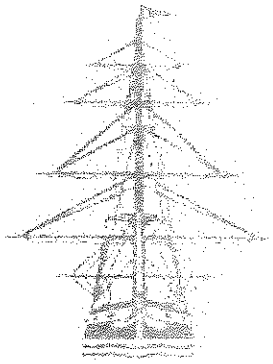

Captain J.P. "Flip" Walters

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30 March, 2017

Annapolis City Council,
Environmental Matters Committee:

Subject: Appropriate Harbormaster Boats for the missions (as directed by the City Council in Title 15 and Title 2) for the City Harbormaster.

The City Council has never authorized the Harbormaster to conduct Search and Rescue, or to act as law enforcement. These missions are nowhere to be found in either Title 15 or Title 2.

The Harbor and City Dock are under the cognizance of the Environmental Matters Committee and the Economic Matters Committee; not the Public Safety Committee (See Highlighted Attachment).

The Harbormaster staff are all part time seasonal. They do not have the training, equipment, or expertise to be first responders. Ask David Stokes, Doug Remaley, or Kevin Simmons if they would want truck drivers (analogy to boat drivers) that had not been thru fire and emergency training, to run into a burning building with their teams.

More importantly, does the City want the potential legal risks that will come with sending untrained people to an emergency scene, acting under color of authority that they do not have, are not trained for and are not equipped for? Or conversely, is the Council willing to pay the cost of providing an additional layer of law enforcement on the water?

Currently the Annapolis Fire Department already has the mission of Search and Rescue for which to the best of my knowledge and belief they have two ideal boats. AFD is included in the intergovernmental MOU that includes the State and the County fire and rescue services; and supplemented by the Navy and the Coast Guard.

As it is now, the City Council just barely gives the Harbormaster enough funding to perform the missions that the Council has assigned by legislation to the Harbormaster. It is all well and good if they happen to be in the right place, at the right time to be helpful good Samaritans (which has happened three or four times in my years), and then to get out of the way of the professional first responders as soon as the professionals arrive on scene.

It is another thing entirely to pull them off the missions as assigned in legislation by this Council, to have them rush off to the Bay Bridge, getting in the way of professional first responders, for a search they aren't trained, or equipped to aid. In so doing, they will be neglecting the missions that you have assigned them, i.e. how many fees will not be collected?

The Annapolis Police Department already has a quarter million dollar patrol boat for a mission they didn't have. It was stored behind the Eastport Fire Station in shrink wrap for several years. Where it is now, I have no idea.? But, I'm reasonably certain APD isn't using it for performance of their mission.

JPW

The Harbormaster's Office currently has two Patrol Boats. One is a newly refurbished Zodiak powered by an outboard motor. Exactly the type of boat described in the budget revision request. It will get to Weems Creek very quickly should the need arise.

To the best of my recollection the City has one police boat (unused) one excellent fire boat (well used), a smaller police zodiac (for the SWAT team); a smaller fire-rescue zodiac; two harbormaster fee collection and code enforcement (patrol) boats (both very well used) and only one very much over used pumpout boat. Does the City need to incur the costs and the attendant liability of yet another police boat /patrol boat?

The City does need a second pumpout boat… Which has been in the works for two years; and I understand is now finally on the way. Up to now the pumpout boat(s) are fully grant funded, including operations costs. This is not a forever guarantee however. Seventy five percent of this is Federal money, twenty five percent State. Under the Trump Administration budgets, I don't think we can count on this to remain unchanged.

The Harbormaster's two primary boats have been designed to best serve in their Title 15 missions assigned to them by the City Council. If the City Council chooses to add search and rescue to the mission of the Harbormaster, it should do so by appropriate legislation. Not by accident, thru the back door; by purchasing inappropriate, or un-needed equipment.

A search and rescue boat should be an open air patrol boat as described in the proposed budget revision, so the boat operators can better hear victims in the water, etc.

A fee collection and code enforcement boat has a completely different mission however. It carries a lot of administrative paper work, permit schedules, as well as cash and credit card receipts which need to be protected from wind and rain. The cabin enclosure protects the money, the receipts, the customer logs, the credit card receipts, a credit card machine and mooring permit logs from wind and rain, so that fee collection continues even in bad weather.

Each time a City boat accidentally hits a customer boat while collecting fees, or performing pumpouts; the City incurs a repair bill. The jet drive boats are far more maneuverable than outboards. Proof- Our outlay for damages to customer boats went way way down after we acquired the jet boats. We managed two full years without a single damage claim. A trained boat operator can make the jet drive boat go sideways. The problem with jet drive boats is if you learned to drive on an outboard, the jet seems counter intuitive and very difficult to drive… Until you learn how to drive it.

The US Navy is moving more and more of their fleet to jet drive including *VIRGINIA* Class Submarines. The US Coast Guard is moving a large percentage of their fleet to jet drive. Almost all new Fire Boats (including ours) are jet drive, so that they can be held on station at the right location from which to fight the fire. And the jet drive doesn't risk injuring a person in the water; if you do happen to become engaged in a rescue operation.

According to the American Association of Boat and Yacht Manufacturers the average American boat owner puts less than eighty hours a year on his boat engine. (See US Coast Guard 2011 National Recreational Boasting Survey, Page 42 attached- One Full Copy of the Survey has been provided for the Record. 17 days per year times 4.5 hours per day = seventy six and a half hours annually). During my eleven years association with the Harbormaster's Office, we routinely put thirteen hundred hours per year on the engines of these two aluminum boats. So we put about 16 average boater years on our engines each and every year.

My predecessor and I fully expected to spend about thirty thousand dollars per boat on new engines about every five to six years (1300 hrs. per year x 6 yrs = 7800 hrs. See BoatSafe.com

"The Life Expectancy of the Marine Engine" Copy attached). Historically, most of this has been obtained from grantor sources without spending City tax dollars / reducing harbor revenue.

The two aluminum boats represent a total investment of about three hundred thousand dollars each (almost all of which came from grant funding, i.e. we are the beneficiary of other people's money). The hulls are good for a working life expectancy of fifty years (one is now 16 years old, the other is now 11). If you have them inspected by a knowledgeable aluminum boat surveyor, he'll tell you the boats (not the current engines) are good for another thirty to forty years. One is already on its second engine; one is now on its third engine. They would both be happy for new engines soon (with or without hybrid technology).

The most important message I wish to leave this committee on the subject of boats is: to not sell either of these boats while a new manager is learning the mission differences between here and elsewhere. There is plenty of room to store them along with the police boat until their value is better understood.

If the Council wishes to buy yet another boat that's great. In this case the Council should authorize it. If the Council wishes to make the Harbormaster's office a law enforcement agency, or a first responder it should do so by appropriate legislation and appropriations for staffing, training and equipping; not by accident.

On the topic of appropriate boats and usages, I believe the Council should be made aware that the pumpout boat should not be used to tow the fireworks barges for New Years and Independence Day. This is a clear violation of the pumpout boat grant.

Once again, the Harbormaster's staff are all part time seasonal employees. They are not trained in the care and safety of explosive ordinance. The Harbormaster staff has to meet with the Navy Commander and the Explosive Ordinance Safety Officer at North Severn twice every year to review explosive ordinance safety protocols prior to being given permission to bring the City's fireworks into their basin, etc. They take it a lot more seriously than the City apparently did last New Year's Eve.

Commercial towing\marine construction services have marine risk insurance, (the City doesn't), general liability insurance, and longshoreman and harbor workers insurance in case any of their employees are injured. The Harbormaster seasonal staff aren't covered in the City medical insurance. The City could have some serious legal liability issues to resolve if any of our unqualified personnel were injured in performance of duties for which they and\or the boat are not legally qualified.

To my recollection, two people have been killed in City fireworks accidents between 1994 and 2003. I'm reasonably certain that the State Laws that limit damages in claims against state and local governments do not apply in Federal Court's Maritime\Admiralty Law cases.

Using city boats and seasonal staff may save the City about twelve thousand dollars a year for fireworks barge tug boats, but against the potential liabilities, neither my predecessor, nor I were willing to expose the City to these risks.

Very truly;

Harbormaster in Absentia.

- **2.16.190 - Standing committees.**

A.

There are designated the following standing committees of the City Council, which shall review and make recommendations with regard to matters referred to them and shall perform other general duties and responsibilities:

1.

Finance Committee. The Finance Committee shall handle all matters relating to the review of the budget and continuous surveillance of the budget. The Finance Committee shall have power to review and make recommendations with regard to the Mayor's annual operating budget and shall submit recommendations with regard to the budget to the City Council not later than the second Monday in May of each year. The Finance Committee shall review all proposed amendments to Title 6 (Revenue and Finance) of this Code.

2.

Public Safety Committee. The Public Safety Committee shall consider matters affecting public safety in the City. The Public Safety Committee shall review all proposed amendments to Title 11 (Public Peace, Morals and Welfare) and Title 12, (Vehicles and Traffic) of this Code.

3.

Rules and City Government Committee. The Rules and City Government Committee shall review and consider all proposed amendments to the Charter and all proposed amendments to Title 1 (General Provisions), Title 2 (Administration), Title 3 (Personnel), Title 4 (Elections), Title 20 (Subdivisions), Title 21 (Planning and Zoning) and Title 22 (Adequate Public Facilities) of this Code.

4.

Economic Matters Committee. The Economic Matters Committee shall consider matters affecting the economy of the City; make recommendations to the City Council on issues relating to the operation of the Markethouse and the regulation of the City Dock; study, independently and with private historic preservation organizations, issues concerning historic structures in the City; and study, consider and make recommendations regarding issues of cable television service to the City of Annapolis and its citizens. The Economic Matters Committee shall review all proposed amendments to Title 7 (Business Licenses, Taxes and Regulations) and Title 17 (Buildings and Construction) of this Code.

5.

Housing and Human Welfare Committee. The Housing and Human Welfare Committee shall consider issues of housing and matters affecting the general health, welfare and quality of life of the residents of the City. The Housing and Human Welfare Committee shall review all proposed amendments to Title 8 (Animals), Title 10 (Health and Safety), and Title 18 (Landlord and Tenant Relations) of this Code.

6.

Environmental Matters Committee. The Environmental Matters Committee shall consider matters affecting the natural environment of the City. The Environmental Matters Committee shall review all proposed amendments to Title 14 (Streets, Sidewalks and Public Places), Title 15 (Harbors and Waterfront Areas), and Title 16 (Public Services) of this Code.

7.

Transportation Committee. The Transportation Committee shall consider matters affecting parking, public transportation, and vehicular traffic. The Transportation Committee shall review all proposed amendments to Title 12 (Vehicles and Traffic), Title 14 (Streets, Sidewalks and Public Places), and Title 22 (Adequate Public Facilities) of this Code.

Days and Hours of Recreational Boats' Use

Across the entire country, the majority (65.5%) of recreational boats were used in 2011. While the proportion of boat types used in any given year and overall proportion of boats used from year to year varies (due to the economy, weather, or water levels), previous national studies indicate that the overall proportion of boats used has remained relatively constant over the last 20 years.

The average boat was used for about 17 days in 2011. This is fewer days than reported in some previous studies, but often these studies surveyed fewer boat owners and mostly those who owned registered vessels. In this study, great effort was made to include the owners of non-registered vessels. Vessels that are more likely to be non-registered (e.g., due to their type, size or propulsion) were generally used less often.

On an average use day, the average boat was on the water for 4.5 hours, with an average of 2.4 persons aboard the boat when it was used.

It is estimated that the boats owned by households logged almost 3 billion person-hours in 2011.

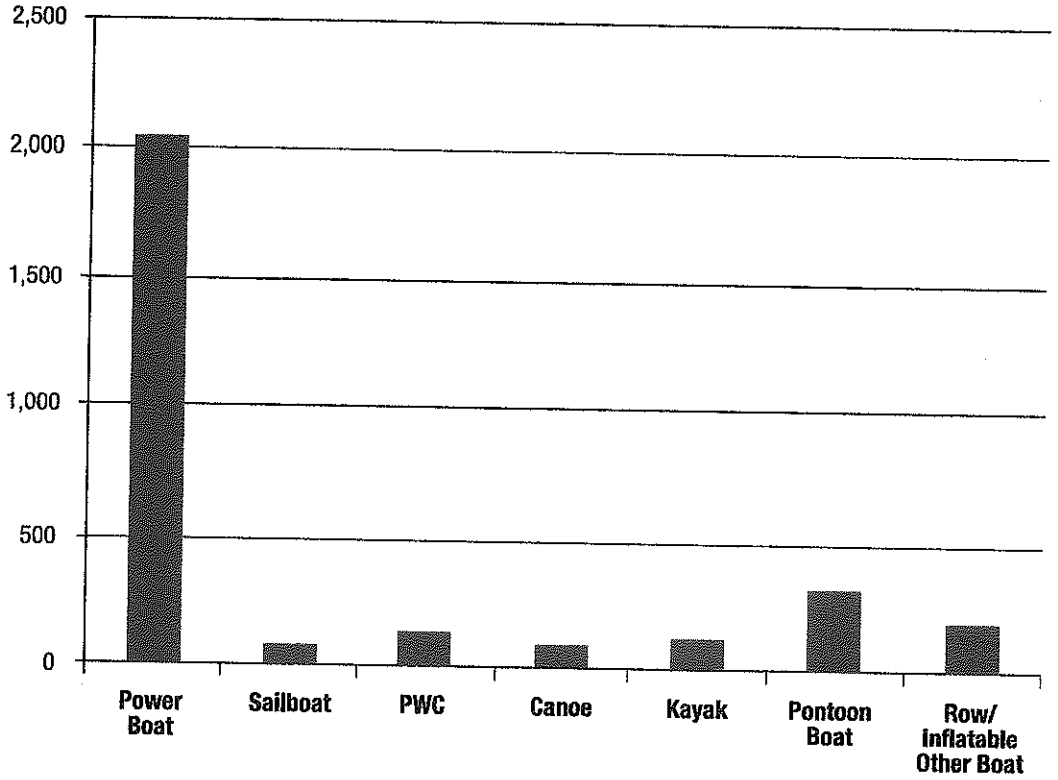
When frequency and duration of use are factored in, along with number of boats, power boats were by far the most used type of boat. Over two-thirds, or 2.05 billion, of boating person-hours were spent on power boats.

The survey results also verified the changing popularity of different recreational boats. Recreational paddling is now very popular, as measured by participation rates, numbers of boats and boating person-hours. About 29% of the recreational boats owned in the country were canoes and kayaks. Half of all canoes and over two-thirds of kayaks were used in 2011, with boaters logging nearly a quarter of a billion hours in them.

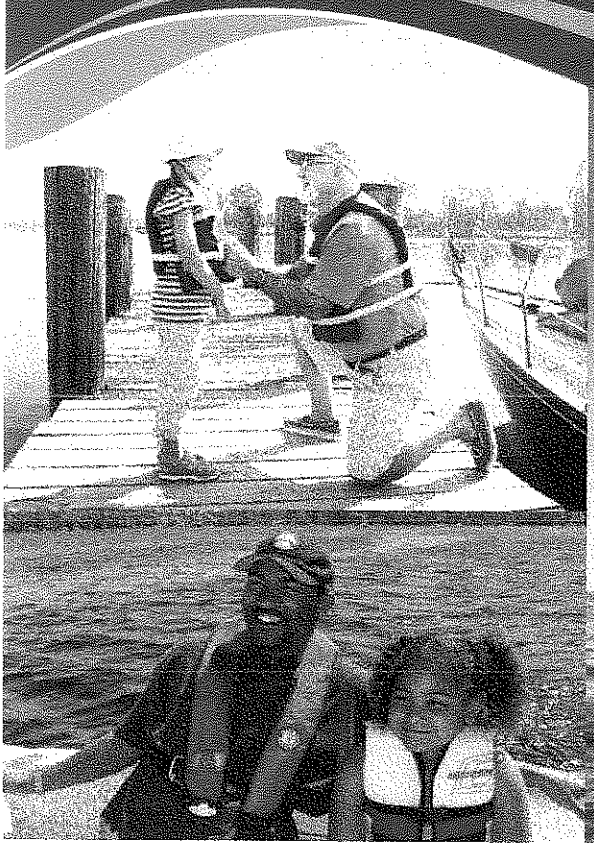
About 69% of personal watercraft (PWCs) were used in 2011, for an average of 16.3 days, and boating participants spent over 130 million hours on PWCs.

A very high proportion (83.4%) of pontoon boats were used in 2011, and their owners used them more days (21.8) on average than any other type of boat. Boaters spent about 301 million hours on them.

Figure 9: Boating Person-Hours (in Millions) in 2011 by Boat Type

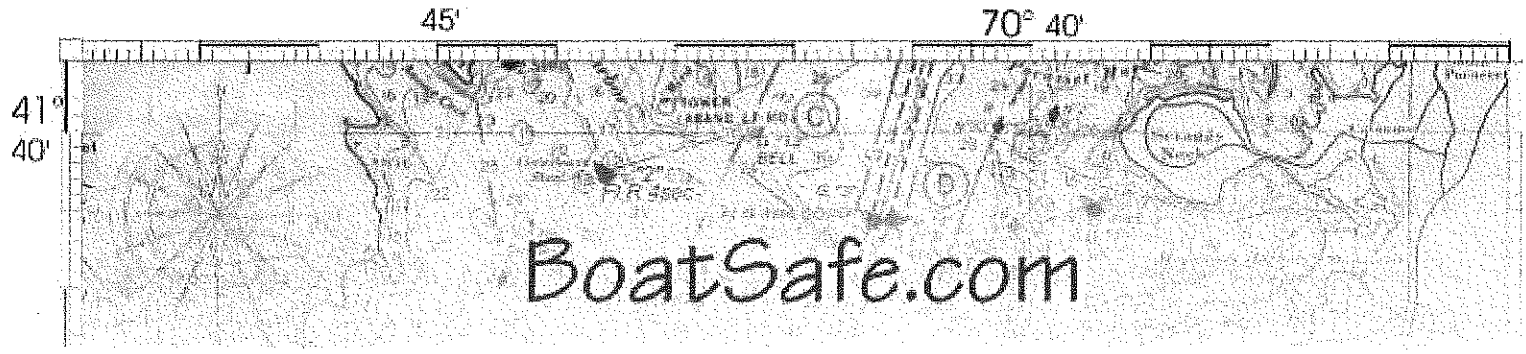


2011 National Recreational Boating Survey



www.uscgboating.org

BOAT Responsibly



The Life Expectancy of the Marine Engine

The average marine gasoline engine runs for 1,500 hours before needing a major overhaul. The average marine diesel engine will run for more than three times that long and log an average 5,000 hours under the same conditions. The number of hours that a marine engine runs is very dependent on the amount and quality of maintenance over the years.

The typical gasoline marine engine will run fine for the first 1,000 hours. It is at this juncture that the engine starts to exhibit small problems. If these small problems aren't addressed, they can turn into major problems which may make the last 500 hours of life difficult to reach.

Interestingly, an automobile engine may run almost twice as long (3,000 hours) as your marine gasoline engine. The reason is that marine engines normally work harder and under worse conditions than automobile engines.

A well-maintained gasoline engine run under the best conditions may well run for more than the 1,500 hours without major overhaul. However, many that operate under the most atrocious conditions of salt air, damp bilges, intermittent operation and pure neglect will certainly die early.

Diesel engines are built to finer tolerances than are gasoline engines. They will accept much more abuse and often deliver, if well maintained, 8,000 hours of hard work before need a major overhaul. Theoretically, a well-maintained diesel may last the life of your boat. Since the average recreational boater logs only about 200 hours per year, the 8,000 hour diesel would last 40 years.

Although diesels can add considerable cost to a boat, they should be seriously considered because of their durability, economy of operation and safety concerns. Diesel fuel has a much higher flash point than gasoline and does not present the same threat of explosion that gasoline fumes carry.

Engines like to run long and steady. The shorter the running time between stops, and the longer the idle time between runs, the fewer the hours they will deliver before needing major repairs.

The adverse conditions under which marine engines operate have a great deal to do with their longevity. What they really need is rarely what they get. Naval architects recommend that engine compartments should be supplied with lots of dry, cool (50 degrees F), clean air. The very minimum fresh air vent area (in square inches) for natural ventilation without blowers is found by dividing engine horsepower by 3.3.

Two of the most important rules of thumb for engine compartment blowers on gasoline engines are that they should always be set to exhaust, not to blow air in, and they should be run for a minimum of 5 minutes before starting the engine.

Two indicators that can alert you to potential trouble are the **color of exhaust smoke** and **changes in the appearance of your oil** when you check it.

Exhaust gases from marine engines should be clear. Any color of smoke can warn you of potential trouble.

- Black smoke is the result of engine overload, a restricted air supply, or a malfunctioning fuel injector in the case of a diesel engine. Improperly burned particles of excess fuel are blown out the exhaust.
- Blue smoke is formed by combustion of the engine's own lubricating oil. This can be the result of worn piston rings, valve guides, or oil seals. The oil can come from an overfilled air filter in the case of a diesel engine or excess oil in the crankcase.
- White smoke indicates either water vapor from dirty fuel, a water leak into the cylinder or atomized, but completely unburned, fuel. Air in the fuel can also cause white smoke.

You can not check the level and condition of your oil in your engine too often. You should check it at least once a day and preferably before every start. It is also a good idea to wipe the dip stick clean with your bare fingers and feel the consistency of the oil. Use the paper towel to wipe your fingers. You should rub the oil on the stick lightly between your thumb and index finger and feel for any foreign particles which could indicate contamination or metal parts failures.

