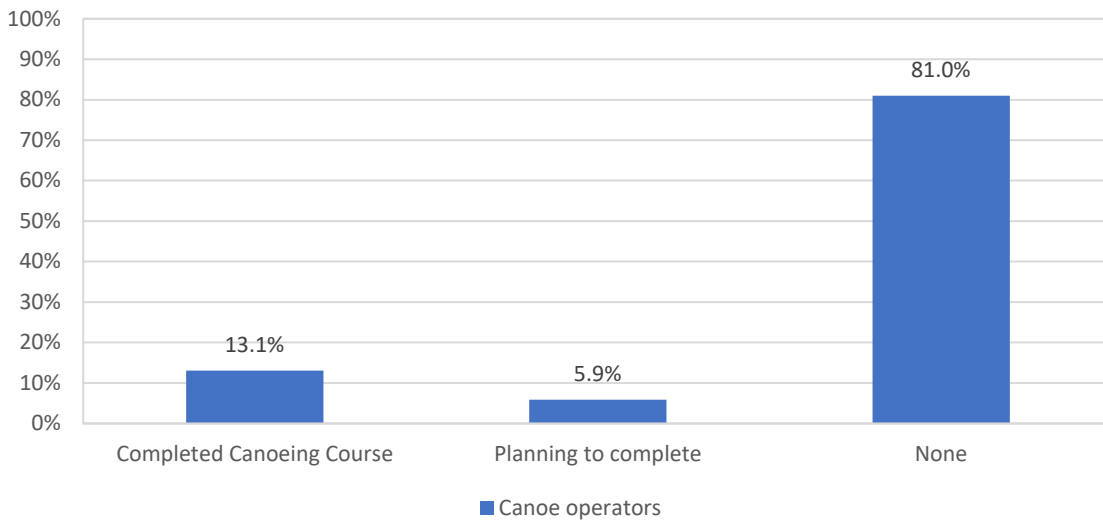
Overall, 16.6% of all boaters (all boaters include 9,165 boating households) owned a canoe; and 4.1% of all boaters used their canoe most often.

Hands-on canoeing courses were completed by 5.9% of all boaters (i.e., 338 boaters out of 5,734 boaters) answering boater education questions, whether or not a canoe was their most frequently used vessel.

The results show that 19% of respondents who identified their most frequently used vessel to be a canoe had an interest in a hands-on canoeing course. The data show 13.1% of canoers in October 2021 to September 2022 had, at some point in their lives, believed themselves to have completed a hands-on canoeing course.

Figure 27 shows the percentage of interest in hands-on canoeing courses from canoe operators who utilize their canoe most often and answered boater education questions.

Hands-on Canoeing Course Participation by Boaters  
Operating Canoes Most Often (374 boaters)



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Hands-on Course Drill Down: Stand-up paddleboard, September 2021-October 2022

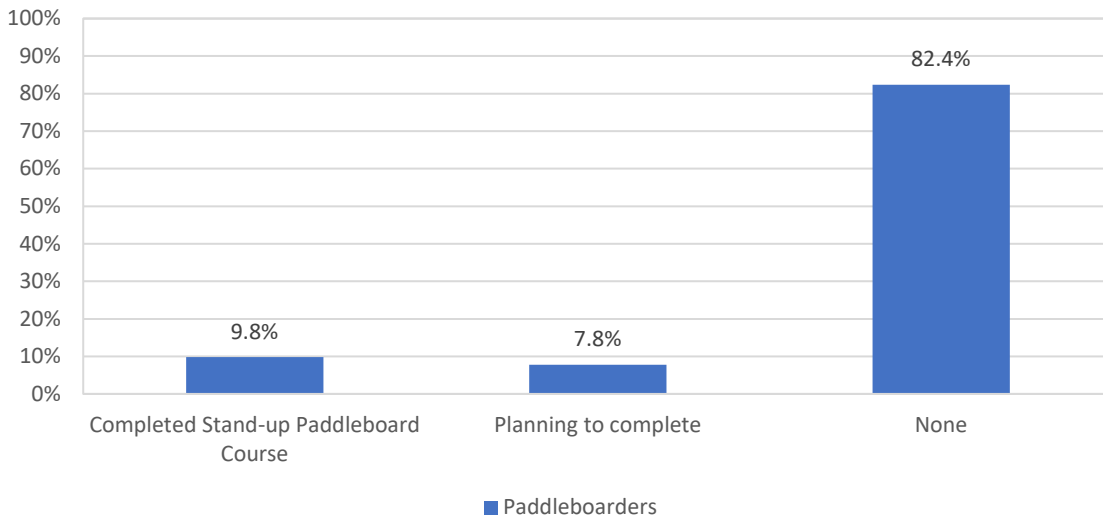
Overall, 7.8% of all boaters (all boaters include 9,165 boating households) owned a paddleboard; and 0.6% of all boaters used their paddleboard most often.

Hands-on stand-up paddleboarding courses were completed by 1.6% of all boaters (i.e., 93 boaters out of 5,734 boaters) answering boater education questions, whether or not a paddleboard was their most frequently used vessel.

The results show that 17.6% of respondents who identified their most frequently used vessel to be a paddleboard had an interest in a stand-up paddleboarding course. The data show 9.8% of paddleboarders in October 2021 to September 2022 had, at some point in their lives, believed themselves to have completed a hands-on stand-up paddleboarding course.

Figure 28 shows the percentage of interest in hands-on stand-up paddleboard courses from paddleboard operators who utilize their paddleboard most often and answered boater education questions.

Hands-on Stand-up Paddleboard Course Participation by  
Boaters Utilizing Paddleboards Most Often (51 boaters)



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Recreational boaters provided written comments about other boater training and skills classes that they had attended. These include Captains (24.6%)—100-Ton, 50-Ton, Captain’s license, Charter, OUPV (Operator of Uninspected Passenger Vessel), Licensed Mariner, and MMC (Merchant Mariner Credential); Coast Guard (17.4%)—Auxiliary, Power Squadrons, and ISC; other boating activities (15.9%)—houseboat, sailing, scuba, skiing, and whitewater; rescue (14.5%)—Swiftwater, Life Saving, Survival, First Aid, and WRT (Water Rescue Technician); ACA (5.8%); Safety (5.8%)—Boater Safety and Lake Erie Regulations; Marine Communications (4.3%); U.S. Navy/Military/Peace Officer (4.3%); Weather (4.3%); Boy Scouts (2.9%); Engine (2.9)—Maintenance and Mercury Marine Technician certification; and ASA (1.4%).

Boater Education and Skills hands-on Course Hosting Agency

Some 1,152 recreational boaters provided the name of the group or agency hosting the hands-on courses that they attended.

*Figure 29 shows written comments from 1,152 recreational boaters where bold represents a category provided by researchers and the non-bold percentages below show how much each contributed to the category. The column on the left identifies the name of the group or agency hosting the hands-on course(s) that Ohio recreational boaters attended. The column on the right identifies where a specific group or agency was significantly mentioned by boat type operator. For example, from the first row under the Associations category (23.4% USPS) has a corresponding row on the right because motorboat operators were statistically significantly more likely at the 95% confidence level  $\pm 5$  confidence interval to have received instruction from USPS. In other words, the finding was not due to chance and indicates that USPS has appeal to motorboat operators.*

<b>What was the name of the group or agency hosting the hands-on course(s) that you attended?</b>	<b>Boat type profile corresponding to significant interest.</b>
<p><b>29.1% Associations<sup>14</sup></b></p> <p>23.4% USPS (United States Power Squadrons)</p> <p>1.1% Red Cross</p> <p>1.0% ASA (American Sailing Association)</p> <p>1.0% ACA (American Canoe Association)</p> <p>0.9% NASBLA (National Association of State Boating Law Admin.)</p> <p>0.3% US Sailing (United States Sailing Association)</p> <p>0.2% ussailing.org</p> <p><b>23.6% Government</b></p> <p>16.3% ODNR Parks and Watercraft</p> <p>2.4% DNR other State</p> <p>2.3% Metroparks</p> <p>1.1% State Park</p> <p>0.5% Ohio county/city</p> <p>0.4% Sheriff</p> <p>0.3% Park District</p> <p>0.3% Wildlife Reserve</p> <p>0.2% Fire Department</p>	<p>USPS – Motorboat Operators</p> <p>Red Cross – Canoers</p> <p>ASA – Sailboat Operators</p> <p>ACA – Kayakers and Canoers</p> <p>Parks and Watercraft – Pontoon</p> <p>Metroparks – Kayakers</p> <p>State Park – Kayakers</p>

<sup>14</sup> Association single mentions include Homeowners Association, MWCD (Muskingum Watershed Conservancy District), and SCSEF (Space Coast Failing Education Foundation).

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<b>What was the name of the group or agency hosting the hands-on course(s) that you attended?</b>	<b>Boat type profile corresponding to significant interest.</b>
<p><b>21.7% Military<sup>15</sup></b>            10.6% USCG (United States Coast Guard)            9.1% US Coast Guard Auxiliary            1.1% U.S. Navy            0.3% U.S. Army            0.2% USACE (U.S. Army Corps of Engineers)</p> <p><b>8.4% Colleges/Courses<sup>16</sup></b>            3.0% BoatU.S.            1.6% University/college            1.4% Safe Boater courses            0.5% Sailing School            0.4% ABC (America’s Boating Course)            0.4% Captain’s License (Maritime License)            0.4% Specialized school            0.3% Sea Tech            0.3% Career Center            0.3% Home Study Course            0.2% Institute</p> <p><b>7.2% Camps/Outdoors/Team Sports</b>            4.6% BSA (Boy Scouts of America)/Girl Scouts            1.2% Team sports            0.5% YMCA            0.4% Camp/Summer Camp            0.4% Spirit of America            0.2% NOLS (wilderness education)</p> <p><b>5.2% Online<sup>17</sup></b>            4.1% online            0.5% boat-ed.com            0.3% boaterexam.com            0.2% YouTube</p> <p><b>4.8% Clubs</b>            2.1% Yacht Club/Sailing Club            1.6% Boat Club            0.8% Sierra Club            0.3% Keel-Haulers Canoe Club</p>	<p>USCG – Motorboat Operators            AUX – Motorboat Operators</p> <p>U.S. Army – Canoers</p> <p>BoatU.S. – Motorboat Operators</p> <p>Sailing School – Kayak and Sailboat</p> <p>BSA – Canoers and kayakers            Team Sports – Canoe and kayak</p> <p>NOLS – Kayakers</p> <p>Online – pontoon operators</p> <p>Yacht Club – Sailboat operators            Boat Club – Sailboat operators            Sierra Club – Kayakers            Keel-Haulers – Kayakers</p>

<sup>15</sup> Military single mentions include Department of Defense, NAVSTA (Guantanamo Bay military base), MWR (Morale, Welfare and Recreation), National Disabled Veterans Summer Sports Clinic, Patrick Air Force Base, USMC (United States Marine Corps), and U.S. Air Force.

<sup>16</sup> Colleges single mentions include Aloha SUP and National Whitewater Center.

<sup>17</sup> Online single mentions include abcboater.com and boatsmartexam.com.

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<b>What was the name of the group or agency hosting the hands-on course(s) that you attended?</b>	<b>Boat type profile corresponding to significant interest.</b>
<p><b>4.3% Businesses<sup>18</sup></b>            1.6% Retail            1.2% Dealer            0.6% Marina            0.6% Consultancy/Symposium            0.2% Livery            0.2% Resort</p> <p><b>2.5% Ohio Bodies of Water<sup>19</sup></b>            0.5% Indian Lake            0.4% Buckeye Lake            0.3% Alum Creek            0.3% East Fork            0.2% Lake Lorelei            0.2% Atwood Lake</p> <p><b>1.6% Self-Taught<sup>20</sup></b>            0.6% Experience            0.5% Expert advice            0.2% Library            0.2% Chapman Piloting (book)</p>	<p>Retail – Kayakers</p> <p>Consultancy – Kayakers</p> <p>Indian Lake – Sailboat operators</p> <p>Expert advice – Canoers</p>

<sup>18</sup> Business single mentions includes an insurance company.

<sup>19</sup> Ohio Bodies of Water single mentions include Apple Valley, Hocking Valley, Lake Choctaw, Lake Milton, Tappan Lake, and Guilford Lake.

<sup>20</sup> Self-taught single mentions include a naturalist and a volunteer.

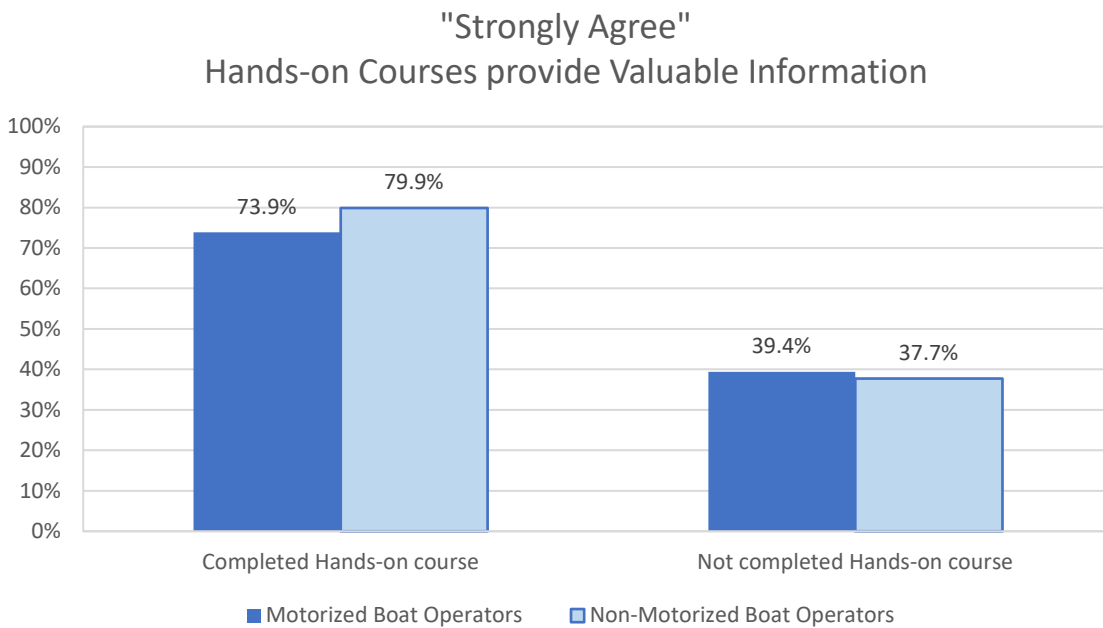
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Hands-on Courses Ratings

Some 4,730 recreational boaters rated hands-on courses—no matter the hands-on course completion status.

Overall, 73.2% of all boaters agree (53.0% Strongly Agree and 20.2% Somewhat Agree) that hands-on courses provide valuable information. Among boaters having completed a hands-on course, 90.5% agree (75.5% Strongly Agree and 15.0% Somewhat Agree) that hands-on courses provide valuable information.

Figure 30 shows the percentage of boaters, aggregated by boat type,<sup>21</sup> who Strongly Agree with the statement “Hands-on courses provide valuable information” cross tabulated on whether or not a Hands-on course had been completed .

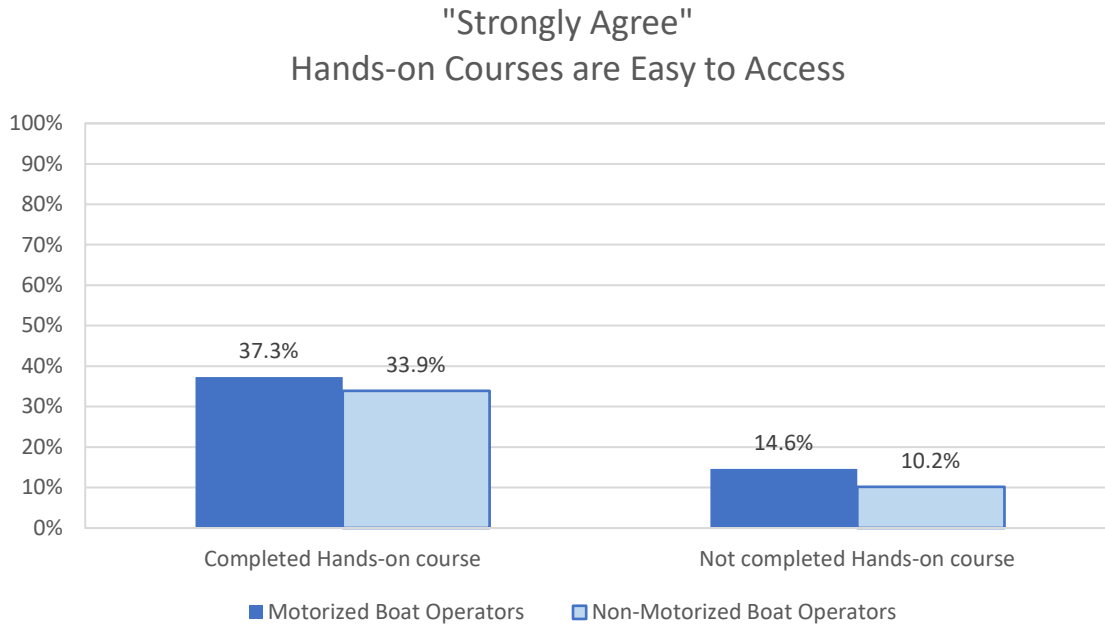


<sup>21</sup> For the boat type aggregation, sailboat with motor was included with motorized boats; sail (sail only) was included with non-motorized boats.

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Overall, 40.1% of all boaters agree (22.1% Strongly Agree and 17.9% Somewhat Agree) that hands-on courses are easy to access. Among boaters having completed a hands-on course, 62.9% agree (36.5% Strongly Agree and 26.4% Somewhat Agree) that hands-on courses are easy to access.

Figure 31 shows the percentage of boaters, aggregated by boat type,<sup>22</sup> who Strongly Agree with the statement “Hands-on courses are easy to access” cross tabulated on whether or not a Hands-on course had been completed.

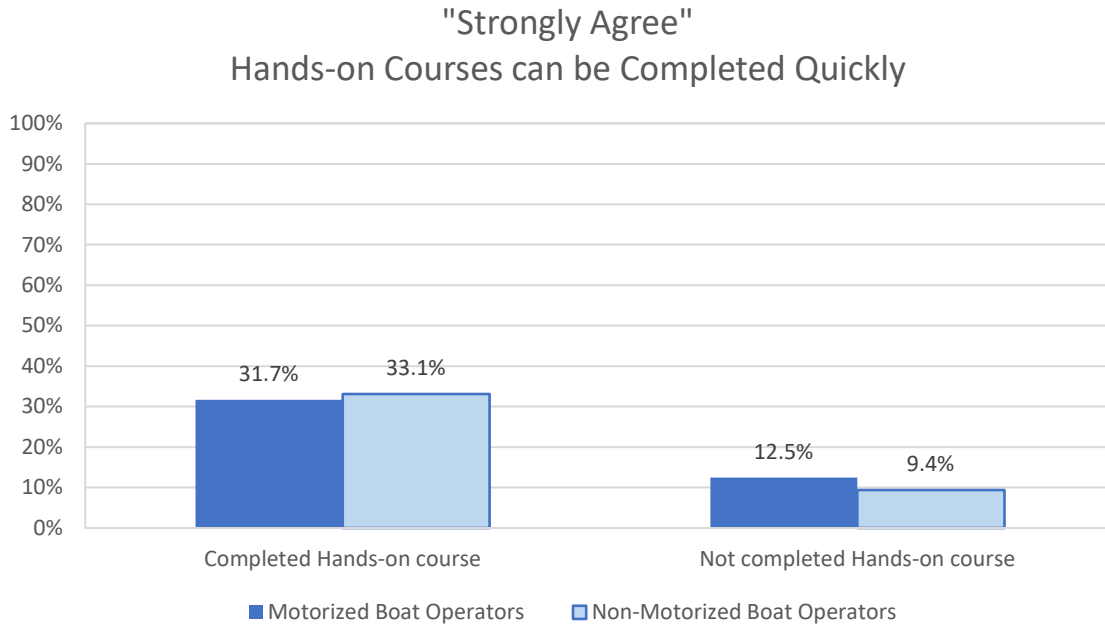


<sup>22</sup> For the boat type aggregation, sailboat with motor was included with motorized boats; sail (sail only) was included with non-motorized boats.

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Overall, 37.6% of all boaters agree (19.4% Strongly Agree and 18.2% Somewhat Agree) that hands-on courses can be completed quickly. Among boaters having completed a hands-on course, 59.1% agree (32.0% Strongly Agree and 27.1% Somewhat Agree) that hands-on courses can be completed quickly.

Figure 32 shows the percentage of boaters, aggregated by boat type,<sup>23</sup> who Strongly Agree with the statement “Hands-on courses can be completed quickly” cross tabulated on whether or not a Hands-on course had been completed .



<sup>23</sup> For the boat type aggregation, sailboat with motor was included with motorized boats; sail (sail only) was included with non-motorized boats.

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Figure 33 shows the ratings from 4,730 recreational boaters for hands-on courses, which were rated lower than Safe Boater courses (see Fig. 34).

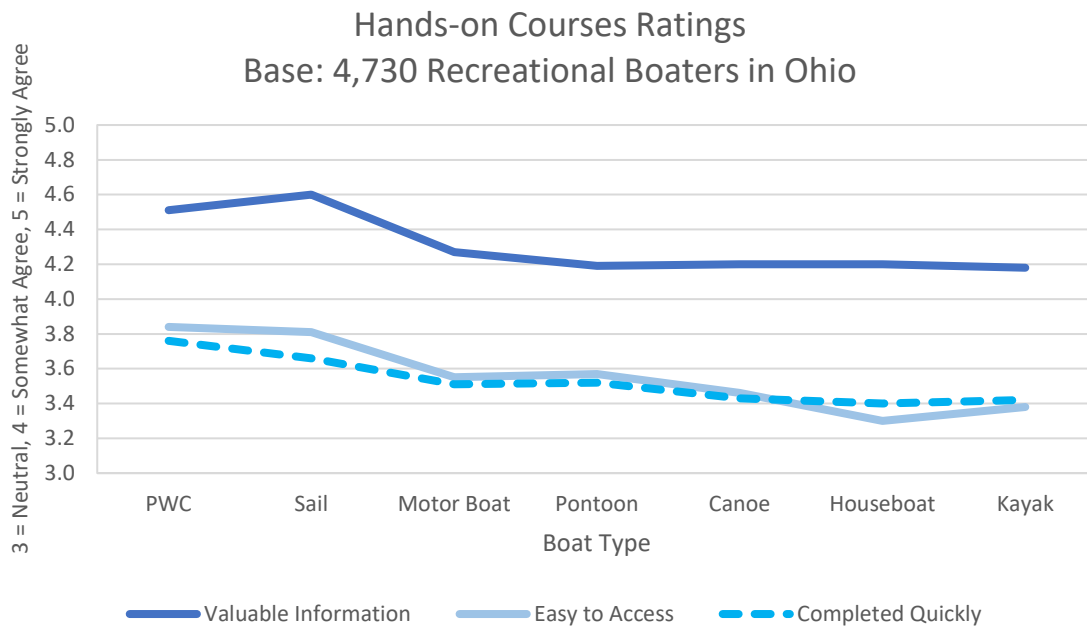
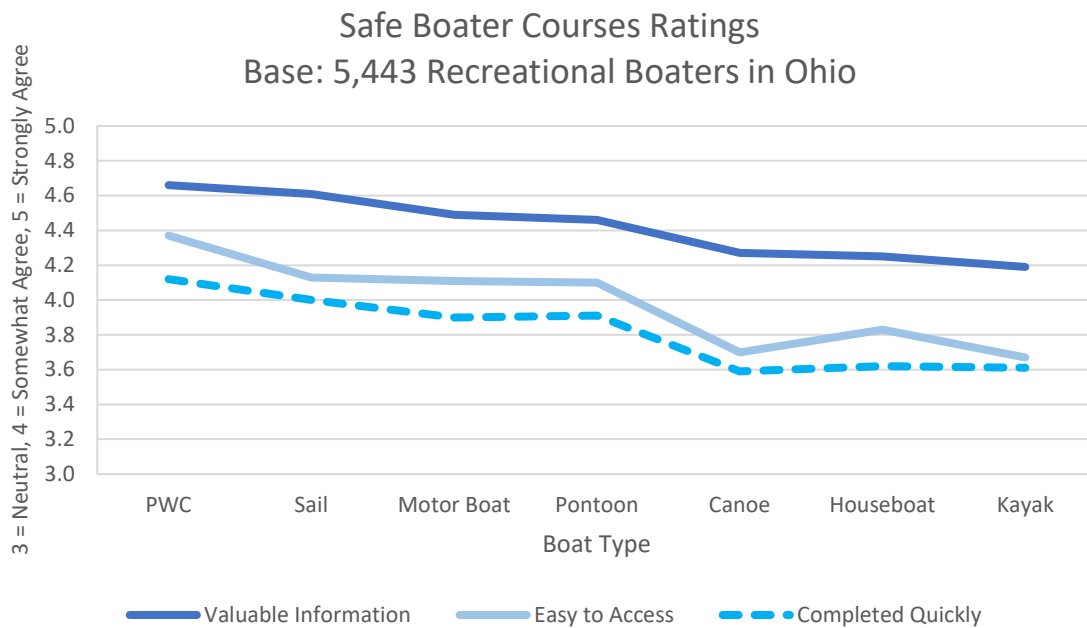


Figure 34 shows the ratings from 5,443 recreational boaters for Safe Boater courses, which were rated higher than Hands-on courses (see Fig. 33).



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#### Charter Safety Equipment

Charters were asked to identify their currently installed operational safety equipment. Most Charters, 56.9%, have a Nav System and 12.7% have EPIRB (Emergency Position Indicating Radio Beacon). ECDIS (Electronic Chart Display and Information System) was checked by 7.8% and 6.9% selected ENC/RNC (Electronic Navigational Chart/Raster Navigational Chart). Radio (with DSC/MMSE/Radar) was on 4.9% of boat Charters, PLP on 3.9% and ECOS on 2.0%. Some 4.9% of Charters indicated no safety equipment in operation on their motorboat.

#### Safety and Life Jacket Attitudes

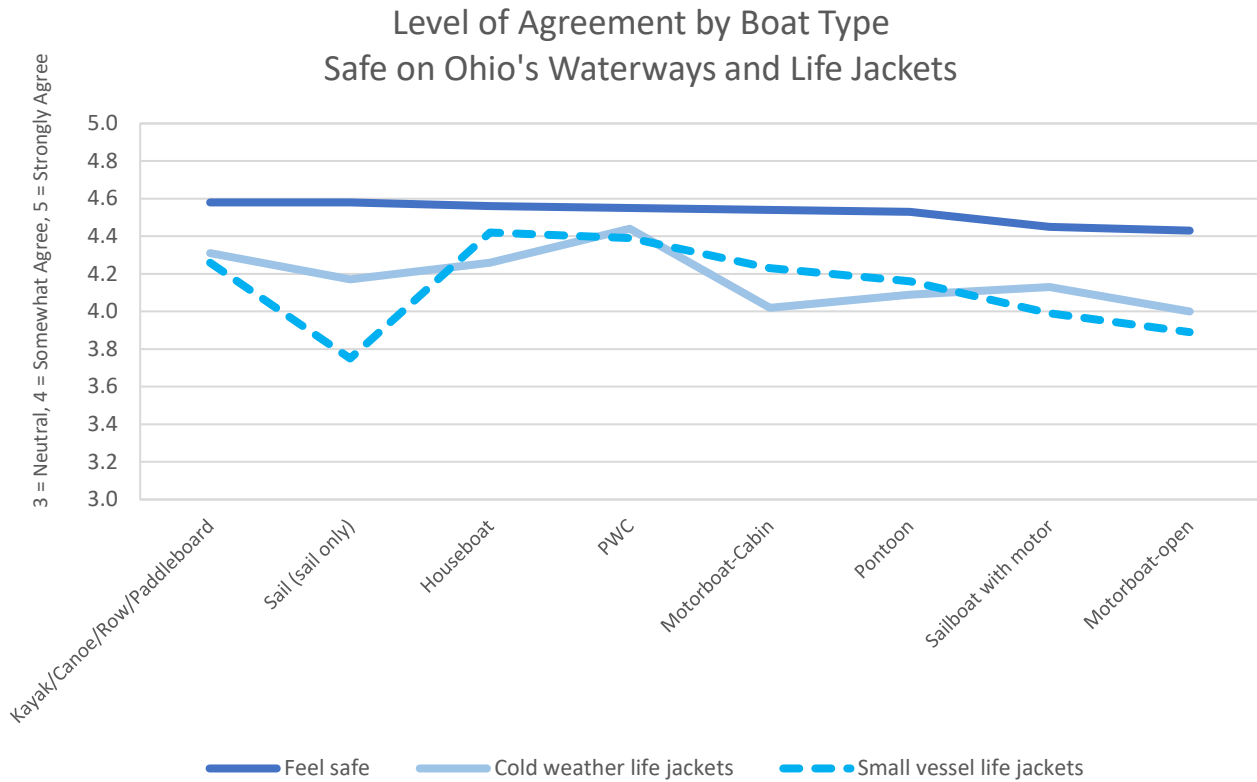
Some 91.0% of recreational boaters in Ohio agree (61.9% Strongly Agree and 29.1% Somewhat Agree) that they feel safe while on Ohio's waterways. The highest level of feeling safe while on Ohio's waterways (72.2% Strongly Agree) was expressed by houseboat operators.

Some 73.9% of boaters in Ohio agree (53.3% Strongly Agree and 20.7% Somewhat Agree) that life jacket wear should be required during cold weather months. Operators of personal watercraft had the highest level of agreement (68.3% Strongly Agree) that life jacket wear should be required during cold weather months. Cabin motorboat operators had the lowest level of agreement (44.6% Strongly Agree).

Some 68.6% of boaters agree (49% Strongly Agree and 19.6% Somewhat Agree) that life jacket wear should be required on smaller vessels and paddlecraft. Operators of personal watercraft had the highest level of agreement (66.1% Strongly Agree) that life jacket wear should be required on smaller vessels. Sail (sail only) boat operators gave the lowest rating (45.3% Strongly Agree).

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Figure 35 shows recreational boaters by boat types most frequently used and their level of agreement with three safety statements: I feel safe while on Ohio's waterways; Require life jacket wear during cold weather months; Require life jacket wear on smaller vessels and paddlecraft.



## Registration

### ODNR Parks and Watercraft Online Reservation System

Ohio requires a boat's first registration be in-person as proof of ownership is required. After the initial registration, the process becomes triennial and includes the option to register online. Beginning in 2020, an increase attributed to the COVID19 pandemic was evident in both registrations for new boats and, also, for vessels transferred to new owners (see Figs. 36-37).

Figure 36 shows boat registration process by year of new boat purchase.