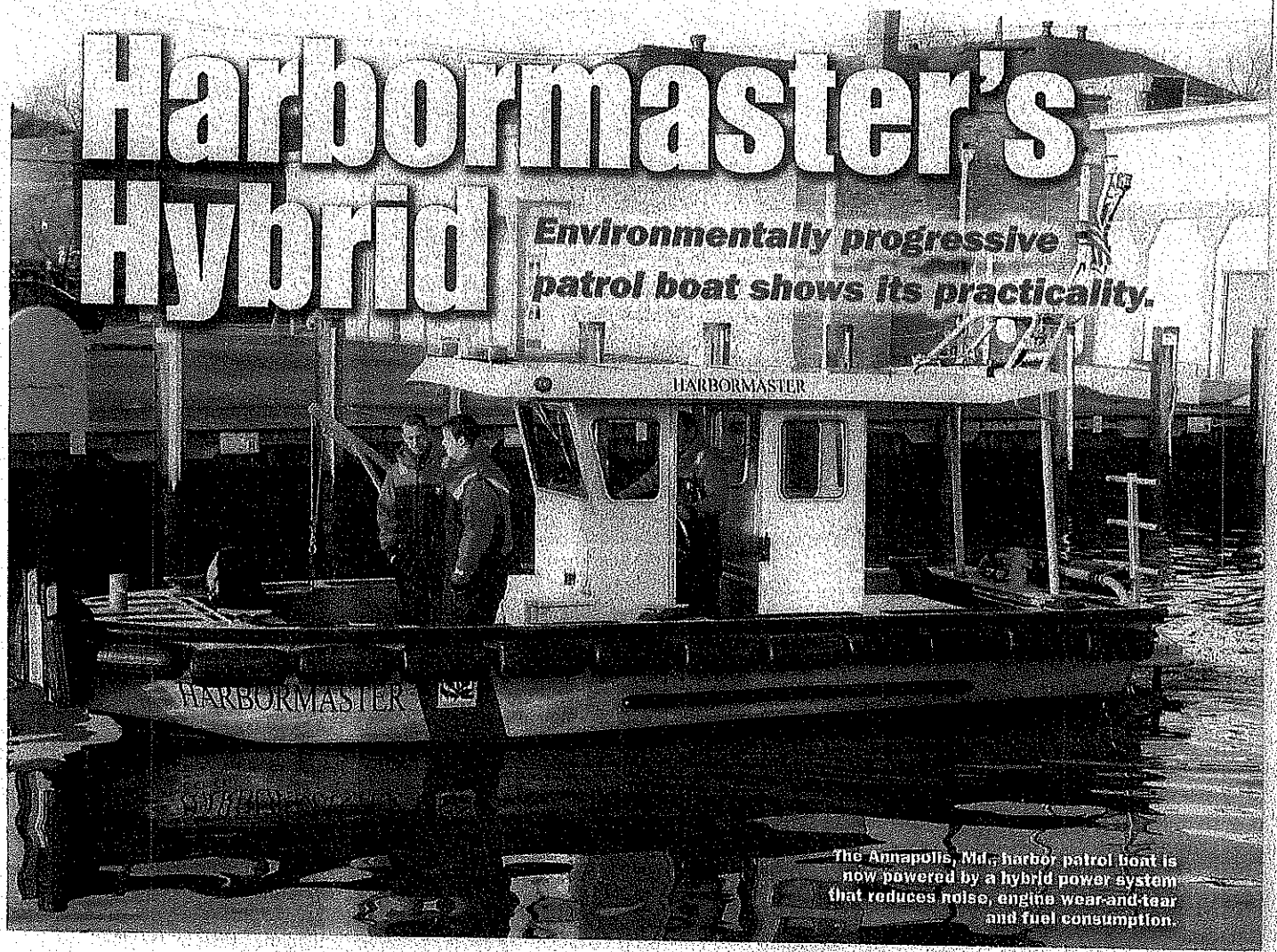
Weekend boaters checking the oil before starting should be suspicious of oil levels that are too high or too low.

- Too high a level might be a clue that water has found its way into the oil sump. You could crack the cylinder head, break a piston, or both, just by turning the engine over. The oil with water in it will also look "milky."
- Too low a level could indicate an oil leak that could lead to engine seizure. Look in the bilge to see if there is any oil residue. Many marine engines sit very low in the bilge and water is consistently in contact with the oil pan. Over the years this can corrode and cause pinhole leaks in the pan.

Whenever there is a large deviation from normal, take that as an urgent warning. Start looking for more clues or seek the advice of an expert.

Harbormaster's Hybrid

Environmentally progressive patrol boat shows its practicality.



The Annapolis, Md., harbor patrol boat is now powered by a hybrid power system that reduces noise, engine wear-and-tear and fuel consumption.

Kathy Bergren Smith

By Kathy Bergren Smith, Correspondent

The city of Annapolis, Md., continues to gain attention for its environmental initiatives, particularly those related to the health of Chesapeake Bay. So it was no surprise when the city's harbormaster walked away with an Environmental Award at the 2011 **International WorkBoat Show**.

The award was for the conversion of its harbor patrol boat to the first solar/diesel/electric hybrid vessel of its kind. Capt. J.P. "Flip" Walters, the harbormaster who worked for nearly five years on the project, said it wasn't easy to be green and even harder to be first. But Walters is very pleased with the project, which started with a request for a jet drive.

"It was a strange sequence of events that brought us here," he said.

In 2001, Kingston, Ontario-based **MetalCraft Marine** delivered a 23'×8'6"×3'6" patrol boat to the Annapolis harbormaster. A six-cylinder **Mercruiser** 220 diesel outdrive powered the vessel. It was a better than average patrol boat, according to Walters.

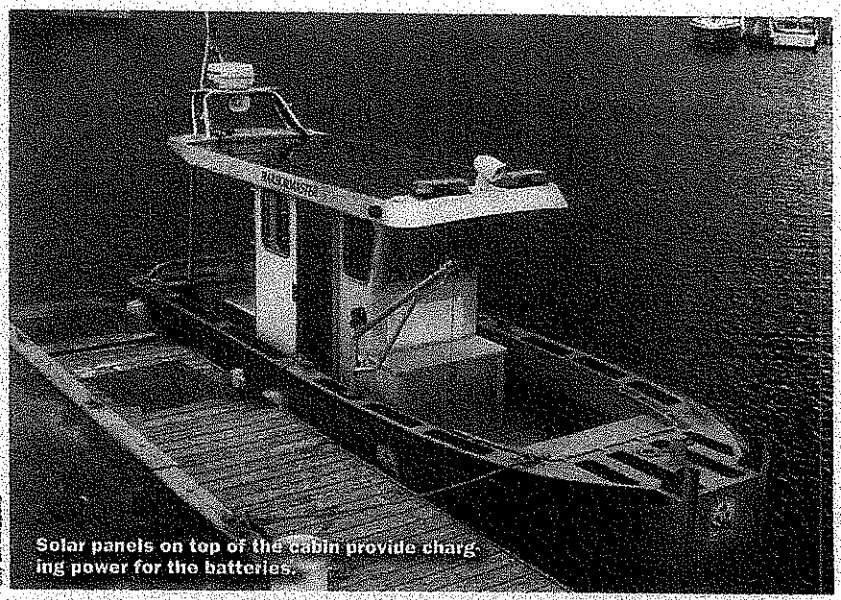
"Then, in 2005, MetalCraft delivered a pump-out boat to the city, this time it had jet drives," said Walters. "We were unfamiliar with the drives, and a number of us operators really did not like the boat, but we had no training either. So once we were able to operate it correctly and take advantage of the incredible maneuverability it offers, we were converted."

Walters, who was assistant harbormaster at the time, proposed converting the patrol boat to waterjets. Like many municipalities, Annapolis had no funding for such a project, so Walters began to look for money in other places. He discovered

that the EPA Clean Diesel Act might be a source if the vessel was converted to a hybrid electric system with a solar array. The project was too small for an EPA grant, but the Mid-Atlantic Regional Air Management Association awarded a $300,000 grant to convert both the patrol boat and the pump-out boat to hybrid.

"The catch was we were awarded the grant, but it only covered 75 percent of the project so we needed to get the remaining funds from somewhere else," said Walters. MetalCraft's president Tom Wroe obtained a $120,000 research grant from the Canadian government and the project was finally fully funded.

"That is my favorite part of the story. Here we are in Annapolis, and we have Her Majesty the Queen to thank for making this boat possible," said Walters.



City of Annapolis

Solar panels on top of the cabin provide charging power for the batteries.

RETROFIT ENGINEERING

Retrofitting *Patrol Boat One* with a new engine system, battery pack and solar array required careful engineering, according to MetalCraft Marine's Bob Clark.

"Every electric boat has its own profile," Clark said. There is not a "one-size-fits-all" solution. First, that profile must be defined.

The Annapolis boats operate within an area that encompasses several creeks in the Severn River. The city's waterways equal 18 linear miles, which makes for an excellent application of the hybrid system. While patrolling the harbor and visiting moorings, the boats are in a 6-mph speed zone, which is ideal for electric propulsion. Moving between these areas, there is opportunity to run the diesel engine and recharge batteries.

Steyr Motors North America, Panama City, Fla., provided the complete power package. The Steyr HDS (hybrid drive system) is a compact marine hybrid system that combines an electric motor and a small diesel engine. The HDS won the **National Marine Manufacturers Association**'s IBEX Award for Innovation in 2008 when it was introduced.

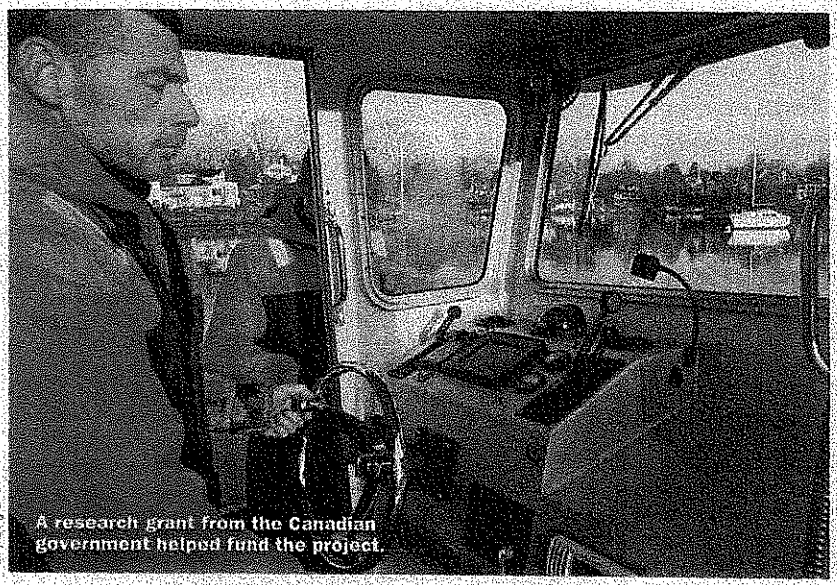
Nestled neatly aft of the wheelhouse, the hybrid drive electric motor is attached to the MO306H43 300-hp, turbocharged, in-line, six-cylinder diesel.

Rich Alley, Steyr Motors North American general manager, said the diesel and electric motors work together seamlessly.

"You can start the diesel off the electric motor. While the diesel is propelling the boat, the electric motor is its generator, and when the diesel accelerates, the electric motor can add a boost," said Alley. "For low-speed operations or operations within environmentally sensitive areas, the hybrid system makes perfect sense, you can just shut the diesel off while the boat is within these areas."

"You should see the boaters' faces as they watch us approach without a sound," said Assistant Harbormaster Bill Brookes. "We used to have to turn off the diesel so they could hear us."

When running in electric mode,



Kathy Bergen Smith

A research grant from the Canadian government helped fund the project.

the motor delivers 7 kW or about 10 hp running on 48 volts (VDC). Fully charged, the boat can operate in electric mode for about three hours. A bank of lead-acid, gel-cell batteries are stowed forward of the wheelhouse. The batteries weigh about 1,000 lbs. They rest in a cradle system and can be lifted by the boat's davit. The weight of the batteries was a consideration from the start, since the boat itself weighs just over 6,000 lbs. Walters said that there is a pending enhancement for the project, which will allow the city to upgrade the batteries to state-of-the-art lithium ions, which will weigh only about 200 lbs. and deliver three times the endurance.


The control console provides information to the operator about charge levels and fuel consumption in different modes.

Katie Brogan Smith

A water-cooled hybrid control unit monitors the flow of electricity to the motor. A touch-screen display in the wheelhouse gives real-time information to the operator about usage, charge levels and fuel consumption.

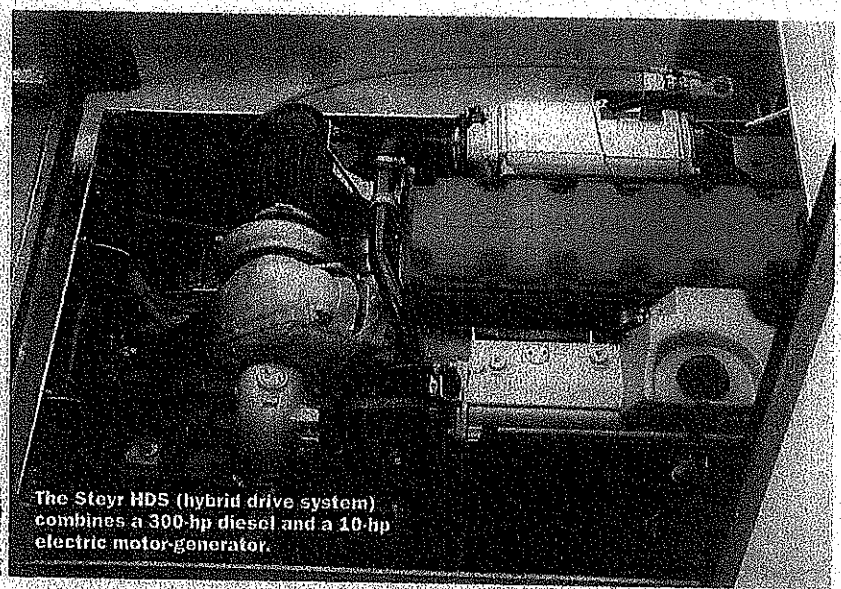
Switching between the diesel and the electric motor is as simple as a flick of a switch.

"The electronically controlled clutch or spline is operated by an electronic linear actuator. This clutch mechanism disengages the diesel so that the electric motor only powers the jet drive," said Walters.

Because this is the first North American application of the Steyr system in a waterjet propulsion boat, there were several issues to iron out.

"We basically had to do an awful lot of reverse engineering," said MetalCraft's Clark.

It was the desire to convert *Patrol Boat One* to waterjet propulsion that began the switch to hybrid technology. MetalCraft specified a **Hamilton Jet** 274 unit to deliver the thrust needed to make 30 knots under diesel power. Since MetalCraft had built the hull, they were able to measure hull efficiencies and create a reverse power curve that optimized the efficiencies for the impellor of the Hamilton waterjet. A ZF 63 marine gear was selected to achieve the optimized efficiency.


The Steyr HDS (hybrid drive system) combines a 300-hp diesel and a 10-hp electric motor-generator.

Steyr Motors

SOLAR PANELS

In addition to the hybrid system, the conversion included the installation of four 130-watt solar panels on the wheelhouse roof. The panels augment the charge of the eight 225-amp hour batteries that supply the 48-volt system.

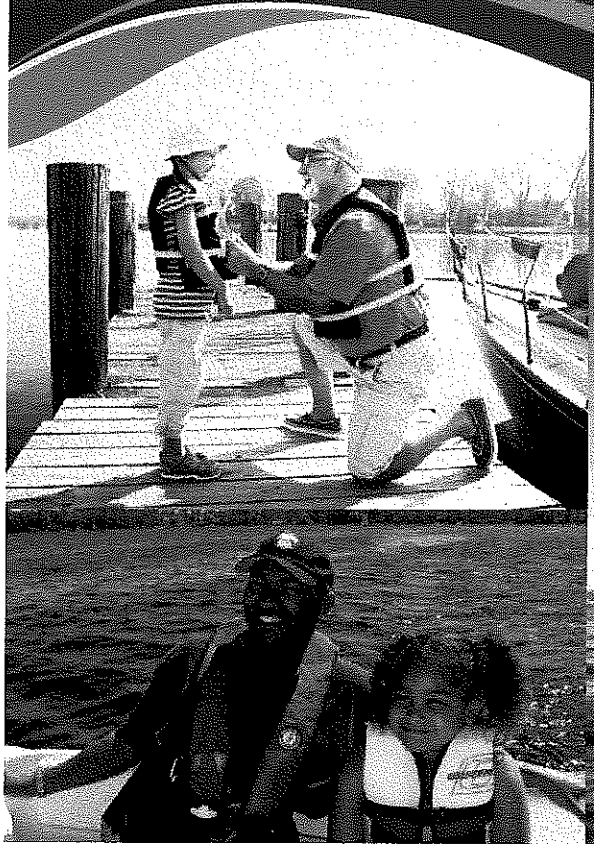
Brookes said the boat performs well, giving the operators the maneuverability they wanted with the jet, a green boat, and the added savings for the city's operations budget.

"I had no trouble with the boat operating in electric mode in up to 30 knots of wind," said Brookes, who also towed a fireworks barge from the headwaters of the Severn with the boat.

As for the savings, since the city did not have to pay for the conversion, every penny now saved is real. Walters now estimates that there will be a 50 percent reduction in fuel consumption and engine wear and tear, thereby extending the life of the boats. According to Annapolis Mayor Josh Cohen, the savings are more than fiscal. "As part of the city's Clean & Green Initiative, this project addressed the need for resources on the water directly affecting the health of the bay," he said.

The hybrid pump-out boat is currently being converted and will be delivered in time for the spring boating season. Walters said it would be identical to *Patrol Boat One* in all ways, except the smell.

2011 National Recreational Boating Survey



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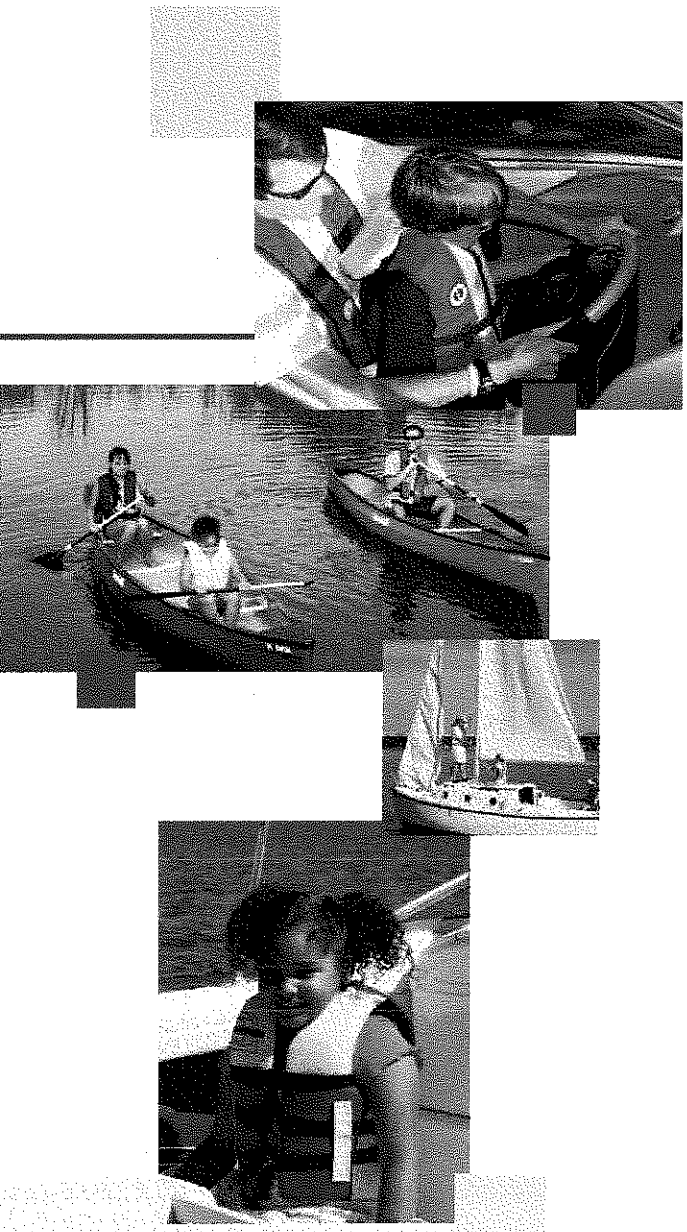
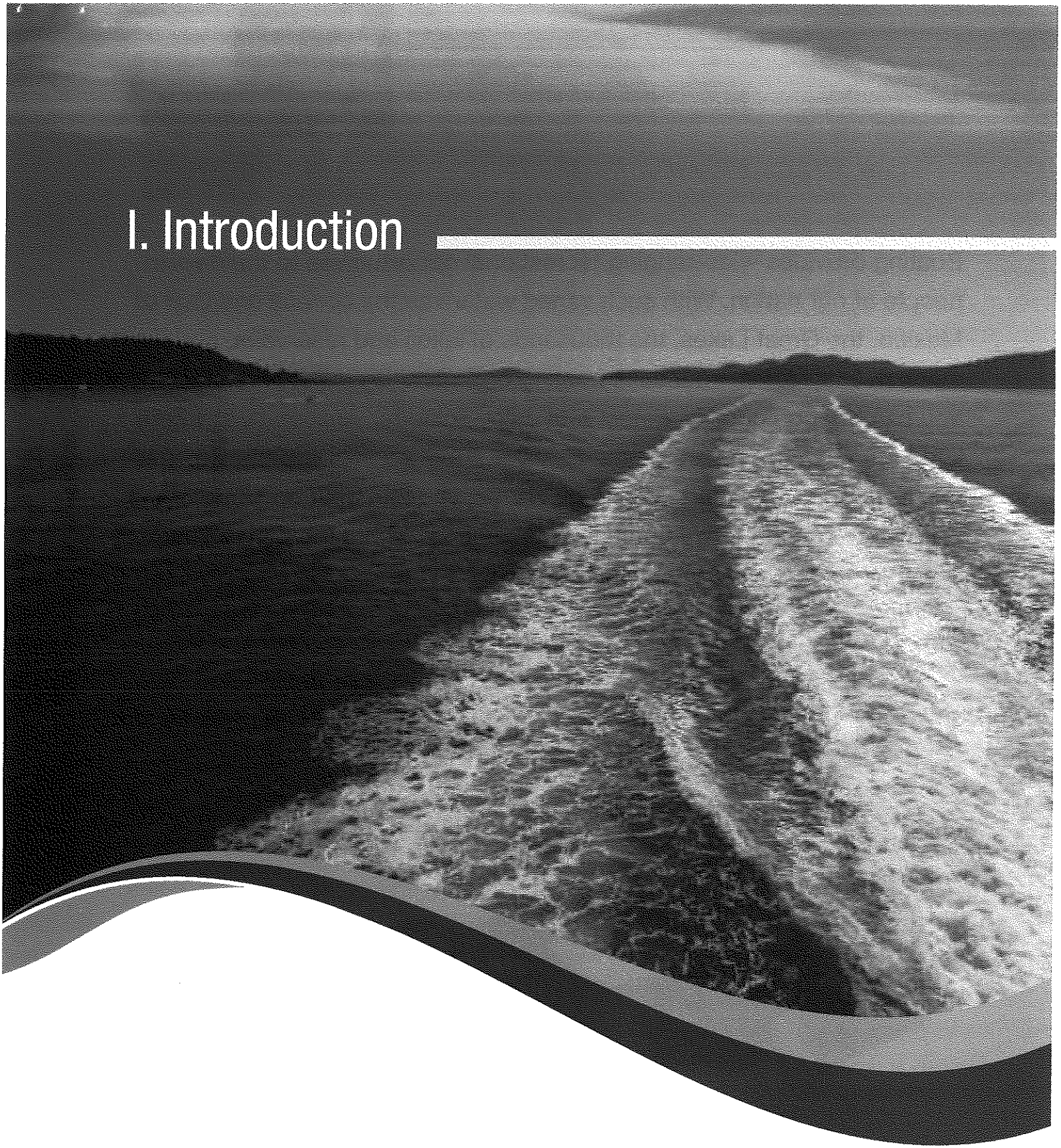


TABLE OF CONTENTS

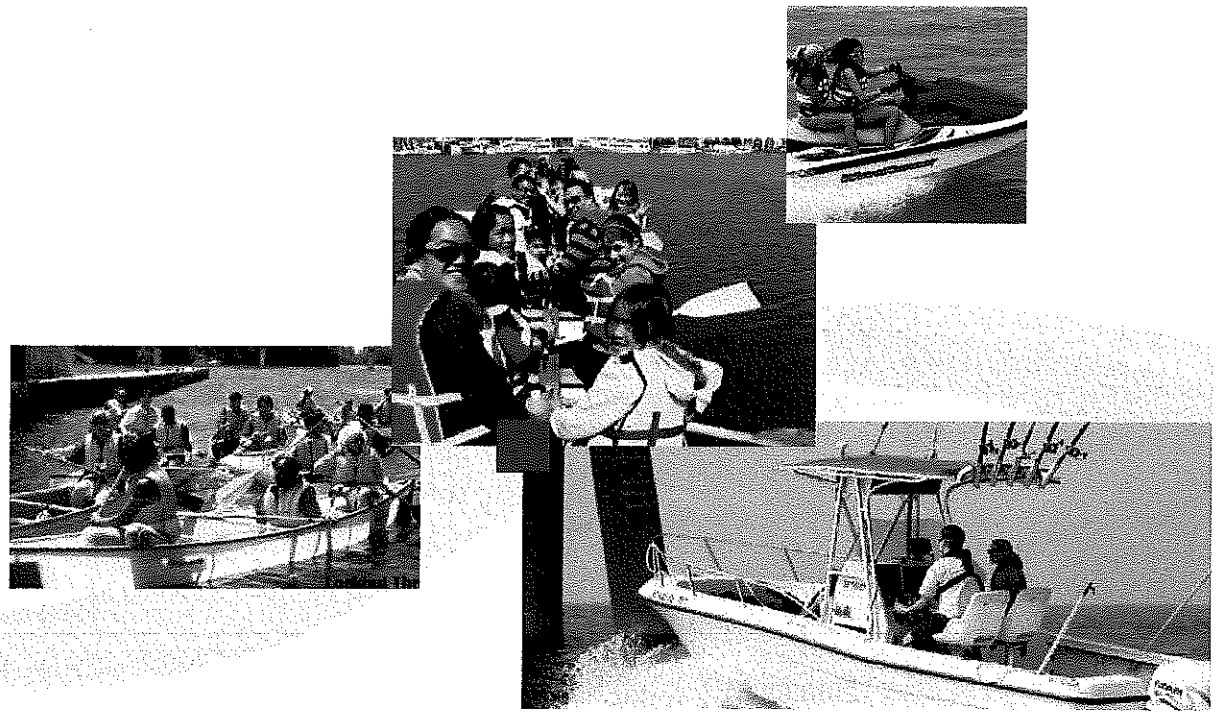
I. Introduction



Boating provides wide-ranging recreational opportunities to the diverse people of our nation. With such varied waters as the oceans and Gulf of Mexico, the Great Lakes, the thousands of lakes and reservoirs, and the many river systems, countless boating opportunities await your enjoyment. You can boat on pristine waters and enjoy solitude; you can boat where large numbers of boaters gather to share a more social experience; you can boat on calm waters or in large waves; you can boat on some of the best whitewater in the world; and you can boat where the pure enjoyment of nature and your surroundings will astound you.

Capt. David Rokes

Chief, USCG Office Of Auxiliary And Boating Safety



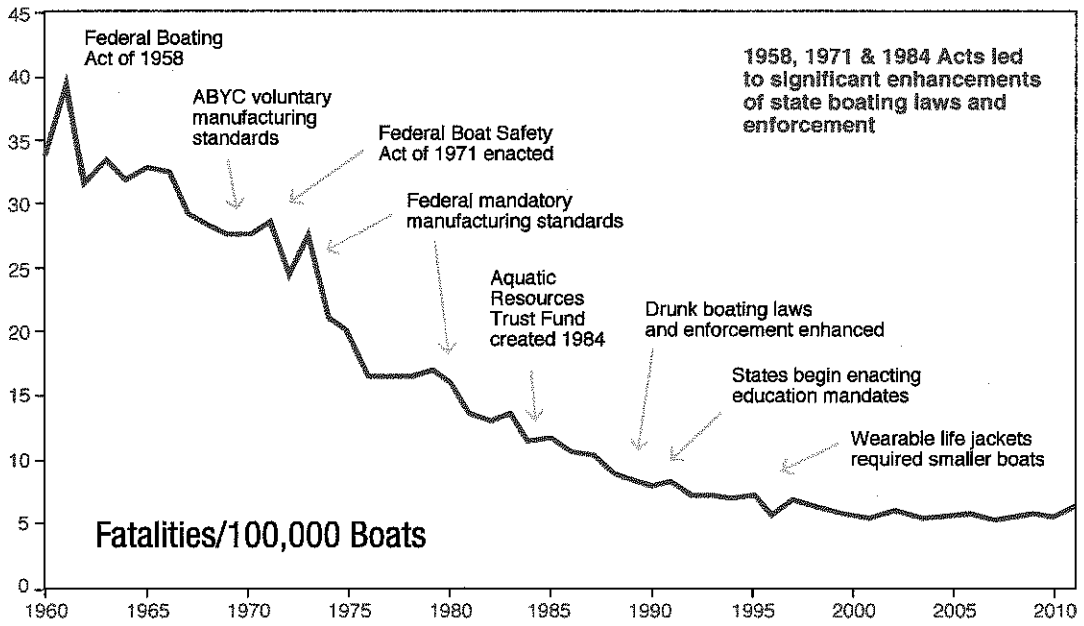
You will find every type of boat conceivable – and more are being invented every year! There are many different types of power boats, from small boats that can get you into shallow waters, through pontoon boats, medium-sized fast boats, houseboats, and full scale motor yachts. There is a great array of sailboats, from small sailboats that are fun and exciting, to sailboards and kiteboards, to medium-sized sailboats for those who enjoy the larger open bodies of water, to multi-masted cruising yachts. There are countless types of paddle craft, from traditional canoes to modern-age whitewater canoes, traditional kayaks to squirt boats, to sit-on-top kayaks, and now the rapid emergence of new varieties of paddleboards.

Across the recreational boating community, you will find people of all ages, cultures and backgrounds. You will find boaters who enjoy relaxing trips to help ease daily stresses; and you will also find boaters who enjoy the thrill of boating, whether it's sailing in stiff winds, catching a great fish, participating in towed water sports, or enjoying some great whitewater.

Boating offers all of this and more. It enhances our quality of life, environmental awareness, health, and economy. Did you know that there are hundreds of thousands of jobs that are directly related to recreational boating? It's a huge industry, and it's one that is producing economic and fiscal (e.g., tax revenues) impacts throughout the country. Boating supports significant tourism industries in many states.

The recreational boating system was developed and is maintained by a combination of different public and private organizations. This system includes access to boating waters (e.g., launch sites, navigation rules and signs, dredging); boating facilities (e.g., harbors, marinas, clubs); safety, rescue, and law enforcement; boat and boating equipment manufacturing and sales; and repair and storage. To improve the recreational boating opportunities in America, effective and productive partnerships have been formed among boating agencies, organizations, stakeholders, and local communities. These partnerships include the boaters themselves; volunteer service organizations such as the U.S. Power Squadrons and U.S. Coast Guard Auxiliary; federal, state and local government entities that provide and maintain facilities and services; the many different components of the

Figure 1. Changes in Boating Fatalities, 1960 - 2010

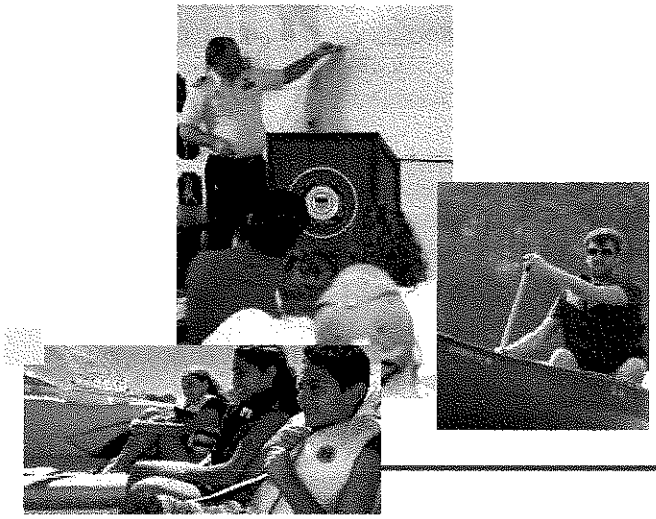


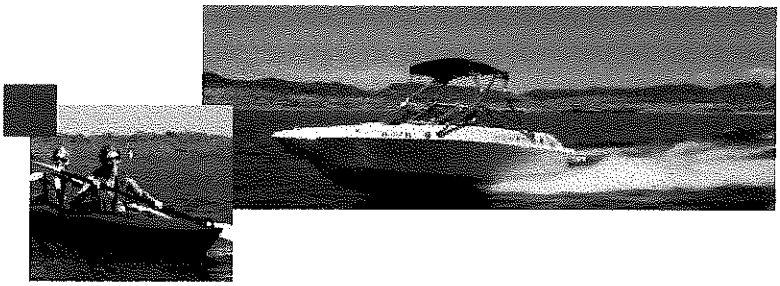
boating industries such as the manufacturers, retailers, marinas, service providers, and more; and centers of research and education.

Within the federal government, many agencies are involved in recreational boating. These include the U.S. Fish & Wildlife Service, the U.S. Army Corps of Engineers, the National Park Service, the Bureau of Land Management, the U.S. Forest Service, the Bureau of Reclamation, the National Oceanic and Atmospheric Administration, as well as the U.S. Coast Guard, among many others.

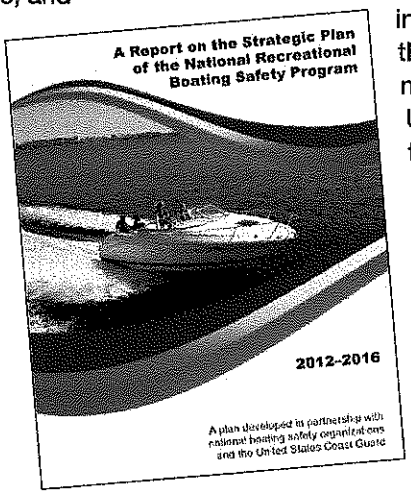
One key U.S. Coast Guard (USCG) responsibility relating to recreational boating is working in partnership with the states and numerous other organizations to administer the National Recreational Boating Safety (RBS) Program. The RBS Program mission is: "To ensure the public has a safe, secure, and enjoyable recreational boating experience by implementing programs designed to minimize the loss of life, personal injury, and property damage while cooperating with environmental and national security efforts."

This partnership program has produced important results since its inception in 1971. The number of boating deaths dropped for decades from the early 1970s to the later 1990s. This was a notable success in itself, especially given that the number of boats bought and used grew significantly during that period.



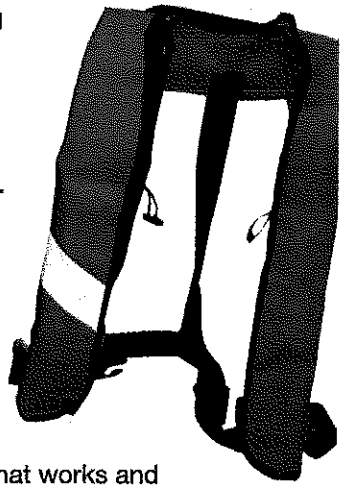


However, it is vital to reduce further recreational boating accidents and related casualties. Since the late 1990s, the decline in boating casualties appears to have leveled off, remaining relatively constant at about 700 deaths per year. There have also been changes in the types, sizes, and characteristics of recreational boats that have significant safety and facility supply implications. The number of registered recreational vessels plateaued during the past decade and has even begun to decrease. Conversely, the number of paddle boats (kayaks and paddleboards) has been growing during this period. There has also been a change in the ratio of registered to non-registered vessels.

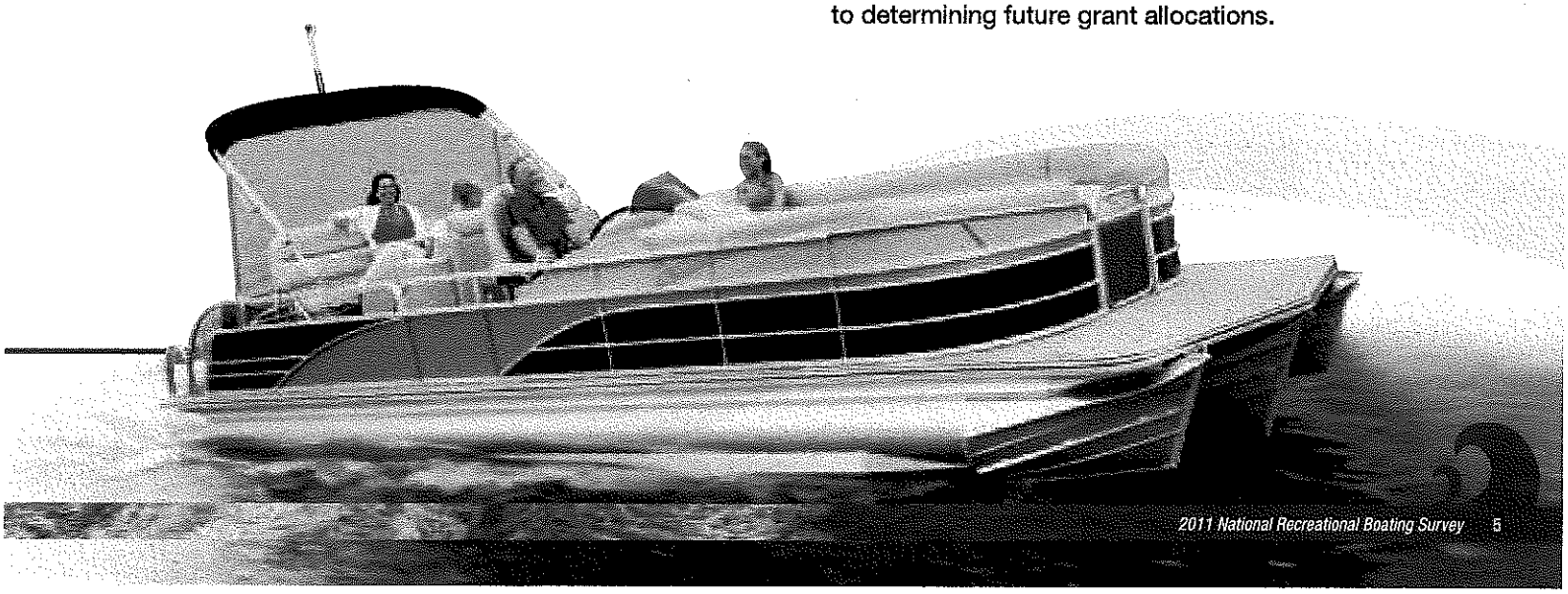


To reduce further the number of boating casualties (deaths and injuries combined), the National RBS Program continues to work to develop a "safety culture" among boaters through outreach and education, regulation, and enforcement. The primary goal of the Program's Strategic Plan for 2012-2016 is to reduce deaths and injuries to specified levels and to decrease property damage that could be associated with recreational boating. The Program thus supports developing and communicating branded messages that encourage positive behaviors, which will ultimately enhance public safety and achieve the program's goals.

A key strategy of the National RBS Program is to motivate greater state participation in boating safety efforts. To execute the National RBS Program and garner more participation from states, the USCG grants funds to eligible states that are approved to implement their own state-run recreational boating safety programs. To support this strategy, the USCG strives to improve program efficiency and effectiveness continuously by setting well-defined, results-based performance objectives; developing targeted strategies in support of those objectives; and collecting valid and reliable information to assess performance.



The USCG also grants Program funds to eligible national non-profit organizations. Organizations that receive these funds implement their own boating safety strategies, along with measures of their effectiveness. Such measures are critical to knowing what works and to determining future grant allocations.



Decades ago, Congress directed the USCG to conduct research in order to obtain valid data about boating activity and about which initiatives are effective in enhancing safety. We've conducted five national boating surveys in the past 40 years to help us to do just that. From those past surveys, we learned a great deal about both the types of data that were needed and improved ways to gather that data. We also learned that we needed to develop a new survey that would not only improve the quality and usability of the data, but also provide for multiple partners to participate in its development and use after the data was gathered. This would mean that other boating surveys could be combined into this new survey, thus reducing the number of surveys that the public would be subjected to and decreasing the costs for many organizations.

The new National Recreational Boating Survey (NRBS) does all of this. It was conceptualized with the boating industry and academia, which brought together two great teams for this project. The first team comprised a large number of representatives from all components of the boating community who provided advice on the different types of data needed to enhance their aspects of boating. The second team, comprised of survey scientists, recommended the methods for survey implementation. These teams offered recommendations regarding survey objectives, questions and sampling methods.

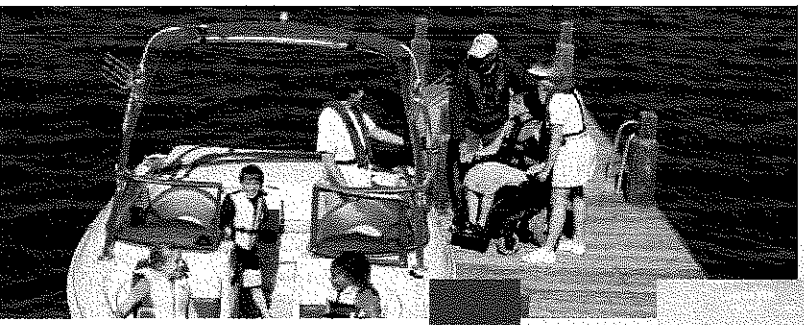
As you read this report, you will see a wealth of information that has never been gathered before, but is crucial to boating, along with improvements in the quality of the data gathered. This information includes how many people participate in boating, the numbers of different types and sizes of vessels that are owned in different regions of the country, as well as how often vessels are used, and much more. With this data, we will be able to better measure the effectiveness of strategies we implement and then refine them to be more effective in creating a better boating environment for the nation through safety programs, new or improved boating facilities, improvement in the boating industry, or other initiatives.

About This Report

This is the first in a series of reports that will convey the results of and describe tools to be produced from the newly designed and implemented NRBS. This report focuses on overall boating participation, boat ownership, the types of boats used, and the amount of time that boats are used (e.g., person-hours on recreational boats) for different regions of the country during 2011. Boating person-hours represent the hours of exposure to boating incidents (in short "exposure hours"), and the estimated numbers produced by NRBS are already being used to assess the effectiveness of efforts to reduce boating deaths and accidents.

Section I provides an overview of the objectives and methodology that guided the 2011 Survey. An in-depth description of the methodology will be available by March 1, 2013 on the U.S. Coast Guard's Boating Safety Resource Center's web site: http://www.uscgboating.org. This detailed information will include: (1) telephone and mail survey instruments, (2) how the instruments were pre-tested; (3) mail and telephone survey sample design, procurement and sample allocation; (4) administration of the mail survey – mailings, reminders, data entry; (5) telephone data collection – interviewer training, respondent selection, call backs, data entry; (6) response rates; and, (7) weighting factors applied to the data. The data from the 2011 telephone and mail surveys will be available to download by March 1, 2013, also through the Boating Safety Resource Center's web site.

Section II below provides major findings of the National Recreational Boating Survey, some in chart format. To facilitate referencing, supporting tables immediately follow each topic addressed. Section III summarizes key results and provides some report conclusions.



NRBS Purpose, Objectives and Methodology

The number and types of boats, where they are used (i.e., rivers, oceans, lakes), the activities for which they are used, as well as boating policies and regulations, can vary significantly from state to state. Recognizing this, the NRBS was designed (through size and distribution of survey sample) to capture sufficient data for each state to produce accurate state-level estimates of boating participation, types of boats owned and how much they are used, boater demographics, and boating safety behaviors, and education. The NRBS produced national, regional, and state estimates of boat ownership and boating participation.

An important NRBS function is to provide reliable and valid measures of the effectiveness of the program elements of the RBS Program's strategic plan. Central to achieving this is the ability to produce valid, accurate, and consistent estimates of boaters' exposure hours - that is, the total number of hours boaters (e.g., kayakers, sailboaters) spend out on the water. Risk ratios for boating incidents (accidents and fatalities) will be calculated by dividing accident numbers by the exposure hours from the NRBS. These risk ratios will be used to evaluate safety programs and to track and analyze accident trends. They will be similar to the ratio of accidents and deaths per 100 million vehicle miles traveled used by the U.S. National Highway Traffic Safety Administration to identify trends and assess the performance of highway safety programs.

The importance of a continuing national survey of both the general population and boat owners was confirmed during a 2004 Recreational Boating Research Symposium organized by Michigan State University. Participants concluded that sample sizes need to be large enough to ensure an adequate number of survey responses to provide regional and state estimates and to allow analyses of different boater segments (e.g., owners of non-registered boats, inactive boaters). Symposium participants

agreed that boating safety (e.g., exposure measures) should be the main topic for the survey, but they also recommended that the survey collect other types of data (e.g., spending on boats and boating trips to estimate economic impacts) that would be useful to other agencies, organizations, and the boating industry.

The NRBS was designed to collect sufficient and reliable data to:

1. Estimate boating participation rates on a national and state level:
   - Total annual boating participation by boat owners and non-owners,
   - Total annual boating participation by boat type, and
   - Total boat ownership including registered and non-registered vessels.

2. Measure recreational boating exposure rates:
   - Number of days different sizes and types of boats were out on the water,
   - Average number of hours these boats were out on the water, and
   - The average number of persons on board boats while they were out on the water.

3. To determine boat ownership and boat use rates:
   - Number of registered and non-registered vessels,
   - Size and types of boats,
   - Boat characteristics (e.g., hull, propulsion), and
   - Boat use rates and number of days they are used.

4. Estimate economic significance and impact of recreational boating:
   - Money spent annually to maintain boats, and
   - Money spent on boating trips.

5. Assess boating safety and awareness behaviors:
   - Participation in safety courses.

6. Evaluate the incidence of negative events:
   - Actual and reported accidents that cause injury and boat damage.

7. Yield precise, state-level estimates of boating activities and behaviors critical to state program and policy development.