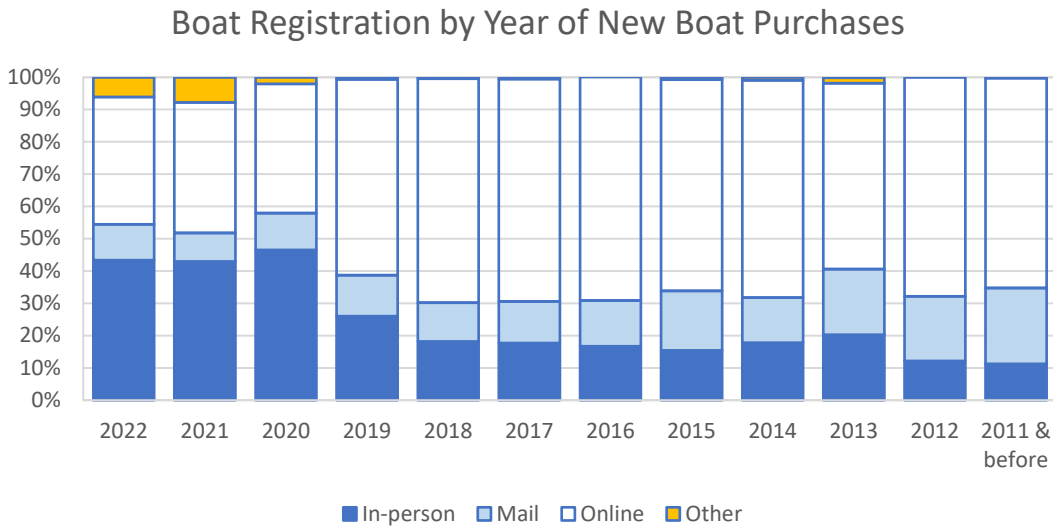
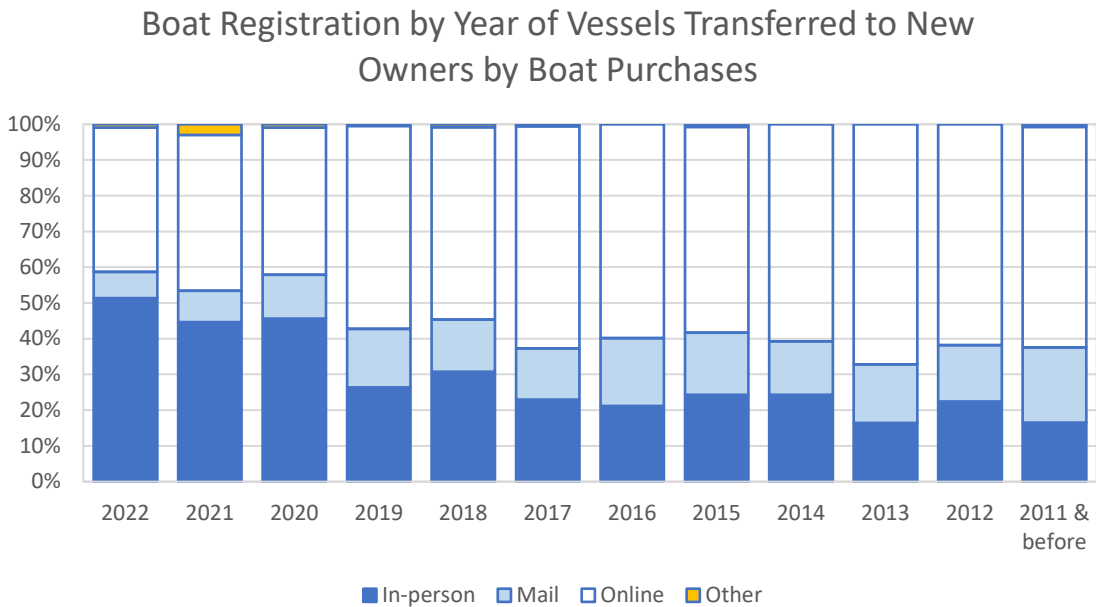


Figure 37 shows boat registration process by year of used boat purchase.



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Recreational Boaters’ Suggestions to Improve the Online Reservation System

Of 3,426 boaters utilizing the online registration system, 4.5% provided suggestions to make the online registration/renewal process better. Of the 153 boaters providing suggestions, 45.8% wrote that the online reservations system was “okay as is.” Some 15% mention price, 13.7% complained about the PIN, 13.7% provided various technical suggestions—for example being able to renew multiple registrations at the same time rather than having to do each separately. Some 11.8% provided process suggestions, for example, a lifetime registration option. Five percent wrote about the decals, for example, decals not sticking to boats.

<b>What suggestions can you offer to make the online registration/renewal process better</b>	
<b>Registered online via a PC (113 boaters)</b>	<b>Registered online via a Mobile device (40 boaters)</b>
<p><b>46.9% Okay as is</b>            37.2% Good/easy/like it            10.6% Must have been okay</p> <p><b>15.9% Lower Price<sup>24</sup></b>            8.0% No registration of non-motorized            2.6% Lower price</p> <p><b>13.3% PIN<sup>25</sup></b>            8.0% No PIN requirement            2.7% I forget the PIN            1.8% Use a different login system</p> <p><b>13.3% Technical Suggestions<sup>26</sup></b>            3.5% Renew multiple boats at same time            3.5% Website outdated            2.7% Save info on website            1.8% Make it like DMV site</p> <p><b>10.6% Process Suggestions<sup>27</sup></b>            2.7% Send reminders/emails            1.8% Have to call            1.8% Improve campground reservation            1.8% No follow-up after application</p> <p><b>4.4% Decal/Stickers<sup>28</sup></b></p>	<p><b>42.5% Okay as is<sup>29</sup></b>            40.0% Good/easy/like it</p> <p><b>12.5% Lower Price</b>            12.5% No registration of non-motorized</p> <p><b>15.0% PIN</b>            7.5% No PIN requirement            5.0% I forget the PIN</p> <p><b>15.0% Technical Suggestions<sup>30</sup></b></p> <p><b>15.0% Process Suggestions<sup>31</sup></b></p> <p><b>5.0% Decal/Stickers<sup>32</sup></b></p>

<sup>24</sup> Lower Price single mentions from PC users include how registration fees are used, multiple boat discount? Problems paying dock fees, reduce price for low use boat, and stop the convenience fee.

<sup>25</sup> PIN single mentions include hard to remember PIN and use OH# not PIN.

<sup>26</sup> Technical Suggestions single mentions from PC users include embed QR code in decal, Fish App, and Hunt App.

<sup>27</sup> Process Suggestions single mentions from PC users include lifetime registration options, long waits at the DMV, and trailer registration requiring weight slip.

<sup>28</sup> Decal/Stickers single mentions from PC users include more information on where to put the decal and providing plastic registration cards.

<sup>29</sup> Okay as is single mention was renewed years ago, can’t recall/must have been okay.

<sup>30</sup> Technical Suggestions single mentions from mobile users include email to have direct link to website, embed re-registration access in reminder email, and online transfer of funds.

<sup>31</sup> Process Suggestions single mentions from mobile users include easier transfer of ownership and longer renewal periods.

<sup>32</sup> Decal/Stickers single mentions from mobile device users include stickers do not stick and mailing issues.

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Registration Preferences and Ratings

Overall, 57.4% of Ohio boaters registered or renewed their watercraft online where 44.2% registered from a PC and 13.2% from a mobile device. Some 24.4% of boaters registered or renewed their boat in-person and 17.1% completed the process via USPS mail. Other ways to register boats included the DMV, dealers, marinas, and phone calls.

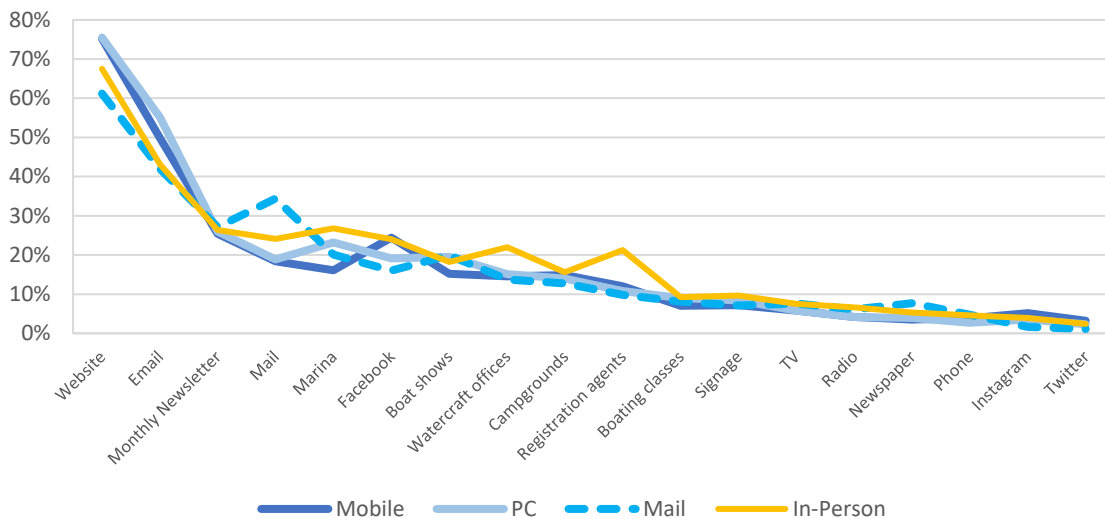
Answering rating questions for ODNR’s online registration/renewal were filtered by boaters who registered or renewed online. Ratings show 62% of boaters were Very Satisfied with the site’s user-friendliness, 63.6% were Very Satisfied locating the registration website, and 51.9% were Very Satisfied entering their PIN#.

Information from ODNR Parks and Watercraft

ODNR Parks and Watercraft website was the most popular information source for boaters, especially among boaters aged 35-64. Boaters aged 35-44 were significantly more interested in receiving a monthly newsletter and those aged 35-54 were more likely than any other age group to want to receive information in the mail. Boaters up to the age of 54 were more interested in Facebook, Instagram, and Twitter than older boaters.

Figure 38 shows the percentage of boaters selecting information options that appeal to them in receiving information from ODNR Parks and Watercraft for each of four registration/renewal options—mobile device, personal computer, USPS mail, and in-person.

Receiving Information from ODNR Parks and Watercraft by  
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<sup>33</sup> Other information preferences not shown on the chart include public outreach (fairs/marinas/clubs), text messages, YouTube/TikTok/Google/blogs, Ohio Outdoor News, Wild Ohio, Lake Erie Living, and the DMV.

## Ohio Boat Ramp/Launch Sites

### Most Frequently Used Ramps

Some 4,492 boaters provided their most frequently used Ohio boat ramps/launch sites (up to three). Usage, ownership, and an overall rating for boat ramps/launch sites are shown in Fig 39. The criteria for inclusion was having a statistically significant sample; therefore, Ohio boat ramp/launch sites shown below received information from at least 30 respondents.

Boat ramps/launch sites at Catawba Island State Park (including Foxhaven) and Mary Jane Thurston State Park earned the highest rating, 3.97 for each, respectively. The launch site at Clendening was rated 3.96, Rocky River earned a 3.94 rating, and Lake Milton State Park (including Robinson Point Ramp, Mahoning Avenue, Pointview Avenue, and Jersey Street) scored 3.92.

Gallipolis (including O'Connor McIntyre) was the lowest rated boat ramp/launch site in Ohio (3.03). Also lowest were Cullen Park (3.28), Forked Run (including Curtis Hollow) (3.31), Hot Waters Marina (3.31), and ramps along the Muskingum River (including McConnelville, Devola Locks, Fern Cliff, Walhonding, Stockport, Gaysport, Jesse Owens State Park, and Dresden) (3.32).

*Figure 39 shows a list of the most popular boat ramps/launch sites in Ohio provided by 4,492 boaters.*

<b>POPULAR OHIO BOAT RAMPS/LAUNCH SITES</b>	<b>% Boaters</b>	<b># Boaters</b>	<b>% Public</b>	<b>% Private</b>	<b>Overall Rating</b>
Alum Creek/Galena/Howard Rd/Cheshire/Africa Rd/Sunbury Rd/Kilbourne	7.7%	331	99.4%	0.6%	3.59
Caesar Creek/River/Furnas Shores/Wellman/Haines/North Pool/Young/Beef Creek	7.2%	308	100%	-	3.44
Lake Erie/Marinas/Rosford/Metro Park/Toussaint/Spitzer/E.72/E. 55	6.1%	263	65.5%	34.5%	3.77
Buckeye Lake/Liebs/Fishermans Park/North Shore/Alexander Landing	4.7%	200	92.8%	7.2%	3.56
Private	4.4%	187	8.8%	91.2%	3.83
Portage Lakes/Nimisila Reservoir/Old State Park/Cove Rd	4.3%	184	94.2%	5.8%	3.71
Indian Lake State Park: Moundwood Marina/Oakwood Avenue/Kings Ave/Pew Island/Creek	4.1%	177	92.1%	7.9%	3.61
Ohio River/Williamstown/Powhatan Point/White Oak/Pomeroy/Syracuse/Straight/Duffy/New Richmond/Kennedy/Aberdeen/Coolville/Bush Creek/Guyandotte	4.1%	176	77.2%	22.8%	3.61
Salt Fork Lake/Morning Glory/Sugar tree/N. Salem	3.9%	168	100%	-	3.65
Mazurik	3.6%	154	100%	-	3.68
Catawba Island State Park/Foxhaven	3.4%	146	75.3%	24.7%	3.97
West Branch State Park/Rock Springs/East launch	2.9%	125	100%	-	3.74
Seneca Lake/Senecaville/Marina/Noble Boat Club	2.6%	113	81.0%	19.0%	3.49
Rocky Fork Lake/Creek/Fisherman's Wharf/Tate	2.4%	105	98.0%	2.0%	3.40

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<b>POPULAR OHIO BOAT RAMPS/LAUNCH SITES</b>	<b>% Boaters</b>	<b># Boaters</b>	<b>% Public</b>	<b>% Private</b>	<b>Overall Rating</b>
Sandusky/Bay/River/Upper/Shelby Street/Steyer/Hank's/St. John's Dam/Venetian/Scenic Area/Memory	2.4%	105	84.8%	15.2%	3.66
Cowan Lake State Park/Mather Mill/Wellman	2.4%	103	95.2%	4.8%	3.77
Atwood/Delroy/Dover/Englewood	2.3%	99	82.7%	17.3%	3.87
Hoover Reservoir Park/Big Walnut/Twin ridges/Redbank/Baldrige	2.3%	99	91.6%	8.4%	3.63
Berlin State Park/Berlin Lake/campground/Reservoir/Bonner Rd/Dutch/Mill Creek/Price St.	2.2%	96	82.9%	17.1%	3.72
East Fork State Park/Harsha Lake/Bantam/Bethel/Chilo/Tunnel Mill/Tate	2.1%	92	100%	-	3.62
Grand Lake St. Marys State Park/Bayview/Behm's/Chickasaw/Windy Point/West Bank/South Point/Kozy/Celina	2.1%	92	83.0%	17.0%	3.76
Tappan Lake	2.1%	92	98.0%	2.0%	3.75
Dempsey/Dempsey's	2.0%	85	100%	-	3.73
Mosquito Lake State Park/Jan's/Shenango	2.0%	85	91.8%	8.2%	3.79
Deer Creek/Harding Cabin	2.0%	84	100%	-	3.43
Lake Milton State Park/Robinson Point Ramp/Mahoning Ave/Pointview Ave/Jersey St.	1.9%	80	89.7%	10.3%	3.92
Little Miami River/Ft. Ancient/Otto Armleder/Spring Valley/Rogers Park/Ross Rd/Terrell/Scenic Area	1.9%	80	87.8%	12.2%	3.38
Maumee River/Maple Street/Walbridge Park/Toledo/State Park/Tibbel's/Perrysburg/Grand Rapids	1.8%	78	88.6%	11.4%	3.40
Paint Creek/Taylor Rd/Rattlesnake Creek	1.7%	74	100%	-	3.47
Muskingum River/McConnelsville/Devola/Locks/Fern Cliff/Walhonding/Stockport/Gaysport/Jesse Owens State Park/Dresden	1.7%	73	79.5%	20.5%	3.32
Lorain County Metro Parks/Black River/Grumpys	1.6%	68	100%	-	3.74
Piedmont Lake/Reynold's Rd/Hazelwood Hills	1.6%	67	91.4%	8.6%	3.73
Delaware State Park/Horseshoe Rd	1.5%	66	100%	-	3.56
Huron River/Couplings Metro Park	1.5%	66			3.55
Lake Loramie/Luthman Rd/Filburns/Earl's Island/Loramie Creek/Ft. Loramie/Eilerman Rd.	1.5%	66	97.3%	2.7%	3.89
Cuyahoga River/Lock/Eldon Russell Park/Whiskey Island/Wendy Park/Neff/Tannery/Fred Fuller/Hidden Valley/CVNP	1.5%	63	92.0%	8.0%	3.68
East Harbor State Park	1.5%	63	94.1%	5.9%	3.67
Vermilion	1.4%	58	87.5%	12.5%	3.71
Burr Oak State Park	1.3%	56	96.5%	3.5%	3.63
Acton Lake	1.3%	55	100%	-	3.68

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<b>POPULAR OHIO BOAT RAMPS/LAUNCH SITES</b>	<b>% Boaters</b>	<b># Boaters</b>	<b>% Public</b>	<b>% Private</b>	<b>Overall Rating</b>
Findley State Park	1.3%	55	100%	-	3.76
Blackhawk	1.2%	53	97.0%	3.0%	3.68
Fairport Harbor/Grand River Landing/Harpersfield Dam/ Kellogg Farm	1.2%	53	75.8%	24.2%	3.61
Dillon/Stadden Bridge	1.2%	51	100%	-	3.38
Kelleys Island/Put-in-Bay/South Bass Island/Middle Bass/ Gem Beach	1.2%	51	90.3%	9.7%	3.86
Geneva State Park/Padanaram Road	1.2%	50	100%	-	3.81
Great Miami River/Treasure Island Park/Tipp City/Stillwater/ Heritage Park/Goll Woods	1.1%	49	87.5%	12.5%	3.67
Leesville/Northfork	1.1%	49	95.8%	4.2%	3.65
Pleasant Hill	1.1%	49	66.7%	33.3%	3.67
C.J. Brown Dam & Reservoir	1.1%	48	100%	-	3.64
Mary Jane Thurston State Park	1.1%	47	100%	-	3.97
Schmidt Boat Ramp	1.1%	47	96.2%	3.8%	3.43
Belpre Civitan Park	1.1%	46	100%	-	3.68
Edgewater	1.1%	46	95.0%	5.0%	3.73
Lake Logan	1.0%	42	100%	-	3.45
Mogadore/Ticknor Rd/Lake Hodgson	0.9%	40	100%	-	3.80
Ottawa County/River/Lost Peninsula/Al's/Paradise/Anchors Away	0.9%	40	46.1%	53.9%	3.55
Rush Creek Lake	0.9%	40	100%	-	3.60
Rocky River	0.9%	40	100%	-	3.94
Pymatuning State Park/Padanaram/Birches	0.9%	39	100%	-	3.75
Cullen Park	0.9%	38	94.7%	5.3%	3.28
Chippewa Lake/Marina	0.9%	37	100%	-	3.85
LaDue Reservoir	0.9%	37	100%	-	3.49
Clendening	0.8%	35	100%	-	3.96
Gallipolis/O'Connor McIntyre	0.8%	35	73.9%	26.1%	3.03
Forked Run/Curtis Hollow	0.8%	33	100%	-	3.31
Apple Valley Lake/Spillway/Sutton Beach	0.7%	32	11.1%	88.9%	3.63
Clearfork	0.7%	32	100%	-	3.80
Charles Mills/Indianola	0.7%	31	93.7%	6.3%	3.71
Knox Lake/Riley Chapel	0.7%	31	100%	-	3.74
Dow Lake/Strouds Run	0.7%	31	100%	-	3.35
West Harbor	0.7%	31	100%	-	3.65
Hot Waters Marina	0.7%	30	100%	-	3.31
Oxbow Lake	0.7%	30	100%	-	3.76
Scioto Grove/Scioto River/Belle Point	0.7%	30	87.5%	12.5%	3.56

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Boater Written Comments about Boat Ramps/Launch Sites

Of the 4,058 boaters rating ramps/launch sites, 31.5% provided written comments. Of those 1,279 comments, 38.2% of boaters in Ohio provided praise for the boat ramp/launch site they used. Boaters made suggestions for boat ramps/launch sites to be upgraded (19.1%) and maintained (13.5%). Nine percent of boaters requested more law enforcement and 8.5% mentioned crowded boat ramps/launch sites.

*Figure 40 shows written comments that were coded and then assigned to categories, shown in bold. Written comments were from boaters provided about their experience with Ohio boat ramps/launch sites. The table compared the comments from operators of motorized and non-motorized boats.*

<b>Additional comments about boat ramps/launch sites in Ohio.</b>	
<b>893</b> <b>Motorized Boat Operators</b>	<b>372</b> <b>Non-motorized Boat Operators</b>
<p><b>35.3% Praise/Pleasure</b>            27.5% Praise for Ohio’s boat ramps/waterways            9.2% Enjoyment of living on lake/2<sup>nd</sup> home            1.1% Enjoyment of boating lifestyle</p> <p><b>18.7% Ramps</b>            8.3% Ramps need updating            4.0% Add more ramps            0.4% Separate launch for kayaks            1.8% Ramp too narrow            1.8% Ramp too steep            1.8% No tie-out rigging            0.1% Kayak ramp needs improvement            0.9% Rocks below steps            0.9% Ramp attendant</p> <p><b>14.7% Maintenance</b>            4.6% Maintenance issues            2.8% Logs/debris in water            2.7% Water quality/dredging            2.9% Lighting at ramp            2.1% Signage (better)            1.1% Trash issues/no trash containers</p> <p><b>10.8% Law Enforcement</b>            6.7% Rules – better enforcement            3.7% Watercraft enforcement presence            1.9% Catalytic converter theft/break-ins            0.2% Alcohol consumption</p> <p><b>9.5% Crowds/Busy<sup>34</sup></b>            6.2% Crowded/overcrowded ramps            3.0% Crowded on weekends            0.2% Open all year            0.1% Overbuild of condos/homes</p>	<p><b>45.7% Praise/Pleasure</b>            39.2% Praise for Ohio’s boat ramps/waterways            5.6% Enjoyment of living on lake/2<sup>nd</sup> home            2.4% Enjoyment of boating lifestyle</p> <p><b>20.4% Ramps</b>            7.3% Ramps need updating            1.9% Add more ramps            6.5% Separate launch for kayaks            1.3% Ramp too narrow            1.3% Ramp too steep            0.3% No tie-out rigging            3.0% Kayak ramp needs improvement            1.1% Rocks below steps</p> <p><b>11.0% Maintenance</b>            2.7% Maintenance issues            2.2% Logs/debris in water            2.2% Water quality/dredging            0.8% Lighting at ramp            1.3% Signage (better)            3.2% Trash issues/no trash containers</p> <p><b>4.3% Law Enforcement</b>            2.4% Rules – better enforcement            1.1% Watercraft enforcement presence            0.5% Catalytic converter theft/break-ins            0.5% Alcohol consumption</p> <p><b>6.2% Crowds/Busy</b>            4.8% Crowded/overcrowded ramps            0.8% Crowded on weekends            0.8% Open all year</p>

<sup>34</sup> Crowds single mention was skiers/tubers to wear bright colored vests.

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<b>Additional comments about boat ramps/launch sites in Ohio.</b>	
<b>893</b> <b>Motorized Boat Operators</b>	<b>372</b> <b>Non-motorized Boat Operators</b>
<p><b>7.6% Restrooms</b> 4.3% Restrooms needed/closed 3.4% Restroom cleanliness 0.5% Portable restrooms needed 0.4% Restroom lighting (needed)</p> <p><b>7.6% Parking</b> 6.2% More parking spaces/expand/re-mark 0.9% Better lighting in parking lot 0.5% Cameras in parking lot</p> <p><b>3.6% Invasive Species</b> 2.2% Weeds/lily pads/algae 1.3% Canada geese 0.1% Zebra mussels</p> <p><b>3.9% Engines/Speed</b> 2.9% Speed limit 1.6% Motor size increase</p> <p><b>4.7% Courtesy Dock</b> 3.8% Courtesy dock 0.9% Boat/trailer wash</p> <p><b>2.7% Fishing</b> 1.5% Stocking (better) 1.0% Fish cleaning station 0.3% Overfishing</p> <p><b>2.1% Bumpers/Concrete</b> 1.1% Concrete damages boats 1.3% Bumpers need updating</p> <p><b>2.0% Grass is Greener</b> 2.0% Other states cited</p> <p><b>1.0% Accessibility</b> 0.8% Accessibility launch 0.2% Rails at ramps (needed) 0.1% Inadequate accessibility parking</p>	<p><b>8.6% Restrooms</b> 5.1% Restrooms needed/closed 1.9% Restroom cleanliness 2.4% Portable restrooms needed</p> <p><b>7.5% Parking</b> 6.5% More parking spaces/expand/re-mark 1.3% Better lighting in parking lot 0.5% Cameras in parking lot</p> <p><b>4.3% Invasive Species</b> 3.8% Weeds/lily pads/algae 0.5% Canada geese 0.5% Zebra mussels</p> <p><b>3.2% Engines/Speed</b> 1.3% Speed limit 1.3% Motor size increase 1.3% Electric only</p> <p><b>0.3% Courtesy Dock</b> 0.3% Courtesy dock</p> <p><b>1.4% Fishing</b> 0.8% Stocking (better) 0.8% Overfishing</p> <p><b>1.6% Bumpers/Concrete</b> 1.6% Concrete damages boats</p> <p><b>0.8% Grass is Greener</b> 0.8% Other states cited</p> <p><b>3.0% Accessibility</b> 2.4% Accessibility launch 0.5% Rails at ramps (needed)</p>

## Ohio Docks/Mooring Sites for Recreational Boaters

### Most Frequently Used Docks/Mooring Sites

Some 1,583 boaters operating motorized boats provided their most frequently used Ohio dock/mooring site (up to three). Usage, ownership, and an overall rating for boat docks/mooring sites are shown in Fig. 41. The criteria for inclusion was having a statistically significant sample; therefore, Ohio dock/mooring sites shown below received information from at least 30 respondents.

Docks/mooring sites at Port Clinton (including Doc's, Yacht Club, City Docks, Drawbridge Marina, Fisherman's Warf, Gem Beach, Lagoon Saloon, Lake Front, Lakecraft, Lemarin, West Bay, White Caps, Bait House, and Brands' Marina) earned the highest rating, 4.24. Vermilion (including Riverside Marina, Romp's, Waterworks, and Valley Harbor Marina) was rated 4.20—the second highest dock rating.

Tappan Lake (including Campground and Marina) was the lowest rated dock with a 3.45 rating. Indian Lake (including Acheson's Resort, Yacht Club, Lakeview, Froggy's, Cranberry, Logan Landing, Moundwood, Newland's, Russell's Point, Tilton Hilton, and Blackhawk scored 3.50—the second to lowest dock rating.

*Figure 41 shows a list of the most popular docks/mooring sites in Ohio provided by 1,583 motorized boat operators.*

<b>POPULAR OHIO DOCKS/MOORING SITES FOR RECREATIONAL BOATERS</b>	<b>% Boaters</b>	<b># Boaters</b>	<b>% Public</b>	<b>% Private</b>	<b>Overall Rating</b>
Miscellaneous private home/cottage/home dock/home lift/second home	19.7%	310	9.0%	91.0%	4.07
Put-in-Bay/Boardwalk/Crews Nest/Miller Marine/Mooring ball/Park Place/South Bass/Middle Bass/North Bass/Burgundy Bay/Oak Point/Park Place/Bay Shore	11.3%	177	69.5%	30.5%	4.13
Kelleys Island/Marina/Casino/Seaway/Dock/West Bay/North/Portside/Seaway Marina/Unique Marker	7.1%	111	52.6%	47.4%	4.09
Ohio River/Chilo/Aberdeen/Duffy/Mile 18/Mile 244/Gallipolis/Eagle Creek/Franklin Furnace/Holiday Point/Malta River Queen/Manhattan Harbor/Mariner's Landing/McConnelsville/Meldahl/Ripley/Party Cove/Pomeroy/Powhatan Point/Red Bank/Rivertowne/Straight Creek/Syracuse/Tara Villa/Wheeling Island/Anchor Pad Boat Club/Belpre/Beverly/Cabana/New Richmond/The Landing Restaurant & Marina/Skipper's	5.1%	80	51.6%	48.4%	3.72
Sandusky Bay/Harbor Marina/Safe Harbor/Paper/Battery Park/Yacht Club/Upper/Shelby St./Castaway Bay/Clemons/Cold Creek/Come Sail Away/Dock of the Bay/Venetian/Safe Harbor/Shelby St./Son Rise/Summer Breeze/Vacationland	4.1%	64	15.0%	85.0%	4.09
Marblehead/Blue Water Marina/Channel Grove/Crabby Joes/Dempsey/Harbors Edge/Hidden Beach/Kamp	3.9%	61	15.7%	84.3%	4.10

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<b>POPULAR OHIO DOCKS/MOORING SITES FOR RECREATIONAL BOATERS</b>	<b>% Boaters</b>	<b># Boaters</b>	<b>% Public</b>	<b>% Private</b>	<b>Overall Rating</b>
Kozy/Bass Haven/King Coach/LakeVue/Plymouth Shore/Shrock's/Tibbels/West Harbor/Willow Cove/Anchors Away/Avalon on the Bay/Bay Point					
Indian Lake/Acheson's Resort/Yacht Club/Lakeview/Froggy's/Cranberry/Logan Landing/Moundwood/Newland's/Russell's Point/Tilton Hilton/Blackhawk	3.1%	49	74.2%	25.8%	3.55
Alum Creek/Marina/Sailing Assn/Cheshire	2.8%	44	81.2%	18.8%	3.76
Salt Fork/Lodge/Marina/Sugar Tree/Camp/Morning Glory	2.7%	43	96.9%	3.1%	3.76
Buckeye Lake/State Park/Marina/Club/Bateson Beach/Carter's/Copper Penny/Fairfield Beach/Fisher's/Horvath's Harbor/Liebs/Papa Boo's	2.7%	42	65.5%	34.5%	3.72
Port Clinton/Doc's/Yacht Club/City Docks/Drawbridge Marina/Fisherman's Warf/Gem Beach/Lagoon Saloon/Lake Front/Lakecraft/Lemarin/West Bay/White Caps/Bait House/Brands' Marina	2.4%	38	10.3%	89.7%	4.24
Atwood Lake/Marina/Park/East/West/Yacht Club	2.3%	36	70.4%	29.6%	3.81
Catawba Island/Club/Moorings/State Park/West Harbor/Fox Haven/Harbor Estates/Harbor Park/Midway Marina/Orchard Isle/Pier 53	2.3%	36	20.0%	80.0%	4.14
Seneca Lake/Pioneer Boat Club	2.2%	35	75.0%	25.0%	3.70
Lorain/Copper Kettle/Hot Waters/Spitzer/Oakwood Park/Oasis Marina/Skyline View	2.1%	33	39.1%	60.9%	3.81
Tappan Lake/Campground/Marina	2.1%	33	68.0%	32.0%	3.45
Vermilion/Riverside Marina/Romp's/Waterworks/Valley Harbor Marina	2.1%	33	15.0%	85.0%	4.20
Caesar Creek/Marina/Campground/Furnas Shores/North Pool/Milman	1.9%	30	100%	-	3.66
Huron River/Yacht Club/Marina/Lagoons/Basin/Holiday Harbor/Couplet Park/Harbor North/Sawmill Creek	1.9%	96	30.0%	70.0%	4.09

**Boater Written Comments about Docks/Mooring Sites**

Of the 1,372 motorized boat operators rating docks, 28.1% provided written comments. Of those 385 comments, 55.6% wrote praise for their docks. Other frequently mentioned categories for docks/mooring sites were better management (10.4%), improved water quality (8.6%), improved maintenance (8.3%), improved dock design (7.5%) and more law enforcement (7.5%).

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Figure 42 shows the coded written comments motorized boat operators provided about their experience with Ohio docks/mooring sites. The comments were coded and then assigned to categories, which are shown in bold.

<b>Additional comments about docks/mooring sites in Ohio.</b>
<b>385 Motorized Boat Operators</b>
<b>55.6% Praise/Pleasure</b>
36.1% Praise for docks/workers
19.5% Private dock
<b>10.4% Management</b>
3.6% Expensive
2.1% Docks not available
1.6% Poorly managed
1.3% Fuel station/overpriced fuel
1.3% Slip lottery unfair
0.5% Keep HP low
0.3% Stay on boat when moored
0.3% Year-round access
<b>8.6% Water Quality/Weeds/Invasive Species<sup>35</sup></b>
2.3% Weeds
1.3% Dredging (needs)
1.3% Geese
0.8% Lily pads
0.8% Mud
0.5% Clear debris/trees
0.5% Invasive species
0.5% Sewage
<b>8.3% Maintenance</b>
1.8% Maintenance (improve)
1.6% Lighting (need)
1.6% Boards (repair/replace)
1.3% Cleats (loose/broken)
1.0% Clean/power wash
1.0% Potholes on roadway
0.8% Bumpers (repair)
<b>7.5% Dock Design</b>
5.2% Update/improve
1.6% Docks too narrow/small/short
0.8% Docks too high
0.5% Channel/fairways narrow
<b>7.5% Law Enforcement</b>
2.9% Law enforcement presence
2.3% Safety/security
1.3% Wake zone violations
0.8% Theft/vandalism
0.5% Consistency in ticketing
0.5% Traffic control

<sup>35</sup> Water quality single mentions include algae, birds' nests, fish guts in water, gulls, and vegetation.