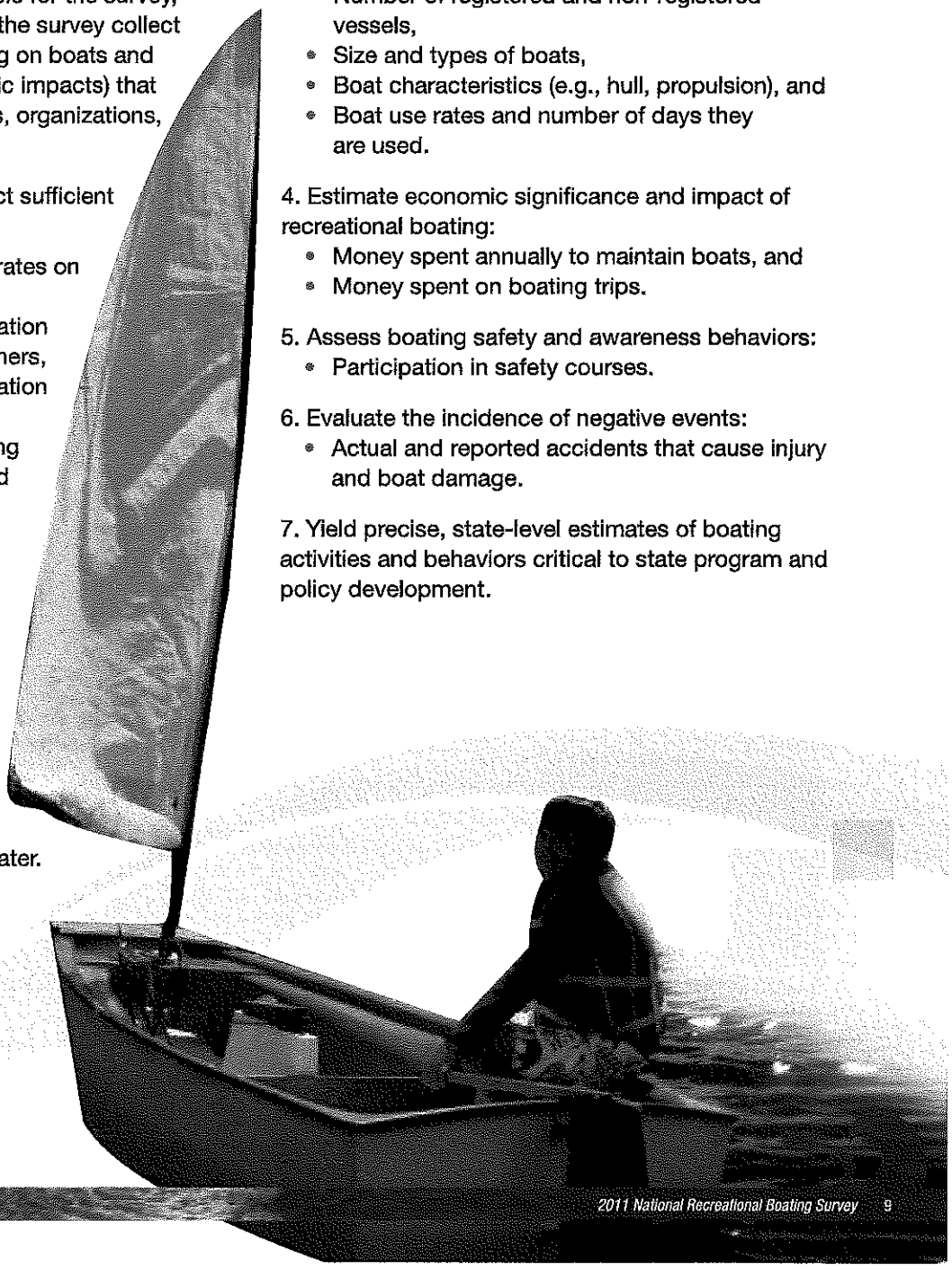


Table 1. Overview of the NRBS Survey Versions and Data Collection Modes

Survey	Mode(s)	Sample source(s)	Universe		Respondent	Informational Purpose
2011 Boat Owner Survey	Phone	Random Digital Dial (RDD)	Privately-owned recreational boats in all states	Non-registered recreational boats in all states	Member of boat-owning household	Ownership and participation Economic impact of boating Boat statistics
				Registered recreational boats in all states	Member of boat-owning household	Exposure (2011 only[1])
	Mail	Registry Lists	Privately-owned recreational boats	Registered recreational boats in states sharing lists	Registered boat owner	
2012 Trip Survey	Web Phone	Panel	Privately-owned recreational boats		Boat owner panelist	Exposure Safety awareness and behaviors Economic impact of boating Negative events
2011 & 2012 Participant Survey	Phone	RDD		U.S. households	Any adult household member	Ownership and participation Safety awareness and behaviors
			Boating participants	U.S. child (<16) boating population	Any adult household member (proxy)	
				U.S. adult boating population	Adult boater	
			Rented boats		Adult boater: rented boat	Exposure Safety awareness and behaviors Economic impact of boating Negative incidents

[1] Exposure data was collected using the Boat Owner Survey in 2011 only; in subsequent iterations of the NRBS, exposure hours will be collected via the Trip Survey.

NRBS Methodology

To accomplish these objectives, the 2011 NRBS was designed as a system of two surveys—Participant Survey and Boat Owner Survey. The Participant Survey is, and will continue to be, conducted every two years, as a population-based survey of U.S. residents regarding their boating participation and related behaviors. In 2011, the Boat Owner Survey utilized mail and telephone surveys to collect information from the owners of both registered and non-registered boats. In 2012, the once-a-year administered Boat Owner Survey was replaced by monthly trip surveys of a panel of boat owners that were conducted by phone and via web application. The panel of boat owners was considered a more efficient way to collect accurate data about the number, timing, and duration of boating trips, as well as how much was spent on these trips. The panelists were recruited as part of the 2011 Boat Owner Survey. Table 1 illustrates the structure of the NRBS.

The Participant Survey

To estimate participation for the 2011 boating season, a subsample of telephone households was selected. The sub-sampling was designed to gather participation data from at least 320 households per state. Table 2 presents the sample of households, by state, where participation data was collected.

Telephone interviewers screened households responding to the telephone survey to identify individuals who were at least 16 years old (considered adult for the purpose of this study) and if the household owned any boats; interviewers then proceeded to collect boat information from a household member knowledgeable about the boats that the household owned. The Participant Survey was then administered to a randomly selected member of the household, age 16 or older, regardless of whether the household owned any boats. Data relating to participation in boating by children residing in the household was collected by proxy from a person at least 16 years old. The surveys were administered in both English and Spanish.

The Participant Survey focused on whether respondents went out on the water in recreational boats in 2011, the types of boats they went out on, and the boating activities they engaged in while out on boats. Additionally, it collected information on boater demographics.

Table 2. Sample Allocation by State

State, Territory	Population in 1,000s	Registered Vessels	Estimated Rate of Boat-Owning Households[1]	Sample Allocation			Sample Completes		
				Mail	Phone	Total	Mail	Phone	Total
Alabama	4,662	273,527	25%	360	376	736	341	391	732
Alaska	686	48, 605	31%	123	200	323	143	349	492
Arizona	6,500	134,583	9%	213	200	413	152	213	365
Arkansas	2,855	208,752	32%	298	375	673	215	377	592
California	36,757	755,972	9%	0	654	654	0	668	668
Colorado	4,939	99,615	9%	156	200	356	110	256	366
Connecticut	3,501	119,496	15%	234	200	434	291	289	580
Delaware	873	43,091	21%	82	200	282	82	215	297
District of Columbia	592	4,363	9%	0	200	200	31	122	153
Florida	18,328	986,124	23%	695	677	1,373	703	704	1,407
Georgia	9,686	364,661	16%	444	330	774	383	320	703
Hawaii	1,288	12,729	9%	0	200	200	47	233	280

[1] Many states do not require registration for manually propelled (person-propelled) and sail-propelled boats.

Table 2. Sample Allocation by State *(Cont'd)*

State, Territory	Population in 1,000s	Registered Vessels	Estimated Rate of Boat-Owning Households[1]	Sample Allocation			Sample Completes		
				Mail	Phone	Total	Mail	Phone	Total
Idaho	1,524	80,845	23%	0	342	342	0	392	392
Illinois	12,902	419,470	14%	482	323	804	505	324	829
Indiana	6,377	253,313	17%	0	523	523	0	472	472
Iowa	3,003	237,212	34%	311	419	729	295	415	710
Kansas	2,802	103,293	16%	210	200	410	219	241	460
Kentucky	4,269	181,107	18%	309	251	559	291	253	544
Louisiana	4,411	306,497	30%	366	441	807	2	650	652
Maine	1,316	96,918	32%	203	257	459	283	405	688
Maryland	5,634	184,796	14%	319	215	535	337	354	691
Massachusetts	6,498	186,140	12%	321	200	521	358	374	732
Michigan	10,003	734,503	32%	559	705	1,264	714	796	1,510
Minnesota	5,220	801,165	36%	0	1,346	1,346	0	1,378	1,378
Mississippi	2,939	191,676	28%	294	336	630	305	335	640
Missouri	5,912	325,346	24%	398	394	792	361	411	772
Montana	967	83,199	36%	0	434	434	7	459	466
Nebraska	1,783	74,244	18%	157	200	357	111	201	312
Nevada	2,600	58,423	10%	77	200	277	54	227	281
New Hampshire	1,316	76,952	25%	0	350	350	0	378	378
New Jersey	8,683	190,311	9%	297	200	497	248	246	494
New Mexico	1,984	2,363	9%	0	200	200	31	208	239
New York	19,490	466,639	10%	514	280	794	584	373	957
North Carolina	9,222	378,078	18%	448	355	802	471	378	849
North Dakota	641	58,694	36%	152	215	367	163	236	399
Ohio	11,486	427,476	16%	481	355	836	548	408	956
Oklahoma	3,642	192,344	23%	308	296	604	265	294	559
Oregon	3,790	179,844	21%	303	268	571	443	356	799
Pennsylvania	12,448	375,518	13%	458	291	749	566	306	872
Rhode Island	1,051	39,134	16%	53	200	253	90	278	368
South Carolina	4,480	414,440	36%	404	570	974	381	558	939
South Dakota	804	57,682	31%	153	200	353	162	259	421
Tennessee	6,215	266,465	19%	374	306	680	404	324	728
Texas	24,327	615,956	11%	590	333	923	482	370	852
Utah	2,736	75,560	12%	130	200	330	119	267	386
Vermont	621	30,137	21%	35	200	235	69	350	419
Virginia	7,769	270,179	15%	385	270	655	430	305	735
Washington	6,549	280,075	19%	384	313	697	518	356	874
West Virginia	1,814	53,267	13%	80	200	280	48	235	283
Wisconsin	5,628	617,178	36%	493	696	1,189	583	787	1,370
Wyoming	533	27,329	22%	26	200	226	54	229	283
Puerto Rico	3,967	40,400	9%	26	200	226	21	223	244

[1] Many states do not require registration for manually propelled (person-propelled) and sail-propelled boats.

Approximately 1.65 million call attempts yielded 35,700 completed surveys including 20,140 participant surveys and 15, 560 boat owner surveys.

Boat Owner Survey

To ensure the accurate representation of registered and non-registered vessels of different types and sizes located in different states, the Boat Owner Survey was conducted using two different survey modes, telephone and mail.

The 2011 Boat Owner Survey collected information on the number, type(s) and size(s) of the boats that households owned; number, types and sizes of motors/engines; hull materials; characteristics of boat storage during the boating season and launch sites used (if any); and annual spending on boat maintenance, upkeep and storage. Questions needed to estimate exposure rates were included only in the telephone survey. These questions gathered the following information: number of days boat was taken out on the water; average number of hours boat was out on the water, and average number of people aboard the boat when it was used.

A mail version of the Boat Owner Survey was administered to a sample of registered and documented boat owners in 43 states, the District of Columbia and Puerto Rico that provided their boat registry information (i.e., the names and addresses of their registered boat owners). Mail surveys were conducted between November 2011 and February 2012.

Info-Link Technologies, Inc. provided the registered boat sample consisting of the count, names, and addresses of owners of registered boats by boat type in 43 states, Puerto Rico, and the District of Columbia. The size and distribution of the selected sample was designed to meet the following objectives:

- Overall boat number estimates with an error margin of ±1 percent at the 95 percent confidence level;
- Boat type estimates with an error margin of ±3 percent at the 95 percent confidence level;
- At least 200 boats per state, the District of Columbia and Puerto Rico;
- Recruitment of a boat owner panel to collect data related to 2012 boating outings.

Table 3. Boat Survey Sample and Completed Interviews by Boat Type

	Registered Boats		Completed Surveys/Interviews		
	Listed	Selected for Mail Survey	Mail	Telephone	Total
Power Boat <16 ft	3,121,539	5,941	1,429	1,920	3,349
Power Boat 16–20 ft	4,562,441	8,708	3,184	4,474	7,658
Power Boat 21–28 ft	1,435,749	5,135	1,852	1,742	3,594
Power Boat >28 ft	270,313	2,021	929	466	1,395
Sailboat ≤25 ft	205,132	2,099	930	677	1,607
Sailboat >26 ft	112,301	2,318	1,252	349	1,601
Pontoon Boat	801,466	2,811	1,410	904	2,314
Personal Water Craft (PWC)	1,279,095	4,806	1,083	1,339	2,422
Canoe	717,620[1]	2,287	315	2,858	3,173
Kayak			270	2,684	2,954
Other Boat			366	2,135	2,501
Total	1,2505,656	36,126	13,020	19,548	32,568

[1] Many states do not require registration for manually propelled (person-propelled) and sail-propelled boats.

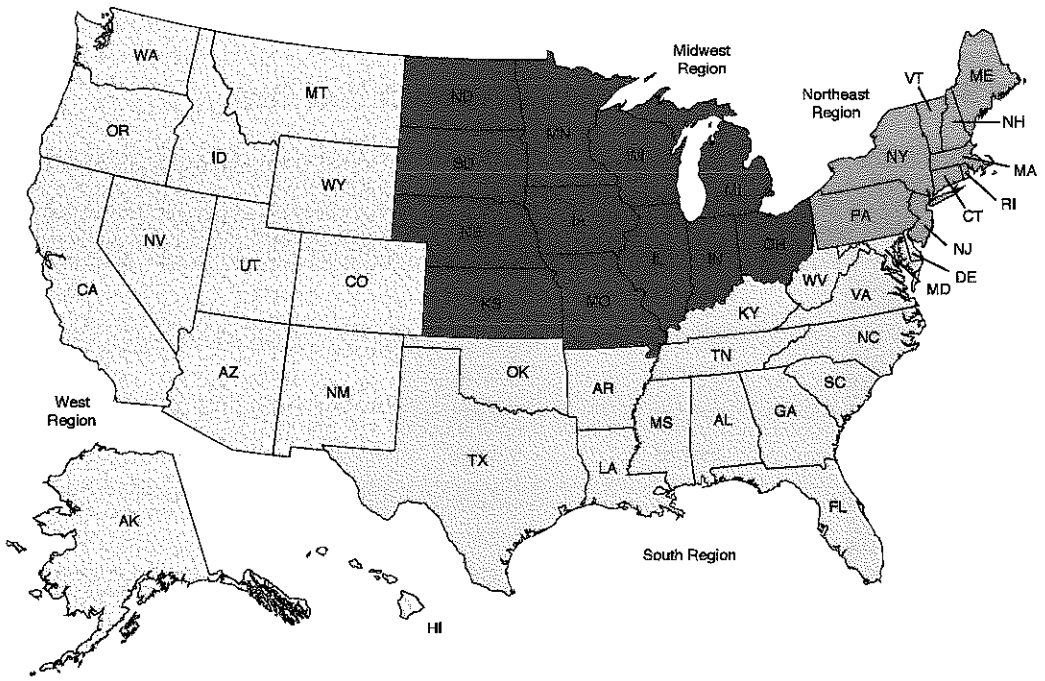
A special Random Digit Dial (RDD) general population telephone survey (cell and landline) was used to collect data from boat-owning households in all 50 states, the District of Columbia, and Puerto Rico. During the telephone survey, upon reaching a household, an adult member provided a roster of the boats owned by the household. Boats were stratified based on boat type and size, and one boat was randomly selected per household for further profiling. Rare boat types (e.g., large sailboats and power boats) were sub-sampled at a higher rate than more common boat types.

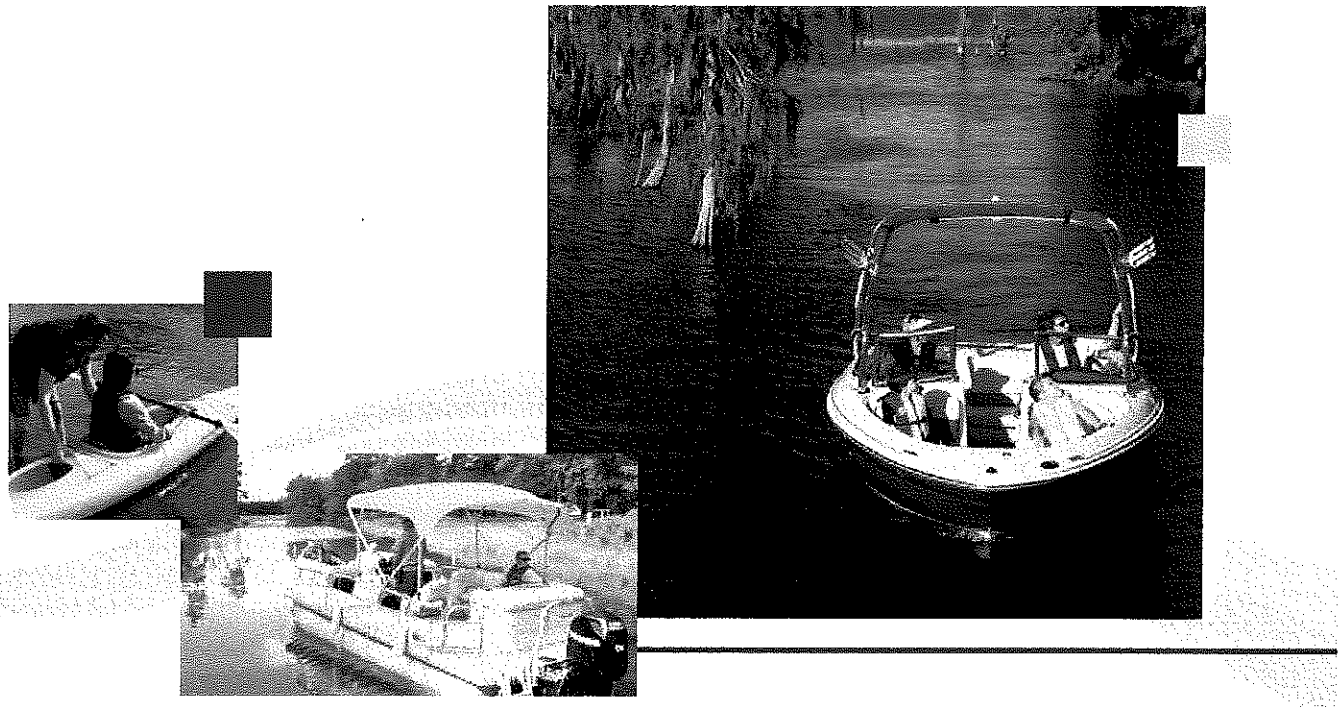
Table 2 shows how the boat owner sample was allocated across states, the District of Columbia, and Puerto Rico. The minimum sample size for achieving the desired level of precision (error margin ±3%) for boat types was 1,500. This goal was met for all but one boat type: power boat over 28 feet long. Table 3 provides registry counts, sample and completed interviews by boat type.

At the end of the 2011 Boat Owner (mail and phone) Survey, respondents were also asked if they would be willing to participate in a panel and be contacted on multiple occasions during 2012; these contacts were designed to gather more detailed information about their boating experiences. Those who agreed to join the panel became the sample for the monthly Trip Survey in 2012.

Approximately 32,570 households completed the boat owner survey either by mail (13,020), or telephone (19,550).

Figure 2. Survey Regions





Weighting and Rounding Errors

Having a representative sample of the population is crucial when conducting a survey. Weighting is normally used to make statistics (e.g., average number of boating days) computed from survey data more representative of the characteristics of the target population, in this case the U.S. population is based on 2010 Census data. In some situations, after a probability sample is drawn and survey is completed, researchers stratify the sample according to supplementary information about the sampled population. This process is often called post stratification. Post stratification and weighting are used to adjust for a known or unknown difference between the response group (e.g., NRBS respondents) and the population.

In the case of the NRBS, every effort was made to produce the most representative sample possible of the U.S. population. However, regardless of these efforts, some persons in the population were oversampled and under-sampled and certain characteristics (e.g., age, gender, state of residence) were distributed differently than they were in the population. Post-stratification weights were estimated and applied to make the sample (i.e., survey respondents) more representative of the population, and to provide greater confidence in the validity of the population parameters (e.g., average number of boating days).

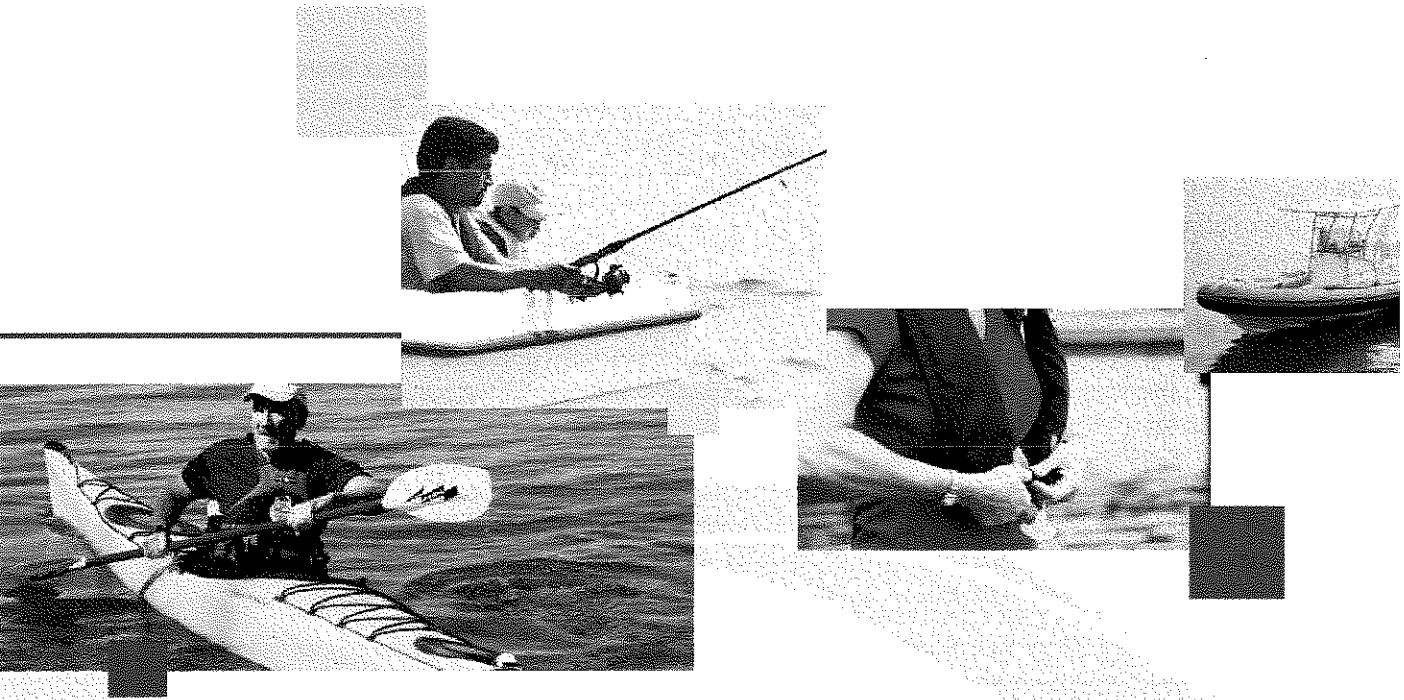
To compute individual-level boating participation statistics, the participant sample was post-stratified. This means that respondents were classified (e.g., by state of residence, age, gender) based on the data collected during the survey. Weights were then calibrated to reflect the U.S. population distributions by state, age, and gender based on the 2010 Census counts.