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***Additional comments about docks/mooring sites in Ohio.***

**385 Motorized Boat Operators**

**6.5% Additions**

- 1.8% Food & drink (options)
- 1.3% Buoys (need)
- 1.3% Docks (more)
- 1.0% Fish cleaning facility (need)
- 0.8% Bait (need)
- 0.5% Electricity (need)
- 0.3% Picnic areas (add)

**4.4% Restrooms**

- 1.8% Restrooms (need)
- 1.0% Portable restrooms (need)
- 1.0% Restroom cleanliness
- 0.5% Restrooms locked (no access)
- 0.3% Showers expensive

**2.9% Other**

- 2.6% Overcrowding
- 0.3% Loud music

**2.6% Accessibility**

- 1.8% Accessibility features at dock
- 0.5% Accessibility railings
- 0.3% Accessibility parking

**1.3% Parking**

- 0.5% More parking
- 0.5% Parking too far away from ramp
- 0.3% Potholes in parking lot

**1.0% Water Level**

- 0.8% Shallow/low
- 0.2% High
- 0.3% Shoreline erosion

## Ohio Docks/Mooring Sites for Charters

Charters have a preference for private docks, compared to recreational boaters.

*Figure 43 shows a list of the most popular docks/mooring sites in Ohio for 65 Charters from the Marine Trades Survey.*

<b>OHIO DOCKS/MOORING SITES FOR CHARTERS</b>	<b>% Charters Using Dock</b>	<b># Charters From Survey</b>	<b>Public/Private</b>	<b>Overall Dock Rating<sup>36</sup></b>
Lake Erie – Ottawa County	47.7%	31	61% Private	3.63
Lake Erie – Erie County	9.2%	6	Private	3.14
Lake Erie – Cuyahoga County	6.2%	4	50% Private	3.67
Lake Erie – Lucas County	6.2%	4	Private	3.65
Lake Erie – Ashtabula County	4.6%	3	67% Private	3.55
Wild Wings Marina	4.6%	3	Private	3.46
Conneaut Scenic River Area	3.1%	2	Public	2.47
Lake Erie – Lake County	3.1%	2	Private	2.06
Lake Erie – Lorain County	3.1%	2	50% Private	3.59

## Popular Bodies of Water

Burr Oak, Lake Erie, Dow, Lake White, Tappan, and Dillon were the most popular bodies of water for motorized boats in terms of number of days on the water per year. East Fork, Findlay Reservoirs, and Atwood Lake were the most popular for non-motorized boats in terms of the number of days on the water per year.

Lake White and Rupert Lake had the highest number of hours per trip on the water in a motorized boat. Lake Loramie and Tycoon Lake had the highest number of hours per trip on the water in a non-motorized boat.

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<sup>36</sup> Rating where 5 = Excellent, 4 = Very Good, 3 = Neutral, 2 = Fair, 1 = Poor.

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Figure 44, column 1, shows the most frequently mentioned body of water for each Ohio county, in alphabetical order by body of water name where counties were grouped together that mentioned the same body of water. For each county in column 6, columns 2 and 3 show the average number of days per year spent on the water aggregated by boat type, motorized and non-motorized. For each county in column 6, columns 4 and 5 show the average recreational boat hours per trip on the water by boat aggregated boat type. Column 7 shows the average number of miles (one-way) that boaters in each county traveled to reach the body of water listed in Column 1. The last column provides the overall rating from five-attributes boaters rated for each body of water. The five attributes, listed in their own descending order of ratings, include: It's pretty easy to navigate; Interactions with other boaters are positive; Area is not over-crowded; Boaters follow the rules; and Invasive species controlled. Boaters rated each attribute on a five-point agreement scale where 5=Strongly Agree, 4=Somewhat Agree, 3=Neutral, 2=Somewhat Disagree, and 1=Strongly Disagree.

#1 Body of Water	October 1, 2021-September 30, 2022						
	Average number of Days Boats on the Water per Year		Average Recreational Boat Hours per Trip		Ohio County	Miles (one-way) to #1 body of water	Overall Rating
	Motorized	Non-Motorized	Motorized	Non-Motorized			
Acton Lake	47	13	6	5	Preble	14	4.08
Alum Creek Reservoir	45	26	8	4	Delaware	6	3.75
	50	22	7	4	Franklin	17	
	46	17	7	5	Morrow	16	
	49	16	9	4	Union	22	
Apple Valley Lake	44	27	6	4	Knox	4	3.83
Atwood Lake	55	42	6	4	Carroll	6	4.07
	48	32	6	5	Tuscarawas	15	
Auglaize River	52	19	5	5	Defiance	3	4.15
	33	28	6	5	Paulding	21	
Berlin Lake	48	20	6	4	Columbiana	26	3.77
Big Darby Creek	45	21	6	4	Madison	3	4.14
Blanchard River	48	21	6	5	Putnam	4	4.47
Buckeye Lake	45	18	6	4	Fairfield	11	3.68
	48	19	7	5	Licking	9	
	51	28	6	3	Perry	2	
Burr Oak Lake	69	25	8	6	Morgan	2	4.26
C.J. Brown Reservoir	42	10	6	4	Clark	7	3.97
Caesar Creek	40	24	8	4	Butler	38	3.89
	40	24	7	4	Greene	18	
Caesar Creek Reservoir	42	26	7	5	Montgomery	30	3.75
	34	24	7	6	Warren	23	
Charles Mill Reservoir	39	31	6	5	Wayne	28	3.96
Chippewa Lake	46	24	5	3	Medina	6	3.99
Clearfork Reservoir	50	23	5	4	Crawford	12	3.93
	45	30	5	3	Richland	6	
Cowan Lake	36	29	9	6	Clinton	13	3.91
Deer Creek Reservoir	35	24	7	5	Fayette	13	3.89
	49	20	8	6	Pickaway	46	
Delaware Reservoir	43	10	7	4	Marion	16	3.86
Dillon Reservoir	58	21	7	4	Muskingum	8	3.95

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#1 Body of Water	October 1, 2021-September 30, 2022						Overall Rating
	Average number of Days Boats on the Water per Year		Average Recreational Boat Hours per Trip		Ohio County	Miles (one-way) to #1 body of water	
	Motorized	Non-Motorized	Motorized	Non-Motorized			
Dow Lake	61	28	7	3	Athens	7	4.01
East Fork Reservoir	48	49	7	5	Brown	17	3.84
	37	22	7	5	Clermont	14	
	38	23	7	5	Hamilton	24	
Findlay Reservoirs	40	43	6	4	Hancock	4	4.08
Forked Run Lake	40	35	7	4	Meigs	12	4.45
Grand Lake – St. Marys	28	14	7	6	Darke	33	4.10
	53	16	5	4	Mercer	3	
	50	13	7	2	Van Wert	24	
Great Miami River	39	22	7	4	Miami	7	4.16
Hammertown Lake	49	20	6	2	Jackson	4	4.29
Harrison Lake	44	29	7	6	Fulton	3	4.44
Indian Lake	55	14	6	4	Allen	26	3.47
	50	16	5	4	Auglaize	21	
	35	22	7	4	Champaign	30	
	50	30	6	5	Hardin	28	
	44	23	4	3	Logan	10	
Ladue Reservoir	36	20	7	4	Geauga	6	3.99
Lake Erie (sections contiguous to counties)	43	22	6	4	Cuyahoga	10	3.84
	52	28	6	5	Erie	5	3.73
	54	22	5	3	Huron	14	3.75
	46	20	6	4	Lake	5	3.88
	51	25	5	5	Lorain	8	3.90
	52	25	6	4	Lucas	13	3.77
	63	19	5	3	Ottawa	7	3.63
	58	19	6	4	Sandusky	19	3.77
	42	21	6	5	Seneca	33	3.69
	48	18	7	5	Wood	27	3.66
Lake Logan	49	20	7	5	Hocking	6	3.95
Lake Loramie	37	21	6	8	Shelby	6	4.20
Lake Milton	43	27	7	5	Mahoning	27	4.03
Lake Vesuvius	36	15	9	6	Lawrence	12	4.04
Lake White	59	29	13	4	Pike	2	4.05
La Su An	50	28	5	5	Williams	11	4.26
Maumee River (Grand Rapids to Independence)	54	18	6	5	Henry	6	4.09
Monroe Lake	44	23	7	5	Monroe	11	4.20
Mosquito Lake	46	29	6	5	Trumbull	11	3.89
Paint Creek	36	14	7	4	Ross	18	3.94
Piedmont	41	19	7	5	Belmont	17	4.18

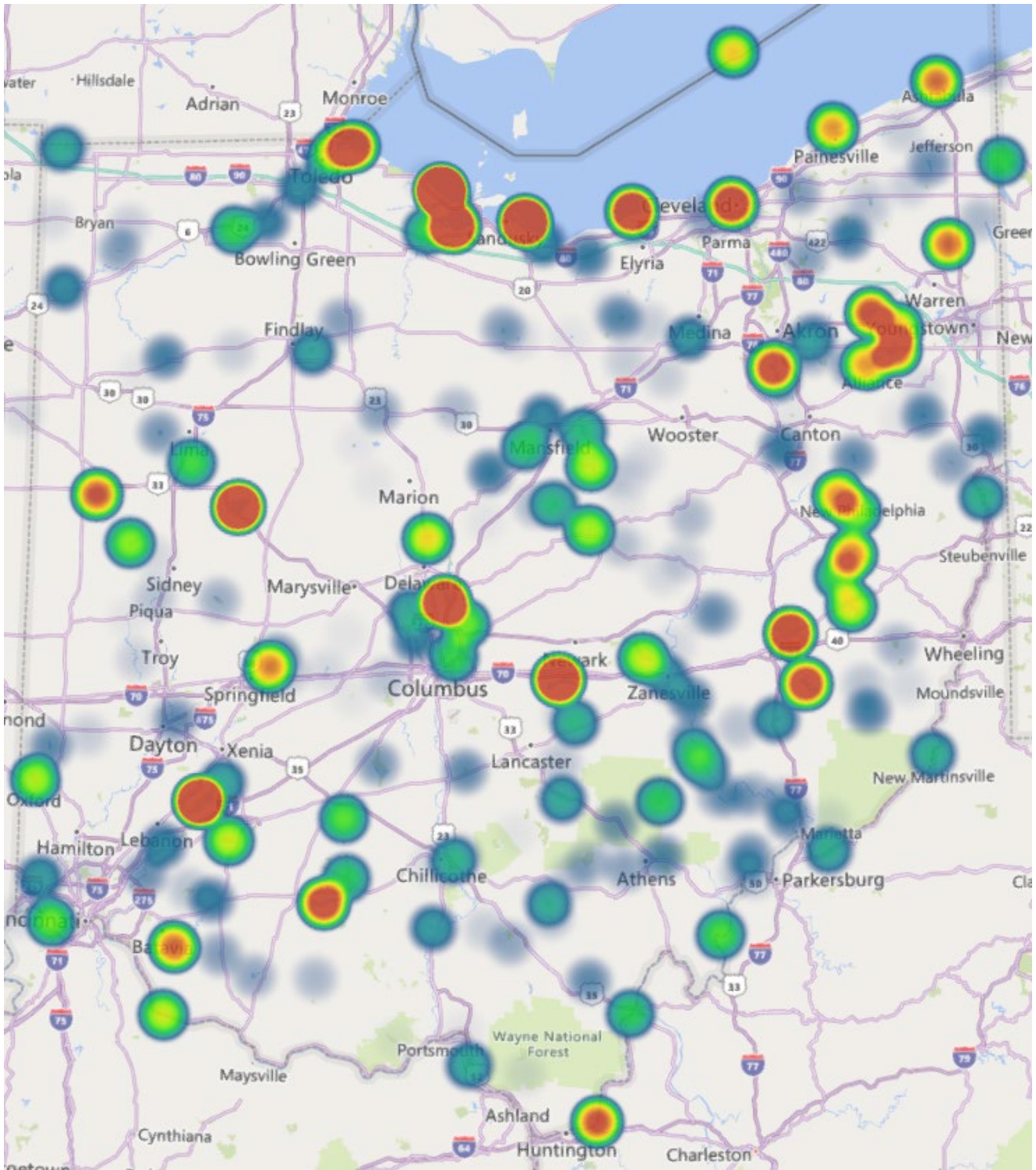
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October 1, 2021-September 30, 2022							
#1 Body of Water	Average number of Days Boats on the Water per Year		Average Recreational Boat Hours per Trip		Ohio County	Miles (one-way) to #1 body of water	Overall Rating
	Motorized	Non-Motorized	Motorized	Non-Motorized			
Pleasant Hill	47	24	6	3	Ashland	11	3.83
	38	23	8	6	Holmes	22	
Portage Lake	43	24	7	5	Stark	11	3.66
	45	28	6	5	Summit	17	
Pymatuning Lake	44	20	6	4	Ashtabula	13	3.95
Rocky Fork Lake	48	18	7	4	Adams	24	3.80
	52	20	8	2	Highland	12	
	39	13	7	5	Scioto	48	
Rupert Lake	40	15	10	4	Vinton	8	4.14
Salt Fork Lake	34	18	9	6	Coshocton	35	4.00
	37	18	6	5	Guernsey	10	
Seneca Lake	31	14	7	4	Noble	15	4.02
Tappan Lake	58	32	8	4	Harrison	6	3.95
	44	20	6	5	Jefferson	23	
Tycoon Lake	42	19	7	7	Gallia	7	4.14
Upper Sandusky Reservoir	38	12	6	3	Wyandot	4	4.09
West Branch Reservoir	42	39	5	4	Portage	11	3.97
Wolf Run Lake	35	20	7	4	Washington	28	4.16

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GPS Heat Map for Motorized Boat Operators (latitude and longitude) Top Three Bodies of Water

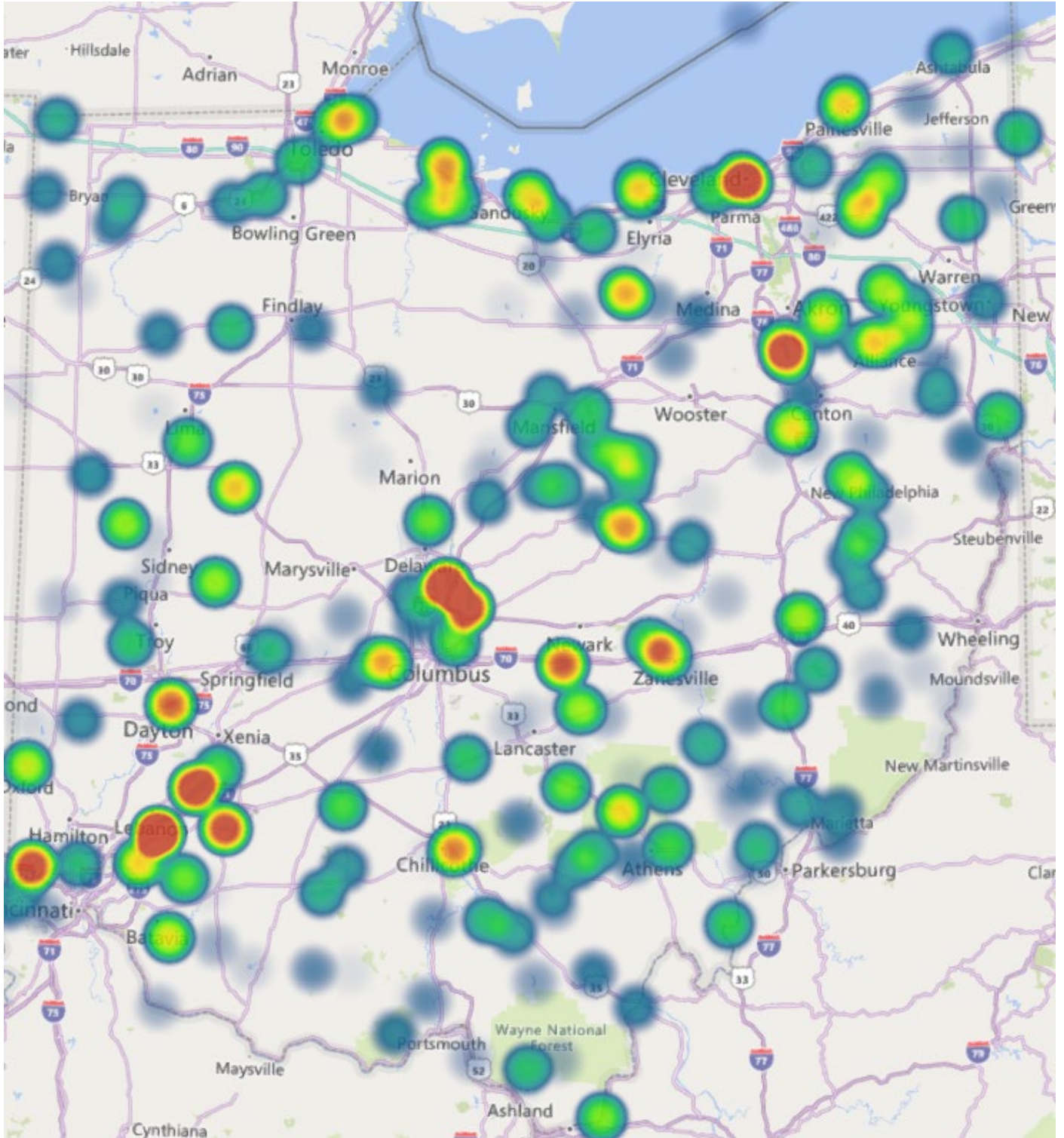
Figure 45 shows a GPS heat map of most frequently mentioned bodies of water from 4,999 operators of motorized boats.



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GPS Heat Map for Non-motorized Boat Operators (latitude and longitude) Top Three Bodies of Water

Figure 46 shows a GPS heat map of the most frequently mentioned bodies of water from 2,370 operators of non-motorized boats.



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Figure 47 provides frequencies and ratings<sup>37</sup> for five attributes for each body of water where the base of ratings was the number of boaters indicated in the #1 mention column (3<sup>rd</sup> column). For example, 322 boaters rated the Ohio River (second row).

Ohio Bodies of Water	ALL MENTIONS	#1 MENTION	Easy to Navigate	Follow Rules	Not Over Crowded	Invasive Species	Other Boaters
<b>BASE: Boating Households</b>	<b>7,440</b>	<b>7,437</b>	<b>Base for ratings = # of Boaters in #1 Mention column</b>				
Lake Erie	1,992 26.8%	1,516 20.4%	4.47	3.38	3.61	3.21	4.06
Ohio River	576 7.7%	322 4.3%	4.68	3.85	4.20	3.68	4.37
Caesar Creek Reservoir	508 6.8%	303 4.1%	4.66	3.29	2.66	3.76	3.86
Indian Lake	452 6.1%	295 4.0%	3.92	3.12	3.06	1.79	3.96
Buckeye Lake	422 5.7%	280 3.8%	4.48	3.02	2.75	3.43	4.00
Alum Creek Reservoir	453 6.1%	244 3.3%	4.54	3.12	2.93	3.64	3.78
Maumee	304 4.1 ,%	167 2.2%	4.47	3.87	4.03	3.77	4.31
Salt Fork Lake	297 4.0%	118 1.6%	4.65	3.67	3.70	3.90	4.19
Portage Lake (Turkeyfoot Reservoir)	215 2.9%	109 1.5%	4.43	2.75	2.37	2.83	3.74
Rocky Fork Lake	205 2.8%	74 1.0%	4.70	3.58	3.64	3.70	4.04
Seneca Lake	205 2.8%	96 1.3%	4.72	3.84	3.59	3.54	4.26
West Branch Reservoir	204 2.7%	65 0.9%	4.70	3.52	3.39	3.61	3.97
East Fork Reservoir/ Harsha Lake	195 2.6%	87 1.2%	4.62	3.38	3.33	3.29	4.00
Berlin Reservoir	192 2.6%	108 1.5%	4.30	3.30	3.31	3.65	3.82
Little Miami River	191 2.6%	91 1.2%	4.61	3.85	3.56	3.58	4.30
Cowan Lake	186 2.5%	71 1.0%	4.86	4.14	4.34	3.85	4.60
Hoover Reservoir	179 2.4%	77 1.0%	4.85	4.44	4.25	3.95	4.43
Atwood Lake	162 2.2%	119 1.6%	4.81	3.79	3.61	3.92	4.29

<sup>37</sup> 5 = Agree, 4 = Somewhat Agree, 3 = Neutral, 2 = Somewhat Disagree, 1 = Strongly Disagree for the following statements. It's pretty easy to navigate; Boaters follow the rules; Area is not over-crowded, Invasive species controlled; Interactions with other boaters are positive.

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Ohio Bodies of Water	ALL MENTIONS	#1 MENTION	Easy to Navigate	Follow Rules	Not Over Crowded	Invasive Species	Other Boaters
<b>BASE: Boating Households</b>	<b>7,440</b>	<b>7,437</b>	<b>Base for ratings = # of Boaters in #1 Mention column</b>				
Mosquito Lake	162 2.2%	65 0.9%	4.44	3.71	3.62	3.40	4.14
Muskingum	161 2.2%	99 1.3%	4.26	4.03	4.54	3.97	4.49
Grand Lake - St. Marys	159 2.1%	109 1.5%	4.57	3.82	4.31	3.40	4.41
Tappan Lake	154 2.1%	63 0.8%	4.78	3.43	3.63	3.73	4.21
Deer Creek Reservoir	139 1.9%	59 0.8%	4.77	3.94	3.67	4.16	4.20
C J Brown Reservoir /Buck Creek Lake	132 1.8%	71 1.0%	4.78	3.89	4.20	4.00	4.28
Delaware Reservoir	132 1.8%	38 0.5%	4.78	3.67	3.74	3.45	4.14
Acton Lake	130 1.7%	88 1.2%	4.66	4.07	3.99	3.97	4.28
Great Miami River	127 1.7%	58 0.8%	4.44	3.83	4.40	3.84	4.20
Other Private Access Lakes	127 1.7%	69 0.9%	4.77	4.30	4.52	4.20	4.60
Lake Milton	124 1.7%	61 0.8%	4.75	3.86	4.00	4.00	4.30
Lake Loramie	118 1.6%	61 0.8%	4.69	4.26	4.68	4.26	4.71
Dillon Reservoir	116 1.6%	29 0.4%	4.73	4.31	4.40	3.64	4.38
Piedmont	108 1.5%	49 0.7%	4.79	4.15	4.31	3.85	4.52
Nimisila Reservoir	104 1.4%	53 0.7%	4.77	4.77	4.57	4.04	4.65
Cuyahoga River	99 1.3%	59 0.8%	4.29	3.80	3.98	3.51	4.31
Pleasant Hill	99 1.3%	36 0.5%	4.54	3.43	2.86	3.45	3.80
Mad River (Eastwood Lake)	96 1.3%	30 0.45	4.43	4.00	4.07	3.65	4.43
Paint Creek	96 1.3%	39 0.5%	4.47	3.79	4.03	3.70	4.06
Leesville Lake	94 1.3%	47 0.6%	4.77	3.91	4.26	3.74	4.40
Scioto River	93 1.3%	39 0.5%	4.51	3.97	4.26	3.26	4.48
Auglaize River	92 1.2%	56 0.8%	4.45	4.02	4.08	3.73	4.42

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Ohio Bodies of Water	ALL MENTIONS	#1 MENTION	Easy to Navigate	Follow Rules	Not Over Crowded	Invasive Species	Other Boaters
<b>BASE: Boating Households</b>	<b>7,440</b>	<b>7,437</b>	<b>Base for ratings = # of Boaters in #1 Mention column</b>				
Apple Valley Lake	91 1.2%	75 1.0%	4.77	3.42	2.89	4.17	4.03
Alum Creek (River)	90 1.2%	57 0.8%	4.52	3.11	2.93	3.39	3.93
Other State Parks (Ohio State Parks)	86 1.2%	30 0.4%	4.72	4.52	4.64	4.17	4.75
Other Wildlife Areas	80 1.1%	40 0.5%	4.81	4.00	4.45	3.94	4.33
Pymatuning Lake	79 1.1%	24 0.3%	4.30	4.04	4.00	3.70	4.30
Sandusky River	78 1.0%	29 0.4%	4.28	4.20	4.28	4.00	4.29
Mohican River	76 1.0%	32 0.4%	4.76	4.00	3.64	3.65	4.19
Rush Creek Reservoir	76 1.0%	37 0.5%	4.68	4.38	4.32	3.97	4.55
Burr Oak Lake	73 1.0%	39 0.5%	4.71	4.24	4.26	3.86	4.58
Clendening Lake	72 1.0%	27 0.4%	4.86	4.43	4.57	4.10	4.30
Little Miami Scenic River Area	72 1.0%	29 0.4%	4.57	3.82	3.82	3.82	4.14
Licking River	71 1.0%	32 0.4%	4.68	4.04	3.54	3.86	4.41
Hocking River	70 0.9%	24 0.3%	4.67	4.29	4.05	3.81	4.67
Tuscarawas River	70 0.9%	24 0.3%	4.43	4.14	4.52	3.70	4.48
Lake Logan	69 0.9%	28 0.4%	4.92	3.74	3.71	2.90	4.0
Clearfork Reservoir	68 0.9%	23 0.3%	4.61	4.39	4.61	4.31	4.47
Findley Lake	68 0.9%	34 0.5%	4.76	4.52	4.38	3.81	4.57
Kokosing River	68 0.9%	25 0.3%	4.45	3.95	4.32	3.80	4.67
Ladue Reservoir	66 0.9%	21 0.3%	4.75	3.68	3.50	3.21	4.00
Charles Mill Reservoir	65 0.9%	39 0.5%	4.60	3.89	4.34	3.88	4.20
Mogadore Reservoir	64 0.9%	33 0.4%	4.63	4.37	4.33	4.03	4.53
Caesar Creek (River)	63 0.8%	36 0.5%	4.39	3.68	3.13	3.70	3.90

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Ohio Bodies of Water	ALL MENTIONS	#1 MENTION	Easy to Navigate	Follow Rules	Not Over Crowded	Invasive Species	Other Boaters
<b>BASE: Boating Households</b>	<b>7,440</b>	<b>7,437</b>	<b>Base for ratings = # of Boaters in #1 Mention column</b>				
Big Darby Creek	61 0.8%	27 0.4%	4.24	4.29	4.28	3.92	4.50
Paint Creek Lake	60 0.8%	18 0.2%	4.47	3.33	4.13	3.57	4.29
Wolf Run Lake	59 0.8%	21 0.3%	4.94	4.44	4.56	4.19	4.65
Knox Lake	57 0.8%	22 0.3%	4.53	4.00	4.61	4.18	4.44
Kiser Lake	52 0.7%	27 0.4%	4.88	4.73	4.77	4.15	4.62
Portage River	52 0.7%	18 0.2%	4.35	3.94	4.24	3.53	4.00
Other Municipal	50 0.7%	28 0.4%	4.92	4.35	4.75	4.09	4.73
Huron River	49 0.7%	18 0.2%	4.47	3.86	4.53	3.40	4.13
Other Rivers (Quarries)	46 0.6%	14 0.2%	4.90	4.40	4.40	3.20	4.10
DOW Lake/Strouds Run	45 0.6%	22 0.3%	4.89	4.05	3.32	3.53	4.47
Stonelick Lake	45 0.6%	14 0.2%	4.71	4.64	4.43	3.68	4.64
O'Shaughnessy	44 0.6%	21 0.3%	4.81	4.10	4.29	3.47	4.33
Grand River	42 0.6%	20 0.3%	4.26	3.78	4.16	3.18	4.00
Vermilion River	40 0.5%	13 0.2%	4.85	4.08	4.08	3.50	4.46
Rocky River	39 0.5%	9 0.1%	4.50	4.33	4.17	3.80	4.33
Black River	38 0.5%	16 0.2%	5.00	4.43	4.71	4.17	4.93
Hargus Lake/A.W. Marion	38 0.5%	17 0.2%	4.88	4.31	4.06	3.69	4.25
Forked Run Lake	37 0.5%	20 0.3%	4.84	4.21	4.74	4.19	4.78
Findlay Reservoirs - Hancock Co	36 0.5%	12 0.2%	4.58	4.17	4.25	3.92	4.25
Rocky Fork Creek	35 0.5%	6 <sup>38</sup> 0.1%	4.83	3.83	3.67	4.00	4.00
Rupert Lake	34 0.5%	18 0.2%	4.65	3.47	3.59	3.25	4.65

<sup>38</sup> Very low number of respondents providing rating for Rocky Fork Creek.

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Ohio Bodies of Water	ALL MENTIONS	#1 MENTION	Easy to Navigate	Follow Rules	Not Over Crowded	Invasive Species	Other Boaters
<b>BASE: Boating Households</b>	<b>7,440</b>	<b>7,437</b>	<b>Base for ratings = # of Boaters in #1 Mention column</b>				
Sandusky Scenic River Area	34 0.5%	14 0.2%	4.23	3.54	3.62	3.31	4.00
Walborn	33 0.4%	5 <sup>39</sup> 0.1%	4.80	4.00	4.00	4.20	4.00
Chippewa Lake	31 0.4%	23 0.3%	4.57	3.52	3.78	3.52	4.14
Cuyahoga Scenic River Area	31 0.4%	15 0.2%	3.83	4.17	4.00	3.40	4.58
Lake Vesuvius (Wayne National Forest, Timber Ridge)	31 0.4%	19 0.3%	4.94	4.06	3.50	3.88	4.17
Veto Lake	31 0.4%	12 0.2%	4.89	4.56	5.00	4.71	4.56
Lake White	30 0.4%	20 0.3%	4.18	3.82	4.06	3.50	4.35
Stillwater River <sup>40</sup>	30 0.4%	8 0.1%	4.57	4.29	4.71	3.71	4.43

<sup>39</sup> Very low number of respondents providing ratings for Walborn.

<sup>40</sup> Other bodies of water, listed in descending order of popularity, include Lake Hope, La Su An, Blanchard River, Guilford Lake, Jackson Lake, Chagrin River, Griggs Reservoir, Hamilton County Parks, Ottawa River, Beaver Creek, Harrison Lake, Ross Lake, Nettle Lake, Tycoon Lake, Wingfoot Lake, Raccoon Creek, Monroe Lake, Tiffin River, Hammertown Lake, Oxbow Lake, Punderson Lake, Darby Scenic River Area, Deer Creek (River), East Branch Reservoir, Kokosing Reservoir, Upper Sandusky Reservoir, Walhonding River, Belmont Lake/Bark Camp State Park, Buck Creek (River), Highlandtown Lake, Kokosing Scenic River Area, Olentangy River, Deer Creek - Stark County, Lake Lorelei, Mahoning River, Twin Creek, Big Walnut Creek, Candlewood Lake, Fox Lake, Mohawk Lake, Grant Lake, St. Joseph River, Little Muskingum, Stillwater Scenic River Area, Whitewater River, Other, Lake Lakengren, Ohio Brush Creek, Other Scenic River Area, Shawnee State Park Lakes (Roosevelt Lake), Whitewater, Lake Alma, Madison Lake, Wellington Reservoir (Upper), Wills Creek, Bresler Lake, Lake Roaming Rock, Little Hocking River, Ohio Power Lakes, Pymatuning Creek, Sippo Lake, Ashtabula Scenic River Area, Beaver Creek Scenic River Area, Holiday Lake, Killbuck Creek, Lake Waynoka, Salt Creek, Spencer Lake, Aurora Lake, Clark Lake, Conneaut Scenic River Area, Fostoria Reservoirs, Seneca Lake (Private), Ashtabula River, Grand Scenic River Area, Springfield Lake, Lake Buckhorn, Lake Katherine, Lake of the 4 Seasons, Little Darby Creek, Loramie Creek, Oakthorpe Lake, Scioto Brush Creek (North and Main Branch), Slope Creek Reservoir, Bucyrus Lakes, Indian Creek, Jackson Lake Wildlife Area, New London Reservoir, New Lyme Wildlife Area, Sandy Creek, Wellington Reservoir (Lower), Wills Creek Lake, Aquila Lake, Captina Creek, Clouse Lake, Norwalk Reservoirs, Symmes Creek, Turtle Creek, Chagrin Scenic River Area, Cinnamon Lake, Duck Creek, Greenville Creek Scenic River Area, Killdeer Ponds, Lake Choctaw, Mt. Gilead Reservoir, Olentangy Scenic River Area, Paint Creek - North Fork, St. Marys River, Toussaint River, Wolf Creek, Woodbury Wildlife Area, Beach City Reservoir, Big Island Ponds, Geauga Lake, Greenfield Lake, Little Beaver Creek, Odell Lake, Paulding Ponds, Rockmill Lake, Storms Creek, Sunfish Creek, Wayne National Forest, Willard Reservoir, Zepernick Lake, Conotton Creek, Dayton Triangle Park, Four-Mile Creek/Talawanda Creek, Jisco Lake, Little Scioto River (Lower), Mineral Springs, Oberlin Reservoir, Ottoville Quarry, Scioto Brush Creek (South Fork), Spring Valley Lake, and Waterloo Lake.