The process of calibrating these combinations of weights to represent the U.S. population is called iterative post-stratification or iterative proportional fitting. When the weights are first adjusted to reflect U.S. Census counts on one dimension, such as age, they often will not reflect the gender dimension.

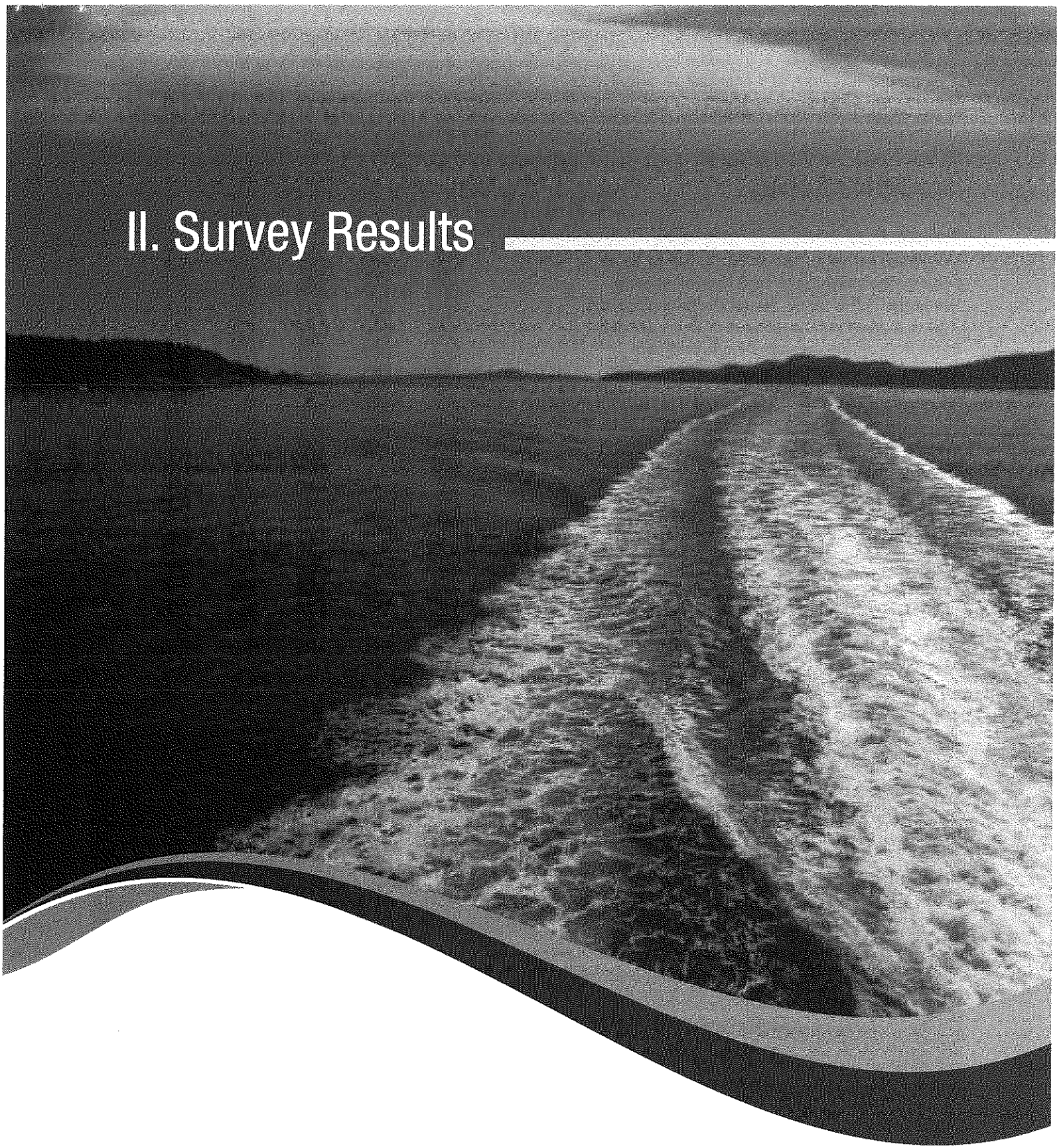
The subsequent adjustments to reflect the gender and state dimensions will alter the previously age-adjusted weights, forcing another iteration to correct them. This iterative process will eventually converge towards a stable set of weights that will reasonably reflect the U.S. Census counts on all dimensions.

Occasionally, the iterative procedure leading to the calibrated weights will take significant processing time. It is common practice to define the relative stopping rule as a relative difference between the achieved Census control total and the actual control total itself. A standard stopping rule often used is 0.001. Therefore, a compromise must often be found between the processing time one is willing to tolerate, and the precision with which the Census counts will be matched. When this iterative algorithm is stopped, the Census counts are generally better matched on some dimensions than others.

The number of recreational boating participants is generally estimated by summing the weights associated with all individuals who belong to the estimation domain of interest, and who reported having participated in recreational boating. The numbers will not always add up accurately to the totals of a higher level of aggregation (e.g., the sum of state numbers may not add up to the region total) due to the loss of precision created by the iterative calibration process. These rounding errors are why, in some tables, the sum of regional numbers differs very slightly (less than 0.05%) from the overall total for the country.



II. Survey Results



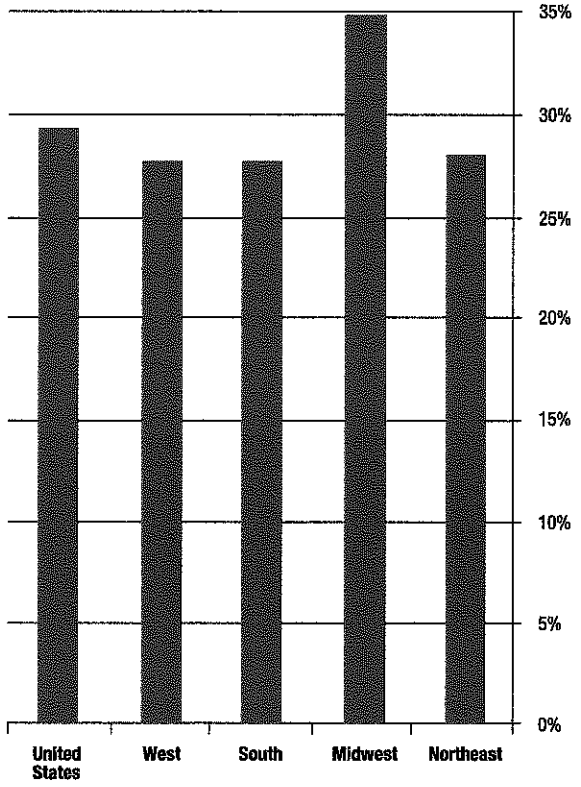
Boating Participation

Household Participation in Recreational Boating

Previous research has shown that some individuals do not perceive fishing from a boat or canoeing/kayaking to be a form of boating. Therefore, in this study, respondents were asked a general question if anyone in their household spent time on a recreational boat, and two specific questions: if anyone in the household fished from a boat, and if anyone used a canoe or kayak in 2011.

About 29%, or 34.2 million, of the estimated 116.7 million U.S. households had at least one member who boated in 2011.

Figure 3: Household Participation in Recreational Boating in 2011 in U.S. Regions



More than a third (35%), or 12 million, of all boating households in the U.S. were located in the South region.

The overall household boating participation rate was highest in the Midwest, at 34.6%. The Midwest also had the highest percentage (17.4%) of households with at least one person who fished from a boat.

The Northeast region had the highest percentage (14.7%) of households with one or more persons who either canoed or kayaked in 2011. Canoeing and kayaking were especially popular in Maine (31.8% of households) and New Hampshire (31.0% of households) where at least one member participated in that form of boating.

California (3 million) and Florida (2.5 million) had the highest numbers of households participating in boating, while Alaska (53.2%) and Minnesota (50.7%) had the highest overall percentage of boating households.

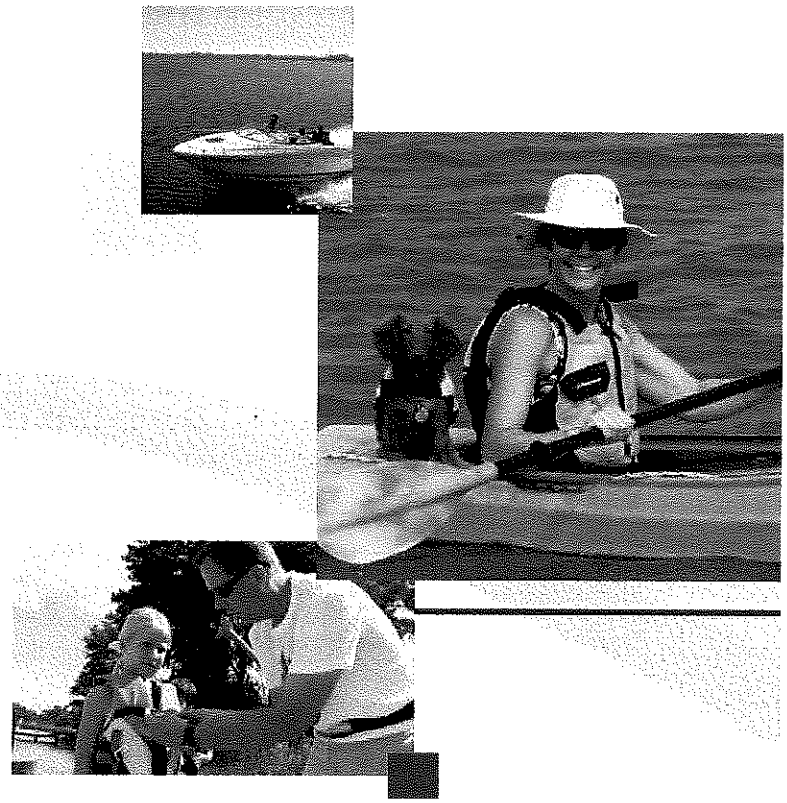


Table 4: Household Participation in Recreational Boating in 2011 in the U.S. Regions

Regions	Households in the U.S. (2010 U.S. Census)		Household Participation in Recreational Boating in 2011					
	Number (000)	Percent (%)	Number (000)	Percent (%)	Overall Participation Rate[1] (%)	Spent Time on a Recreational Boat (%)	Fished from a Recreational Boat (%)	Used a Canoe/Kayak (%)
United States	**116,716**	**100.0**	**34,210**	**100.0**	**29.3**	**26.3**	**14.6**	**11.6**
Northeast	21,215	18.2	5,925	17.3	27.9	24.8	11.7	14.7
Midwest	26,216	22.5	9,087	26.6	34.6	32.1	17.4	13.2
South	43,610	37.4	12,091	35.3	27.7	24.4	16.0	10.2
West	25,675	22.0	7,107	20.8	27.6	24.8	11.7	9.8

[1] This represents the number of boating households per 100 households.

Table 5: Household Participation in Recreational Boating in 2011 in the States in the Northeast Region

Northeast States	Households in Northeast Region (2010 U.S. Census)		Household Participation in Recreational Boating in 2011					
	Number (000)	Percent (%)	Number (000)	Percent (%)	Overall Participation Rate[1] (%)	Spent Time on a Recreational Boat (%)	Fished from a Recreational Boat (%)	Used a Canoe/Kayak (%)
Northeast Region	**21,215**	**100.0**	**5,925**	**100.0**	**27.9**	**24.8**	**11.7**	**14.7**
Connecticut	1,371	6.5	429	7.2	31.3	28.4	12.7	14.5
Maine	557	2.6	282	4.8	50.6	45.9	22.9	31.8
Massachusetts	2,547	12.0	828	14.0	32.5	30.0	11.2	21.4
New Hampshire	519	2.4	221	3.7	42.5	39.5	15.9	31.0
New Jersey	3,214	15.2	778	13.1	24.2	22.7	10.1	11.7
New York	7,318	34.5	1,742	29.4	23.8	20.2	8.9	9.8
Pennsylvania	5,019	23.7	1,420	24.0	28.3	24.8	14.8	16.4
Rhode Island	414	1.9	118	2.0	28.5	26.5	11.3	13.5
Vermont	256	1.2	107	1.8	41.9	38.3	19.1	28.7

[1] This represents the number of boating households per 100 households.

Table 6: Household Participation in Recreational Boating in 2011 in the States in the Midwest Region

Midwest States	Households in Midwest Region (2010 U.S. Census)		Household Participation in Recreational Boating in 2011					
	Number (000)	Percent (%)	Number (000)	Percent (%)	Overall Participation Rate[1] (%)	Spent Time on a Recreational Boat (%)	Fished from a Recreational Boat (%)	Used a Canoe/Kayak (%)
Midwest Region	**26,216**	**100.0**	**9,087**	**100.0**	**34.6**	**32.1**	**17.4**	**13.2**
Illinois	4,837	18.5	1,359	15.0	28.1	24.6	10.9	11.6
Indiana	2,502	9.5	851	9.4	34.0	30.5	14.9	15.7
Iowa	1,222	4.7	379	4.2	31.0	28.0	15.3	14.9
Kansas	1,112	4.2	282	3.1	25.4	23.1	10.3	6.5
Michigan	3,873	14.8	1,417	15.6	36.6	36.4	20.4	17.6
Minnesota	2,087	8.0	1,058	11.6	50.7	47.6	29.5	18.0
Missouri	2,376	9.1	817	9.0	34.4	30.9	18.5	14.2
Nebraska	721	2.8	222	2.4	30.8	27.8	17.9	5.0
North Dakota	281	1.1	110	1.2	39.0	37.5	23.9	8.9
Ohio	4,603	17.6	1,409	15.5	30.6	29.2	14.5	8.8
South Dakota	322	1.2	91	1.0	28.2	26.4	17.0	6.2
Wisconsin	2,280	8.7	1,092	12.0	47.9	44.1	26.7	16.2

[1] This represents the number of boating households per 100 households.

Table 7: Household Participation in Recreational Boating in 2011 in the States in the South Region

South States	Households in South Region (2010 U.S. Census)		Household Participation in Recreational Boating in 2011					
	Number (000)	Percent (%)	Number (000)	Percent (%)	Overall Participation Rate[1] (%)	Spent Time on a Recreational Boat (%)	Fished from a Recreational Boat (%)	Used a Canoe/Kayak (%)
South Region	**43,610**	**100.0**	**12,091**	**100.0**	**27.7**	**24.4**	**16.0**	**10.2**
Alabama	1,884	4.3	507	4.2	26.9	22.8	15.9	9.1
Arkansas	1,147	2.6	388	3.2	33.8	30.5	21.7	12.0
Delaware	342	0.8	86	0.7	25.1	23.8	12.8	8.1
District of Columbia	267	0.6	61	0.5	22.7	21.1	6.0	12.1
Florida	7,421	17.0	2,493	20.6	33.6	30.4	19.2	15.5
Georgia	3,586	8.2	982	8.1	27.4	24.6	12.3	10.4
Kentucky	1,720	3.9	568	4.7	33.0	28.2	19.0	9.5
Louisiana	1,728	4.0	510	4.2	29.5	25.9	22.1	7.9
Maryland	2,156	4.9	673	5.6	31.2	26.8	17.3	14.1
Mississippi	1,116	2.6	316	2.6	28.3	23.5	16.8	6.0
North Carolina	3,745	8.6	850	7.0	22.7	20.6	16.0	6.3
Oklahoma	1,460	3.3	349	2.9	23.9	20.1	14.4	7.7
South Carolina	1,801	4.1	650	5.4	36.1	31.5	23.3	11.4
Tennessee	2,494	5.7	805	6.7	32.3	26.8	18.3	8.8
Texas	8,923	20.5	1,856	15.4	20.8	18.5	11.4	6.9
Virginia	3,056	7.0	828	6.8	27.1	23.7	13.9	14.9
West Virginia	764	1.8	169	1.4	22.1	20.8	11.8	6.3

[1] This represents the number of boating households per 100 households.

Table 8: Household Participation in Recreational Boating in 2011 in the States in the West Region

West States	Households in West Region (2010 U.S. Census)		Household Participation in Recreational Boating in 2011					
	Number (000)	Percent (%)	Number (000)	Percent (%)	Overall Participation Rate[1] (%)	Spent Time on a Recreational Boat (%)	Fished from a Recreational Boat (%)	Used a Canoe/Kayak (%)
West Region	**25,675**	**100.0**	**7,107**	**100.0**	**27.6**	**24.8**	**11.7**	**9.8**
Alaska	258	1.0	137	1.9	53.2	48.6	37.9	17.2
Arizona	2,381	9.3	512	7.2	21.5	20.8	6.0	7.4
California	12,577	49.0	3,019	42.5	24.0	21.3	8.7	8.7
Colorado	1,973	7.7	576	8.1	29.2	23.1	14.7	12.0
Hawaii	455	1.8	127	1.8	28.0	22.5	10.7	13.3
Idaho	579	2.3	203	2.9	35.0	30.9	15.6	12.9
Montana	410	1.6	164	2.3	40.1	37.5	26.0	14.5
Nevada	1,006	3.9	216	3.0	21.5	20.0	9.9	4.9
New Mexico	791	3.1	150	2.1	18.9	15.2	12.8	6.2
Oregon	1,519	5.9	497	7.0	32.7	30.7	18.9	12.0
Utah	878	3.4	269	3.8	30.6	27.1	14.3	10.0
Washington	2,620	10.2	1,158	16.3	44.2	41.0	18.2	14.6
Wyoming	227	0.9	80	1.1	35.1	33.5	23.7	11.2

[1] This represents the number of boating households per 100 households.

Individual Participation in Recreational Boating

Tables below report the percentage of persons in the U.S. who went out on the water on boats, as well as those who spent time on boats while they were docked. A very small percentage (less than 6%) of individuals spent time only on docked boats in 2011.

The individual boating participation rate was greatest in the Midwest, at 32% (as compared with the national participation rate of 23.8%), but the South region had the highest number of boating participants, 24.7 million, which constituted about a third of all boating participants in the U.S.

States with highest individual participation rates included Minnesota (51.8%), Wisconsin (46.4%), Maine (44.6%), Vermont (41.1%), Alaska (39.3%), and North Dakota (37.0%). States with the lowest individual participation rates included New Mexico (14.3%), Texas (15.0%), and New Jersey (16.9%).

Figure 4: Individual Participation in Recreational Boating in 2011 in U.S. Regions

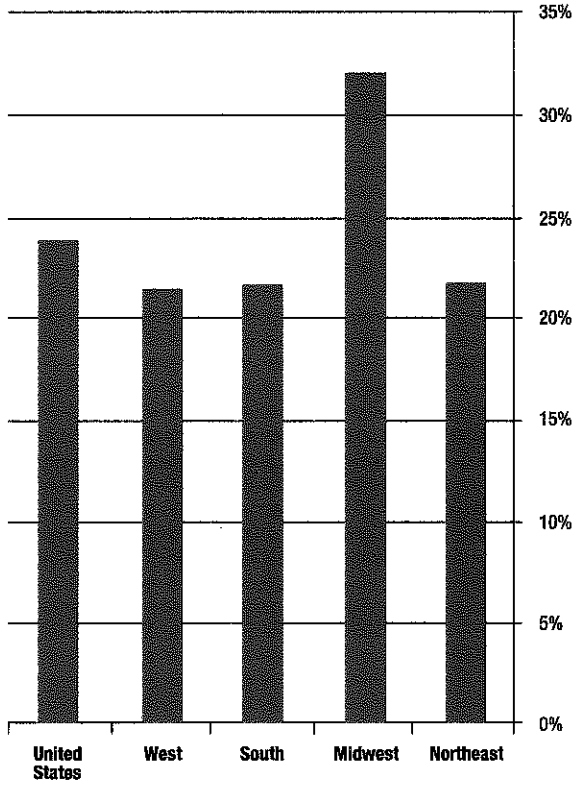


Table 9: Individual Participation in Recreational Boating in 2011 in the U.S. Regions

Regions	Population in the U.S. (2010 U.S. Census)		Individual Participation in Recreational Boating in 2011				
	Number (000)	Percent (%)	Number (000)	Percent (%)	Overall Participation Rate (%)	Participation While Boat on Water (%)	Participation While Boat Docked (%)
United States	308,746	100.0	73,560	100.0	23.8	23.4	6.6
Northeast	55,317	17.9	12,021	16.3	21.7	21.2	6.2
Midwest	66,927	21.7	21,419	29.1	32.0	31.6	7.4
South	114,556	37.1	24,727	33.6	21.6	21.2	6.8
West	71,946	23.3	15,393	20.9	21.4	21.1	5.8

Table 10: Individual Participation in Recreational Boating in 2011 in the States in the Northeast Region

Northeast States	Population in Northeast Region (2010 U.S. Census)		Individual Participation in Recreational Boating in 2011				
	Number (000)	Percent (%)	Number (000)	Percent (%)	Overall Participation Rate (%)	Participation While Boat on Water (%)	Participation While Boat Docked (%)
Northeast Region	**55,317**	**100.0**	**12,021**	**100.0**	**21.7**	**21.2**	**6.2**
Connecticut	3,574	6.5	889	7.4	24.9	24.8	5.6
Maine	1,328	2.4	592	4.9	44.6	44.1	13.2
Massachusetts	6,548	11.8	1,713	14.3	26.2	25.7	7.0
New Hampshire	1,316	2.4	440	3.7	33.4	33.3	7.2
New Jersey	8,792	15.9	1,488	12.4	16.9	16.4	6.9
New York	19,378	35.0	3,365	28.0	17.4	16.5	4.8
Pennsylvania	12,702	23.0	3,021	25.1	23.8	23.4	6.7
Rhode Island	1,053	1.9	256	2.1	24.3	24.1	8.7
Vermont	626	1.1	257	2.1	41.1	41.1	7.1

Table 11: Individual Participation in Recreational Boating in 2011 in the States in the Midwest Region

Midwest States	Households in South Region (2010 U.S. Census)		Household Participation in Recreational Boating in 2011				
	Number (000)	Percent (%)	Number (000)	Percent (%)	Overall Participation Rate (%)	Participation While Boat on Water (%)	Participation While Boat Docked (%)
Midwest Region	**66,927**	**100.0**	**21,419**	**100.0**	**32.0**	**31.6**	**7.4**
Illinois	12,831	19.2	3,590	16.8	28.0	28.0	6.1
Indiana	6,484	9.7	1,712	8.0	26.4	26.1	6.0
Iowa	3,046	4.6	819	3.8	26.9	26.4	7.2
Kansas	2,853	4.3	600	2.8	21.0	21.0	4.0
Michigan	9,884	14.8	3,116	14.5	31.5	30.9	6.9
Minnesota	5,304	7.9	2,749	12.8	51.8	51.5	12.7
Missouri	5,989	8.9	1,995	9.3	33.3	33.1	7.3
Nebraska	1,826	2.7	496	2.3	27.1	27.1	4.8
North Dakota	673	1.0	249	1.2	37.0	36.8	8.8
Ohio	11,537	17.2	3,247	15.2	28.1	27.3	8.0
South Dakota	814	1.2	211	1.0	25.9	25.6	3.2
Wisconsin	5,687	8.5	2,637	12.3	46.4	45.1	9.4