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## Ohio Counties – Living and Boating

Coshocton, where Walhonding and Tuscarawas Rivers meet to become the Muskingum River, and Scioto, where Scioto River meets the Ohio River, were the only two counties where respondent boaters lived and boated in 2022 without leaving the county line.

Ottawa County, contiguous to Lake Erie and including the Lake Erie Islands, and Logan County, the home of Indian Lake, represent Ohio’s favorite boating destinations. Also, Ottawa and Logan counties had the lowest average percent (8.3% and 5.3%, respectively) incidence of boating trips requiring an overnight stay.

Boaters in Marion, Crawford, and Hardin were most likely to travel across county lines for boating activities. Marion and Hardin had the highest average percent of boating trips requiring an overnight stay (36% and 33.9%, respectively).

*Figure 48 shows all 88 Ohio counties in descending order of boat influx/outflux into each county during the boating season.*

Ohio County	Boaters’ Home County	Boaters’ Boat-Home County	Influx/Outflux of # Boats by County	Influx/Outflux of % Boats by County	% Trips Overnight Stay	% Traveling ≤10 miles from Home County to #1 Body of Water
Ottawa	209	608	399	+190.9%	8.3%	81.2%
Logan	117	287	170	+145.3%	5.8%	74.4%
Carroll	51	114	63	+123.5%	6.1%	77.1%
Guernsey	57	119	62	+108.8%	8.5%	57.1%
Erie	167	302	135	+80.8%	11.6%	88.7%
Harrison	50	79	29	+58.0%	13.1%	50.0%
Mercer	62	97	35	+56.5%	12.0%	83.3%
Ashtabula	67	101	34	+50.7%	10.0%	44.4%
Brown	54	81	27	+50.0%	11.2%	39.4%
Highland	60	89	29	+48.3%	10.5%	51.4%
Morgan	41	59	18	+43.9%	7.6%	70.6%
Noble	48	63	15	+31.3%	15.2%	27.3%
Portage	99	125	26	+26.3%	14.6%	40.8%
Hamilton	189	226	37	+19.6%	27.4%	40.2%
Ashland	53	62	9	+17.0%	10.5%	44.4%
Ross	66	75	9	+13.6%	10.9%	40.9%
Knox	153	173	20	+13.1%	10.7%	67.6%
Lake	124	140	16	+12.9%	11.2%	69.2%
Williams	58	65	7	+12.1%	11.7%	50.0%
Delaware	166	186	20	+12.0%	15.0%	70.9%
Mahoning	101	113	12	+11.9%	16.8%	33.8%
Meigs	54	59	5	+9.3%	6.9%	52.8%
Clinton	64	69	5	+7.8%	24.1%	52.8%
Gallia	53	57	4	+7.5%	11.2%	63.6%
Sandusky	61	65	4	+6.6%	10.8%	44.2%

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Ohio County	Boaters' Home County	Boaters' Boat-Home County	Influx/Outflux of # Boats by County	Influx/Outflux of % Boats by County	% Trips Overnight Stay	% Traveling ≤10 miles from Home County to #1 Body of Water
Paulding	41	43	2	+4.9%	20.5%	50.0%
Preble	52	54	2	+3.8%	25.0%	35.5%
Athens	59	61	2	+3.4%	9.9%	67.6%
Jackson	40	41	1	+2.5%	13.9%	51.7%
Muskingum	91	93	2	+2.2%	18.9%	42.6%
Belmont	73	74	1	+1.4%	22.1%	45.7%
Coshocton	42	42	0	-	14.5%	29.0%
Scioto	64	64	0	-	17.0%	32.3%
Pickaway	64	63	-1	(-1.6%)	24.2%	34.2%
Washington	175	171	-4	(-2.3%)	11.6%	61.8%
Hocking	64	62	-2	(-3.1%)	14.5%	52.5%
Clark	89	85	-4	(-4.5%)	21.7%	47.3%
Henry	52	49	-3	(-5.8%)	19.0%	58.1%
Warren	254	238	-16	(-6.3%)	25.8%	35.0%
Shelby	61	57	-4	(-6.6%)	14.2%	53.7%
Richland	90	84	-6	(-6.7%)	14.2%	41.7%
Pike	44	41	-3	(-6.8%)	12.9%	55.2%
Monroe	54	50	-4	(-7.4%)	10.2%	37.8%
Licking	363	326	-37	(-10.2%)	14.4%	43.5%
Perry	99	88	-11	(-11.1%)	8.2%	75.0%
Columbiana	85	75	-10	(-11.8%)	20.6%	32.7%
Auglaize	57	50	-7	(-12.3%)	22.6%	45.9%
Lawrence	65	57	-8	(-12.3%)	10.4%	38.2%
Summit	275	241	-34	(-12.4%)	11.4%	56.1%
Defiance	79	69	-10	(-12.7%)	14.6%	64.4%
Huron	52	45	-7	(-13.5%)	8.6%	44.8%
Fayette	44	38	-6	(-13.6%)	10.0%	28.0%
Clermont	193	166	-27	(-14.0%)	25.3%	53.1%
Madison	57	49	-8	(-14.0%)	22.9%	54.1%
Trumbull	91	78	-13	(-14.3%)	11.3%	35.3%
Fairfield	289	246	-43	(-14.9%)	20.7%	38.9%
Jefferson	58	49	-9	(-15.5%)	17.8%	24.2%
Champaign	64	54	-10	(-15.6%)	17.9%	44.1%
Adams	43	35	-8	(-18.6%)	13.4%	34.6%
Wood	63	51	-12	(-19.0%)	17.0%	31.4%
Greene	86	69	-17	(-19.8%)	27.2%	33.3%
Tuscarawas	169	134	-35	(-20.7%)	14.6%	25.2%
Lorain	314	246	-68	(-21.7%)	17.1%	53.1%
Lucas	452	353	-99	(-21.9%)	15.0%	54.0%
Holmes	45	35	-10	(-22.2%)	19.1%	16.1%
Van Wert	54	42	-12	(-22.2%)	34.2%	29.4%
Cuyahoga	341	264	-77	(-22.6%)	12.5%	50.7%

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Ohio County	Boaters' Home County	Boaters' Boat-Home County	Influx/Outflux of # Boats by County	Influx/Outflux of % Boats by County	% Trips Overnight Stay	% Traveling ≤10 miles from Home County to #1 Body of Water
Vinton	36	27	-9	(-25.0%)	16.2%	39.3%
Fulton	64	48	-16	(-25.0%)	16.7%	21.6%
Darke	58	43	-15	(-25.9%)	33.9%	15.2%
Morrow	53	39	-14	(-26.4%)	14.5%	34.1%
Butler	267	192	-75	(-28.1%)	31.9%	16.8%
Union	75	53	-22	(-29.3%)	28.3%	24.5%
Medina	85	60	-25	(-29.4%)	13.0%	40.0%
Miami	146	103	-43	(-29.5%)	33.1%	29.3%
Franklin	347	243	-104	(-30.0%)	19.9%	42.4%
Montgomery	374	257	-117	(-31.3%)	26.6%	24.0%
Wayne	71	47	-24	(-33.8%)	10.5%	13.0%
Geauga	61	40	-21	(-34.4%)	10.5%	50.0%
Stark	421	273	-148	(-35.2%)	19.4%	30.7%
Hancock	71	46	-25	(-35.2%)	21.9%	43.2%
Allen	72	46	-26	(-36.1%)	32.0%	22.7%
Putnam	64	40	-24	(-37.5%)	29.2%	47.4%
Seneca	74	45	-29	(-39.2%)	14.6%	33.3%
Wyandot	50	30	-20	(-40.0%)	22.8%	27.3%
Hardin	44	25	-19	(-43.2%)	33.9%	17.9%
Crawford	40	20	-20	(-50.0%)	17.0%	26.9%
Marion	52	25	-27	(-51.9%)	36.0%	13.9%

## Boating Situations and Experiences

Some 57.2% of motorized boat operators<sup>41</sup> (2,081 boaters) observed no-wake zone violations in the past 12-months (i.e., October 2021 to September 2022), where 6.8% (248 boaters) report always witnessing no-wake zone violations. Some 33.9% of operators of non-motorized boats<sup>42</sup> (1,591 boaters) observed no-wake zone violations, where 4.6% (73 boaters) report always witnessing no-wake zone violations.

Some 52.1% of motorized boat operators observed careless and reckless boat operation and 3.5% report always witnessing careless and reckless boat operation. Some 31% of operators of non-motorized boaters observed careless and reckless boat operation and 3.5% report always witnessing careless and reckless boat operation.

Some 50.6% of motorized boat operators observed crowding of waterways in the past 12-months, where 2.7% report always witnessing crowding. Some 33.7% of operators of non-motorized boats observed crowding and 2.9% report always witnessing crowding.

Some 39.3% of motorized boat operators observed speed limit violations and 4.0% report always witnessing speed limit violations. Some 26% of operators of non-motorized boaters observed speed limit violations and 3.9% report always witnessing speed limit violations.

Some 38.2% of motorized boat operators (1,344 boaters) heard excessive noise on Ohio's waterways in the last 12-months, where 2.6% (90 boaters) report always hearing excessive noise. Some 33.5% of non-motorized boat operators (529 boaters) heard excessive noise and 3.6% (57) report always hearing excessive noise.

"Always" witnessed issues were filtered by water-bodies and Alum Creek Reservoir, Indian Lake, Caesar Creek Reservoir, and Buckeye Lake were the most frequently used by boaters "always experiencing" these issues.

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<sup>41</sup> Sailboat with motor was included with motorized boats.

<sup>42</sup> Sail (sail only) was included with non-motorized boats.

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Figure 49 shows the percentage of respondent boaters observing no-wake zone violations over 12-months on Ohio's waterways aggregated by boat type, motorized boats include sailboats with motors and non-motorized boats include sail (sail only) boats.

No-Wake Zone Violations

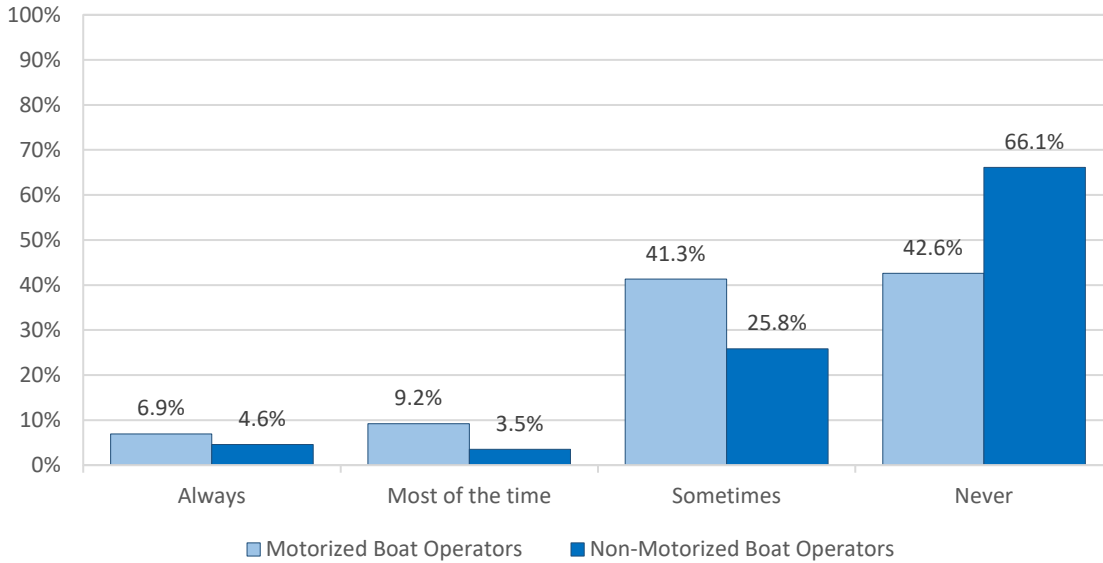
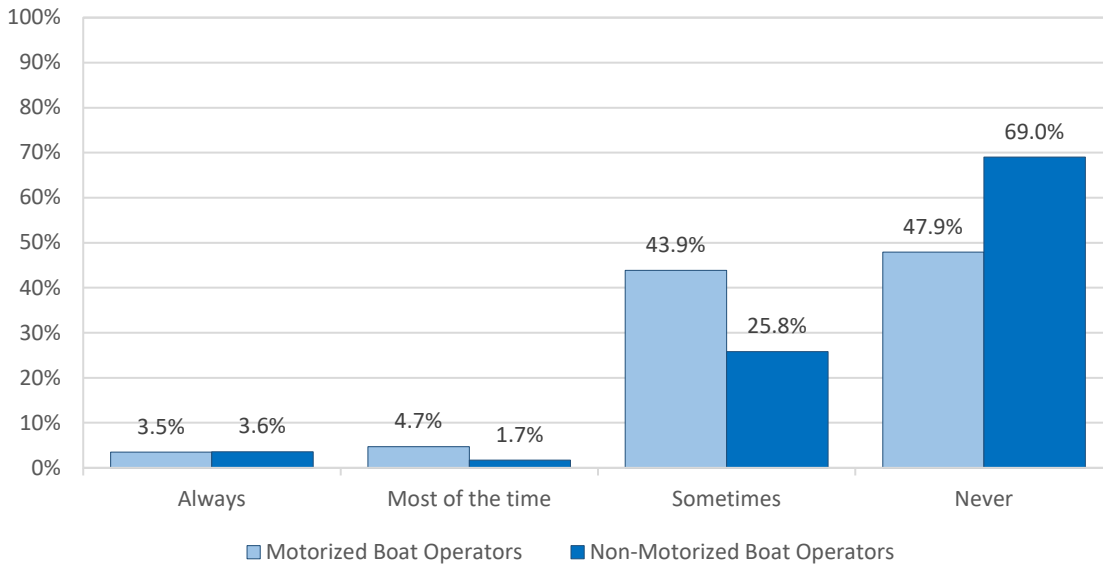


Figure 50 shows the percentage of respondent boaters observing careless/reckless operation over 12-months on Ohio's waterways aggregated by boat type, motorized boats include sailboats with motors and non-motorized boats include sail (sail only) boats.

Careless/Reckless Operation



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Figure 51 shows the percentage of respondent boaters observing crowding of waterways over 12-months from 5,152 Ohio boaters (3,517 operating motorized boats, which include sailboats with motors; 1,572 non-motorized, which includes sail [sail only] boats).

Crowding of Waterways

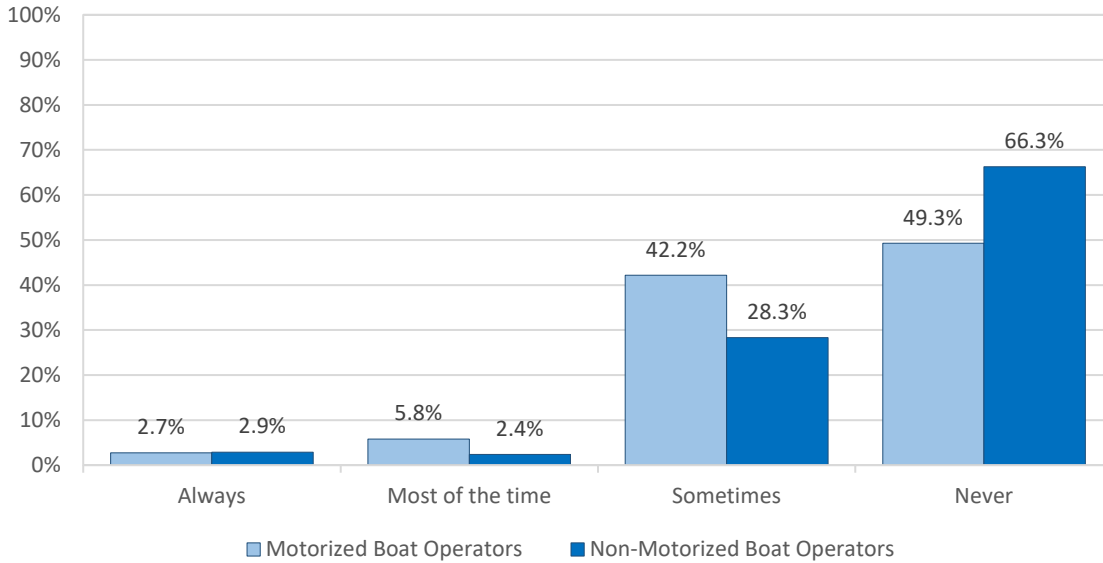
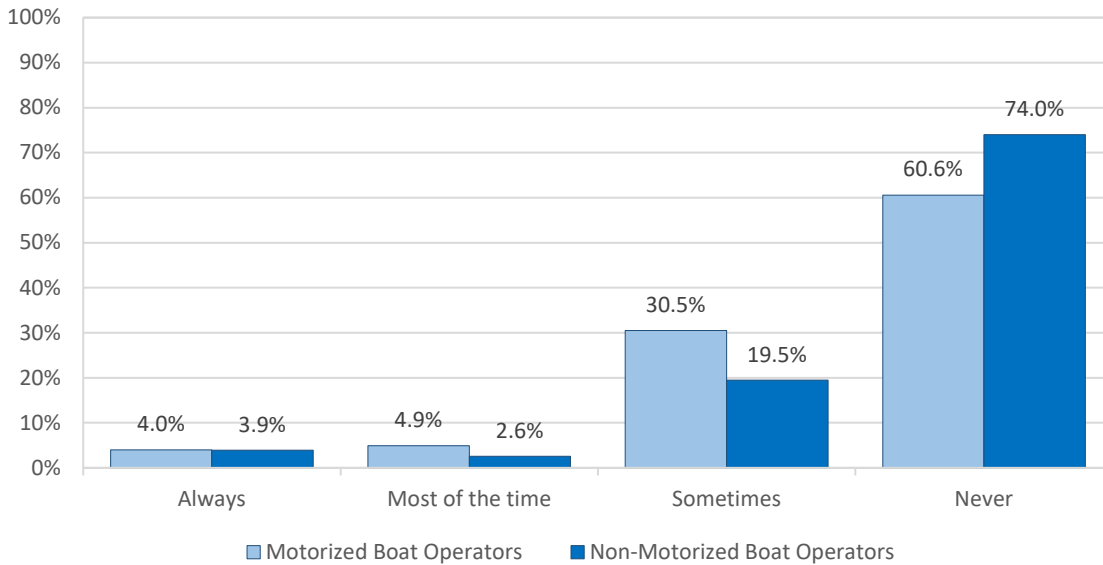


Figure 52 shows the percentage of respondent boaters observing speed limit violations over 12-months on Ohio’s waterways aggregated by boat type, motorized boats include sailboats with motors and non-motorized boats include sail (sail only) boats.

Speed Limit Violations



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Figure 53 shows the percentage of respondent boaters hearing excessive noise over 12-months on Ohio’s waterways aggregated by boat type, motorized boats include sailboats with motors and non-motorized boats include sail (sail only) boats.

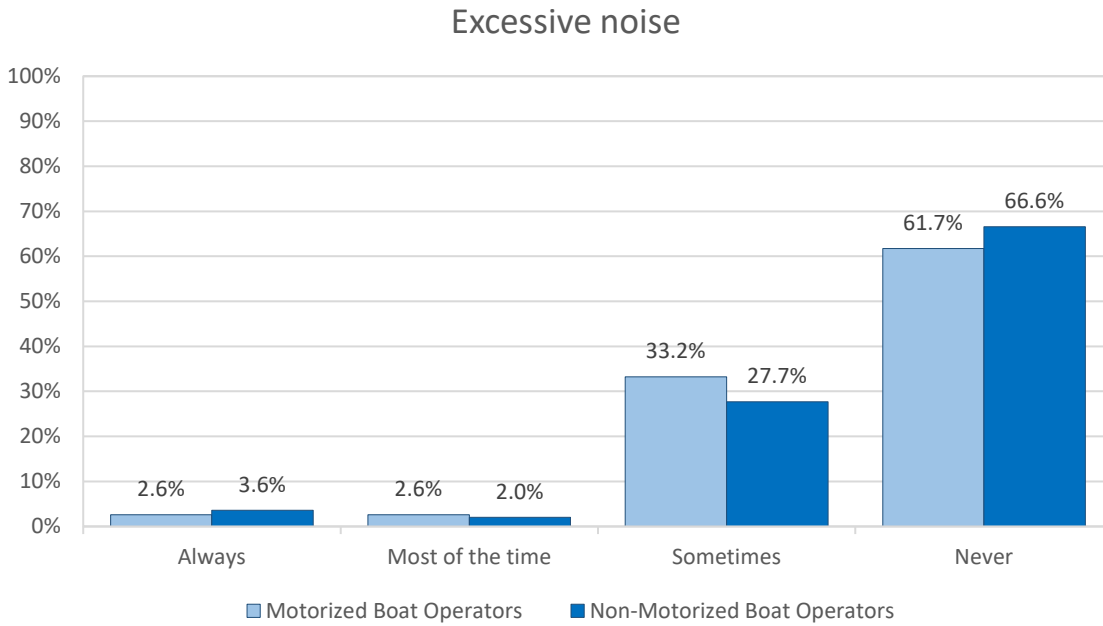
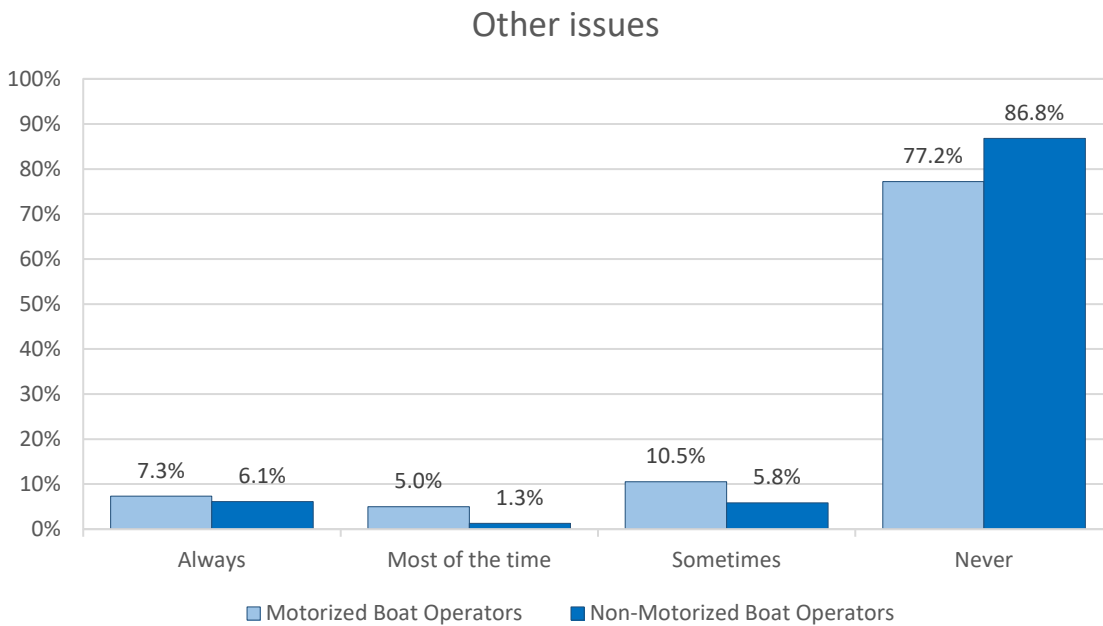


Figure 54 shows the incidence of “other” issues during boating over 12-months on Ohio’s waterways aggregated by boat type, motorized boats include sailboats with motors and non-motorized boats include sail (sail only) boats.



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*Figure 55 shows the categorized (bold) and coded responses from written comments boaters provided for other situations witnessed over the last 12-months on Ohio's waterways.*

<i>Other situations reported on Ohio's waterways</i>
117 Recreational Boaters
<p><b>29.1% Speed/HP</b></p> <ul style="list-style-type: none"> <li>7.7% HP violations</li> <li>6.8% Jet-ski issues</li> <li>6.8% Wake issues</li> <li>2.6% Speed issues</li> <li>1.7% Bowriders</li> <li>1.7% Lack of kayak ramps</li> <li>0.9% Exhaust noise</li> <li>0.9% No pump-out stations</li> </ul> <p><b>25.6% Abuse Disorder/Civility</b></p> <ul style="list-style-type: none"> <li>9.4% Likely alcohol impairment</li> <li>9.4% Lack of courtesy/civility</li> <li>3.4% Littering</li> <li>1.7% Vandalism</li> <li>0.9% Charter boat issues</li> <li>0.9% Likely drug impairment</li> </ul> <p><b>22.2% Blocking</b></p> <ul style="list-style-type: none"> <li>8.5% Too close</li> <li>6.8% Right of way/wrong way</li> <li>0.9% Boats under bridge</li> <li>0.9% Cars in trailer spots</li> <li>0.9% Congestion at fishing tournament</li> <li>0.9% Fishing at docks</li> <li>0.9% Lily pads</li> <li>0.9% Narrow channels</li> <li>0.9% Ramp blocking</li> <li>0.9% Towing</li> </ul> <p><b>17.9% Dangers</b></p> <ul style="list-style-type: none"> <li>5.1% Lack of knowledge/ability to operate a boat</li> <li>2.6% No lights on vessels at night</li> <li>2.6% Swimming outside zones</li> <li>2.6% Waterskiing issues</li> <li>1.7% No life jackets</li> <li>0.9% Overloading vessel</li> <li>0.9% Racing</li> <li>0.9% Tubing issues</li> <li>0.9% Vessels in distress</li> </ul> <p><b>3.4% Law Enforcement</b></p> <ul style="list-style-type: none"> <li>2.6% Fishing license check</li> <li>0.9% No law enforcement</li> </ul> <p><b>1.7% Property Damage</b></p> <ul style="list-style-type: none"> <li>0.9% Boat damage from objects under water</li> <li>0.9% Body found</li> </ul>

## On the Water Assistance

### Overview and Excellence (ODNR)

Boaters were asked to report any on the water contact from a list of six law enforcement agencies (plus a commercial tow). The following data relies on the accuracy of 4,921 boaters identifying the agency represented by officers they encountered on the water. The results, however, show a logical consistency. Data for interaction with officers from USCG, USCG Auxiliary, local marine patrols, commercial tow, Customs & Border Patrol, and US Homeland Security were statistically significantly more likely to have been with operators of motorized boats,<sup>43</sup> which likely reflects activity on Lake Erie. Similarly, boat operators in ODNR Districts closest to Lake Erie (Northwest and Northeast) were statistically significantly more likely to interact USCG, USCG Auxiliary, commercial tow, Customs & Border Patrol, and US Homeland Security. Interaction with boaters was consistent throughout all ODNR Districts for ODNR Officers and local marine patrols.

Some 15.7% of motorized boat<sup>44</sup> operators and 11.1% of non-motorized boat<sup>45</sup> operators interacted with ODNR Officers between October 1, 2021 and September 30, 2022.

Some 59.0% of motorized boat operators and 65.8% of non-motorized boat operators rated ODNR Excellent for *courteous personnel*. Some 58.4% of motorized boat operators and 65.1% of non-motorized operators rated ODNR Excellent for *professional personnel*. Some 55.6% of motorized boat operators and 63.2% of non-motorized boat operators rated ODNR Excellent for *knowledgeable personnel*. Some 50.6% of motorized boat operators and 54.5% of non-motorized boat operators rated ODNR Excellent for *helpful assistance*. Some 33.6% of motorized boat operators and 42.4% of non-motorized boat operators rated ODNR Excellent (5) for *services (tow, first aid, etc.)*.

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<sup>43</sup> Aggregated boat type was based on boat used most often and does not exclude the possibility of a boater who utilizes a non-motorized boat most often but sometimes boats in a motorized vessel.

<sup>44</sup> Motorized boats include sailboats with motors.

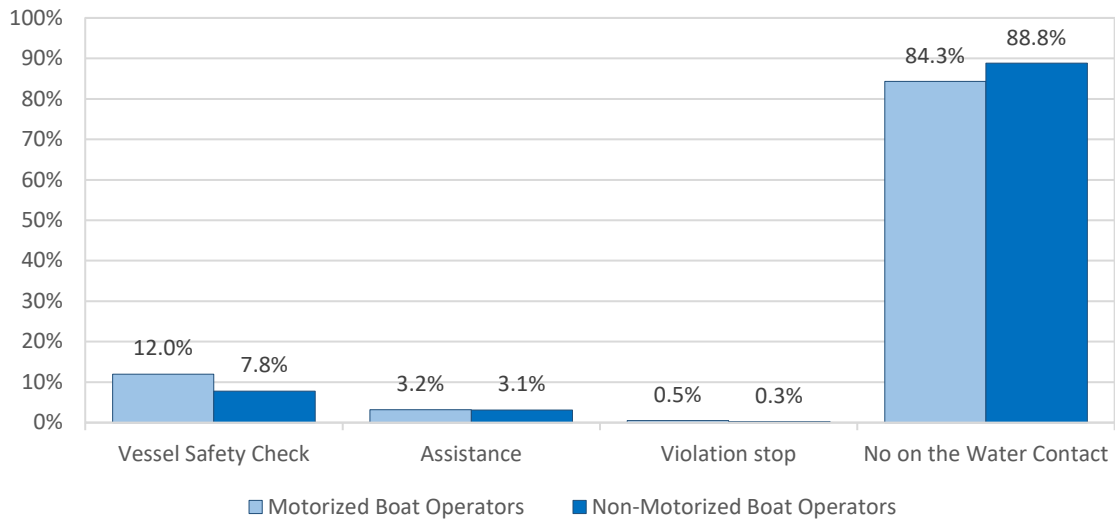
<sup>45</sup> Non-motorized boats include sail (sail only) boats.

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ODNR

Figure 56 shows the type of on the water contact for 5,009 Ohio boat operators, aggregated by boat type where sailboats with motors were included with motorized boats and sail (sail only) boats were included with non-motorized boats, with ODNR Officers.

Type of on the Water Contact  
with ODNR



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Figure 57 shows a stacked column of the rating scale for ODNR Officers interacting with motorized boat operators (motorized boats includes sailboats with motors).

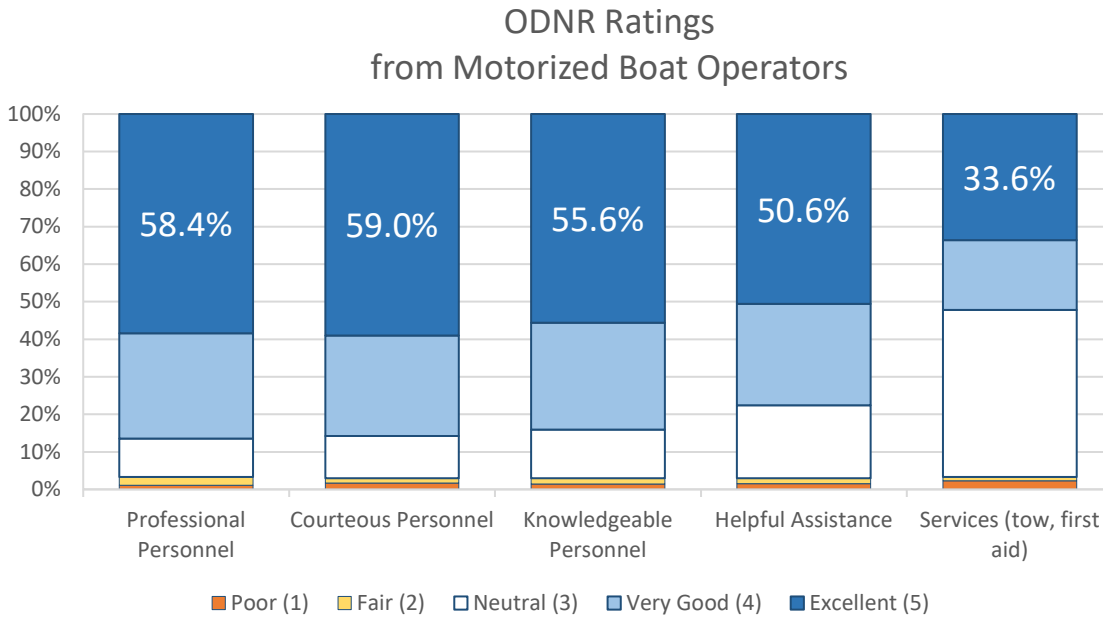
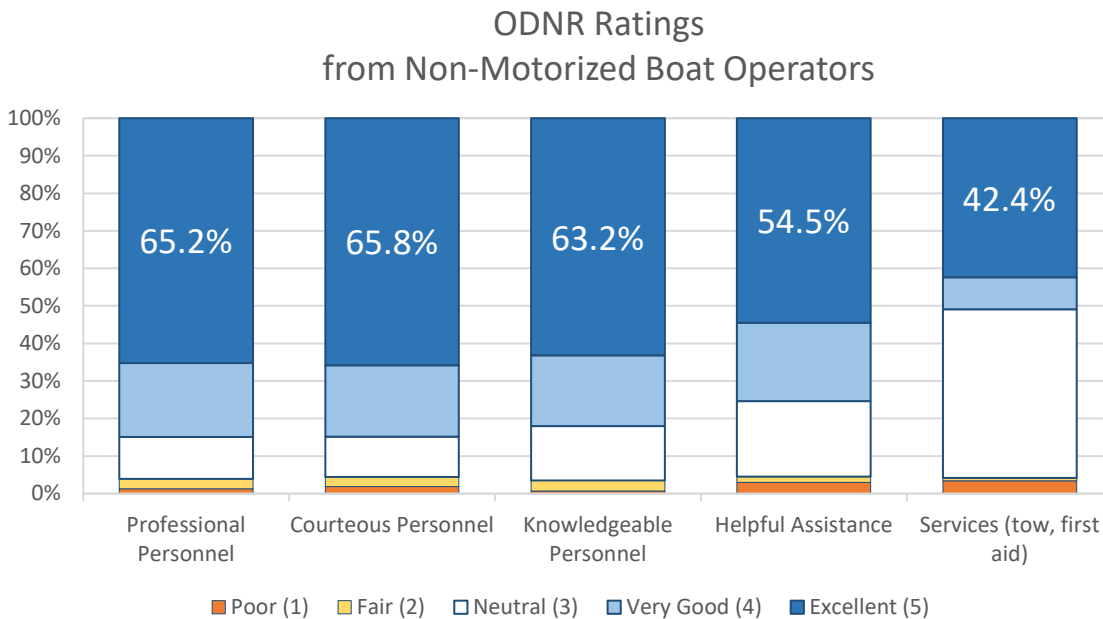


Figure 58 shows a stacked column of the rating scale for ODNR Officers interacting with non-motorized boat operators (non-motorized boats includes sail (sail only) boats).



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U.S. Coast Guard

Figure 59 shows the type of on the water contact for 4,830 Ohio boat operators, aggregated by boat type where sailboats with motors were included with motorized boats and sail (sail only) were included in non-motorized boats, with U.S. Coast Guard Officers.

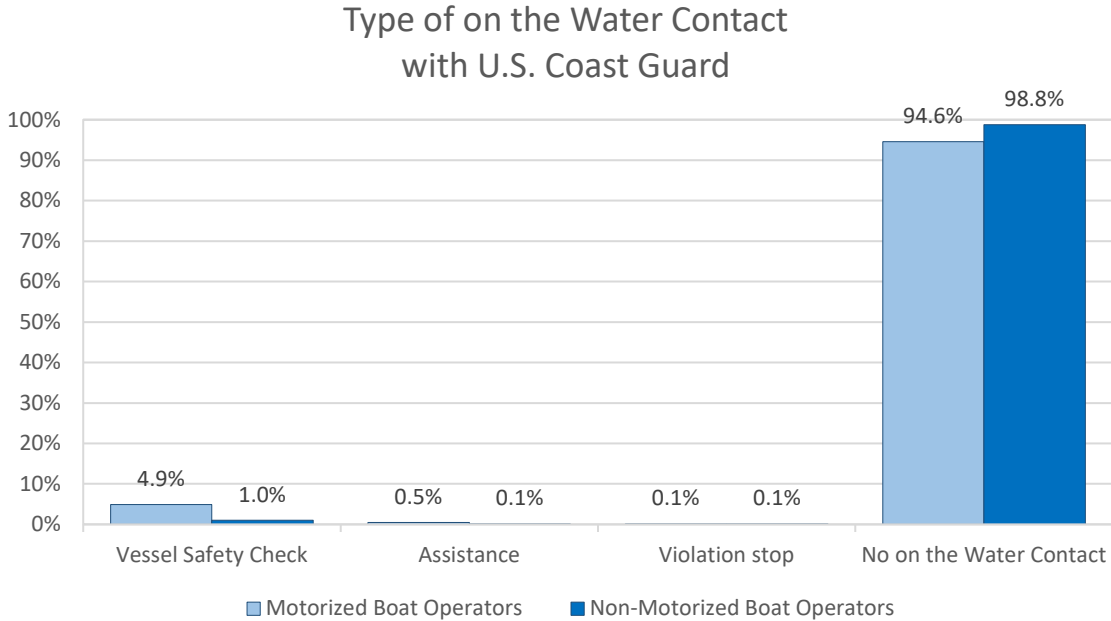
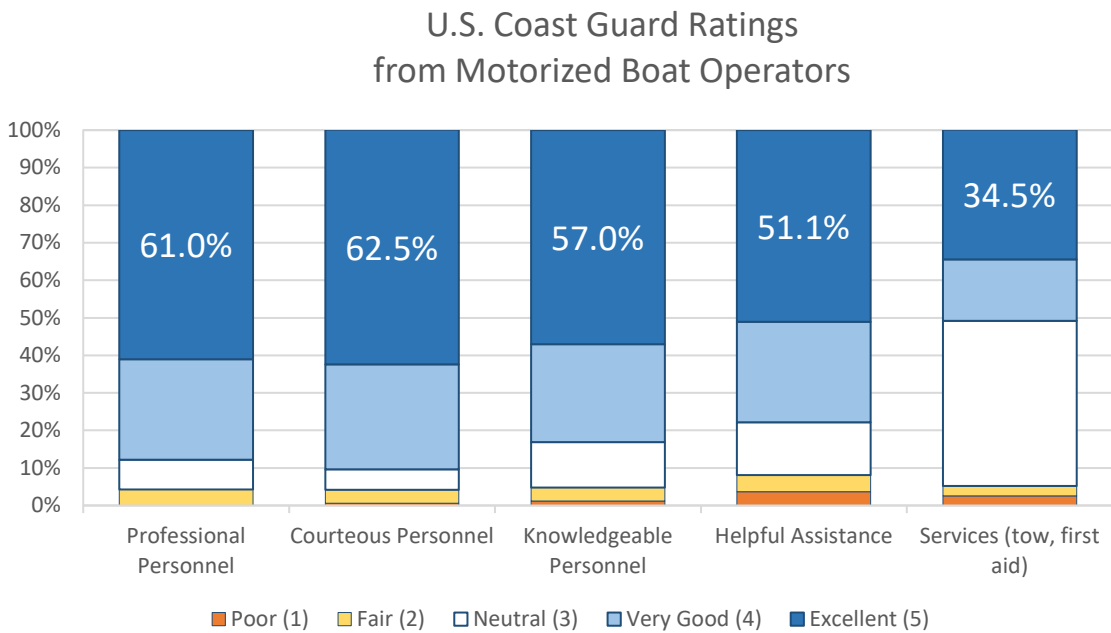


Figure 60 shows a stacked column of the rating scale for U.S. Coast Guard Officers interacting with motorized boat operators which includes sailboats with motors. There was insufficient sample to include ratings from operators of non-motorized vessels.



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Local Marine Patrols

Figure 61 shows the type of on the water contact for 4,760 Ohio boat operators, aggregated by boat type where sailboats with motors were included with motorized boats and sail (sail only) were included in non-motorized boats, with local marine patrols (Sheriff, local police).

Type of on the Water Contact  
with local marine patrols (Sheriff, local police)

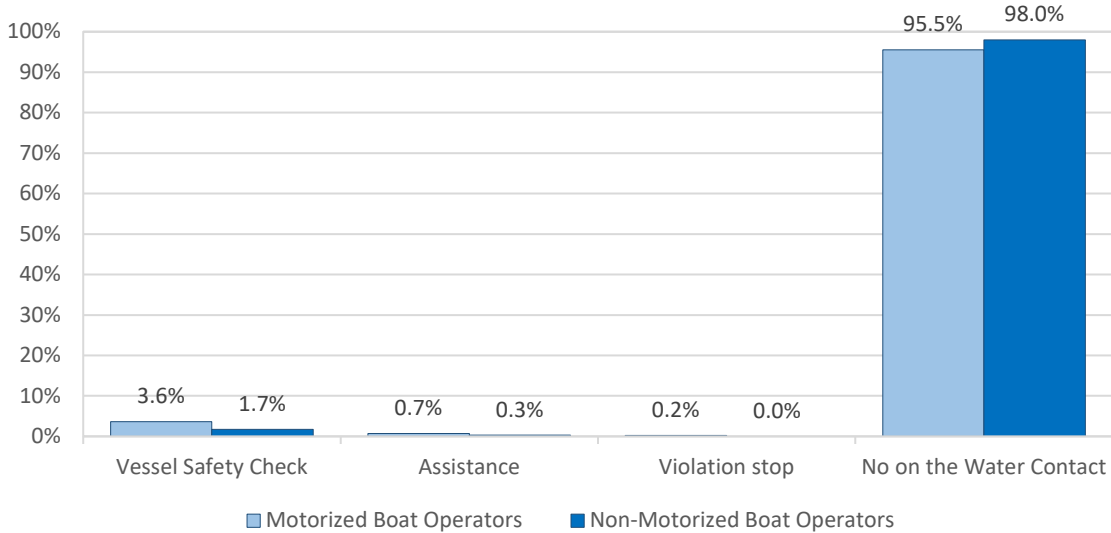
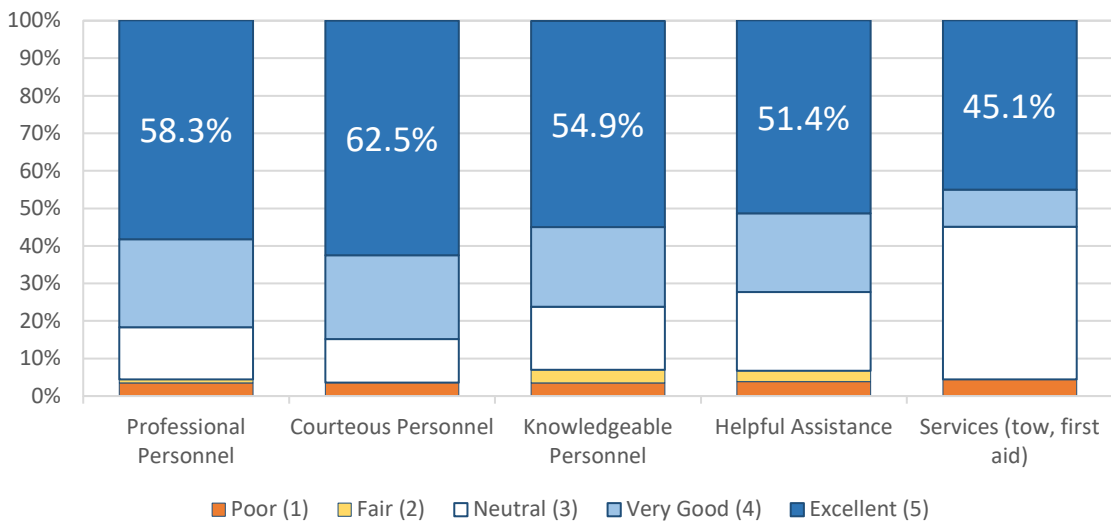


Figure 62 shows a stacked column of the rating scale for local marine patrols (Sheriff, local police) Officers interacting with motorized boat operators (motorized boats includes sailboats with motors).

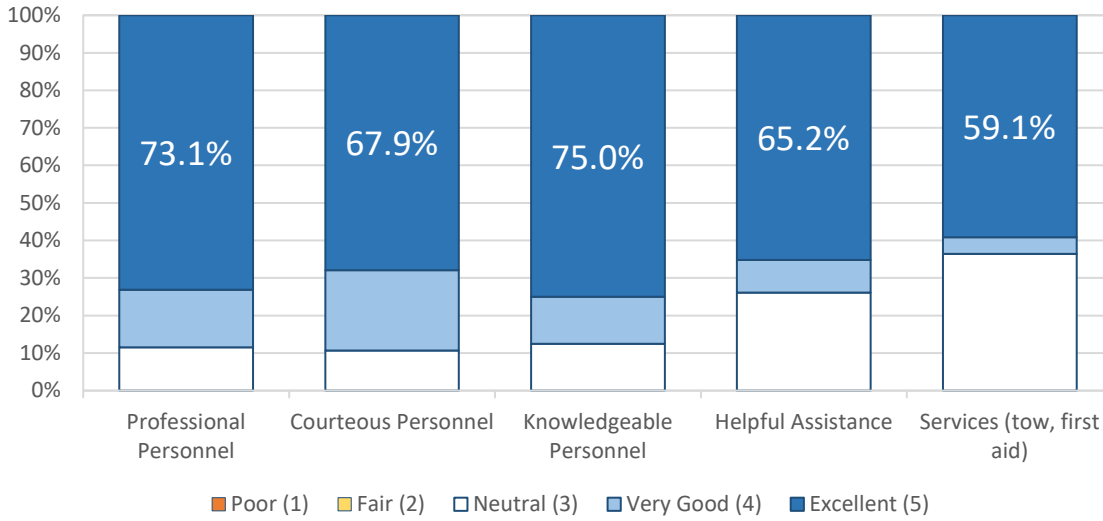
Local marine patrols (Sheriff, local police Ratings  
from Motorized Boat Operators



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Figure 63 shows a stacked column of the rating scale for local marine patrols (Sheriff, local police) Officers interacting with non-motorized boat operators (non-motorized boats include sail (sail only) boats).

Local marine patrols (Sheriff, local police Ratings from Non-Motorized Boat Operators



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USCG Auxiliary

Figure 64 shows the type of on the water contact for 4,776 Ohio boat operators, aggregated by boat type where sailboats with motors were included with motorized boats and sail (sail only) were included in non-motorized boats, with Officers from USCG Auxiliary.

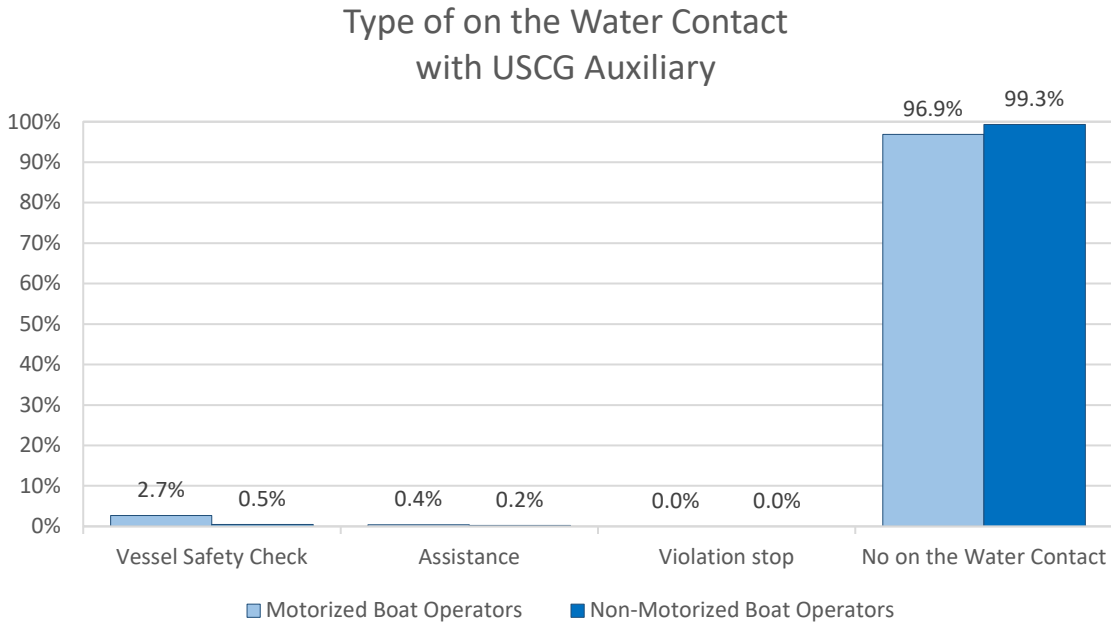
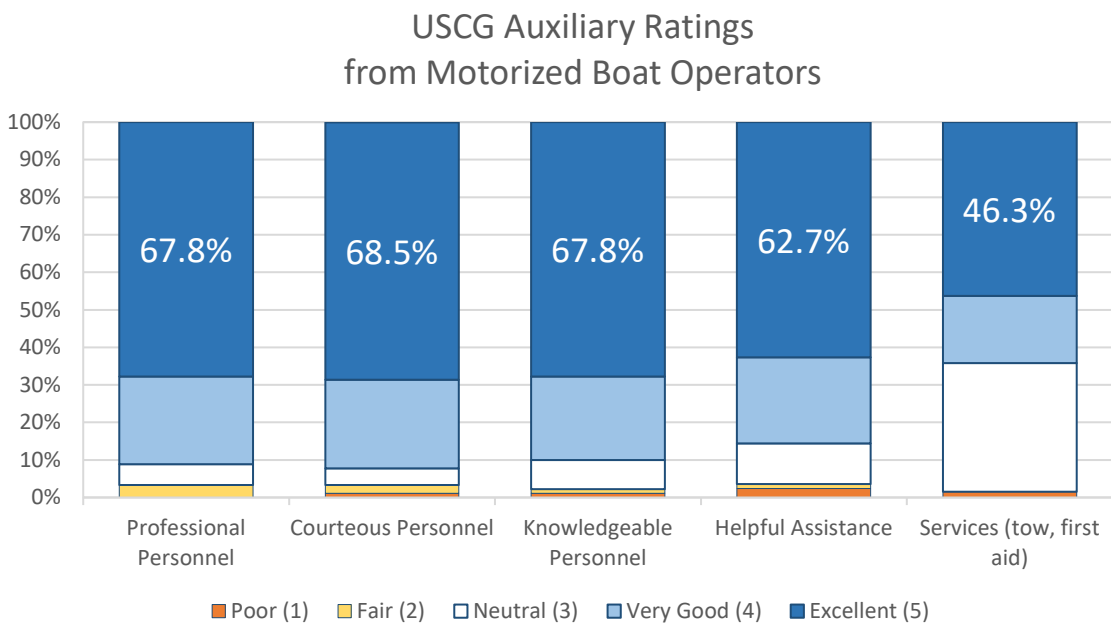


Figure 65 shows a stacked column of the rating scale for USCG Auxiliary Officers interacting with motorized boat operators which includes sailboats with motors. There was insufficient sample to include ratings from operators of non-motorized vessels.



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Commercial Tow

Figure 66 shows the type of on the water contact for 4,729 Ohio boat operators, aggregated by boat type where sailboats with motors were included with motorized boats and sail (sail only) were included in non-motorized boats, with personnel from commercial tow, salvage (not law enforcement).

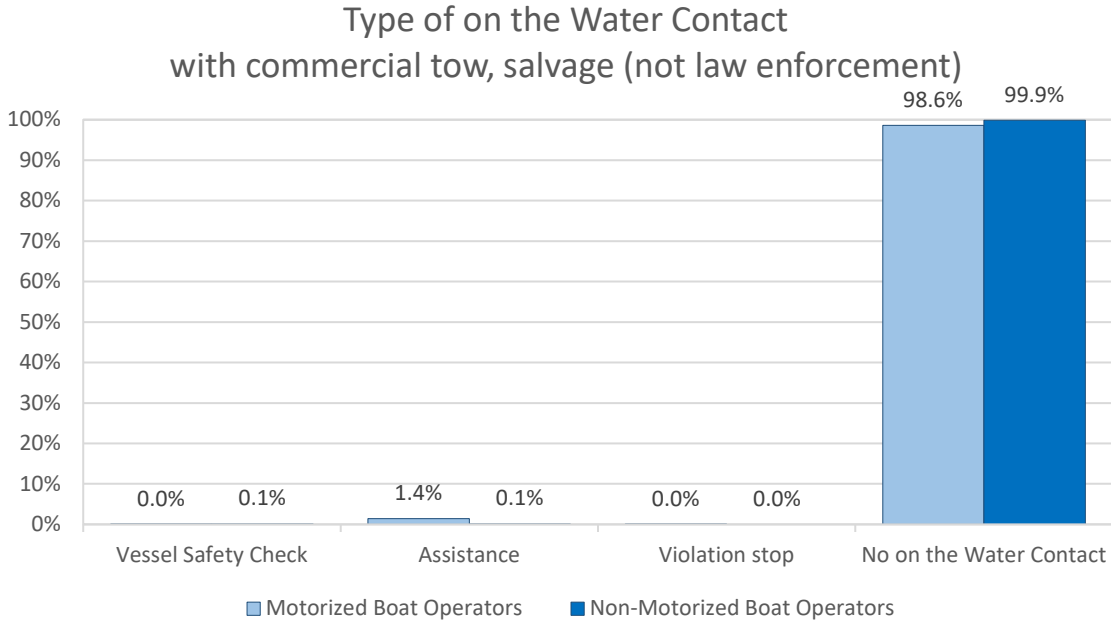
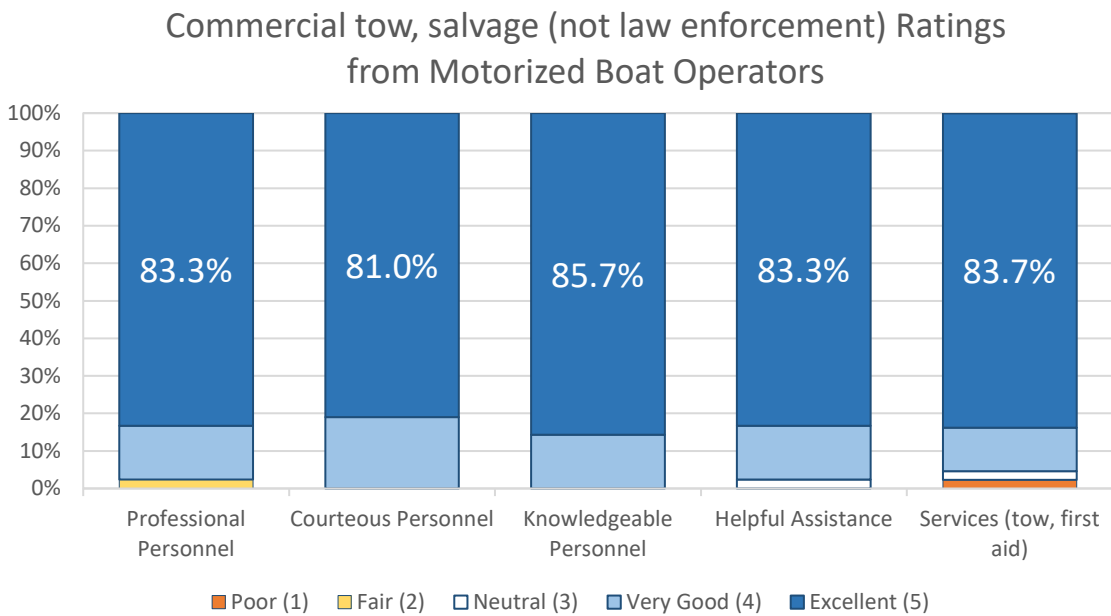


Figure 67 shows a stacked column of the rating scale for commercial tow, salvage (not law enforcement) personnel interacting with motorized boat operators which includes sailboats with motors. There was insufficient sample to include ratings from operators of non-motorized vessels.



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Customs & Border Patrol

Figure 68 shows the type of on the water contact for 4,757 Ohio boat operators, aggregated by boat type where sailboats with motors were included with motorized boats and sail (sail only) were included in non-motorized boats, with Officers from Customs & Border Patrol.

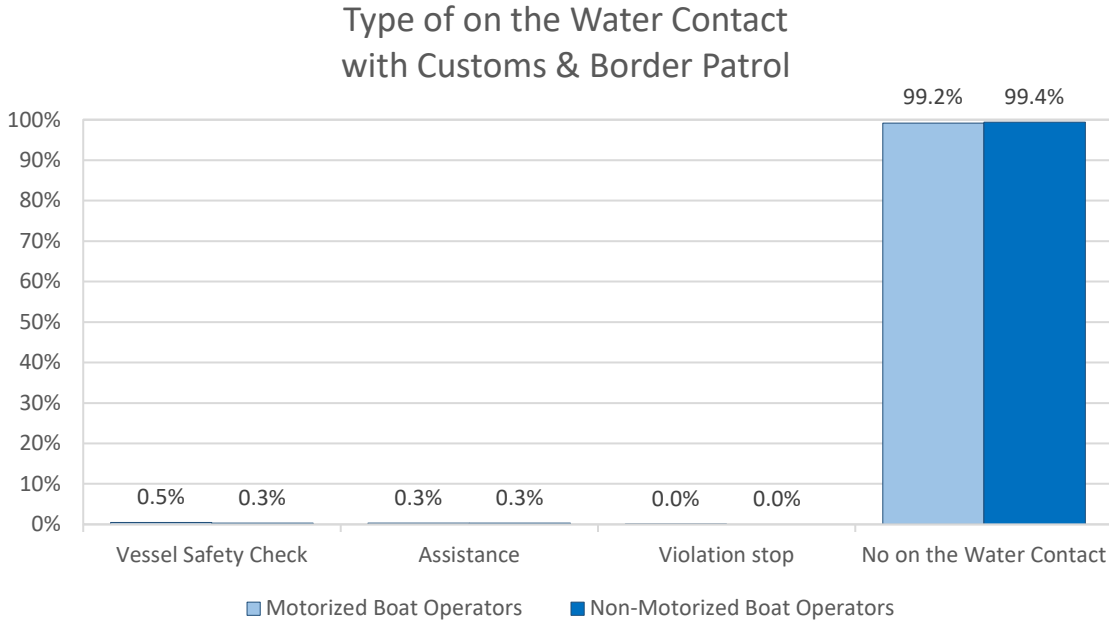
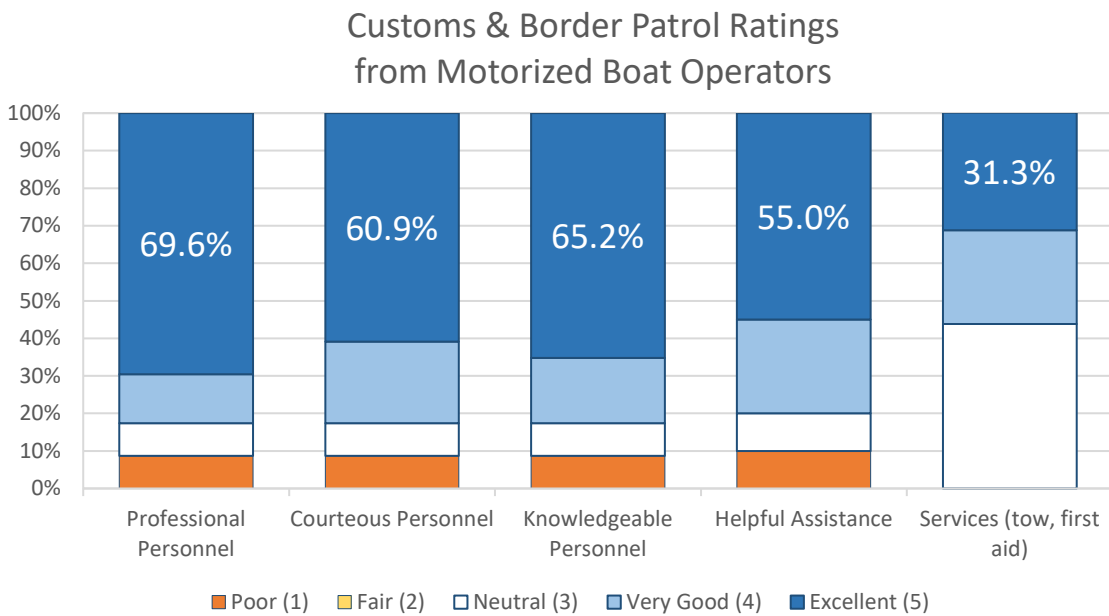


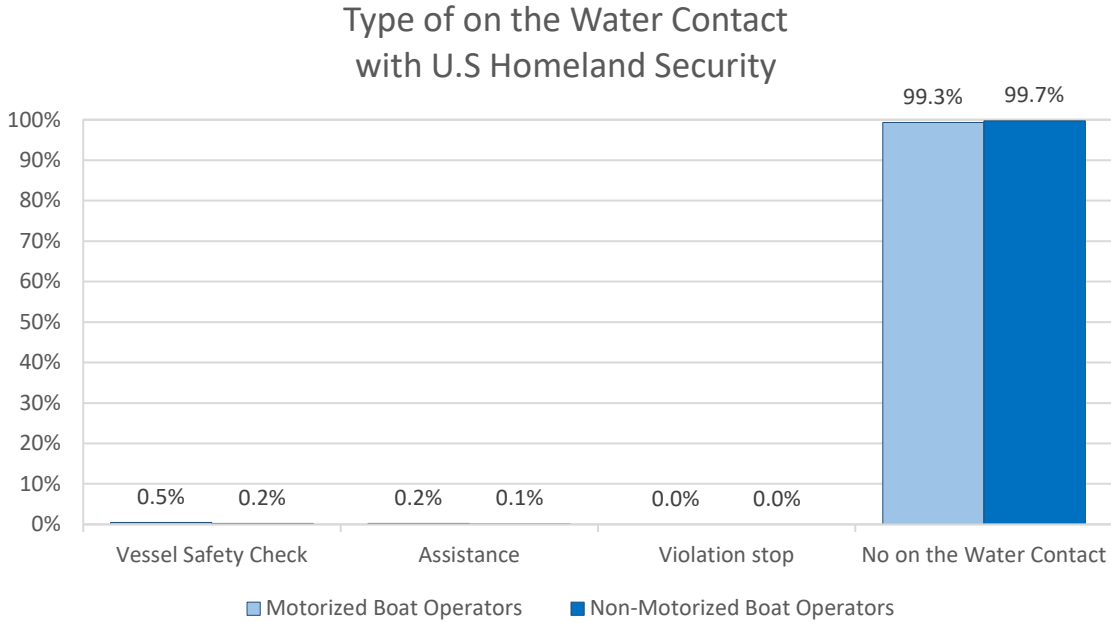
Figure 69 shows a stacked column of the rating scale for Customs & Border Patrol Officers interacting with motorized boat operators which includes sailboats with motors. There was insufficient sample to include ratings from operators of non-motorized vessels.



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U.S Homeland Security

Figure 70 shows the type of on the water contact for 4,755 Ohio boat operators, aggregated by boat type where sailboats with motors were included with motorized boats and sail (sail only) were included in non-motorized boats, with Officers from U.S Homeland Security. There was insufficient sample for ratings.



Other authorities written-in by boaters include the U.S. Power Squadron, Fishing Survey, National Park Service, Marinas, and other officials in other States and Canada.