Table 12: Individual Participation in Recreational Boating in 2011 in the States in the South Region

South States	Households in South Region (2010 U.S. Census)		Individual Participation in Recreational Boating in 2011				
	Number (000)	Percent (%)	Number (000)	Percent (%)	Overall Participation Rate (%)	Participation While Boat on Water (%)	Participation While Boat Docked (%)
South Region	**114,556**	**100.0**	**24,727**	**100.0**	**21.6**	**21.2**	**6.8**
Alabama	4,780	4.2	988	4.0	20.7	20.4	10.0
Arkansas	2,916	2.5	849	3.4	29.1	28.7	8.5
Delaware	898	0.8	207	0.8	23.0	22.0	7.8
District of Columbia	602	0.5	124	0.5	20.6	20.6	4.9
Florida	18,801	16.4	5,401	21.8	28.7	27.7	8.9
Georgia	9,688	8.5	1,723	7.0	17.8	17.8	4.5
Kentucky	4,339	3.8	1,022	4.1	23.6	23.2	8.7
Louisiana	4,533	4.0	1,037	4.2	22.9	22.4	9.2
Maryland	5,774	5.0	1,405	5.7	24.3	23.5	8.8
Mississippi	2,967	2.6	631	2.6	21.3	20.7	4.7
North Carolina	9,535	8.3	2,094	8.5	22.0	21.4	7.3
Oklahoma	3,751	3.3	749	3.0	20.0	19.7	7.5
South Carolina	4,625	4.0	1,295	5.2	28.0	27.0	8.1
Tennessee	6,346	5.5	1,366	5.5	21.5	21.4	5.9
Texas	25,146	22.0	3,765	15.2	15.0	15.0	4.4
Virginia	8,001	7.0	1,704	6.9	21.3	20.8	5.5
West Virginia	1,853	1.6	366	1.5	19.7	19.6	6.0

Table 13: Individual Participation in Recreational Boating in 2011 in the States in the West Region

West States	Households in West Region (2010 U.S. Census)		Individual Participation in Recreational Boating in 2011				
	Number (000)	Percent (%)	Number (000)	Percent (%)	Overall Participation Rate (%)	Participation While Boat on Water (%)	Participation While Boat Docked (%)
West Region	**71,946**	**100.0**	**15,393**	**100.0**	**21.4**	**21.1**	**5.8**
Alaska	710	1.0	279	1.8	39.3	39.1	10.4
Arizona	6,392	8.9	1,309	8.5	20.5	20.4	6.3
California	37,254	51.8	6,452	41.9	17.3	17.0	5.0
Colorado	5,029	7.0	1,080	7.0	21.5	21.2	5.5
Hawaii	1,360	1.9	257	1.7	18.9	18.6	6.4
Idaho	1,568	2.2	468	3.0	29.8	29.5	11.0
Montana	989	1.4	332	2.2	33.6	33.5	7.4
Nevada	2,701	3.8	583	3.8	21.6	21.4	6.0
New Mexico	2,059	2.9	294	1.9	14.3	13.6	4.3
Oregon	3,831	5.3	1,181	7.7	30.8	30.5	8.5
Utah	2,764	3.8	666	4.3	24.1	24.0	5.1
Washington	6,725	9.3	2,323	15.1	34.5	34.1	6.6
Wyoming	564	0.8	169	1.1	30.0	29.3	11.1

Adult Participation in Recreational Boating

Adult (an individual at least 16 years old) participation rates varied across the U.S. regions. The rate was significantly higher in the Midwest region, at 30.4%. Minnesota (50.2%) Wisconsin (44.9%) and Maine (44.7%) had the highest adult participation on the state level.

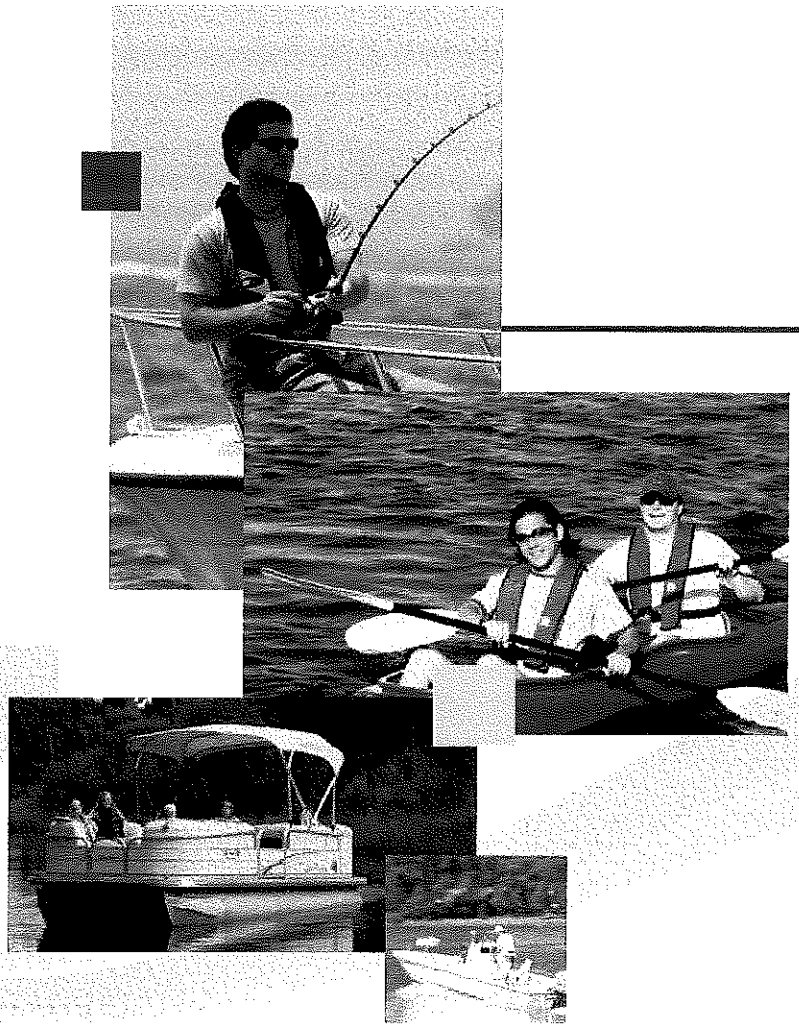


Table 14: Adult Participation in Recreational Boating in 2011 in the U.S. Regions

Regions	Adult[1] Population in the U.S. (2010 U.S. Census)		Adult Participation in Recreational Boating in 2011				
	Number (000)	Percent (%)	Number (000)	Percent (%)	Overall Participation Rate (%)	Participation While Boat on Water (%)	Participation While Boat Docked (%)
United States	**246,952**	**100.0**	**58,324**	**100.0**	**23.6**	**23.1**	**6.8**
Northeast	45,378	18.4	9,692	16.6	21.4	20.8	6.3
Midwest	53,416	21.6	16,212	27.8	30.4	29.9	7.7
South	91,155	36.9	20,183	34.6	22.1	21.7	7.1
West	57,003	23.1	12,238	21.0	21.5	21.1	6.0

[1] Adults are individuals 16 years old or older.

Table 15: Adult Participation in Recreational Boating in 2011 in the States in the Northeast Region

Northeast States	Adult[1] Population in Northeast Region (2010 U.S. Census)		Adult Participation in Recreational Boating in 2011				
	Number (000)	Percent (%)	Number (000)	Percent (%)	Overall Participation Rate (%)	Participation While Boat on Water (%)	Participation While Boat Docked (%)
Northeast Region	**45,378**	**100.0**	**9,692**	**100.0**	**21.4**	**20.8**	**6.3**
Connecticut	2,924	6.4	744	7.7	25.4	25.4	6.2
Maine	1,092	2.4	489	5.0	44.7	44.2	12.7
Massachusetts	5,367	11.8	1,292	13.3	24.1	23.6	6.8
New Hampshire	1,088	2.4	373	3.8	34.3	34.3	8.0
New Jersey	7,278	16.0	1,218	12.6	16.7	16.2	6.6
New York	15,958	35.2	2,912	30.1	18.2	17.2	5.1
Pennsylvania	10,286	22.7	2,244	23.2	21.8	21.7	6.5
Rhode Island	870	1.9	214	2.2	24.6	24.2	8.9
Vermont	516	1.1	205	2.1	39.7	39.7	7.5

[1] Adults are individuals 16 years old or older.

Table 16: Adult Participation in Recreational Boating in 2011 in the States in the Midwest Region

Midwest States	Adult[1] Population in Midwest Region (2010 U.S. Census)		Adult Participation in Recreational Boating in 2011				
	Number (000)	Percent (%)	Number (000)	Percent (%)	Overall Participation Rate (%)	Participation While Boat on Water (%)	Participation While Boat Docked (%)
Midwest Region	**53,416**	**100.0**	**16,212**	**100.0**	**30.4**	**29.9**	**7.7**
Illinois	10,203	19.1	2,637	16.3	25.8	25.8	5.8
Indiana	5,106	9.6	1,220	7.5	23.9	23.5	6.7
Iowa	2,420	4.5	601	3.7	24.9	24.2	7.0
Kansas	2,219	4.2	467	2.9	21.1	21.1	5.1
Michigan	7,921	14.8	2,502	15.4	31.6	31.0	7.5
Minnesota	4,187	7.8	2,104	13.0	50.2	50.0	12.6
Missouri	4,837	9.1	1,543	9.5	31.9	31.7	8.4
Nebraska	1,421	2.7	346	2.1	24.3	24.3	5.3
North Dakota	551	1.0	182	1.1	33.0	32.7	9.3
Ohio	9,382	17.6	2,416	14.9	25.7	24.8	8.4
South Dakota	634	1.2	160	1.0	25.2	24.9	3.6
Wisconsin	4,535	8.5	2,034	12.5	44.9	43.5	9.6

[1] Adults are individuals 16 years old or older.

Table 17: Adult Participation in Recreational Boating in 2011 in the States in the South Region

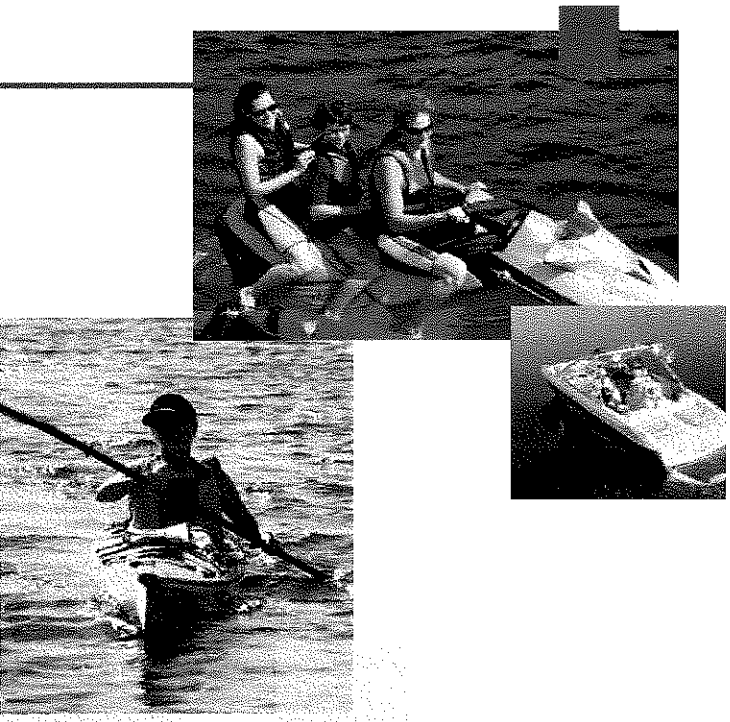
South States	Adult[1] Population in South Region (2010 U.S. Census)		Adult Participation in Recreational Boating in 2011				
	Number (000)	Percent (%)	Number (000)	Percent (%)	Overall Participation Rate (%)	Participation While Boat on Water (%)	Participation While Boat Docked (%)
South Region	**91,155**	**100.0**	**20,183**	**100.0**	**22.1**	**21.7**	**7.1**
Alabama	3,866	4.2	837	4.1	21.7	21.4	10.1
Arkansas	2,293	2.5	687	3.4	29.9	29.5	9.2
Delaware	730	0.8	171	0.8	23.5	22.7	8.5
District of Columbia	519	0.6	104	0.5	20.1	20.1	5.2
Florida	15,373	16.9	4,396	21.8	28.6	27.3	9.7
Georgia	7,582	8.3	1,341	6.6	17.7	17.6	5.4
Kentucky	3,457	3.8	800	4.0	23.2	22.9	9.4
Louisiana	3,573	3.9	801	4.0	22.4	21.9	9.4
Maryland	4,657	5.1	1,154	5.7	24.8	23.8	9.2
Mississippi	2,332	2.6	445	2.2	19.1	18.4	5.1
North Carolina	7,526	8.3	1,631	8.1	21.7	21.3	6.0
Oklahoma	3,002	3.3	548	2.7	18.3	17.9	6.2
South Carolina	3,688	4.0	1,057	5.2	28.7	27.5	9.5
Tennessee	5,069	5.6	1,100	5.5	21.7	21.5	6.2
Texas	19,447	21.3	3,478	17.2	17.9	17.9	4.8
Virginia	6,523	7.2	1,327	6.6	20.3	19.7	5.6
West Virginia	1,519	1.7	305	1.5	20.1	19.9	6.3

[1] Adults are individuals 16 years old or older.

Table 18: Adult Participation in Recreational Boating in 2011 in the States in the West Region

West States	Adult[1] Population in West Region (2010 U.S. Census)		Adult Participation in Recreational Boating in 2011				
	Number (000)	Percent (%)	Number (000)	Percent (%)	Overall Participation Rate (%)	Participation While Boat on Water (%)	Participation While Boat Docked (%)
West Region	**57,003**	**100.0**	**12,238**	**100.0**	**21.5**	**21.1**	**6.0**
Alaska	557	1.0	219	1.8	39.3	39.0	12.2
Arizona	4,971	8.7	940	7.7	18.9	18.8	6.0
California	29,627	52.0	5,373	43.9	18.1	17.7	5.5
Colorado	4,013	7.0	817	6.7	20.4	20.1	4.8
Hawaii	1,118	2.0	222	1.8	19.8	19.5	6.9
Idaho	1,217	2.1	365	3.0	30.0	29.6	8.9
Montana	803	1.4	258	2.1	32.2	32.1	8.2
Nevada	2,132	3.7	406	3.3	19.0	18.8	5.6
New Mexico	1,613	2.8	202	1.6	12.5	11.6	3.7
Oregon	3,085	5.4	935	7.6	30.3	30.1	9.4
Utah	2,013	3.5	505	4.1	25.1	25.0	5.8
Washington	5,409	9.5	1,866	15.2	34.5	33.9	6.8
Wyoming	445	0.8	131	1.1	29.4	28.8	10.0

[1] Adults are individuals 16 years old or older.



Child Participation in Recreational Boating

Tables below report the percentage of persons in the Midwest reported the greatest boating participation rate for children (those aged 15 or younger) at 38.5% (compared with the national average of 24.7% children), while the South reported the lowest participation rate of children, at 19.4%.

States with highest rates of children's participation in boating included Minnesota (57.8%), North Dakota (55%), Wisconsin (52.3%), Vermont (47.3%), and Maine (43.8%).

States with the lowest recreational boating participation rates for children were Texas (5%), New York (13.2%), California (14.1%), and Hawaii (14.7%).

Table 19: Child Participation in Recreational Boating in 2011 in the U.S. Regions

Regions	Child[1] Population in the U.S. (2010 U.S. Census)		Child Participation in Recreational Boating in 2011				
	Number (000)	Percent (%)	Number (000)	Percent (%)	Overall Participation Rate (%)	Participation While Boat on Water (%)	Participation While Boat Docked (%)
United States	**61,793**	**100.0**	**15,236**	**100.0**	**24.7**	**24.4**	**5.4**
Northeast	9,939	16.1	2,329	15.3	23.4	23.1	6.1
Midwest	13,511	21.9	5,207	34.2	38.5	38.3	5.9
South	23,400	37.9	4,544	29.8	19.4	19.2	5.3
West	14,943	24.2	3,156	20.7	21.1	20.9	4.8

[1] Children are individuals 15 years old or younger.

Table 20: Child Participation in Recreational Boating in 2011 in the States in the Northeast Region

Northeast States	Child[1] Population in Northeast Region (2010 U.S. Census)		Child Participation in Recreational Boating in 2011				
	Number (000)	Percent (%)	Number (000)	Percent (%)	Overall Participation Rate (%)	Participation While Boat on Water (%)	Participation While Boat Docked (%)
Northeast Region	**9,939**	**100.0**	**2,329**	**100.0**	**23.4**	**23.1**	**6.1**
Connecticut	651	6.5	145	6.2	22.3	22.3	3.0
Maine	236	2.4	103	4.4	43.8	43.8	15.7
Massachusetts	1,181	11.9	421	18.1	35.6	35.5	8.2
New Hampshire	229	2.3	67	2.9	29.2	28.6	2.9
New Jersey	1,514	15.2	269	11.6	17.8	17.8	8.1
New York	3,420	34.4	453	19.4	13.2	13.2	3.6
Pennsylvania	2,416	24.3	777	33.3	32.1	30.7	7.5
Rhode Island	183	1.8	43	1.8	23.3	23.3	7.8
Vermont	110	1.1	52	2.2	47.3	47.3	5.5

[1] Children are individuals 15 years old or younger.

Table 21: Child Participation in Recreational Boating in 2011 in the States in the Midwest Region

Midwest States	Child[1] Population in Midwest Region (2010 U.S. Census)		Child Participation in Recreational Boating in 2011				
	Number (000)	Percent (%)	Number (000)	Percent (%)	Overall Participation Rate (%)	Participation While Boat on Water (%)	Participation While Boat Docked (%)
Midwest Region	**13,511**	**100.0**	**5,207**	**100.0**	**38.5**	**38.3**	**5.9**
Illinois	2,628	19.4	953	18.3	36.3	36.3	7.0
Indiana	1,378	10.2	492	9.4	35.7	35.4	3.5
Iowa	627	4.6	217	4.2	34.7	34.7	7.7
Kansas	634	4.7	132	2.5	20.8	20.7	< 1
Michigan	1,963	14.5	614	11.8	31.3	30.5	4.4
Minnesota	1,117	8.3	645	12.4	57.8	57.1	13.0
Missouri	1,152	8.5	452	8.7	39.3	39.3	2.3
Nebraska	405	3.0	150	2.9	37.0	37.0	3.0
North Dakota	122	0.9	67	1.3	55.0	55.0	6.7
Ohio	2,155	15.9	831	16.0	38.6	38.6	5.9
South Dakota	180	1.3	51	1.0	28.4	28.4	1.7
Wisconsin	1,152	8.5	603	11.6	52.3	51.5	8.8

[1] Children are individuals 15 years old or younger.

Table 22: Child Participation in Recreational Boating in 2011 in the States in the South Region

South States	Child[1] Population in South Region (2010 U.S. Census)		Child Participation in Recreational Boating in 2011				
	Number (000)	Percent (%)	Number (000)	Percent (%)	Overall Participation Rate (%)	Participation While Boat on Water (%)	Participation While Boat Docked (%)
South Region	**23,400**	**100.0**	**4,544**	**100.0**	**19.4**	**19.2**	**5.3**
Alabama	914	3.9	151	3.3	16.5	16.5	9.3
Arkansas	623	2.7	163	3.6	26.1	26.1	5.8
Delaware	168	0.7	35	0.8	20.8	19.0	4.7
District of Columbia	82	0.4	20	0.4	24.2	24.2	2.8
Florida	3,429	14.7	1,005	22.1	29.3	29.3	5.3
Georgia	2,106	9.0	382	8.4	18.2	18.2	1.4
Kentucky	883	3.8	222	4.9	25.2	24.1	5.8
Louisiana	961	4.1	236	5.2	24.6	24.3	8.1
Maryland	1,117	4.8	252	5.5	22.5	22.4	7.2
Mississippi	636	2.7	186	4.1	29.3	29.1	3.0
North Carolina	2,010	8.6	463	10.2	23.0	21.6	11.9
Oklahoma	749	3.2	201	4.4	26.9	26.9	12.5
South Carolina	937	4.0	238	5.2	25.4	25.4	2.6
Tennessee	1,277	5.5	266	5.9	20.8	20.8	4.7
Texas	5,699	24.4	287	6.3	5.0	5.0	2.8
Virginia	1,478	6.3	377	8.3	25.5	25.5	4.9
West Virginia	334	1.4	61	1.3	18.2	18.2	5.1

[1] Children are individuals 15 years old or younger.

Table 23: Child Participation in Recreational Boating in 2011 in the States in the West Region

West States	Child[1] Population in West Region (2010 U.S. Census)		Child Participation in Recreational Boating in 2011				
	Number (000)	Percent (%)	Number (000)	Percent (%)	Overall Participation Rate (%)	Participation While Boat on Water (%)	Participation While Boat Docked (%)
West Region	**14,943**	**100.0**	**3,156**	**100.0**	**21.1**	**20.9**	**4.8**
Alaska	153	1.0	61	1.9	39.6	39.6	3.6
Arizona	1,421	9.5	369	11.7	26.0	26.0	7.2
California	7,627	51.0	1,079	34.2	14.1	13.9	2.9
Colorado	1,016	6.8	262	8.3	25.8	25.8	7.9
Hawaii	242	1.6	36	1.1	14.7	14.2	4.2
Idaho	351	2.3	103	3.3	29.3	29.3	18.1
Montana	186	1.2	74	2.3	39.6	39.6	4.1
Nevada	569	3.8	177	5.6	31.2	31.2	7.4
New Mexico	446	3.0	92	2.9	20.6	20.6	6.5
Oregon	746	5.0	246	7.8	33.0	31.9	4.8
Utah	751	5.0	161	5.1	21.4	21.2	3.3
Washington	1,316	8.8	457	14.5	34.8	34.8	6.0
Wyoming	119	0.8	39	1.2	32.5	31.0	15.0

[1] Children are individuals 15 years old or younger.

Boater Demographics

Gender

About 44.3% of boating participants across the nation in 2011 were female, with little variance across regions. In the Northeast, females of all ages represented 48.3% of participants; in the Midwest, 46.1%; in the South, 40.8%; and in the West, 44%.

Overall 20.3% of adult women and 20.7% of females of all ages (compared with 27.1% of adult men and 27% of males of all ages) across the U.S. participated in boating in 2011. The highest percentage of females participated in the Midwest, where about 29.1% of females of all ages went boating in 2011.