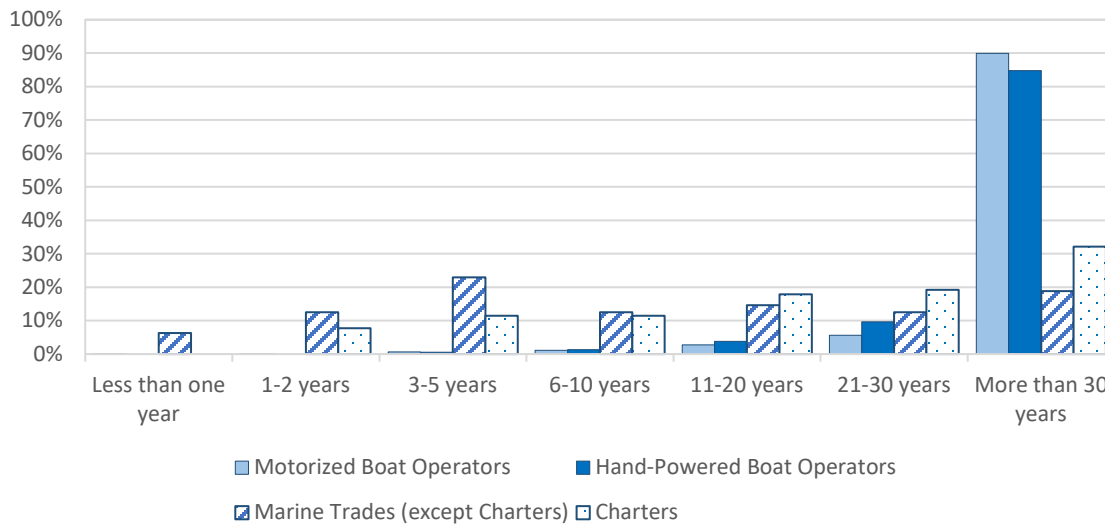
## Thoughts on Boating and Operating a Boating-Related Business in Ohio

### Ohio Longevity

Overall, 88.3% of responding Ohio boaters have lived in Ohio over 30 years, which compared to 27% of businesses operating in Ohio for over 30 years. Overall, one in four Marine Trades businesses and charters operating in Ohio were less than five-years old.

*Figure 71 combines Ohio boaters' years living in Ohio by aggregated boat type (where motorized boats includes sailboats with motor and non-motorized boats include sail [sail only] boats) and years in Ohio for boating-related businesses, (aggregated by Marine Trades (except Charters) and Charters).*

Living in Ohio by Aggregated Boat Type;  
Time Operating a Marine Trades Business in Ohio



### Praise

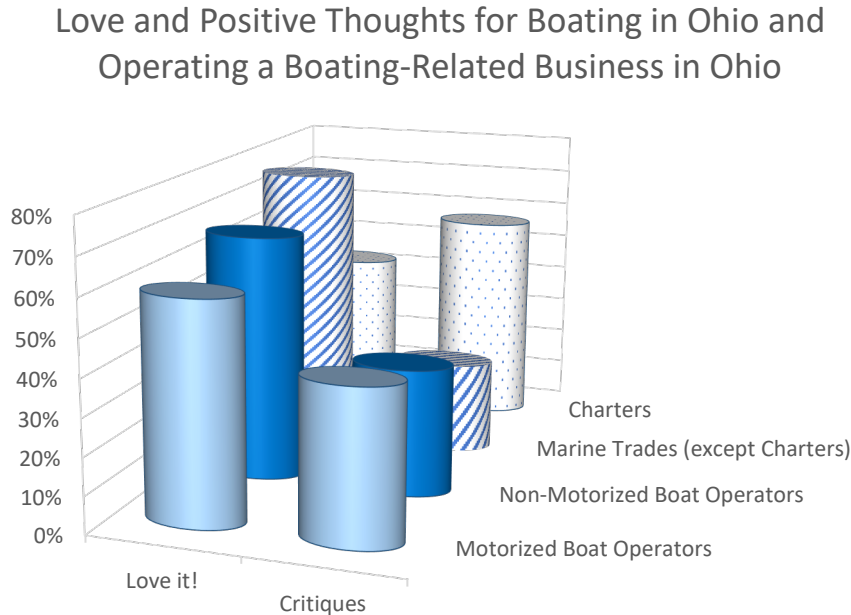
Boaters were asked to provide their thoughts on boating in Ohio and 2,140 boaters responded with written comments. Some 58.9% of motorized boat operators and 66% of non-motorized boat operators took the opportunity to praise<sup>46</sup> boating in Ohio.

Some 46.9% of Marine Trades businesses (except Charters) praised Ohio for being business-friendly and 28.6% praised the boating industry in Ohio. For Charters, 17.9% thought Ohio was business-friendly and 25% praised the boating industry in Ohio (Figs. 74 & 75).

<sup>46</sup> Praise comments include wonderful / relaxing / praise for boating / praise for fishing / praise for Ohio mentioned by 43.6%; 13.6% wrote that they loved boating in Ohio; 2.3% mentioned Lake Erie being great; and 2.1% wrote about their love for a specific lake or river in Ohio.

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Figure 72 is presented to provide a visual of the true level of positive thoughts about boating in Ohio and operating a boating-related business in Ohio. The following table of data (Fig. 73) shows positive comments in a category, which takes up a couple of lines; then the table continues for two pages presenting all the critiques. This chart shows that the volume of responding boaters providing positive feedback about boating in Ohio dwarfs the critiques.



**Critique**

Most frequently mentioned critiques from motorized boat operators relate to water quality, the impact of crowding, a lack of boater civility, and an absence of law enforcement patrolling and solving their issues with other boaters.

Operators of non-motorized boats wanted cleaner lakes and rivers through investments in water-infrastructure, amenities, and access points specifically designed for kayaks.

Marine Trades businesses’ critiques reflected current economic conditions and current anomalies following the pandemic shelter in place order; for example, staff shortages, fuel costs, and inflation.

Charters seem to have had the most difficult business recovery with reports of no growth and the impact of economic conditions such as high energy prices reducing tourism. As well as the economy, Charters were affected by environmental issues, such as Lake Erie’s algae bloom.

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Figure 73 shows the categorized and coded written comments from the perspective of both Ohio boaters and Ohio businesses. To capture the weight given to certain issues by diverse parties, the columns have been divided into four. The first two columns, colored, reflect comments from recreational boaters by aggregated boat type for motorized boat operators and non-motorized boat operators. For example, these data show that significantly more operators of motorized boats mentioned issues with submerged trees compared to operators of non-motorized boaters. The last two columns show categorized and coded written comments from Marine Trades business (manufacturers, storage facilities, bait & tackle, dealers, liveries, education, and marinas) compared to Charters. For example, while some Marine Trades businesses report no growth (6.1%), the number of Charters reporting no growth was significantly higher (14.3%).

Please provide your thoughts on boating in Ohio		Please provide your thoughts on operating a boating-related business in Ohio	
1,434 MOTORIZED BOAT OPERATORS	660 NON-MOTORIZED BOAT OPERATORS	MARINE TRADES (Except Charters)	CHARTERS
<p><b>58.9% LOVE IT!</b> 41.1% Wonderful/relaxing 12.9% Love it! 3.3% Lake Erie is great 2.4% Love of specific lake</p> <p><b>14.1% Water Quality</b> 7.0% Vegetation<sup>47</sup> 4.5% Cleanup 4.5% Indian Lake issues 0.7% Dirty water 0.4% Littering/trash 0.8% Shallow 0.8% Dredging 0.4% Water level 0.2% Submerged trees 0.1% Mud 0.1% Geese</p> <p><b>12.4% Dangers<sup>48</sup></b> 4.7% Overcrowding 3.6% Wake zone/HP 1.8% Crowded weekends 1.6% Jet-skis (reckless) 1.1% Speed violations 0.2% Crafts rough water 0.1% Underwater hazards</p>	<p><b>65.9% LOVE IT!</b> 48.9% Wonderful/relaxing 15.0% Love it! 0.5% Lake Erie is great 1.7% Love of specific lake</p> <p><b>12.7% Water Quality</b> 3.2% Vegetation 6.5% Cleanup 1.7% Indian Lake issues 1.2% Dirty water 1.4% Littering/trash 0.6% Shallow 0.5% Dredging 0.9% Water level 0.5% Submerged trees 0.5% Mud 0.2% Geese 0.5% Water smells</p> <p><b>4.7% Dangers</b> 2.7% Overcrowding 2.0% Wake zone/HP 0.3% Crowded weekends 0.2% Jet-skis (reckless) 0.3% Speed violations</p>	<p><b>46.9% Ohio Friendly<sup>55&amp;56</sup></b> 26.5% Always busy 8.2% Best in U.S. 8.2% Friendly 4.1% Supportive</p> <p><b>28.6% Industry Praise<sup>57</sup></b> 14.3% Fun/rewarding 8.2% Opportunities 4.1% Best job 6.1% Unique</p> <p><b>20.4% Economy<sup>58</sup></b> 6.1% No growth 6.1% Economy 6.1% Staff shortages 4.1% Financing 4.1% Skills</p> <p><b>14.3% Expenses<sup>59</sup></b> 2.0% Fuel costs 8.2% Inflation</p> <p><b>12.2% Regulations<sup>60</sup></b> 8.2% Handcuffed 2.0% Education</p> <p><b>10.2% Environment<sup>61</sup></b> 4.1% Indian Lake 4.1% Ohio River</p>	<p><b>17.9% Ohio Friendly</b> 14.3% Always busy 3.6% Best in U.S. 3.6% Friendly</p> <p><b>25.0% Industry Praise</b> 7.1% Fun/rewarding 3.6% Opportunities 7.1% Best job 3.6% Unique</p> <p><b>21.4% Economy<sup>63</sup></b> 14.3% No growth 3.1% Economy</p> <p><b>17.9% Expenses</b> 14.3% Fuel costs</p> <p><b>7.1% Regulations</b> 3.6% Education</p> <p><b>7.1% Environment<sup>64</sup></b></p>

<sup>47</sup> Vegetation includes invasive species (lily pads, seaweeds, zebra mussels, and bacteria).

<sup>48</sup> Dangers single mention was boats overloaded.

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<i>Please provide your thoughts on boating in Ohio</i>		<i>Please provide your thoughts on operating a boating-related business in Ohio</i>	
<b>1,434 MOTORIZED BOAT OPERATORS</b>	<b>660 NON-MOTORIZED BOAT OPERATORS</b>	<b>MARINE TRADES (Except Charters)</b>	<b>CHARTERS</b>
<p><b>6.1% Investment<sup>49</sup></b>                      0.3% Kayak launches                      1.6% More ramps                      1.3% Larger lakes/more                      0.6% More access points                      0.8% More docks                      0.3% Infrastructure                      0.5% Southern lakes                      0.3% Restrooms                      0.1% Campsites                      0.3% Deeper water                      0.1% Focus on rivers                      0.1% Low head dams                      0.1% Ramp lighting</p> <p><b>7.5% Civility/education<sup>50</sup></b>                      2.7% Boat safety                      2.2% Inexperience                      2.0% Ramp etiquette                      1.7% Follow rules                      0.2% Tie off on dock                      0.1% Charter boats</p>	<p><b>10.3% Investment</b>                      4.5% Kayak launches                      1.2% More ramps                      0.2% Larger lakes/more                      1.8% More access points                      0.2% More docks                      0.9% Infrastructure                      0.2% Southern lakes                      0.3% Restrooms                      0.6% Campsites                      0.6% Places for kayaks                      0.2% Focus on rivers                      0.3% Low head dams</p> <p><b>2.1% Civility/education</b>                      0.5% Boat safety                      1.2% Inexperience                      0.2% Ramp etiquette                      0.2% Follow rules                      0.2% Tie off on dock                      0.2% Charter boats</p>	<p><b>8.2% Promotion</b>                      6.1% Resources                      2.0% Safety #1</p> <p><b>6.1% Competition<sup>62</sup></b>                      4.1% Amazon parts                      4.1% Online</p>	<p><b>7.1% Promotion<sup>65</sup></b>                      3.6% Resources                      3.6% Safety #1</p> <p><b>7.1% Competition<sup>66</sup></b></p>

<sup>55</sup> Ohio is business friendly.

<sup>56</sup> Ohio Friendly single mentions include excellent location (Marblehead), MWCD supportive, ODNR supportive, and unique geography.

<sup>57</sup> Praise of industry single mentions include best thing ever introducing people to water, boat owners pay on time, and you never know what type of customer will arrive.

<sup>58</sup> Economy single mentions include energy prices to reduce tourism and manufacturing fail on custom orders.

<sup>59</sup> Expenses single mentions include overhead expenses high, some in business rip-off boaters, and taxes are high.

<sup>60</sup> Regulations single mentions from Marine Trades businesses include consistent regulations for shared waterway use, PUCO requirements, and U.S. Coast Guard requirements.

<sup>61</sup> Environmental single mentions from Marine Trades business include Deer Creek flood control.

<sup>63</sup> Charter economy single mention was that energy prices reduce tourism.

<sup>64</sup> Environmental single mentions from Charters include idle only on inshore waterways (not 10HP limit) and Lake Erie algae blooms.

<sup>49</sup> Investment single mentions include more fuel points, public docks along Ohio River, buy back the Ohio River, and resume the Adopt-a-Waterway program.

<sup>50</sup> Civility/Education single mentions include more instruction for renters.

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<i>Please provide your thoughts on boating in Ohio</i>		<i>Please provide your thoughts on operating a boating-related business in Ohio</i>	
<b>1,434 MOTORIZED BOAT OPERATORS</b>	<b>660 NON-MOTORIZED BOAT OPERATORS</b>	<b>MARINE TRADES (Except Charters)</b>	<b>CHARTERS</b>
<p><b>5.6% Law Enforcement<sup>51</sup></b>                      2.9% ODNR presence                      0.8% Alcohol abuse                      0.8% Over patrolling                      0.4% Noise limits                      0.3% Enforce rules                      0.4% Restrictions                      0.1% No spotters<sup>52</sup></p> <p><b>3.7% Other States</b>                      3.7% Grass is greener</p> <p><b>3.8% Fishing<sup>53</sup></b>                      2.0% Fish quality decline                      1.8% Stocking                      0.1% Overfished</p> <p><b>1.0% Register/Expense</b>                      0.2% No fee for kayaks                      0.8% Expensive</p> <p><b>1.9% Ramps/Docks</b>                      1.0% Improve                      0.3% Info on access                      0.4% Dock lotter (hate)                      0.2% Mark for public</p> <p><b>1.4% Survey Too Long</b></p> <p><b>1.7% HP Limits</b>                      1.5% Remove limits                      0.2% Not for pontoons</p> <p><b>0.2% Parking<sup>54</sup></b></p>	<p><b>2.6% Law Enforcement</b>                      1.1% ODNR presence                      0.8% Alcohol abuse                      0.6% Over patrolling                      0.2% Noise limits                      0.3% Enforce rules</p> <p><b>2.6% Other States</b>                      2.6% Grass is greener</p> <p><b>1.5% Fishing</b>                      0.9% Fish quality decline</p> <p><b>6.1% Register/Expense</b>                      5.3% No fee for kayaks                      0.5% Expensive                      0.3% Paper fails</p> <p><b>1.9% Ramps/Docks</b>                      0.6% Improve                      0.6% Info on access                      0.2% Dock lotter (hate)                      0.3% Mark for public</p> <p><b>2.1% Survey Too Long</b></p> <p><b>0.5% HP Limits</b>                      0.3% Remove limits                      0.2% Not for pontoons</p> <p><b>0.3% Parking</b></p>		

<sup>62</sup> Competition single mentions from Marine Trades businesses include livery challenged by private sales and YouTube mechanics.

<sup>65</sup> Promotion single mention was more promotion of the Western Basin.

<sup>66</sup> Competition single mentions from charters include non-licensed charters and over capacity.

<sup>51</sup> Law Enforcement single mention was not allowing wind turbines.

<sup>52</sup> Do away with spotter if you have a mirror.

<sup>53</sup> Fishing single mention was people fishing off docks.

<sup>54</sup> Parking single mentions include accessibility parking, parking improvement, and parking lighting.

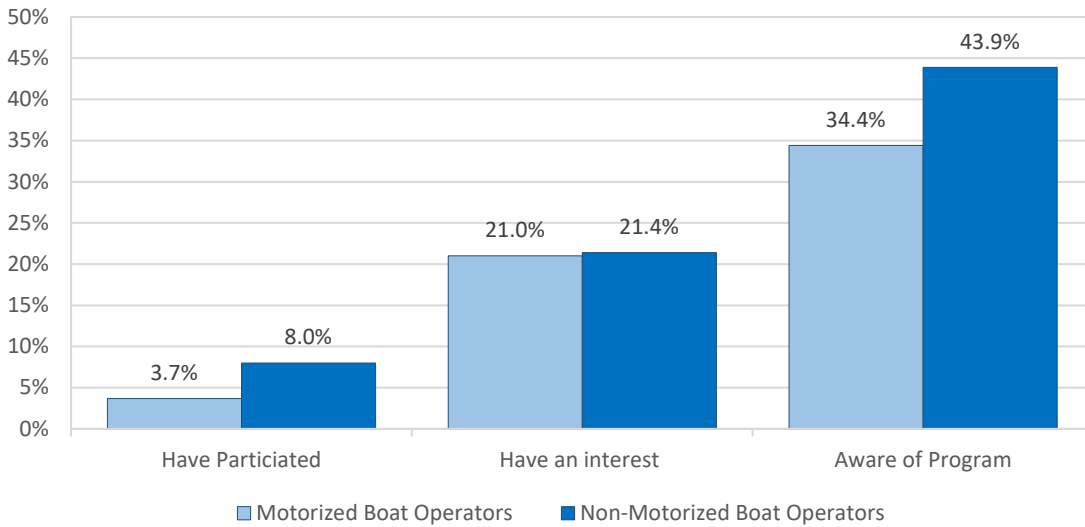
## Ohio's Scenic Rivers and Ohio's Water Trails

### Ohio's Scenic Rivers

Some 67% of Ohio boaters have some sort of relationship with the Ohio's Scenic Rivers Program where 5.1% have participated, 24.5% have an interest, and 37.4% are aware of the program. Ohio's Scenic Rivers Program was rated 4.31 for scenic value and 4.18 for the overall experience. Information, access points, and water quality earned lower ratings.

Figure 74 shows the level of participation, interest, and awareness in Ohio's Scenic Rivers program by aggregated boat type. The lower participation by motorized boat operators may have to do with restrictions on horsepower limiting access by some motorized vessels.<sup>67</sup>

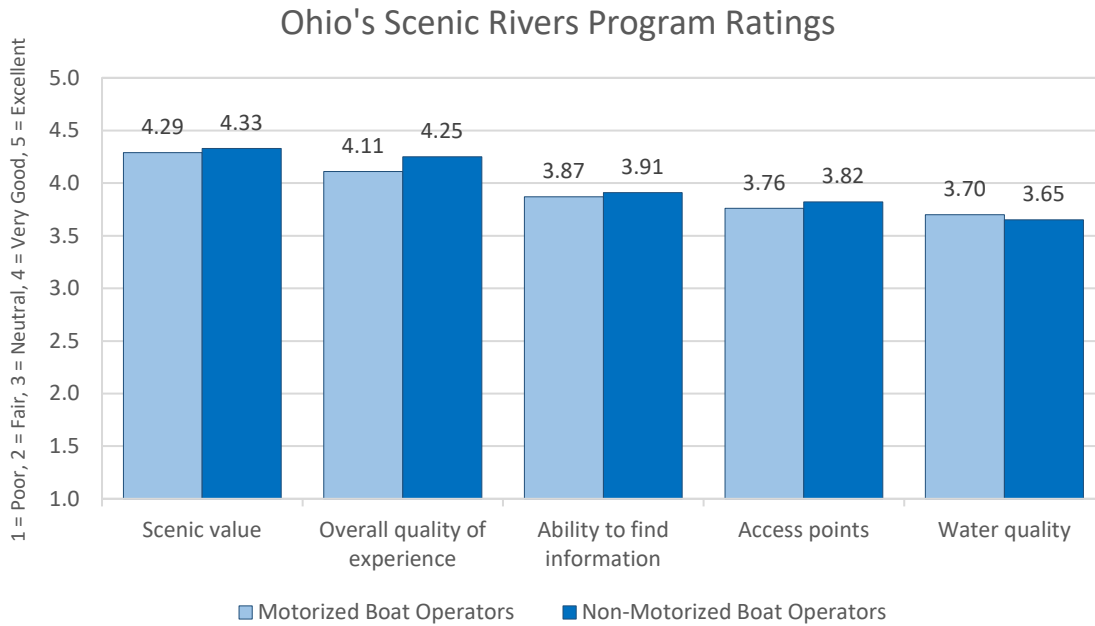
Ohio's Scenic Rivers Program Participation



<sup>67</sup> While motorized boat operators utilized motorized boats most often, 41.2% also own non-motorized boats.

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Figure 75 shows the ratings provided by 265 boaters having participated in Ohio's Scenic Rivers Program. While value and quality were rated well above Very Good, finding information, access points, and water quality scored below, and sometimes well below, Very Good.



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Ohio's Water Trails

Some 63.8% of Ohio boaters have some sort of relationship with Ohio's Water Trails Program where 3.8% have participated, 27.7% have an interest, and 32.2% are aware of the program. Ohio's Water Trails Program was generally rated slightly lower than the Ohio's Scenic Rivers program.

Figure 76 shows the level of participation, interest, and awareness in Ohio's Water Trails program by aggregated boat type.

Ohio's Water Trails Program Participation

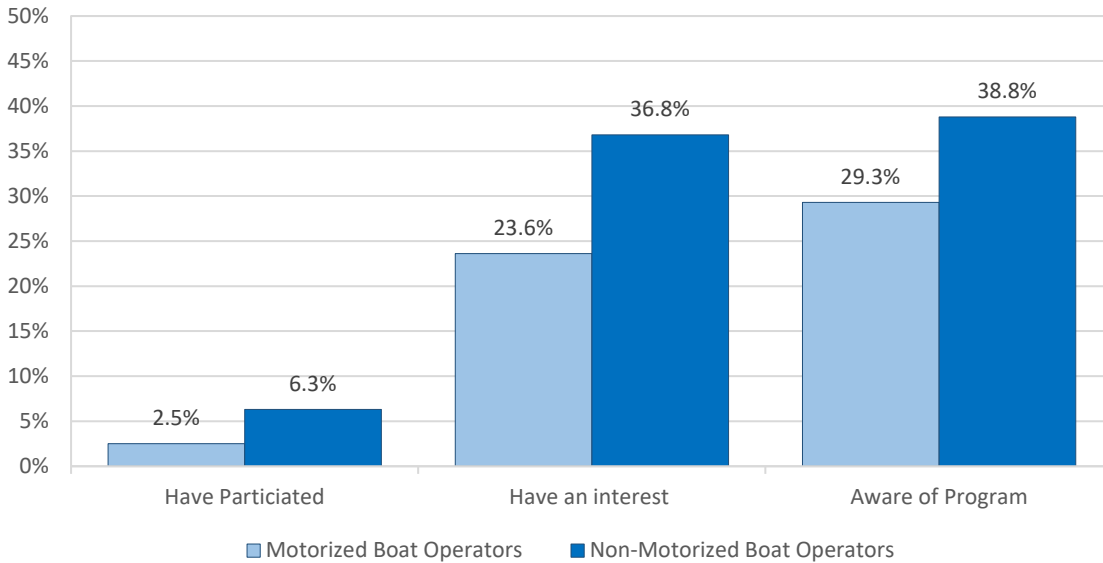
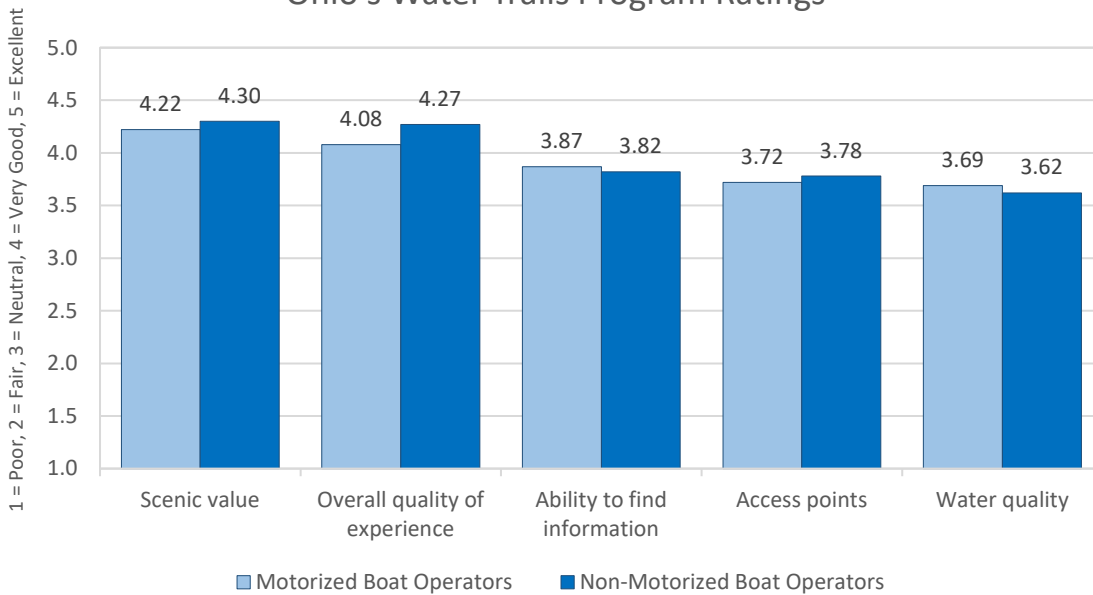


Figure 77 shows the ratings from 215 boaters having participated in the Ohio Water Trails Rivers Program.

Ohio's Water Trails Program Ratings



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How to Improve Ohio’s Scenic Rivers and Ohio’s Water Trails programs

Figure 78 shows categorized (bold) and coded written comments from 768 boaters answering questions about how to improve Ohio’s Scenic Rivers and Ohio’s Water Trails Programs. The answers are presented in two columns corresponding to aggregated motorboat operators and non-motorized boat operators.

<i>What could be done to improve Ohio’s Scenic Rivers and Ohio’s Water Trails programs?</i>	
Motorized Boat Operators (354)	Non-Motorized Boat Operators (406)
<p><b>27.9% Presentation<sup>68</sup></b></p> <ul style="list-style-type: none"> <li>18.8% More launch/access sites</li> <li>1.7% Water level management</li> <li>1.4% Maintenance</li> <li>0.9% Accessibility launch sites</li> <li>1.4% Signs/markings</li> <li>2.0% Signs for obstructions</li> <li>1.4% Tours/Events/Trips</li> <li>0.6% Volunteers</li> <li>0.6% Camping/overnight options</li> <li>0.6% Conservation</li> </ul> <p><b>20.8% Cleanup</b></p> <ul style="list-style-type: none"> <li>11.7% Cleanup</li> <li>3.1% Log jams/trees</li> <li>3.7% Dredge/deeper water</li> <li>2.6% Debris</li> <li>1.4% Funding for cleanup</li> <li>0.6% Overgrowth</li> <li>0.3% Remove dams</li> </ul> <p><b>18.5% Marketing/Advertising</b></p> <ul style="list-style-type: none"> <li>16.2% Advertise/promote</li> <li>1.1% Public Outreach</li> <li>1.7% Flyers/mail/email</li> <li>0.3% Information with registration</li> <li>0.3% Like Pure Michigan</li> <li>0.9% Facebook/social media</li> </ul>	<p><b>42.8% Presentation</b></p> <ul style="list-style-type: none"> <li>26.0% More launch/access sites</li> <li>2.7% Water level management</li> <li>2.7% Maintenance</li> <li>2.7% Accessibility launch sites</li> <li>2.0% Signs/markings</li> <li>1.7% Signs for obstructions</li> <li>1.7% Tours/Events/Trips</li> <li>2.2% Volunteers</li> <li>1.7% Camping/overnight options</li> <li>1.2% Conservation</li> <li>1.7% Livery</li> <li>1.2% Caring</li> <li>0.7% Bordering property</li> </ul> <p><b>25.2% Cleanup<sup>69</sup></b></p> <ul style="list-style-type: none"> <li>13.9% Cleanup</li> <li>6.4% Log jams/trees</li> <li>1.7% Dredge/deeper water</li> <li>2.5% Debris</li> <li>1.7% Funding for cleanup</li> <li>0.7% Overgrowth</li> <li>1.2% Remove dams</li> </ul> <p><b>21.8% Marketing/Advertising<sup>70</sup></b></p> <ul style="list-style-type: none"> <li>16.3% Advertise/promote</li> <li>3.2% Public Outreach</li> <li>2.5% Flyers/mail/email</li> <li>2.0% Information with registration</li> <li>0.5% Like Pure Michigan</li> </ul>

Continues

<sup>68</sup> Presentation single mentions include a bike path connection and posting access points.

<sup>69</sup> Cleanup’s single mention was shoreline litter.

<sup>70</sup> Marketing’s single mention was to have QR codes at launch sites.

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<i>What could be done to improve Ohio's Scenic Rivers and Ohio's Water Trails programs?</i>	
Motorized Boat Operators	Non-Motorized Boat Operators
<p><b>17.1% Information</b></p> <ul style="list-style-type: none"> <li>10.3% Information/descriptions</li> <li>2.3% Maps</li> <li>2.6% Boater education</li> <li>2.0% Boater safety</li> <li>0.6% Websites</li> <li>0.3% Reports on conditions</li> <li>0.3% Guides</li> </ul> <p><b>13.7% Law Enforcement</b></p> <ul style="list-style-type: none"> <li>8.3% Littering/trash/fines</li> <li>4.3% Law enforcement presence</li> <li>2.3% No wake zones</li> </ul> <p><b>9.7% Water Quality</b></p> <ul style="list-style-type: none"> <li>2.8% HAB (treatment works)</li> <li>1.4% Invasive species</li> <li>2.3% Weeds</li> <li>0.9% Farm runoff</li> <li>0.9% Chemical pollution</li> <li>0.9% CSO (combined sewer overflows)</li> <li>0.6% Fertilizer runoff</li> </ul> <p><b>5.1% Amenities</b></p> <ul style="list-style-type: none"> <li>2.3% Parking</li> <li>1.7% Restrooms</li> <li>1.1% Trash cans at launch sites</li> <li>0.6% Fuel stations</li> </ul> <p><b>6.3% Wildlife Control</b></p> <ul style="list-style-type: none"> <li>4.3% Fishing/stocking</li> <li>1.4% Geese</li> </ul>	<p><b>20.0% Information</b></p> <ul style="list-style-type: none"> <li>9.9% Information/descriptions</li> <li>6.2% Maps</li> <li>2.2% Boater education</li> <li>1.5% Boater safety</li> <li>2.5% Websites</li> <li>0.7% Reports on conditions</li> <li>0.7% Guides</li> <li>0.5% Google maps (at access points)</li> </ul> <p><b>8.9% Law Enforcement<sup>71</sup></b></p> <ul style="list-style-type: none"> <li>6.9% Littering/trash/fines</li> <li>2.0% Law enforcement presence</li> <li>0.5% No wake zones</li> </ul> <p><b>6.2% Water Quality<sup>72</sup></b></p> <ul style="list-style-type: none"> <li>1.2% HAB (treatment works)</li> <li>1.2% Invasive species</li> <li>0.2% Weeds</li> <li>1.2% Farm runoff</li> <li>1.0% Chemical pollution</li> <li>0.7% CSO (combined sewer overflows)</li> <li>0.7% Agricultural runoff</li> <li>0.5% Lily pads</li> <li>0.5% Construction runoff</li> </ul> <p><b>4.5% Amenities<sup>73</sup></b></p> <ul style="list-style-type: none"> <li>2.5% Parking</li> <li>2.0% Restrooms</li> <li>0.5% Trash cans at launch sites</li> </ul> <p><b>2.0% Wildlife Control<sup>74</sup></b></p> <ul style="list-style-type: none"> <li>1.5% Fishing/stocking</li> </ul>

<sup>71</sup> Law Enforcement single mentions include encroachment and surveillance.

<sup>72</sup> Water Quality single mentions include vegetation, zebra mussels, bad smell, nitrate runoff, and POTW (publicly owned treatment works).

<sup>73</sup> Amenities' single mention was restroom cleanliness.

<sup>74</sup> Wildlife Control single mentions include beavers and turtles.

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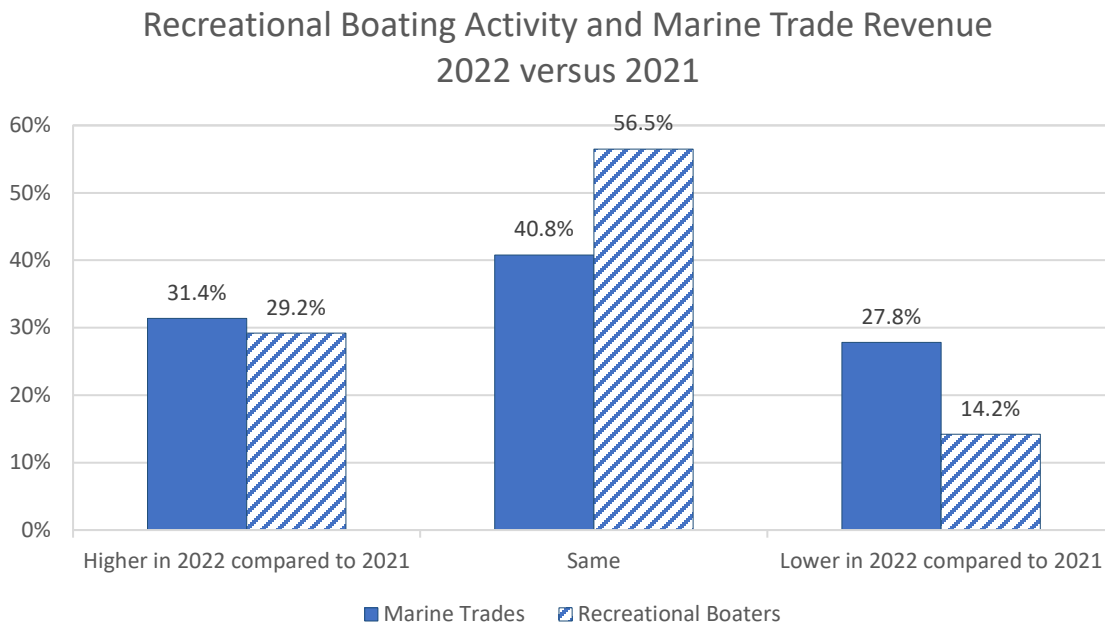
Future Expectations for Marine Trades and Recreational Boaters

One of three Marine Trades businesses anticipated growth in 2022 compared to 2021 and, similarly, 29.2% of recreational boaters planned to increase their boating activity in 2022 compared to 2021.

Most recreational boaters (56.5%) expected to maintain their 2021 boating activity schedule, while 14.2% planned to decrease their boating activity.

Some 27.8% of Marine Trades businesses anticipated lower revenue in 2022 compared to 2021.<sup>75</sup> There were no significant differences in this expectation no matter the type of business (i.e., there was no Charter predominance in this regard).

Figure 79 shows the recreational boater activity expectations and Marine Trades (including Charters) revenue expectations for 2022 compared to 2021.



Business Concerns in 2022

In June 2022, when the Marine Trades survey was fielded, businesses in general had a Very High Level of Concern about higher energy prices and the U.S. economy, especially Charters.

Marine Trades businesses had a Somewhat High Level of Concern about fluctuating prices and supply chain issues, especially Bait & Tackle businesses. Fluctuating prices and supply chain issues have continued to plague businesses since the survey.

Keeping prices competitive and government regulations were less than Somewhat Concerning for Marine Trades businesses. Government regulation were a Very High Concern for marinas.

<sup>75</sup> Marine Trades businesses' thinking about decreased revenue was more likely to reflect a very successful 2021 and being cautious about 2022 in considering the impact of new boaters returning to work and other macro-economic factors.

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In June of 2022, Marine Trade businesses were Neutral regarding staff shortages, employee retention, competition, and industry overcapacity.

Recreational Boater Concerns in 2022

Family commitments have a powerful impact on recreational boaters in reducing activities, especially for operators of non-motorized boats. Higher fuel costs and inflation were significantly more likely to deter motorized boat operators from the waterways than non-motorized boat operators. On the other hand, work scheduling was significantly more likely to reduce paddling time for non-motorized boat operators compared to motorized boat operators.

Figure 80 shows the circumstances that affect boating activity for motorized boat operators.

Circumstances that Affect Boating Activity  
for Motorized Boat Operators

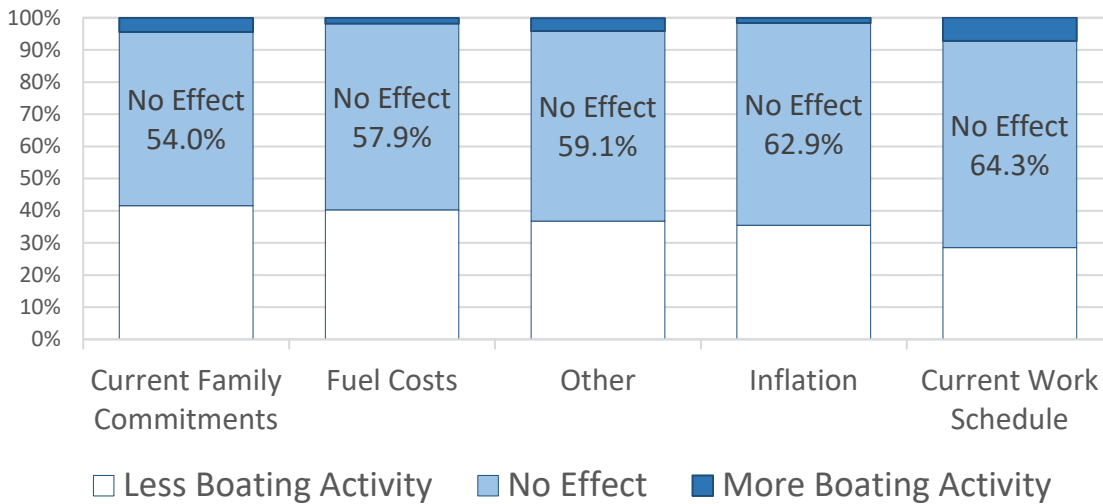
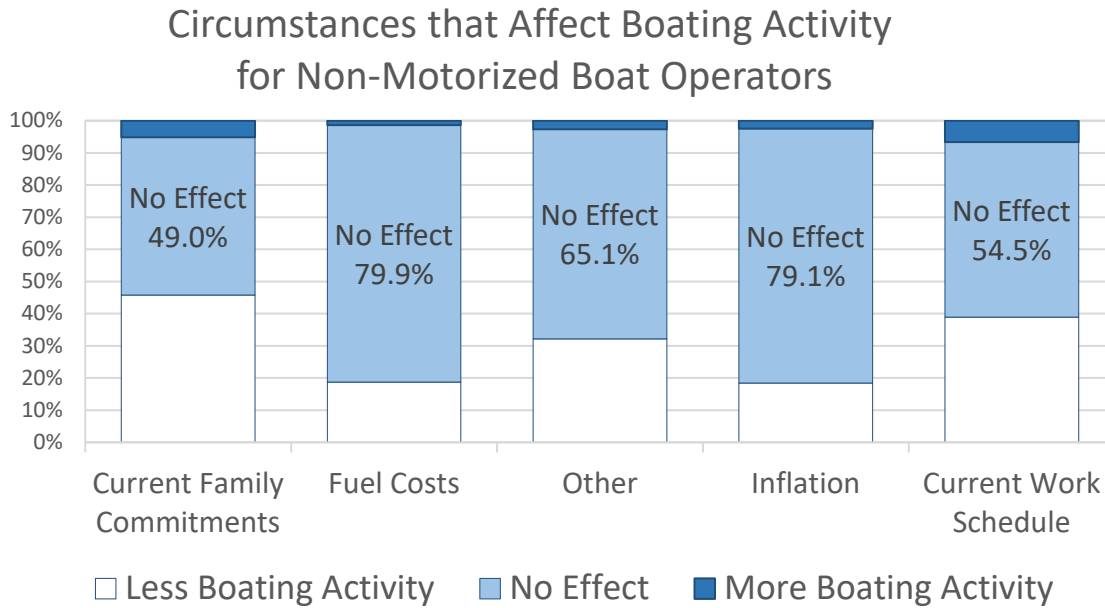


Figure 81 shows the circumstances that affect boating activity for non-motorized boat operators.



One in three recreational boaters identified other issues that kept them away from Ohio’s waterways; however, there continued to be significant differences between operators of motorized boats and non-motorized boats (see Fig. 82). Invasive species and vegetation (including algae, lily pads, weeds, seaweed, and grasses) hindered boating activity for 22.5%<sup>76</sup> of motorized boat operators, which compared to 2.4% of non-motorized boat operators. Health issues (including arthritis, surgeries, joint aches, cancer, disability, diminishing mobility, injury, age, and stroke) affected 32.9% of boaters operating non-motorized boats, which compared to 18.3% of motorized boat operators. Costs (including registration, state fees, inflation, and food) impacted 9.8% of non-motorized boat operators, which compared to 1.2% of motorized boat operators. However, motorized boat operators were unique mentioning prohibitive engine costs; non-motorized boaters were unique in reducing boating activity if they were not able to swim.

<sup>76</sup> i.e., 22.5% of 169 motorized boat operators who provided “other” written comments (see Fig. 82).

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Figure 82 shows the categorized (bold) and coded responses from the written comments that boaters provided about other issues affecting their boating activity, specifically a negative impact. The table shows the comments for aggregated boat types, motorized and non-motorized, due to significant differences in responses between the two types of boat operators. For example, 22.5% of motorized boat operators were affected by invasive species, which compared to 2.4% of non-motorized boat operators.

<b>Other issues affecting boating activity.</b>	
<b>169 Motorized Boat Operators</b>	<b>82 Non-Motorized Boat Operators</b>
<p><b>46.7% Water Quality/Weather</b>            22.5% Invasive species/vegetation<sup>77</sup>            12.4% Inclement weather            6.5% Water quality<sup>78</sup>            2.4% Water level management            3.0% Fishing quality (walleye, biting)</p> <p><b>24.9% Age/Health</b>            18.3% Health issues<sup>79</sup>            3.6% Age            3.0% Retired</p> <p><b>10.1% Costs/Repairs</b>            1.2% Costs<sup>80</sup>            4.1% Boat repairs/boat damaged            4.1% Engine/motor issues            0.6% Transporting vessel<sup>81</sup></p> <p><b>6.5% Other Interests</b>            3.0% Family<sup>82</sup>            1.8% Moving            1.2% Building house on a lake            0.6% Volunteering</p> <p><b>6.5% Community</b>            3.0% Friends busy            1.2% Crowded (weekends)            1.2% Politics</p> <p><b>5.3% Docks/Ramps/Restriction</b>            2.4% HP restriction            2.4% No dock available            0.6% Not enough ramps</p>	<p><b>28.0% Water Quality/Weather</b>            2.4% Invasive species/vegetation            14.6% Inclement weather            6.1% Water quality            3.7% Water level management            1.2% Climate change</p> <p><b>42.7% Age/Health</b>            32.9% Health issues            8.5% Age            1.2% Retired</p> <p><b>13.4% Costs/Repairs</b>            9.8% Costs            1.2% Boat repairs/boat damaged            2.4% Transporting vessel</p> <p><b>6.1% Other Interests</b>            1.2% Family            1.8% Moving            1.2% Volunteering            1.2% Baseball</p> <p><b>4.9% Community</b>            1.2% Friends busy            1.2% Crowded (weekends)            1.2% Politics</p> <p><b>4.9% Docks/Ramps/Restriction</b>            1.2% HP restriction            1.2% No dock available            2.4% No swimming</p>

<sup>77</sup> Vegetation includes algae, lily pads, weeds, seaweed, and grasses.

<sup>78</sup> Water Quality includes condition of lake (dirty) and channel blockage.

<sup>79</sup> Age/Health includes arthritis, surgeries, joint aches, cancer, disability, diminishing, injury, age, and stroke.

<sup>80</sup> Costs include registration, marina-fuel, state fees, rental, inflation, and food.

<sup>81</sup> Transporting vessel includes no transport equipment and bridge closure.

<sup>82</sup> Family includes grandchildren, wife, kids, yard work, and vacations.

## How it all Began

Some 86.8% of boaters completing questionnaires identified as male, which likely corresponds to current boaters being introduced to boating more often by male relatives (13.3%) rather than female relatives (0.4%).

One in three boaters came to the waterways through fishing. The boating lifestyle, enhanced by living close to a waterway, was mentioned by 32.6%. Some 28.6% of respondents report growing up boating and spending their entire lives around waterways. Specific boating activities drew 22.1% to boating, where the most popular vessels were kayaks (9.1%). Although programs were mentioned by 5.4%, it seems important to note that this was a verbatim question, which means boaters were not prompted to remember.<sup>83</sup>

*Figure 83 shows the categorized (bold) and coded responses from written comments recreational boaters provided for the first question on the survey. The category percentages add up to more than 100% because most boaters provided multiple answers.*

<b>What was it that first attracted you to boating? How were you introduced to boating?</b>
<b>8,842</b>
<b>Ohio Recreational Boaters</b>
<b>38.0% Family &amp; Friends</b>
15.3% Family/parents
13.3% Father/Uncle/Grandfather/Grandparents
7.0% Friends/neighbors
2.7% Spouse/Partner/In-Laws/siblings
0.4% Mother/Aunt/Sister/Grandmother
0.3% Adult children
<b>33.1% Fishing &amp; Hunting</b>
32.7% Fishing/fishing on the water/bass fishing
1.0% Hunting/waterfowl
<b>32.6% Lifestyle</b>
11.9% Love water/love boating lifestyle
11.7% Living local to lake/river/waterfront/vacationing
6.5% Relaxing/tranquil/free/recreation
5.2% Outdoors/nature
0.4% Affordable
0.1% COVID
<b>28.6% Childhood +</b>
22.1% Childhood introduction/grew up boating
8.2% Around water/boats my whole life

<sup>83</sup> A respondent may not have recalled a program because they did not think of it while typing/writing, but may have if prompted.

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<b><i>What was it that first attracted you to boating? How were you introduced to boating?</i></b>
<b>8,842</b>
<b>Ohio Recreational Boaters</b>
<b>22.1% Boat/Activity</b>
9.1% Kayak
4.2% Canoe
4.0% Waterskiing/skiing
1.5% Tubing/boarding/swimming
1.2% Motorboat/pontoon
0.8% Exercise
0.5% Jet-ski
0.4% Row boat
0.2% Whitewater
0.1% Scuba
<b>5.4% Programs</b>
1.3% Livery/rental
1.3% Scouts/boy scouts/girl scouts
1.2% Camp/summer camp/camping/club
0.7% Educational
0.6% U.S. Navy/Marines/Coast Guard
0.4% High school/high school trip
0.1% College

## Appendix A: Recreational Boating Questionnaire

Take Survey at [DNRsurvey.com](https://DNRsurvey.com) Enter PIN (all numbers)

«PIN»



Please complete our customer satisfaction survey regarding your boating experience and expectations. All answers are strictly confidential, responses are anonymous, and Ohio Department of Natural Resources Parks and Watercraft staff will use and implement your responses to improve its public service. We truly value your opinions in our ongoing effort to reflect what matters most to you.

Have you and your boating household been or will go boating between October 1, 2021 to September 30, 2022?

- Yes
- No – indicate the last year that you boated in Ohio and answer the survey questions for that year \_\_\_\_\_

What was it that first attracted you to boating? How were you introduced to boating?

\_\_\_\_\_

Check where you and your boating household went boating or plan to go boating between Oct 1, 2021 to Sep 30, 2022.

- We always boat in Ohio [skip next question]
- Sometimes we boat outside Ohio
- We always boat outside Ohio

Indicate the reason(s) you boat outside Ohio.

- We vacation outside Ohio
- We live close to the border
- Registration fees in Ohio
- Congestion on Ohio's waterways
- Other \_\_\_\_\_
- Boater conflicts
- Regulations in Ohio
- Water quality in Ohio

How many boats/vessels does your household own? (Include inner tubes, novelties, diver propulsion devices, etc.) # \_\_\_\_\_

In what county is the boat you use most often kept?

	County
During boating season	
During off season	

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Provide the number of people in your household, the number who participate in boating, and the number boating for the first time.

	People	Boaters	1 <sup>st</sup> time boaters
Boating household	#	#	#

Approximately how many days did you, or do you plan to spend on the water for each of the following months?

2021			2022								
Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep

Check the type of boat(s) you or anyone in your household operate(s) and tick ✓ on the line to indicate the boat used most often.

	Boats In Use	✓Boat Used most often
Motorboat – OPEN	<input type="radio"/>	
Motorboat – CABIN	<input type="radio"/>	
Kayak	<input type="radio"/>	
Canoe	<input type="radio"/>	
Pontoon	<input type="radio"/>	
Inflatable boat	<input type="radio"/>	
Sailboat –MOTOR	<input type="radio"/>	
Sailboat – SAIL ONLY	<input type="radio"/>	
Rowboat	<input type="radio"/>	
Paddleboard	<input type="radio"/>	
Houseboat	<input type="radio"/>	
Personal watercraft (jet ski etc.)	<input type="radio"/>	
Airboat/Hovercraft	<input type="radio"/>	
Other(s) _____	<input type="radio"/>	

Describe the boat used most often.

Length: feet _____ inches _____	
Make _____	Year Purchased _____
Model _____	Model Year . . . _____
<b>If motor</b>	
Total horsepower _____	Fuel type?
# of boat motors _____	<input type="radio"/> Gas <input type="radio"/> Diesel
	<input type="radio"/> Gas/Electric <input type="radio"/> Electric
	<input type="radio"/> Other _____

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Did you purchase this boat new/used from a dealer or an individual?

- New from boat dealer     Used from individual  
 Used from boat dealer     Other \_\_\_\_\_

What was the purchase price of this boat (include vessel, motor, and trailer costs)?

\$ \_\_\_\_\_

Indicate where the boat you use most often is kept during the boating season and during the off season?

	During season	During off season
Marina, boat yard, club, dry rack	<input type="radio"/>	<input type="radio"/>
In water at home	<input type="radio"/>	<input type="radio"/>
In water at another residence	<input type="radio"/>	<input type="radio"/>
On land at home	<input type="radio"/>	<input type="radio"/>
On land at another residence	<input type="radio"/>	<input type="radio"/>
Other _____	<input type="radio"/>	<input type="radio"/>

About what percent of your boating trips include an overnight stay away from home?

\_\_\_\_\_ %

Provide your boating household's use of the following watercraft types. In the last column write 1 for own or 2 for rent or 3 for borrowed.

	Days per year operating	Hours per trip	People per Trip	1=own 2=rent 3=borrow
Motorboat – OPEN				
Motorboat – CABIN				
Kayak				
Canoe				
Pontoon				
Inflatable boat				
Sailboat –MOTOR				
Sailboat – SAIL ONLY				
Rowboat				
Paddleboard				
Houseboat				
Personal watercraft				
Airboat/Hovercraft				
Other _____				

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How much of your boating time is spent on the following?

	% of boating time
Onboard, docked/moored	_____ %
Socializing with people (not in household)	_____ %
Sightseeing or observing nature	_____ %
Cruising	_____ %
Fishing	_____ %
Hunting	_____ %
Paddling	_____ %
Rowing	_____ %
Riding personal watercraft	_____ %
Sailing	_____ %
Swimming	_____ %
White-water	_____ %
Skiing or tubing	_____ %
Other _____	_____ %
<b>100%</b>	

List up to three Ohio bodies of water you use most often.

Ohio bodies of water you use most often	Miles from home (one way)	Days on water per trip	% of boating time
#1			
#2			
#3			

Provide a number to indicate your level of agreement with the following regarding the body of water you use most often.

Use scale 5=Strongly Agree, 4=Somewhat Agree, 3=Neutral, 2=Somewhat Disagree, 1=Strongly Disagree (NA=does not apply)

- It's pretty easy to navigate \_\_\_\_\_
- Boaters follow the rules \_\_\_\_\_
- Area is not over-crowded \_\_\_\_\_
- Invasive species controlled \_\_\_\_\_
- Interactions with other boaters are positive \_\_\_\_\_

Indicate up to three Ohio boat ramps/launch sites that you use most often and if they are public or private.

Most frequently used ramps/launch sites	Indicate if ramp is Public or Private
#1	<input type="radio"/> Public <input type="radio"/> Private <input type="radio"/> Unsure
#2	<input type="radio"/> Public <input type="radio"/> Private <input type="radio"/> Unsure
#3	<input type="radio"/> Public <input type="radio"/> Private <input type="radio"/> Unsure

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Provide a number to rate the following for your most frequently used launch ramp. Use scale 5=Excellent, 4=Very Good, 3=Neutral, 2=Fair, 1=Poor (NA=does not apply)

Accessibility features for boaters requiring this option	
Courtesy docking availability	
Courtesy docking location	
Courtesy docking lighting	
Boat cleaning facility at launch site	
Launch ramp condition	
Ramp traffic pattern	
Launch ramp fees	
Parking lot condition	
Parking lot size	
Parking lot lighting	
Your level of feeling safe at the launch ramp	
Wait time required to launch	
Restroom cleanliness	
Restroom supplies (toilet paper, etc.)	
Restroom amenities (Infant changing, ADA etc.)	

Additional comments about the launch facility?

---

List up to three of your frequently used docks/mooring sites.

Top three dockage/ mooring sites in Ohio	Indicate if dock is Public or Private
#1	<input type="radio"/> Public <input type="radio"/> Private <input type="radio"/> Unsure
#2	<input type="radio"/> Public <input type="radio"/> Private <input type="radio"/> Unsure
#3	<input type="radio"/> Public <input type="radio"/> Private <input type="radio"/> Unsure

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Provide a number to rate the following for your most frequently used dock or mooring site. Use scale 5=Excellent, 4=Very Good, 3=Neutral, 2=Fair, 1=Poor (NA=does not apply)

Accessibility features for boaters requiring this option	_____
Dock design	_____
Dock physical condition	_____
Dock size	_____
Parking lot condition	_____
Parking lot proximity to dock	_____
Dock's proximity to launch-ramp	_____
Dock lighting	_____
Your level of feeling safe at dock or mooring site	_____
Dock lease terms, fees, etc.	_____
Restroom cleanliness	_____
Restroom supplies (toilet paper, etc.)	_____
Restroom amenities (Infant changing, ADA etc.)	_____
Shower cleanliness	_____
Boat fuel availability	_____
Food/drink availability	_____
Access to lodging facilities	_____

Additional comments about dock or mooring site?

---

Which of the following best describes your relationship with the following programs?

	Aware	Participated	Have interest	None
Ohio's Scenic Rivers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ohio's Water Trails	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you participated in Ohio's Scenic Rivers or Ohio's Water Trails programs, provide a number to rate your experience. Use scale 5=Excellent, 4=Very Good, 3=Neutral, 2=Fair, 1=Poor

- Ability to find information (maps, rules, etc.) \_\_\_\_\_
- Access points \_\_\_\_\_
- Water quality \_\_\_\_\_
- Scenic value \_\_\_\_\_
- Overall quality of your experience \_\_\_\_\_

What could be done to improve these programs?

---

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Provide a number to indicate your level of agreement with the following. Use scale 5=Strongly Agree, 4=Somewhat Agree, 3=Neutral, 2=Somewhat Disagree, 1=Strongly Disagree

- Require life jacket wear on smaller vessels and paddlecraft \_\_\_\_\_
- Require life jacket wear during cold weather months \_\_\_\_\_
- I feel safe while on Ohio's waterways \_\_\_\_\_

Check any of the following that apply to you.

- Completed a Safe Boater Course in a Classroom
- Completed a Safe Boater Course Online
- Completed a Home Study Course
- Completed a Proctored Safe Boater Proficiency Exam
- None of these

Provide a number to indicate your level of agreement with the following. Use scale 5=Strongly Agree, 4=Somewhat Agree, 3=Neutral, 2=Somewhat Disagree, 1=Strongly Disagree

- Safe Boater courses provide valuable information \_\_\_\_\_
- Safe Boater courses are easy to access \_\_\_\_\_
- Safe Boater courses can be completed quickly \_\_\_\_\_

Indicate you and your household's participation in any of the following Boater Education and Skills hands-on courses.

	Completed	Planning	None
Canoeing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Kayaking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Personal watercraft	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Power boating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stand-up paddleboarding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sailing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Navigation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Global positioning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What was the name of the group or agency hosting the hands-on course(s) that you attended?

\_\_\_\_\_

Provide a number to indicate your level of agreement with the following statements. Use scale 5=Strongly Agree, 4=Somewhat Agree, 3=Neutral, 2=Somewhat Disagree, 1=Strongly Disagree

- Hands-on courses provide valuable information \_\_\_\_\_
- Hands-on courses are easy to access \_\_\_\_\_
- Hands-on courses can be completed quickly \_\_\_\_\_

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Provide a number to indicate your level of satisfaction with ODNR Division of Parks and Watercraft website.

Use scale 5=Very Satisfied, 4=Somewhat Satisfied, 3=Neutral, 2=Somewhat Dissatisfied, 1=Very Dissatisfied

User-friendly website \_\_\_\_\_

Easy-to-find info on website \_\_\_\_\_

Did you register or renew your watercraft online?

- Yes – from a mobile device
- No – Done through mail
- Yes – from a PC/desktop
- No – Done in-person
- No – Other \_\_\_\_\_

Provide a number to indicate your satisfaction with online registration/renewal. Use scale 5=Very Satisfied, 4=Somewhat Satisfied, 3=Neutral, 2=Somewhat Dissatisfied, 1=Very Dissatisfied

Locating registration website \_\_\_\_\_

User-friendliness \_\_\_\_\_

Entering PIN # \_\_\_\_\_

What suggestions can you offer to make the online registration/renewal process better?

\_\_\_\_\_

Select any options that appeal to you as a way to receive information from ODNR Parks and Watercraft.

- Website: watercraft.ohiodnr.gov
- Facebook
- Twitter
- Instagram
- Boat shows
- Signage
- Phone
- Email
- Radio
- TV
- Watercraft offices
- Marina
- Watercraft registration agents
- Campgrounds
- Monthly newsletter from ODNR
- Newspaper
- Mail
- Boating classes
- Other \_\_\_\_\_

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Check any on-the-water contact you and your boating household received this year.

	Assistance	Safety check	Violation Stop	None
US Coast Guard	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
USCG Auxiliary	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
US Homeland Security	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Customs & Border Patrol	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ODNR Parks and Watercraft	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ODNR Wildlife	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Local marine patrols (Sheriff, local police)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Commercial tow, salvage (not law enforcement)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Provide a number to rate the on-the-water contact received.

Use scale 5=Excellent, 4=Very Good, 3=Neutral, 2=Fair, 1=Poor

- Services (tow, first aid, etc.) \_\_\_\_\_
- Helpful assistance \_\_\_\_\_
- Professional personnel \_\_\_\_\_
- Courteous personnel \_\_\_\_\_
- Knowledgeable personnel \_\_\_\_\_

Indicate if you experienced any of the following situations in the past 12-months.

	Never	Some -times	Most of the time	Always
Crowding of waterway	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No-wake zone violations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Speed limit violations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Careless/reckless operation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Excessive noise	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How long have you lived in Ohio?

- Less than one year     1-2 years     3-5 years
- 6-10 years     11-20 years     21-30 years
- More than 30 years

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Indicate your boating activity during the pandemic, compared to pre-pandemic (2019).

- Higher during pandemic, compared to pre-pandemic
- Boating activity was the same
- Lower during pandemic, compared to pre-pandemic

Indicate your expectations for 2022, compared to 2021.

- Expecting increased boating activity in 2022
- Expect boating activity to be the same
- Expecting lower boating activity in 2022

Indicate how each of the following affect your boating activity.

	Increases Boating	No effect	Decreases Boating
Fuel costs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Current work schedule	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inflation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Current family commitments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Provide your county of residence: \_\_\_\_\_

Select the occupation(s) of the primary boat operator.

- Administrative support/clerical
- Executive/managerial
- Manufacturing
- Professional/Technical
- Safety (Police, Fire, EMS)
- Sales
- Transportation
- Other \_\_\_\_\_
- Construction
- Home manager
- Military
- Retail/food service
- Retired
- Student
- Unemployed

Gender of the primary boat operator.

- Male
- Female
- Non-binary
- Chose not to answer

Age-range of the primary boat operator.

- Under 21
- 21-25
- 26-34
- 35-44
- 45-54
- 55-64
- 65-75
- 76 & over

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Highest year of schooling completed by primary boat operator?

- Some High School     High School Graduate
- Trade School         Associate Degree
- Bachelor Degree     Graduate Degree(s)

Are you Hispanic or Latino?

- Hispanic/Latino         Not Hispanic/Latino

What is your race? CHECK ALL THAT APPLY

- African American or Black         Asian
- American Indian or Alaska Native     White
- Other(s) \_\_\_\_\_

Estimate the total annual boating expenditure for you and your boating household for each of the following items from October 1, 2021 to September 30, 2022.

	Annual cost
Boat purchase	\$ _____
Boat trailer or car racks	\$ _____
Boat loan payments	\$ _____
Boating insurance	\$ _____
Mooring/docking fee	\$ _____
Boat launch ramp fee	\$ _____
Marina or club fees	\$ _____
Tournament or event fees	\$ _____
Registration/subscription fees	\$ _____
Engine purchase	\$ _____
Engine maintenance and repair	\$ _____
Hull repair	\$ _____
Boat bottom paint	\$ _____
Electronics	\$ _____
Fishing equipment	\$ _____
Waterskiing equipment	\$ _____
Scuba diving equipment	\$ _____
Winterization	\$ _____
Boat storage	\$ _____
Boating clothing	\$ _____
Other _____	\$ _____

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Please estimate how much you spend on the following items during a typical boat trip.

	Cost Per Trip
Lodging (hotels, motels, campgrounds etc.)	\$ _____
Grocery, convenience stores	\$ _____
Restaurant meals	\$ _____
Entertainment	\$ _____
Fishing supplies	\$ _____
Boat fuel costs	\$ _____
Transportation to/from boat site	\$ _____
Other _____	\$ _____

Please check your annual household income range?

- Less than \$15,000
- \$15,000 - \$30,000
- \$30,000 - \$40,000
- \$40,000 - \$50,000
- \$50,000 - \$70,000
- \$70,000 - \$100,000
- \$100,000 - \$150,000
- \$150,000 - \$200,000
- \$200,000 or more
- Prefer not to answer

Please provide your thoughts on boating in Ohio.

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What could be done to improve safety for you and your boating household when on Ohio's waterways?

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How did the COVID19 pandemic affect your boating activity?

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Please return your completed survey in the enclosed Business Reply Envelope or mail to:

Penn and Associates Inc  
3547 Fenley Rd  
Cleveland Hts., Ohio 44121

## Appendix B: Recreational Boating Questionnaire with Summary Data

Take Survey at [DNRsurvey.com](https://DNRsurvey.com) Enter PIN (all numbers) «PIN»



Please complete our customer satisfaction survey regarding your boating experience and expectations. All answers are strictly confidential, responses are anonymous, and Ohio Department of Natural Resources Parks and Watercraft staff will use and implement your responses to improve its public service. We truly value your opinions in our ongoing effort to reflect what matters most to you.

Have you and your boating household been or will go boating between October 1, 2021 to September 30, 2022?

Base: 9,729

91% Yes

9% No – indicate the last year that you boated in Ohio and answer the survey questions for that year 2021 (32.8%), 2020 (29.7%), 2019 (16.4%), earlier (21.1%)

What was it that first attracted you to boating? How were you introduced to boating?

Base: 8,867

38.0% Family & Friends  
33.1% Fishing & Hunting  
32.5% Lifestyle  
28.6% Childhood  
22.0% Boat / Activity  
5.5% Programs

Check where you and your boating household went boating or plan to go boating between Oct 1, 2021 to Sep 30, 2022.

Base: 9,652

55.9% We always boat in Ohio [skip next question]  
39.9% Sometimes we boat outside Ohio  
4.2% We always boat outside Ohio

Indicate the reason(s) you boat outside Ohio.