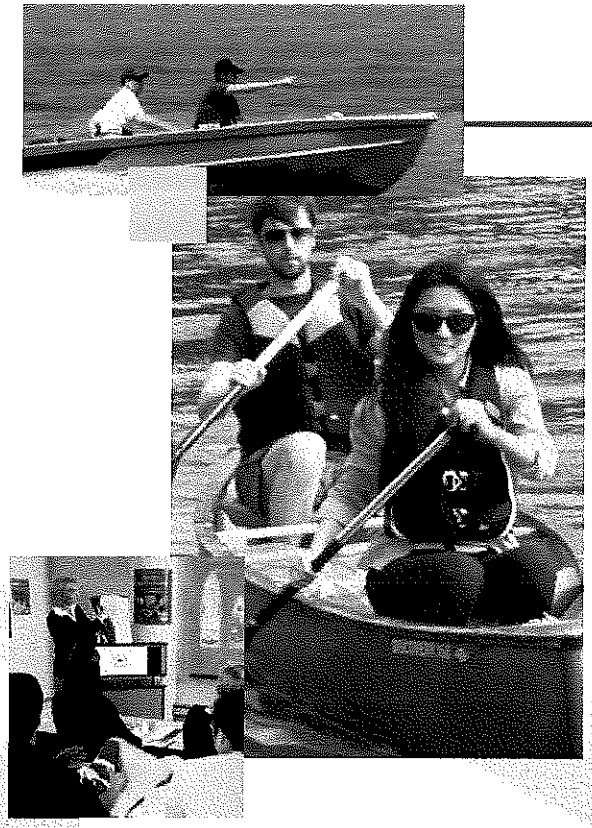


Table 24: Individual Participation in Recreational Boating in 2011 in the U.S. Regions by Gender

Regions	Gender	Population in the U.S. (2010 U.S. Census)		Individual Participation in Recreational Boating in 2011				
		Number (000)	Percent (%)	Number (000)	Percent (%)	Overall Participation Rate (%)	Participation While Boat on Water (%)	Participation While Boat Docked (%)
United States	Female	156,964	50.8	32,563	44.3	20.7	20.4	5.0
	Male	151,781	49.2	41,007	55.7	27.0	26.5	8.2
	Total	308,746	100.0	73,560	100.0	23.8	23.4	6.6
Northeast	Female	28,448	51.4	5,809	48.3	20.4	20.0	5.1
	Male	26,869	48.6	6,215	51.7	23.1	22.5	7.5
	Total	55,317	100.0	12,021	100.0	21.7	21.2	6.2
Midwest	Female	33,999	50.8	9,882	46.1	29.1	28.6	5.8
	Male	32,928	49.2	11,544	53.9	35.1	34.6	8.9
	Total	66,927	100.0	21,419	100.0	32.0	31.6	7.4
South	Female	58,421	51.0	10,097	40.8	17.3	17.1	4.9
	Male	56,135	49.0	14,630	59.2	26.1	25.4	8.7
	Total	114,556	100.0	24,727	100.0	21.6	21.2	6.8
West	Female	36,096	50.2	6,775	44.0	18.8	18.4	4.5
	Male	35,850	49.8	8,618	56.0	24.0	23.8	7.1
	Total	71,946	100.0	15,393	100.0	21.4	21.1	5.8

Table 25: Adult Participation in Recreational Boating in 2011 in the U.S. Regions by Gender

Regions	Gender	Adult[1] Population in the U.S. (2010 U.S. Census)		Adult Participation in Recreational Boating in 2011				
		Number (000)	Percent (%)	Number (000)	Percent (%)	Overall Participation Rate (%)	Participation While Boat on Water (%)	Participation While Boat Docked (%)
United States	Female	127,037	51.4	25,838	44.3	20.3	20.0	5.2
	Male	119,915	48.6	32,496	55.7	27.1	26.5	8.6
	Total	246,952	100.0	58,324	100.0	23.6	23.1	6.8
Northeast	Female	23,652	52.1	4,729	48.8	20.0	19.6	5.3
	Male	21,727	47.9	4,965	51.2	22.9	22.0	7.4
	Total	45,378	100.0	9,692	100.0	21.4	20.8	6.3
Midwest	Female	27,448	51.4	7,453	46.0	27.2	26.6	6.0
	Male	25,968	48.6	8,765	54.1	33.8	33.3	9.5
	Total	53,416	100.0	16,212	100.0	30.4	29.9	7.7
South	Female	47,105	51.7	8,237	40.8	17.5	17.4	5.0
	Male	44,050	48.3	11,946	59.2	27.1	26.2	9.4
	Total	91,155	100.0	20,183	100.0	22.1	21.7	7.1
West	Female	28,833	50.6	5,418	44.3	18.8	18.4	4.9
	Male	28,170	49.4	6,819	55.7	24.2	23.9	7.2
	Total	57,003	100.0	12,238	100.0	21.5	21.1	6.0

[1] Adults are individuals 16 years old or older.

Table 26: Child Participation in Recreational Boating in 2011 in the U.S. Region by Gender

Regions	Gender	Child[1] Population in the U.S. (2010 U.S. Census)		Child Participation in Recreational Boating in 2011				
		Number (000)	Percent (%)	Number (000)	Percent (%)	Overall Participation Rate (%)	Participation While Boat on Water (%)	Participation While Boat Docked (%)
United States	Female	29,927	48.4	6,725	44.1	22.5	22.2	4.2
	Male	31,866	51.6	8,512	55.9	26.7	26.5	6.6
	Total	61,793	100.0	15,236	100.0	24.7	24.4	5.4
Northeast	Female	4,796	48.3	1,080	46.4	22.5	21.8	4.1
	Male	5,143	51.7	1,250	53.7	24.3	24.3	8.0
	Total	9,939	100.0	2,329	100.0	23.4	23.1	6.1
Midwest	Female	6,552	48.5	2,429	46.6	37.1	37.0	4.9
	Male	6,959	51.5	2,779	53.4	39.9	39.5	6.8
	Total	13,511	100.0	5,207	100.0	38.5	38.3	5.9
South	Female	11,316	48.4	1,860	40.9	16.4	16.1	4.4
	Male	12,084	51.6	2,684	59.1	22.2	22.1	6.1
	Total	23,400	100.0	4,544	100.0	19.4	19.2	5.3
West	Female	7,263	48.6	1,357	43.0	18.7	18.4	3.1
	Male	7,680	51.4	1,799	57.0	23.4	23.3	6.4
	Total	14,943	100.0	3,156	100.0	21.1	20.9	4.8

[1] Children are individuals 15 years old or younger.

Age of Recreational Boating Participant

Almost a quarter (23.8%) of the U.S. population - 73.6 million persons - went recreational boating in 2011, 58.3 million adults and 15.3 million children.

Participation was significantly higher for young boaters in the Midwest, where 38.2% of those ages 0-11 participated in boating, and 39.7% of those ages 12-15.

Young to middle-age adults were a significant part of the boating community; nearly 30% of boaters were ages 25-44.

Over a quarter (27.5%) of recreational boaters were between 45 and 65 years old.

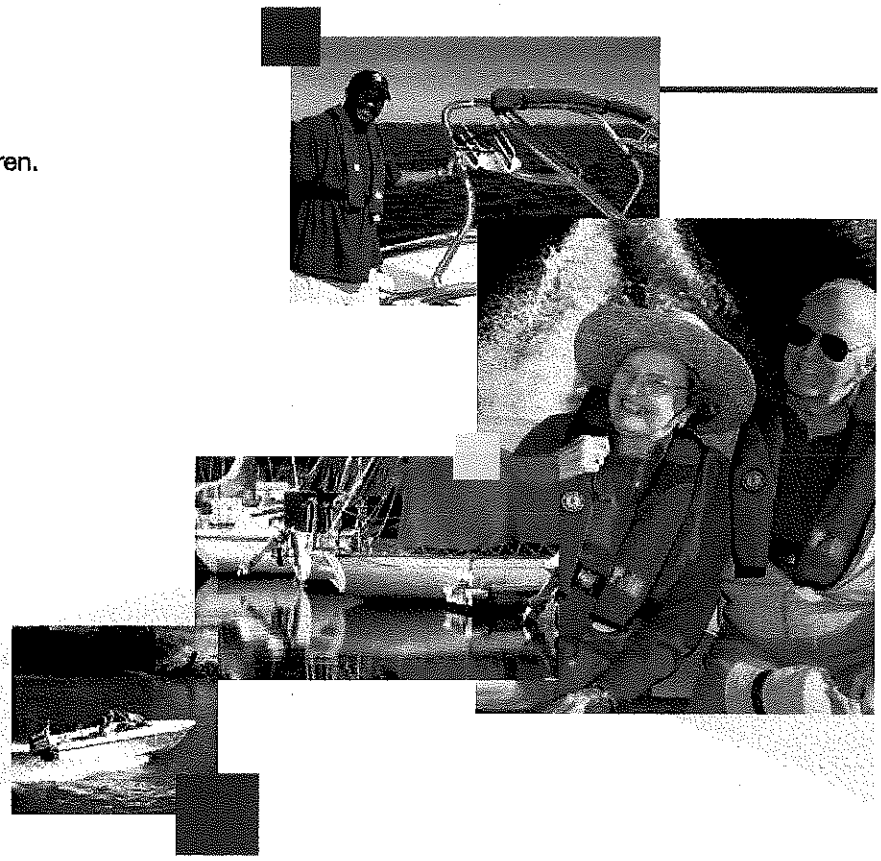


Figure 5: Recreational Boating Participants in 2011 by Age

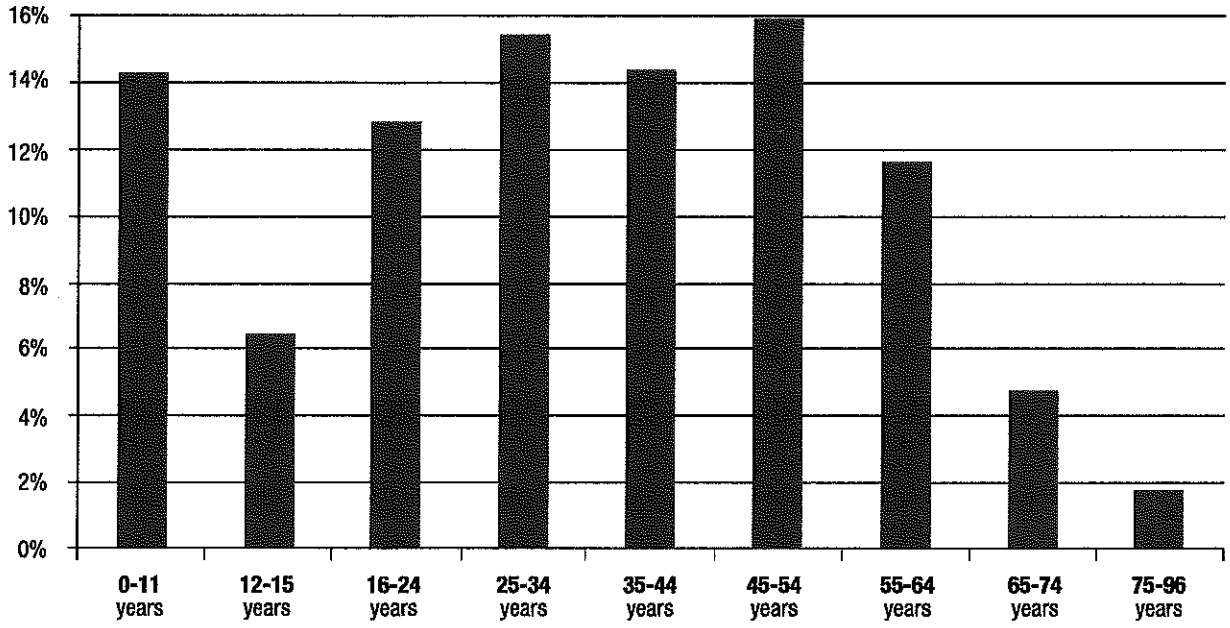


Table 27: Individual Participation in Recreational Boating in 2011 in the U.S. Regions by Age

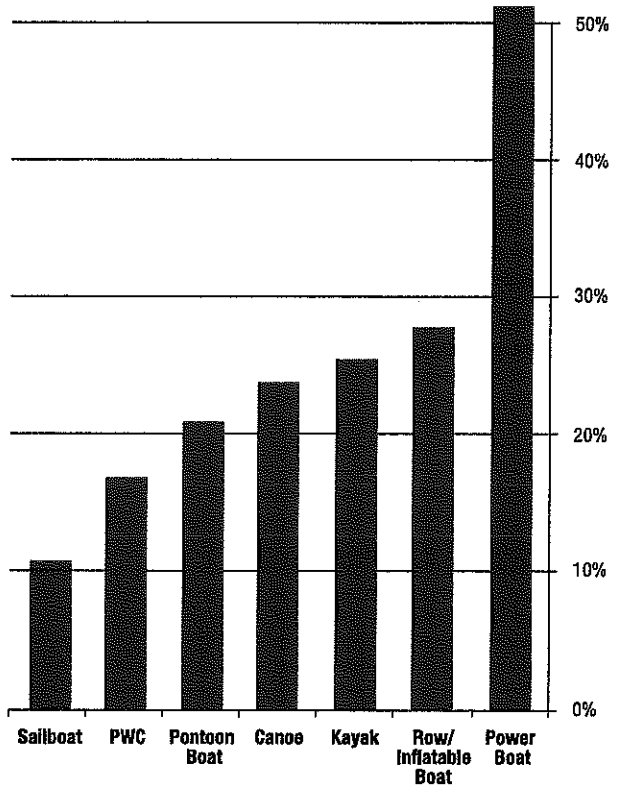
Regions	Age	Population in the U.S. (2010 U.S. Census)		Individual Participation in Recreational Boating in 2011				
		Number (000)	Percent (%)	Number (000)	Percent (%)	Overall Participation Rate (%)	Participation While Boat on Water (%)	Participation While Boat Docked (%)
United States	0-11	46,304	15.0	10,522	14.3	22.7	22.5	4.6
	12-15	15,489	5.0	4,715	6.4	30.4	30.2	8.0
	16-24	37,366	12.1	9,412	12.8	25.2	24.8	6.6
	25-34	39,366	12.8	11,339	15.4	28.8	28.3	7.1
	35-44	39,349	12.7	10,591	14.4	26.9	26.5	8.3
	45-54	42,731	13.8	11,676	15.9	27.3	26.9	7.8
	55-64	34,503	11.2	8,554	11.6	24.8	24.1	8.1
	65-74	20,646	6.7	3,567	4.8	17.3	16.5	5.1
	75-96	16,624	5.4	1,357	1.8	8.2	7.6	3.4
	Unknown	16,369	5.3	1,828	2.5	11.2	11.1	3.9
	Total[1]	308,746	100.0	73,560	100.0	23.8	23.4	6.6
Northeast	0-11	7,208	13.0	1,444	12.0	20.0	19.5	5.9
	12-15	2,731	4.9	886	7.4	32.4	32.4	6.8
	16-24	6,407	11.6	1,694	14.1	26.4	26.2	6.9
	25-34	6,657	12.0	1,409	11.7	21.2	20.4	5.1
	35-44	7,146	12.9	1,457	12.1	20.4	19.6	5.3
	45-54	7,908	14.3	2,088	17.4	26.4	26.3	7.3
	55-64	6,364	11.5	1,749	14.5	27.5	27.3	7.7
	65-74	3,642	6.6	598	5.0	16.4	14.2	5.2
	75-96	3,347	6.1	281	2.3	8.4	7.1	4.7
	Unknown	3,907	7.1	409	4.2	10.5	10.4	7.1
	Total[1]	55,317	100.0	12,021	100.0	21.7	21.2	6.2
Midwest	0-11	10,074	15.1	3,845	17.9	38.2	38.1	5.1
	12-15	3,436	5.1	1,363	6.4	39.7	38.9	8.3
	16-24	8,002	12.0	2,360	11.0	29.5	29.0	6.3
	25-34	8,226	12.3	3,569	16.7	43.4	43.4	11.1
	35-44	8,359	12.5	2,863	13.4	34.2	34.1	9.5
	45-54	9,535	14.2	3,082	14.4	32.3	31.9	6.7
	55-64	7,741	11.6	2,296	10.7	29.7	28.8	10.0
	65-74	4,563	6.8	1,155	5.4	25.3	24.1	5.4
	75-96	3,916	5.9	414	1.9	10.6	10.0	3.8
	Unknown	3,075	4.6	479	3.0	15.6	15.3	3.4
	Total[1]	66,927	100.0	21,419	100.0	32.0	31.6	7.4
South	0-11	17,815	15.6	2,965	12.0	16.6	16.4	4.3
	12-15	5,585	4.9	1,578	6.4	28.3	28.2	8.3
	16-24	14,028	12.2	3,266	13.2	23.3	22.7	6.8
	25-34	14,772	12.9	3,868	15.6	26.2	25.5	6.3
	35-44	14,801	12.9	3,661	14.8	24.7	24.6	8.5
	45-54	15,761	13.8	4,287	17.3	27.2	26.7	9.4
	55-64	12,747	11.1	3,086	12.5	24.2	23.2	8.5
	65-74	8,235	7.2	1,260	5.1	15.3	15.2	5.9
	75-96	5,735	5.0	367	1.5	6.4	6.2	2.4
	Unknown	5,077	4.4	388	1.9	7.6	7.5	3.1
	Total[1]	114,556	100.0	24,727	100.0	21.6	21.2	6.8
West	0-11	11,206	15.6	2,268	14.7	20.2	20.1	3.8
	12-15	3,736	5.2	888	5.8	23.8	23.3	7.9
	16-24	8,929	12.4	2,091	13.6	23.4	23.3	6.4
	25-34	9,710	13.5	2,493	16.2	25.7	25.3	6.1
	35-44	9,043	12.6	2,610	17.0	28.9	28.2	9.4
	45-54	9,528	13.2	2,219	14.4	23.3	22.8	6.4
	55-64	7,652	10.6	1,423	9.2	18.6	18.3	6.0
	65-74	4,206	5.8	554	3.6	13.2	12.9	3.3
	75-96	3,626	5.0	295	1.9	8.1	7.7	3.4
	Unknown	4,310	6.0	552	4.5	12.8	12.8	2.1
	Total[1]	71,946	100.0	15,393	100.0	21.4	21.1	5.8

[1] The sum of numbers may not equal the total in a higher-level of aggregation due to weighing procedures and rounding.

Boating Participation by Type of Boat

About half (51.1%) of the 73.6 million people who boated in 2011 did so at least once on a power boats, 23.9% in canoes, 25.3% in kayaks, and 20.8% on pontoon boats.

Figure 6: Individual Participation in Recreational Boating in 2011 by Type of Boat Used



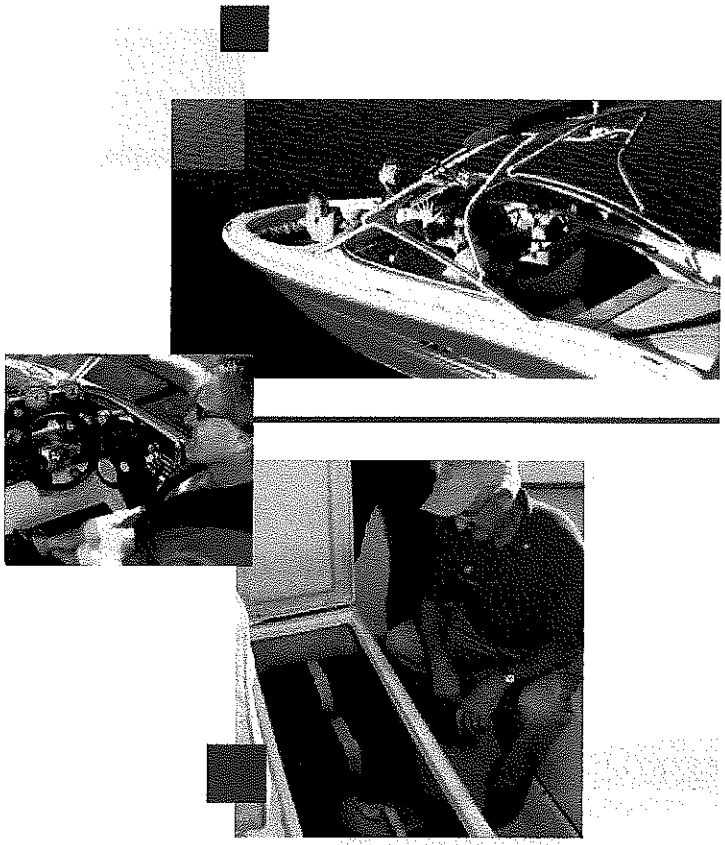
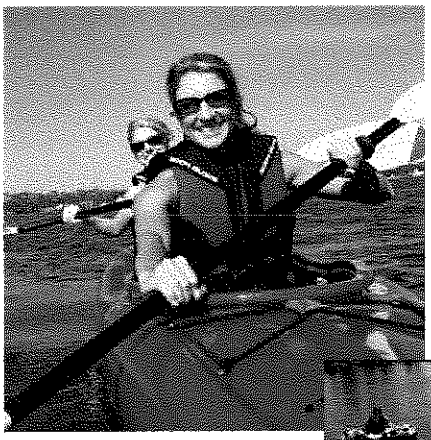
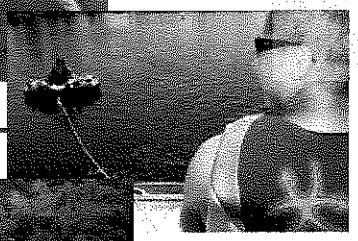


Table 28: Individual Participation in Recreational Boating in 2011 in the U.S. Regions by Type of Boat Used

Regions	Individual Participation in Recreational Boating in 2011		Percentage of Individual Boating Participants by Type of Boat Used						
	Number (000)	Percent (%)	Power Boat (%)	Sailboat (%)	PWC (%)	Canoe (%)	Kayak (%)	Pontoon Boat (%)	Row/ Inflatable Boat (%)
United States	**73,560**	**100.0**	**51.1**	**10.6**	**16.8**	**23.9**	**25.3**	**20.8**	**27.7**
Northeast	12,021	16.3	51.0	11.8	13.1	32.1	37.2	13.1	26.3
Midwest	21,419	29.1	41.3	6.0	19.3	28.0	18.3	32.3	31.1
South	24,727	33.6	54.8	11.9	19.1	22.4	24.9	20.8	23.9
West	15,393	20.9	56.9	13.5	13.0	15.1	25.9	12.0	30.7





Individual Participation in Recreational Boating Activities

People participate in boating in many ways. Socializing (reported by 75.3% of individual boating participants), cruising (70.3%), sightseeing (65.7%), fishing or crabbing (48.5%), and swimming or diving (46.7%) were the most popular boating activities across the nation. There was not strong regional variance: however, waterskiing, wakeboarding, and tubing was more popular in the Midwest (35.8%) than the national average; and rowing was more popular in the Northeast (27.1%), as was paddling (35.4%).