Base: 4,267

73.2% We vacation outside Ohio	7.7% Congestion on Ohio's waterways
23.7% We live close to the border	2.0% Regulations in Ohio
13.6% Water quality in Ohio	1.6% Registration fees in Ohio
	1.3% Boater conflicts

Other: Fishing trips (5.5%), larger lakes/other waters (1.9%), travel/camping (1.8%), Michigan (1.4%), tournaments/races/regattas/clubs (1.0%), Florida (0.8%), own property in another state (0.8%), family/friends (0.6%), Canada (0.6%), Bass fishing (0.5%), Indiana (0.5%), Pennsylvania (0.5%), Tennessee (0.5%), Kentucky (0.5%), snowbirds (0.4%), hunting (0.4%), Ohio River boundaries (0.2%), launches/access (0.2%), West Virginia (0.2%), Minnesota (0.2%), New York/New Jersey/Maryland (0.2%), Texas (0.1%).

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How many boats/vessels does your household own? (Include inner tubes, novelties, diver propulsion devices, etc.)

Base: 9,731

Total # of boats 26,504

Average # of boats 2.72

In what county is the boat you use most often kept?

Base: 9,726

COUNTY	During boating season	During off season	COUNTY	During boating season	During off season
Outside Ohio, but U.S.	3.4%	3.5%	Guernsey	1.2%	0.8%
Canada	0.2%	0.1%	Hamilton	2.3%	2.3%
Adams	0.4%	0.4%	Hancock	0.5%	0.6%
Allen	0.5%	0.5%	Hardin	0.3%	0.3%
Ashland	0.6%	0.6%	Harrison	0.8%	0.6%
Ashtabula	1.0%	0.9%	Henry	0.5%	0.5%
Athens	0.6%	0.6%	Highland	0.9%	0.8%
Auglaize	0.5%	0.5%	Hocking	0.6%	0.7%
Belmont	0.8%	0.8%	Holmes	0.4%	0.4%
Brown	0.8%	0.9%	Huron	0.5%	0.5%
Butler	2.0%	2.0%	Jackson	0.5%	0.5%
Carroll	1.2%	1.0%	Jefferson	0.5%	0.6%
Champaign	0.6%	0.6%	Knox	1.8%	1.8%
Clark	0.9%	0.8%	Lake	1.4%	1.4%
Clermont	1.7%	1.8%	Lawrence	0.6%	0.6%
Clinton	0.7%	0.7%	Licking	3.4%	3.4%
Columbiana	0.8%	0.8%	Logan	3.0%	2.6%
Coshocton	0.4%	0.5%	Lorain	2.5%	2.5%
Crawford	0.2%	0.3%	Lucas	3.6%	3.7%
Cuyahoga	2.7%	2.5%	Madison	0.5%	0.5%
Darke	0.4%	0.6%	Mahoning	1.2%	1.0%
Defiance	0.7%	0.7%	Marion	0.3%	0.4%
Delaware	1.9%	1.6%	Medina	0.6%	0.7%
Erie	3.1%	2.8%	Meigs	0.6%	0.6%
Fairfield	2.5%	2.8%	Mercer	1.0%	0.9%
Fayette	0.4%	0.5%	Miami	1.1%	1.1%
Franklin	2.5%	2.5%	Monroe	0.5%	0.5%
Fulton	0.5%	0.6%	Montgomery	2.6%	2.8%
Gallia	0.6%	0.6%	Morgan	0.6%	0.6%
Geauga	0.4%	0.5%	Morrow	0.4%	0.5%
Greene	0.7%	0.8%	Muskingum	1.0%	0.9%

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COUNTY	During boating season	During off season	COUNTY	During boating season	During off season
Noble	0.7%	0.7%	Shelby	0.6%	0.6%
Ottawa	6.3%	5.1%	Stark	2.8%	3.2%
Paulding	0.5%	0.5%	Summit	2.5%	2.6%
Perry	0.9%	0.8%	Trumbull	0.8%	0.9%
Pickaway	0.6%	0.7%	Tuscarawas	1.4%	1.6%
Pike	0.4%	0.4%	Union	0.5%	0.7%
Portage	1.3%	1.2%	Van Wert	0.5%	0.5%
Preble	0.6%	0.5%	Vinton	0.3%	0.3%
Putnam	0.4%	0.5%	Warren	2.4%	2.4%
Richland	0.9%	0.9%	Washington	1.8%	1.8%
Ross	0.8%	0.8%	Wayne	0.5%	0.6%
Sandusky	0.7%	0.8%	Williams	0.7%	0.6%
Scioto	0.7%	0.6%	Wood	0.5%	0.7%
Seneca	0.5%	0.6%	Wyandot	0.3%	0.4%

Provide the number of people in your household, the number who participate in boating, and the number boating for the first time.

	People	Boaters	1 <sup>st</sup> time boaters
Boating household (total)	25,902	24,179	1,845
Boating household (average)	3	2	0

Approximately how many days did you, or do you plan to spend on the water for each of the following months?

	2021			2022								
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Total Days	20,961	7,287	2,936	2,177	2,036	7,533	20,836	40,331	53,720	57,006	52,093	41,518
Average Days	2.6	0.9	0.4	0.3	0.3	0.9	2.6	5.0	6.7	7.1	6.5	5.2

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Check the type of boat(s) you or anyone in your household operate(s) and tick ✓ on the line to indicate the boat used most often.

Base: 9,165

	Boats In Use	✓ Boat Used most often
Motorboat – OPEN	49.2%	37.5%
Motorboat – CABIN	10.6%	8.5%
Kayak	46.4%	25.4%
Canoe	16.6%	4.1%
Pontoon	21.2%	16.0%
Inflatable boat	7.0%	0.5%
Sailboat –MOTOR	2.2%	1.5%
Sailboat – SAIL ONLY	3.3%	0.8%
Rowboat	7.1%	1.5%
Paddleboard	7.8%	0.6%
Houseboat	0.7%	0.4%
Personal watercraft (jet ski etc.)	12.3%	2.6%
Airboat/Hovercraft	0.1%	0
Other boats: Bass, tube/innertube, fishing, paddle, jon, windsurfer, pedal, sneak, dinghy, jet boat, sculling, rowing shell, cuddy, ice, surfboard, ferry, amphacar, eFoil.		

Describe the boat used most often.

Base: 9,343

Average Length: 18 feet and 3 inches	
Year Purchased: 2022 (4.2%), 2021 (7.5%), 2020 (8.6%), 2019 (7.2%), 2018 (9.9%), 2017 (7.7%), 2016 (5.4%) . . .	
Model Year: 2022 (2.1%), 2021 (3.7%), 2020 (3.8%), 2019 (3.7%), 2018 (5.7%), 2017 (4.4%), 2016 (3.2%) . . .	
Make: Pelican (5.3%), Old Town (4.3%), Tracker (3.6%), Sea Ray (3.6%), Bennington (3.1%), Perception (2.9%), StarCraft (2.7%), Yamaha (2.5%), Lund (2.2%), Ranger (2.1%), Sundolphin (2.0%), Sylvan (1.9%), Future Beach (1.8%), Lowe (1.8%), Sun Tracker (1.8%), Bayliner (1.7%), Wilderness Systems (1.6%), Sea-Doo (1.5%) . . .	
Model: Sundancer (2.6%), V . . . (2.5%), Sport (2.4%), Open (2.2%), Pro (2.2%), Z . . . (2.2%), Fisherman (2.1%), SX (1.8%), Fishing (1.6%), Capri (1.4%), Cruiser (1.4%), Jon (1.4%), X . . . (1.4%), Trophy (1.3%), Angler (1.2%), Bowrider (1.2%), Express (1.2%), Kayak (1.2%), Bass (1.1%), Pontoon (1.1%), CC (1.1%), Bass Boat (1.0%) Party (1.0%) . . .	
<u>If motor</u> Base: 5,623	
Total horsepower 168.6	Fuel type?
# of boat motors 1.2	93.1% Gas                      4.6% Gas/Electric
	5.7% Electric                2.1% Diesel
	Other: Gas/oil mix (0.3%), trolling motor (0.1%), non-ethanol (0.1%) . . .

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Did you purchase this boat new/used from a dealer or an individual?

Base: 8,080

45.4% New from boat dealer      37.2% Used from individual  
 11.0% Used from boat dealer      Other: Retail (0.6%), Dick’s Sporting Goods (0.5%), sporting goods store (0.4%), Walmart (0.3%), Costco (0.2%), Menards (0.2%), auction (0.2%), LL Bean (0.1%), Dunham’s (0.1%), Tractor Supply Store (0.1%), Rural King (0.1%) . . .

What was the purchase price of this boat (include vessel, motor, and trailer costs)?

Base: 6,317

Total      \$114,724,899.16

Average    \$    18,161.29

Indicate where the boat you use most often is kept during the boating season and during the off season?

Base: 8,028

	During season	During off season
Marina, boat yard, club, dry rack	19.2%	14.9%
In water at home	9.2%	1.2%
In water at another residence	4.8%	0.4%
On land at home	58.6%	65.1%
On land at another residence	5.3%	12.6%
Other during season: Garage, lift, home, dock, boathouse, campground, barn, other state, lake, trailer, covered, business, carport, river, shed, traveling with us . . .		
Other during off season: Garage, fairgrounds, barn, lift, home, warehouse, other state, heated warehouse, dealer, boathouse, business, campground, mineshaft, carport, shed, covered, dock, lake, secured, traveling with us . . .		

About what percent of your boating trips include an overnight stay away from home?

Base: 8,095    17.8%

Provide your boating household’s use of the following watercraft types. In the last column write 1 for own or 2 for rent or 3 for borrowed.

		Days per year operating	Hours per trip	People per Trip	1=own 2=rent 3=borrow
Base: 4,194	Motorboat	31	5	3	Own 97.5%
Base: 4,057	Kayak, Canoe, inflatable, row, paddleboard	16	3	2	Own 95.2%
Base: 1,470	Pontoon	35	4	4	Own 90.6%
Base: 152	Sailboat –MOTOR	31	5	3	Own 93.9%
Base: 246	Sailboat – SAIL ONLY	14	3	2	Own 91.3%
Base: 45	Houseboat	35	21	6	Own 66.7%
Base: 832	Personal watercraft	20	2	2	Own 92.3%
Base: 6	Airboat/Hovercraft	7	2	2	Own 85.7%

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How much of your boating time is spent on the following?

Base: 7,137

	% of boating time
Onboard, docked/moored	4.0%
Socializing with people (not in household)	7.4%
Sightseeing or observing nature	12.3%
Cruising	12.7%
Fishing	33.6%
Hunting	1.0%
Paddling	12.4%
Rowing	1.6%
Riding personal watercraft	3.4%
Sailing	1.7%
Swimming	4.7%
White-water	0.4%
Skiing or tubing	4.2%
Other: Restaurant (16.7%), relaxing (12.9%), floating (6.8%), racing (6.8%), maintenance (5.3%), photography (5.3%), visiting (5.3%, cooking/grilling/picnics (4.5%), listening to music (4.5%), river clean/trash collecting (4.5%) . . .	0.6%
	100%

List up to three Ohio bodies of water you use most often.

Base: 7,440 Ohio bodies of water you use most often	Miles from home (one way)	Days on water per trip	% of boating time
#1 of 263 Lake Erie (26.8%)	31	2.04	70.4%
#2 of 263 Ohio River (7.7%)	39	2.02	18.8%
#3 of 263 Caesar Creek (6.8%) . . .	48	2.14	10.8%

Provide a number to indicate your level of agreement with the following regarding the body of water you use most often.

Use scale 5=Strongly Agree, 4=Somewhat Agree, 3=Neutral, 2=Somewhat Disagree, 1=Strongly Disagree (NA=does not apply)

Base: 6,579

It's pretty easy to navigate 4.55  
Boaters follow the rules 3.69  
Area is not over-crowded 3.74  
Invasive species controlled 3.55  
Interactions with other boaters are positive 4.20

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Indicate up to three Ohio boat ramps/launch sites that you use most often and if they are public or private.  
Base: 4,315

Most frequently used ramps/launch sites	Indicate if ramp is Public or Private
#1 of 235 Alum Creek/Galena/Howard Rd/Cheshire/Africa Rd/Sunbury Rd/Kilbourne k (7.6%)	83.3% Public 14.8% Private 2.0% Unsure
#2 of 235 Caesar Creek/River/Furnas Shores/Wellman/Haines/North Pool/Young/Beef Creek (7.1%)	92.1% Public 6.4% Private 1.4% Unsure
#3 of 235 Lake Erie/Marinas/Rossford/Metro Park/Toussaint/Spitzer/E.72/E. 55 (6.1%)	89.8% Public 6.7% Private 3.4% Unsure

Provide a number to rate the following for your most frequently used launch ramp. Use scale 5=Excellent, 4=Very Good, 3=Neutral, 2=Fair, 1=Poor (NA=does not apply)

Base: 4,058

Accessibility features for boaters requiring this option	3.54
Courtesy docking availability	3.55
Courtesy docking location	3.65
Courtesy docking lighting	3.25
Boat cleaning facility at launch site	3.04
Launch ramp condition	3.79
Ramp traffic pattern	3.80
Launch ramp fees	4.18
Parking lot condition	3.94
Parking lot size	3.86
Parking lot lighting	3.55
Your level of feeling safe at the launch ramp	4.21
Wait time required to launch	3.99
Restroom cleanliness	3.35
Restroom supplies (toilet paper, etc.)	3.40
Restroom amenities (Infant changing, ADA etc.)	3.17

Additional comments about the launch facility?

Base: 1,279

Praise/pleasure (38.2%), ramps (19.1%), maintenance (13.5%), law enforcement (9.0%), crowds/busy (8.5%), restrooms (8.0%), parking (7.6%), invasive species (3.9%), engines/speed (3.8%), courtesy dock (3.4%), fishing (2.3%), bumpers/concrete (2.0%), grass greener in other states (1.7%), accessibility (1.6%).

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List up to three of your frequently used docks/mooring sites.

Base: 1,891

Top three dockage/ mooring sites in Ohio	Indicate if dock is Public or Private
#1 of 178 Miscellaneous/private/home/cottage/ home/dock/home lift/second home (19.5%)	48.9% Public 43.0% Private 8.1% Unsure
#2 of 178 Put-in-Bay/Boardwalk/Crews Nest/ Miller Marine/Mooring ball/Park Place/ South Bass/Middle Bass/North Bass/Burgundy Bay/Oak Point/Park Place/Bay Shore (11.2%)	68.6% Public 21.3% Private 10.0% Unsure
#3 of 178 Kelleys Island/Marina/Casino/Seaway/ Dock/West Bay/North/Portside/Seaway Marina/Unique Marker (7.0%)	68.4% Public 18.0% Private 13.6% Unsure

Provide a number to rate the following for your most frequently used dock or mooring site. Use scale 5=Excellent, 4=Very Good, 3=Neutral, 2=Fair, 1=Poor (NA=does not apply)

Base: 1,372

Accessibility features for boaters requiring this option	3.73
Dock design	3.94
Dock physical condition	3.92
Dock size	4.02
Parking lot condition	3.92
Parking lot proximity to dock	4.18
Dock's proximity to launch-ramp	4.04
Dock lighting	3.68
Your level of feeling safe at dock or mooring site	4.33
Dock lease terms, fees, etc.	3.74
Restroom cleanliness	3.79
Restroom supplies (toilet paper, etc.)	3.84
Restroom amenities (Infant changing, ADA etc.)	3.66
Shower cleanliness	3.94
Boat fuel availability	3.76
Food/drink availability	3.55
Access to lodging facilities	3.57

Additional comments about dock or mooring site?

Base: 385

Praise (55.6%), management (10.4%), water quality/weeds/invasive species (8.6%), maintenance (8.3%), dock design (7.5%), law enforcement (7.5%), additions (6.5%), restrooms (4.4%), accessibility (2.6%), parking (1.3%), water level (1.0%).

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Which of the following best describes your relationship with the following programs?

Base: 5,821

	Aware	Participated	Have interest	None
Ohio's Scenic Rivers	37.4%	5.1%	24.5%	33.0%
Ohio's Water Trails	32.2%	3.8%	27.7%	36.3%

If you participated in Ohio's Scenic Rivers or Ohio's Water Trails programs, provide a number to rate your experience. Use scale 5=Excellent, 4=Very Good, 3=Neutral, 2=Fair, 1=Poor

Base: 265

	Ohio's Scenic Rivers	Ohio's Water Trails
Ability to find information (maps, rules, etc.)	3.89	3.83
Access points	3.79	3.76
Water quality	3.67	3.64
Scenic value	4.31	4.25
Overall quality of your experience	4.18	4.18

What could be done to improve these programs?

Base: 768

Presentation (35.7%), cleanup (23.2%), marketing/advertising (19.9%), information (18.6%), law enforcement (11.5%), water quality (7.8%), amenities (4.8%), wildlife control (4.4%).

Provide a number to indicate your level of agreement with the following. Use scale 5=Strongly Agree, 4=Somewhat Agree, 3=Neutral, 2=Somewhat Disagree, 1=Strongly Disagree

Base: 5,981

Require life jacket wear on smaller vessels and paddlecraft 3.97  
 Require life jacket wear during cold weather months 4.13  
 I feel safe while on Ohio's waterways 4.51

Check any of the following that apply to you.

Base: 5,991

24.2% Completed a Safe Boater Course in a Classroom  
 19.1% Completed a Safe Boater Course Online  
 12.2% Completed a Home Study Course  
 5.7% Completed a Proctored Safe Boater Proficiency Exam  
 51.7% None of these

Provide a number to indicate your level of agreement with the following. Use scale 5=Strongly Agree, 4=Somewhat Agree, 3=Neutral, 2=Somewhat Disagree, 1=Strongly Disagree

Base: 5,443

Safe Boater courses provide valuable information 4.41  
 Safe Boater courses are easy to access 3.99  
 Safe Boater courses can be completed quickly 3.82

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Indicate you and your household’s participation in any of the following Boater Education and Skills hands-on courses.

		Completed	Planning	None
Base: 4,058	Canoeing	8.3%	6.2%	85.4%
Base: 4,182	Kayaking	11.3%	11.8%	76.9%
Base: 4,275	Personal watercraft	19.6%	9.1%	71.3%
Base: 4,548	Power boating	30.3%	9.7%	60.0%
Base: 3,959	Stand-up paddleboarding	2.3%	5.6%	92.1%
Base: 4,045	Sailing	7.4%	4.9%	87.7%
Base: 4,207	Navigation	17.0%	14.5%	68.5%
Base: 4,009	Global positioning	7.4%	10.5%	82.2%
Base: 1,766	Other	4.3%	1.4%	94.3%
Base: 69	Other: Captain (24.6%), USCG (17.4%), rescue (14.5%), ACA (5.8%), Safety (5.8%), marine communications (4.3%), military (4.3%), weather (4.3%), BSA (2.9%), engine (2.9%).			

What was the name of the group or agency hosting the hands-on course(s) that you attended?

Base: 1,155

Associations (29.0%), government (23.7%), military (21.7%), colleges/courses (8.4%), camps/outdoors/team sports (7.2%), online (5.2%), clubs (4.8%), businesses (4.3%), Ohio bodies of water (2.5%), self-taught (1.6%).

Provide a number to indicate your level of agreement with the following statements. Use scale 5=Strongly Agree, 4=Somewhat Agree, 3=Neutral, 2=Somewhat Disagree, 1=Strongly Disagree

Base: 4,730

Hands-on courses provide valuable information 4.25

Hands-on courses are easy to access 3.52

Hands-on courses can be completed quickly 3.49

Provide a number to indicate your level of satisfaction with ODNR Parks and Watercraft website.

Use scale 5=Very Satisfied, 4=Somewhat Satisfied, 3=Neutral, 2=Somewhat Dissatisfied, 1=Very Dissatisfied

Base: 5,216

User-friendly website 3.95

Easy-to-find info on website 3.90

Did you register or renew your watercraft online?

Base: 5,980

13.2% Yes – from a mobile device 17.1% No – Done through mail

44.1% Yes – from a PC/desktop 24.5% No – Done in-person

Other: Dealer/marina/MDV (0.5%), not specified (0.4%), sold boat (0.1%)

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Provide a number to indicate your satisfaction with online registration/renewal. Use scale 5=Very Satisfied, 4=Somewhat Satisfied, 3=Neutral, 2=Somewhat Dissatisfied, 1=Very Dissatisfied

Base: 3,264

Locating registration website 4.52  
User-friendliness 4.49  
Entering PIN # 4.24

What suggestions can you offer to make the online registration/renewal process better?

Base: 153

Okay as is (45.8%), lower price (15.0%), PIN (13.7%), technical suggestions (13.7%), process suggestions (11.8%), decal/stickers (4.6%)

Select any options that appeal to you as a way to receive information from ODNR Parks and Watercraft.

Base: 4,992

70.5% Website: watercraft.ohiodnr.gov	20.3% Facebook
2.2% Twitter	3.4% Instagram
18.6% Boat shows	8.3% Signage
3.6% Phone	48.8% Email
5.2% Radio	6.6% TV
16.4% Watercraft offices	22.6% Marina
13.3% Watercraft registration agents	14.3% Campgrounds
26.2% Monthly newsletter from ODNR	4.9% Newspaper
22.8% Mail	8.6% Boating classes

Other: Public outreach (0.3%), texts (0.2%), YouTube (0.1%), Ohio Outdoor News (0.1%).

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Check any on-the-water contact you and your boating household received this year.

		Assistance	Safety check	Violation Stop	None
Base: 4,830	US Coast Guard	0.4%	3.6%	0.1%	95.9%
Base: 4,776	USCG Auxiliary	0.4%	2.0%	-	97.7%
Base: 4,755	US Homeland Security	0.2%	0.4%	-	99.5%
Base: 4,757	Customs & Border Patrol	0.3%	0.4%	0.0%	99.2%
Base: 5,009	ODNR	3.2%	10.7%	0.4%	85.7%
Base: 4,760	Local marine patrols (Sheriff, local police)	0.6%	3.0%	0.1%	96.3%
Base: 4,729	Commercial tow, salvage (not law enforcement)	1.0%	0.0%	0.0%	99.0%
Base: 2,507	Other: Fishing survey (0.3%), USPS (0.2%), National Park Service (0.2%), marina (0.1%) . . .	1.3%	-	-	98.7%

Provide a number to rate the on-the-water contact received.

Use scale 5=Excellent, 4=Very Good, 3=Neutral, 2=Fair, 1=Poor

		Services (tow, first aid, etc.)	Helpful assistance	Professional personnel	Courteous personnel	Knowledgeable personnel
Base: 198	US Coast Guard	3.78	4.18	4.43	4.46	4.34
Base: 111	USCG Auxiliary	4.04	4.44	4.57	4.58	4.54
Base: 26	US Homeland Security	3.42	3.50	4.26	4.06	4.22
Base: 36	Customs & Border Patrol	3.82	4.11	4.35	4.29	4.27
Base: 629	ODNR	3.82	4.24	4.41	4.41	4.37
Base: 178	Local marine patrols	3.98	4.19	4.38	4.44	4.28
Base: 48	Commercial tow, salvage	4.71	4.77	4.75	4.77	4.82

Indicate if you experienced any of the following situations in the past 12-months.

		Never	Sometimes	Most of the time	Always
Base: 5,174	Crowding of waterway	54.6%	37.9%	4.8%	2.7%
Base: 5,267	No-wake zone violations	49.9%	36.4%	7.5%	6.2%
Base: 5,109	Speed limit violations	64.8%	27.1%	4.2%	3.9%
Base: 5,234	Careless/reckless operation	54.3%	38.3%	3.8%	3.5%
Base: 5,134	Excessive noise	63.3%	31.4%	2.4%	2.9%
Base: 1,007	Other	80.9%	8.6%	3.7%	6.8%
Base: 117	Other: Speed/HP (29.1%), civility/alcohol (25.6%), blocking (22.2%), dangers (17.9%), law enforcement (3.4%), property damage (1.7%).				

How long have you lived in Ohio?

Base: 6,046

0.0% Less than one year    0.0% 1-2 years    0.6% 3-5 years  
 1.2% 6-10 years    3.0% 11-20 years    6.8% 21-30 years  
 88.3% More than 30 years

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Indicate your boating activity during the pandemic, compared to pre-pandemic (2019).

Base: 5,732

22.9% Higher during pandemic, compared to pre-pandemic

58.3% Boating activity was the same

18.8% Lower during pandemic, compared to pre-pandemic

Indicate your expectations for 2022, compared to 2021.

Base: 5,602

29.2% Expecting increased boating activity in 2022

56.6% Expect boating activity to be the same

14.2% Expecting lower boating activity in 2022

Indicate how each of the following affect your boating activity.

		Increases Boating	No effect	Decreases Boating
Base: 5,581	Fuel costs	1.7%	64.4%	33.9%
Base: 5,520	Current work schedule	7.1%	61.2%	31.7%
Base: 5,532	Inflation	1.8%	67.6%	30.5%
Base: 5,538	Current family commitments	4.6%	52.5%	42.9%
Base: 803	Other	3.5%	61.3%	35.2%
Base: 254	Other: Water quality/weather (40.6%), age/health (30.7%), costs/repairs (11.0%), other interests (6.7%), community (5.9%), dock/ramps/restrictions (5.1%).			

Provide your county of residence:

Base: 9,732

COUNTY	%	COUNTY	%	COUNTY	%	COUNTY	%
Outside Ohio, but U.S.	0.1%	Crawford	0.4%	Harrison	0.5%	Marion	0.5%
Adams	0.4%	Cuyahoga	3.5%	Henry	0.5%	Medina	0.9%
Allen	0.7%	Darke	0.6%	Highland	0.6%	Meigs	0.6%
Ashland	0.5%	Defiance	0.8%	Hocking	0.7%	Mercer	0.6%
Ashtabula	0.7%	Delaware	1.7%	Holmes	0.5%	Miami	1.5%
Athens	0.6%	Erie	1.7%	Huron	0.5%	Monroe	0.6%
Auglaize	0.6%	Fairfield	3.0%	Jackson	0.4%	Montgomery	3.8%
Belmont	0.8%	Fayette	0.5%	Jefferson	0.6%	Morgan	0.5%
Brown	0.6%	Franklin	3.6%	Knox	1.6%	Morrow	0.5%
Butler	2.7%	Fulton	0.7%	Lake	1.3%	Muskingum	0.9%
Carroll	0.5%	Gallia	0.6%	Lawrence	0.7%	Noble	0.5%
Champaign	0.7%	Geauga	0.6%	Licking	3.7%	Ottawa	2.1%
Clark	0.9%	Greene	0.9%	Logan	1.2%	Paulding	0.5%
Clermont	2.0%	Guernsey	0.6%	Lorain	3.2%	Perry	1.0%
Clinton	0.7%	Hamilton	3.0%	Lucas	4.6%	Pickaway	0.7%
Columbiana	0.9%	Hancock	0.7%	Madison	0.6%	Pike	0.5%
Coshocton	0.4%	Hardin	0.5%	Mahoning	1.0%	Portage	1.0%

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COUNTY	%	COUNTY	%	COUNTY	%	COUNTY	%
Preble	0.5%	Scioto	0.7%	Trumbull	0.9%	Warren	2.6%
Putnam	0.7%	Seneca	0.8%	Tuscarawas	1.7%	Washington	1.8%
Richland	0.9%	Shelby	0.6%	Union	0.8%	Wayne	0.7%
Ross	0.7%	Stark	4.3%	Van Wert	0.6%	Williams	0.6%
Sandusky	0.6%	Summit	2.8%	Vinton	0.4%	Wood	0.6%
						Wyandot	0.5%

Select the occupation(s) of the primary boat operator.

Base: 5,824

1.6% Administrative support/clerical	5.1% Construction
9.7% Executive/managerial	0.4% Home manager
6.4% Manufacturing	1.2% Military
20.5% Professional/Technical	1.2% Retail/food service
3.5% Safety (Police, Fire, EMS)	43.5% Retired
4.4% Sales	0.4% Student
3.1% Transportation	0.5% Unemployed

Other: Education (1.5%), healthcare (1.2%), self-employed (1.0%), trades (1.0%), government (0.5%), agriculture (0.4%), IT/finance (0.4%), utilities (0.2%), ministry (0.2%), USPS (0.1%).

Gender of the primary boat operator.

Base: 5,861

86.8% Male 11.3% Female 0.1% Non-binary 1.8% Chose not to answer

Age-range of the primary boat operator.

Base: 5,851

0.1% Under 21	0.4% 21-25	2.5% 26-34	8.4% 35-44
16.8% 45-54	32.1% 55-64	33.5% 65-75	6.1% 76 & over

Highest year of schooling completed by primary boat operator?

Base: 5,808

1.2% Some High School	26.4% High School Graduate
9.5% Trade School	14.9% Associate Degree
27.2% Bachelor Degree	20.8% Graduate Degree(s)

Are you Hispanic or Latino?

Base: 5,660

0.5% Hispanic/Latino 99.5% Not Hispanic/Latino

What is your race? CHECK ALL THAT APPLY

Base: 5,729

0.6% African American or Black	0.3% Asian
0.9% American Indian or Alaska Native	98.8% White

Other(s): Middle Eastern (0.1%), Pacific Islander (0.1%), not specified (0.05%).

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Estimate the total annual boating expenditure for you and your boating household for each of the following items from October 1, 2021 to September 30, 2022.

Base: 3,559

	<b>Average Annual cost</b>
Boat purchase	\$2,024.48
Boat trailer or car racks	\$79.62
Boat loan payments	\$349.13
Boating insurance	\$206.22
Mooring/docking fee	\$236.81
Boat launch ramp fee	\$10.93
Marina or club fees	\$172.47
Tournament or event fees	\$36.43
Registration/subscription fees	\$37.17
Engine purchase	\$223.58
Engine maintenance and repair	\$251.33
Hull repair	\$25.78
Boat bottom paint	\$34.94
Electronics	\$173.93
Fishing equipment	\$208.59
Waterskiing equipment	\$16.66
Scuba diving equipment	\$6.77
Winterization	\$129.29
Boat storage	\$271.82
Boating clothing	\$40.83
Base: 146 Other: Fuel (28.1%), boat repair/cleaning (19.2%), miscellaneous (15.1%), boat accoutrements (14.4%), cover/canvas/rigging (9.6%), safety (8.9%), dock/launch (6.8%), fees (4.1%).	\$84.37

Please estimate how much you spend on the following items during a typical boat trip.

	<b>Average Cost Per Trip</b>
Lodging (hotels, motels, campgrounds etc.)	\$64.55
Grocery, convenience stores	\$45.74
Restaurant meals	\$61.48
Entertainment	\$15.00
Fishing supplies	\$24.14
Boat fuel costs	\$106.68
Transportation to/from boat site	\$49.23
Base: 19 Other: Dockage (47.4%), gas for truck (21.1%), show/regatta fees (10.5%), camping (10.5%).	\$2.20

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Please check your annual household income range?

Base: 5,126

0.5% Less than \$15,000	2.6% \$15,000 - \$30,000
3.9% \$30,000 - \$40,000	6.3% \$40,000 – \$50,000
12.2% \$50,000 - \$70,000	19.6% \$70,000 - \$100,000
18.7% \$100,000 – \$150,000	10.0% \$150,000 - \$200,000
8.2% \$200,000 or more	18.0% Prefer not to answer

Please provide your thoughts on boating in Ohio.

Base: 2,140

Love it! (61.2%), water quality (13.6%), dangers (9.9%), investment (7.5%), boater civility/education (5.7%), law enforcement/regulations (4.6%), other states (3.4%), fishing (3.2%), registration/expense (2.6%), ramps/docks (1.8%), survey too long (1.6%), HP limits (1.3%), parking (0.2%).

What could be done to improve safety for you and your boating household when on Ohio’s waterways?

Base: 1,448

Enforcement/safety (32.3%), safety rules (20.2%), boater safety courses (16.0%), environmental safety (15.1%), engineering safety (13.7%), already safe (10.2%), preventative safety (7.0%), knowledge safety (6.6%), surveillance safety (1.0%).

How did the COVID19 pandemic affect your boating activity?

Base: 2,567

None/little effect/accommodations (60.4%), increased boating (23.1%), decreased boating (17.1%).

This ends the Ohio Department of Natural Resources  
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