Figure 7: Individual Participation in Specific Recreational Boating Activities in 2011

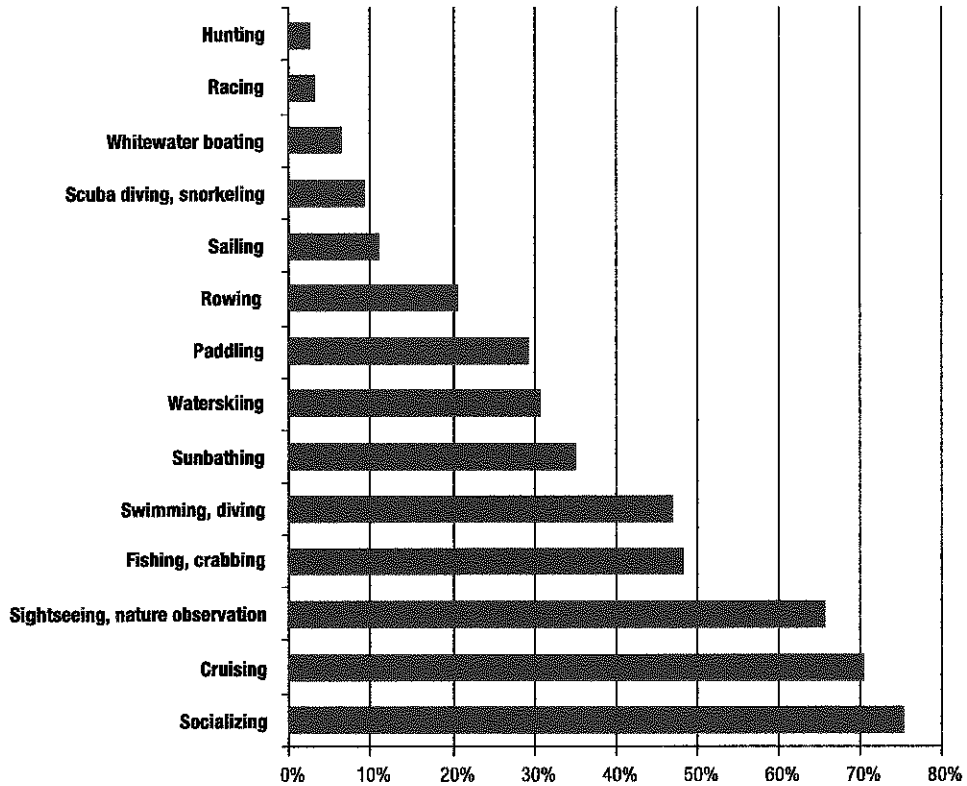


Table 29: Individual Participation in Recreational Boating in 2011 in the U.S. Regions by Boating Activity

Boating Activity	Percentage[1] of Individual Boating Participants by U.S. Region				
	Northeast (%)	Midwest (%)	South (%)	West (%)	United States (%)
Cruising	71.9	72.9	68.8	68.2	70.3
Socializing	73.1	78.7	73.8	75.1	75.3
Fishing or crabbing	41.8	47.7	57.3	40.4	48.5
Hunting	<1	3.1	4.1	2.4	2.9
Water paddling	35.4	25.2	28.3	30.8	29.2
Racing	5.1	2.2	2.3	5.1	3.3
Rowing	27.1	18.2	17.1	23.6	20.5
Scuba diving or snorkeling	8.8	3.9	12.2	12.1	9.4
Sightseeing or nature observation	69.9	64.2	64.7	65.8	65.7
Sunbathing	34.0	37.4	34.1	33.7	34.9
Swimming or diving	44.2	48.2	49.4	43.3	46.9
Waterskiing, wakeboarding, or tubing	22.0	35.8	32.2	29.4	30.9
Whitewater boating	5.1	2.6	7.8	10.0	6.4
Sailing	12.9	6.6	11.7	12.3	10.6

[1] Percentages add up to more than 100%, because individuals could participate in more than one boating activity.

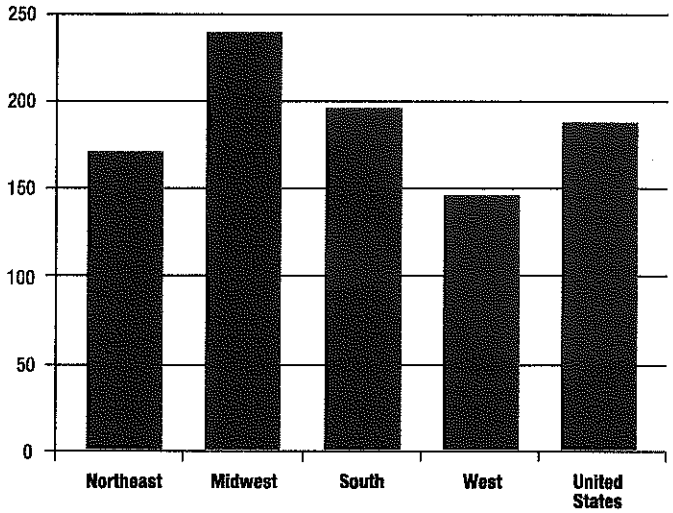
Boating Ownership

Household Boat Ownership in the United States

Of the 116.7 million households in the United States, 17% owned one or more recreational boats (an average of 1.1 boats per boat-owning household) in 2011, for a total of approximately 22.2 million boats. The boat ownership rate averaged 190 per 1,000 households for the country as a whole, or about 72 boats per 1,000 U.S. residents.

The Midwest region had the highest boat ownership rate, at 239 boats per 1,000 households and 94 boats per 1,000 residents.

Figure 8: Boat Ownership per 1,000 Households in 2011 in U.S. Regions



The West region had the lowest boat ownership, with rates of 146 boats per 1,000 households and 52 boats per 1,000 residents.

The number of boats owned per 1,000 boating households was highest in the South, at 712.

States with the highest household boat ownership rates include Alaska (39.4% of households), Maine (37.8%), Vermont (35.4%), and Minnesota (34.0%). The District of Columbia had the lowest rate (6.7%), followed by California (11.3%) and New Mexico (11.4%).

Table 30: Rates of Boat Ownership, and Distribution of Boating Households by U.S. Region and Type of Boat Owned

Regions	Households in the U.S. (2010 U.S. Census)		Household Boat Ownership Rate (%)	Average Number of Boats Per Boating Household	Percentage of Boating Households by Type of Boat Owned[1]						
	Number (000)	Percent (%)			Power Boat (%)	Sailboat (%)	PWC (%)	Canoe (%)	Kayak (%)	Pontoon Boat (%)	Row/ Inflatable Boat (%)
United States	**116,716**	**100.0**	**17.0**	**1.1**	**51.0**	**3.7**	**8.5**	**12.6**	**19.7**	**4.3**	**8.8**
Northeast	21,215	18.2	16.5	1.0	42.3	6.0	6.9	18.3	30.6	2.7	8.1
Midwest	26,216	22.5	19.7	1.2	53.9	3.0	8.9	14.8	14.9	6.8	8.7
South	43,610	37.4	16.5	1.2	56.3	2.9	8.9	10.4	17.6	4.7	6.5
West	25,675	22.0	15.5	1.0	45.2	3.9	8.9	8.8	19.9	1.8	13.8

[1] Percentages of boating households add up to more than 100%, because households can own more than one boat

Table 31: Number and Distribution of Recreational Boats in 2011 in the U.S. Regions by Households and Residents

Region	Number of Boats (000)	Number of Boats Per 1000 Households	Number of Boats Per 1000 Boating Households[1]	Number of Boats Per 1000 U.S. Residents	Number of Boats Per 1000 Boaters
United States	**22,217**	**190**	**649**	**72**	**302**
Northeast	3,606	170	609	65	300
Midwest	6,258	239	689	94	292
South	8,603	197	712	75	348
West	3,750	146	528	52	244

[1] A boating household is a household with a member who participated in any recreational boating activity in 2011.

Table 32: Distribution of Recreational Boats in 2011 in the U.S. Regions by Boat Type

Boat Type	Recreational Boats by U. S. Region								Boats in the U.S.	
	Boats in Northeast		Boats in Midwest		Boats in South		Boats in West			
	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)
All Boats	**3,606**	**100.0**	**6,258**	**100.0**	**8,603**	**100.0**	**3,750**	**100.0**	**22,217**	**100.0**
Power Boat	1,324	36.7	3,045	48.6	4,175	48.5	1,576	42.0	10,119	45.5
Sailboat	193	5.4	171	2.7	243	2.8	127	3.4	733	3.3
PWC	177	4.9	436	7.0	709	8.2	368	9.8	1,689	7.6
Canoe	537	14.9	770	12.3	902	10.5	296	7.9	2,505	11.3
Kayak	1,028	28.5	770	12.3	1,405	16.3	695	18.5	3,898	17.5
Pontoon Boat	64	1.8	423	6.8	316	3.7	51	1.4	854	3.8
Row/Inflatable Boat	229	6.4	432	6.9	538	6.3	548	14.6	1,747	7.9
Other Boat	53	1.5	213	3.4	315	3.7	90	2.4	671	3.0

Table 33: Rate of Boat Ownership, and Distribution of Boat-Owning Households in 2011 in the States in the Northeast Region by Type of Boat Owned

Northeast States	Households in Northeast Region (2010 U.S. Census)		Household Boat Ownership Rate (%)	Average Number of Boats Per Boat-Owning Household	Percentage of Boat-Owning Households by Type of Boat Owned[1]						
	Number (000)	Percent (%)			Power Boat (%)	Sailboat (%)	PWC (%)	Canoe (%)	Kayak (%)	Pontoon Boat (%)	Row/ Inflatable Boat (%)
Northeast Region	**21,215**	**100.0**	**16.5**	**1.0**	**37.8**	**5.5**	**5.0**	**15.3**	**29.3**	**1.8**	**6.5**
Connecticut	1,371	6.5	16.6	1.2	37.7	4.2	6.1	16.0	29.2	1.6	4.5
Maine	557	2.6	37.8	1.1	36.0	4.6	2.3	24.5	41.7	1.1	6.5
Massachusetts	2,547	12.0	17.4	1.3	40.2	6.9	4.0	13.2	37.8	1.0	6.1
New Hampshire	519	2.4	32.7	1.2	33.0	5.0	2.9	21.6	41.0	2.0	7.2
New Jersey	3,214	15.2	13.3	1.0	40.9	7.7	6.6	9.7	26.3	1.0	5.5
New York	7,318	34.5	14.5	1.0	39.8	5.6	4.2	12.8	25.5	3.5	6.8
Pennsylvania	5,019	23.7	15.6	1.0	35.0	4.1	7.2	18.1	23.9	0.9	7.4
Rhode Island	414	1.9	22.0	1.1	34.9	7.0	3.4	14.8	33.6	1.1	5.2
Vermont	256	1.2	35.4	1.4	27.9	4.1	2.5	23.2	39.9	1.0	7.7

[1] Percentages of boat-owning households add up to more than 100%, because households can own more than one boat

Table 34: Rate of Boat Ownership, and Distribution of Boat-Owning Households in 2011 in the States in the Midwest Region by Type of Boat Owned

Midwest States	Households in Midwest Region (2010 U.S. Census)		Household Boat Ownership Rate (%)	Average Number of Boats Per Boat-Owning Household	Percentage of Boat-Owning Households by Type of Boat Owned[1]						
	Number (000)	Percent (%)			Power Boat (%)	Sailboat (%)	PWC (%)	Canoe (%)	Kayak (%)	Pontoon Boat (%)	Row/ Inflatable Boat (%)
Midwest Region	**26,216**	**100.0**	**19.7**	**1.2**	**57.7**	**3.3**	**8.4**	**14.9**	**14.9**	**8.2**	**8.4**
Illinois	4,837	18.5	13.0	1.1	52.4	2.9	6.8	13.7	15.4	4.8	10.6
Indiana	2,502	9.5	16.7	1.2	52.9	4.3	9.4	13.6	12.4	9.4	11.1
Iowa	1,222	4.7	19.4	1.3	59.1	1.8	7.2	12.9	12.4	6.0	6.1
Kansas	1,112	4.2	14.5	1.2	56.5	4.1	12.7	8.9	10.0	4.7	9.0
Michigan	3,873	14.8	26.0	1.2	57.4	4.4	8.4	14.2	22.9	12.3	9.7
Minnesota	2,087	8.0	34.0	1.5	65.6	2.7	8.2	19.8	13.7	10.0	6.4
Missouri	2,376	9.1	17.5	1.3	57.4	2.4	10.7	12.8	9.2	9.1	6.6
Nebraska	721	2.8	14.9	1.0	64.3	2.0	7.5	9.5	7.8	3.0	10.0
North Dakota	281	1.1	24.5	1.4	73.4	2.4	8.9	10.6	9.2	6.4	6.0
Ohio	4,603	17.6	15.2	1.0	51.3	3.6	10.1	14.7	11.9	6.3	6.5
South Dakota	322	1.2	22.1	1.0	65.8	1.7	8.7	9.2	14.4	4.0	6.1
Wisconsin	2,280	8.7	28.2	1.5	60.6	3.0	5.9	18.5	15.7	6.9	8.6

[1] Percentages of boat-owning households add up to more than 100%, because households can own more than one boat

Table 35: Rate of Boat Ownership, and Distribution of Boat-Owning Households in 2011 in the States in the South Region by Type of Boat Owned

South States	Households in South Region (2010 U.S. Census)		Household Boat Ownership Rate (%)	Average Number of Boats Per Boat-Owning Household	Percentage of Boat-Owning Households by Type of Boat Owned[1]						
	Number (000)	Percent (%)			Power Boat (%)	Sailboat (%)	PWC (%)	Canoe (%)	Kayak (%)	Pontoon Boat (%)	Row/ Inflatable Boat (%)
South Region	**43,610**	**100.0**	**16.5**	**1.2**	**57.9**	**3.4**	**9.8**	**12.5**	**18.4**	**4.4**	**7.4**
Alabama	1,884	4.3	18.5	1.1	70.8	2.1	19.6	13.7	10.5	7.0	7.4
Arkansas	1,147	2.6	23.7	1.3	62.9	1.2	8.5	12.7	10.1	5.7	9.6
Delaware	342	0.8	16.9	1.3	54.3	4.9	6.8	12.1	23.0	4.3	10.1
District of Columbia	267	0.6	6.7	1.0	41.6	14.2	9.2	13.4	32.5	1.4	4.1
Florida	7,421	17.0	19.3	1.2	59.9	4.0	8.2	11.7	23.5	2.4	7.5
Georgia	3,586	8.2	14.4	1.7	58.5	3.2	8.9	13.9	17.3	5.2	7.1
Kentucky	1,720	3.9	15.9	1.1	54.4	1.5	8.8	17.0	10.9	6.9	7.7
Louisiana	1,728	4.0	21.7	1.2	71.1	1.9	8.8	9.2	11.0	2.8	6.9
Maryland	2,156	4.9	16.0	1.0	43.1	8.1	11.4	16.2	35.1	1.2	6.0
Mississippi	1,116	2.6	17.2	1.5	68.0	2.0	8.4	9.0	8.9	2.8	9.1
North Carolina	3,745	8.6	16.8	1.2	51.5	3.4	9.5	12.4	26.0	4.0	8.5
Oklahoma	1,460	3.3	13.8	1.2	63.3	1.6	10.1	8.4	9.1	5.5	8.2
South Carolina	1,801	4.1	19.4	1.8	66.9	2.4	8.3	9.8	16.4	5.7	5.1
Tennessee	2,494	5.7	18.3	1.1	60.1	2.2	10.2	11.1	13.3	8.0	4.0
Texas	8,923	20.5	13.1	1.0	54.9	3.3	11.0	9.0	15.8	5.5	7.7
Virginia	3,056	7.0	15.0	1.2	48.7	6.0	8.4	22.7	22.4	2.6	7.3
West Virginia	764	1.8	16.1	1.2	31.9	0.7	10.3	23.0	18.8	3.4	16.8

[1] Percentages of boat-owning households add up to more than 100%, because households can own more than one boat

Table 36: Rate of Boat Ownership, and Distribution of Boat-Owning Households in 2011 in the States in the West Region by Type of Boat Owned

West States	Households in West Region (2010 U.S. Census)		Household Boat Ownership Rate (%)	Average Number of Boats Per Boat-Owning Household	Percentage of Boat-Owning Households by Type of Boat Owned[1]						
	Number (000)	Percent (%)			Power Boat (%)	Sailboat (%)	PWC (%)	Canoe (%)	Kayak (%)	Pontoon Boat (%)	Row/ Inflatable Boat (%)
West Region	**25,675**	**100.0**	**15.5**	**1.0**	**39.7**	**3.2**	**9.3**	**7.4**	**17.5**	**1.3**	**13.8**
Alaska	258	1.0	39.4	1.0	51.6	1.1	6.6	13.3	15.7	0.5	13.8
Arizona	2,381	9.3	11.8	1.0	38.0	2.0	8.9	7.3	15.3	5.1	14.3
California	12,577	49.0	11.3	1.0	39.8	4.7	12.0	4.1	21.3	0.8	10.6
Colorado	1,973	7.7	15.6	1.0	35.7	2.8	8.7	11.1	18.8	1.6	9.5
Hawaii	455	1.8	14.5	1.0	34.8	3.2	7.1	7.4	30.9	0.8	4.9
Idaho	579	2.3	27.1	1.1	39.3	1.8	5.3	10.0	14.3	1.5	17.8
Montana	410	1.6	32.2	1.3	41.6	1.6	9.4	13.2	12.9	1.4	20.4
Nevada	1,006	3.9	12.4	1.0	43.0	2.1	12.7	3.8	11.1	2.5	10.8
New Mexico	791	3.1	11.4	1.0	40.6	2.1	13.0	9.8	8.5	3.0	12.4
Oregon	1,519	5.9	26.1	1.0	38.2	3.5	6.2	9.2	10.7	0.8	19.5
Utah	878	3.4	18.2	1.0	40.8	1.4	10.6	9.2	14.0	<1	11.2
Washington	2,620	10.2	26.1	1.0	40.4	2.5	6.0	8.8	18.3	0.9	18.6
Wyoming	227	0.9	22.3	1.2	36.6	0.6	7.3	13.2	9.0	1.4	15.9

[1] Percentages of boat-owning households add up to more than 100%, because households can own more than one boat

Days and Hours of Recreational Boats' Use

Across the entire country, the majority (65.5%) of recreational boats were used in 2011. While the proportion of boat types used in any given year and overall proportion of boats used from year to year varies (due to the economy, weather, or water levels), previous national studies indicate that the overall proportion of boats used has remained relatively constant over the last 20 years.

The average boat was used for about 17 days in 2011. This is fewer days than reported in some previous studies, but often these studies surveyed fewer boat owners and mostly those who owned registered vessels. In this study, great effort was made to include the owners of non-registered vessels. Vessels that are more likely to be non-registered (e.g., due to their type, size or propulsion) were generally used less often.

On an average use day, the average boat was on the water for 4.5 hours, with an average of 2.4 persons aboard the boat when it was used.

It is estimated that the boats owned by households logged almost 3 billion person-hours in 2011.

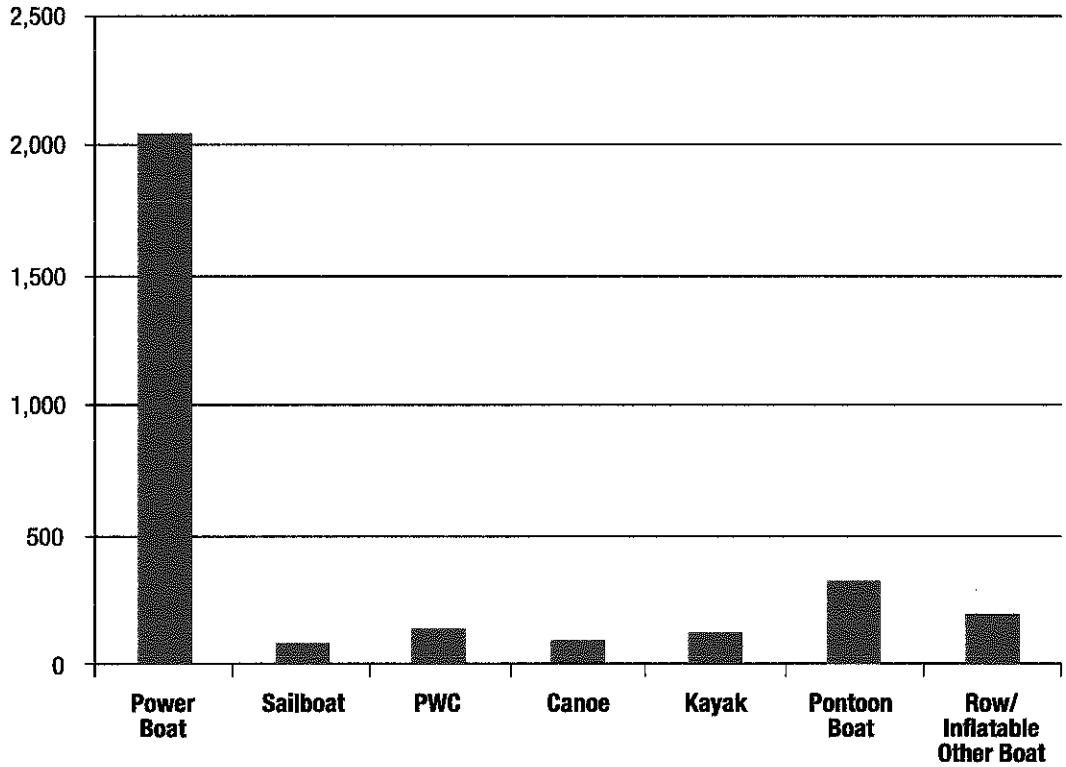
When frequency and duration of use are factored in, along with number of boats, power boats were by far the most used type of boat. Over two-thirds, or 2.05 billion, of boating person-hours were spent on power boats.

The survey results also verified the changing popularity of different recreational boats. Recreational paddling is now very popular, as measured by participation rates, numbers of boats and boating person-hours. About 29% of the recreational boats owned in the country were canoes and kayaks. Half of all canoes and over two-thirds of kayaks were used in 2011, with boaters logging nearly a quarter of a billion hours in them.

About 69% of personal watercraft (PWCs) were used in 2011, for an average of 16.3 days, and boating participants spent over 130 million hours on PWCs.

A very high proportion (83.4%) of pontoon boats were used in 2011, and their owners used them more days (21.8) on average than any other type of boat. Boaters spent about 301 million hours on them.

Figure 9: Boating Person-Hours (in Millions) in 2011 by Boat Type



About half of sailboats were used in 2011, for 19.2 days on average, and boaters logged about 70.9 million person-hours on them.

Canoes were the least used (50.1%), and for the smallest average number of days (8.8). They were also out on the water for one of the smallest average number of hours – 3.9.

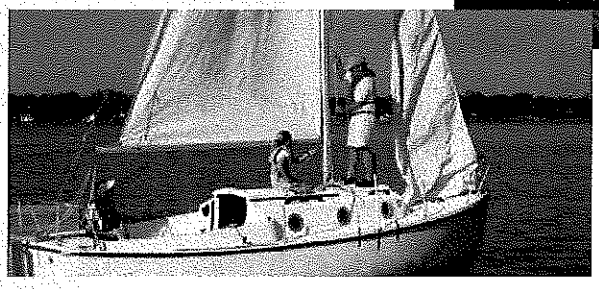
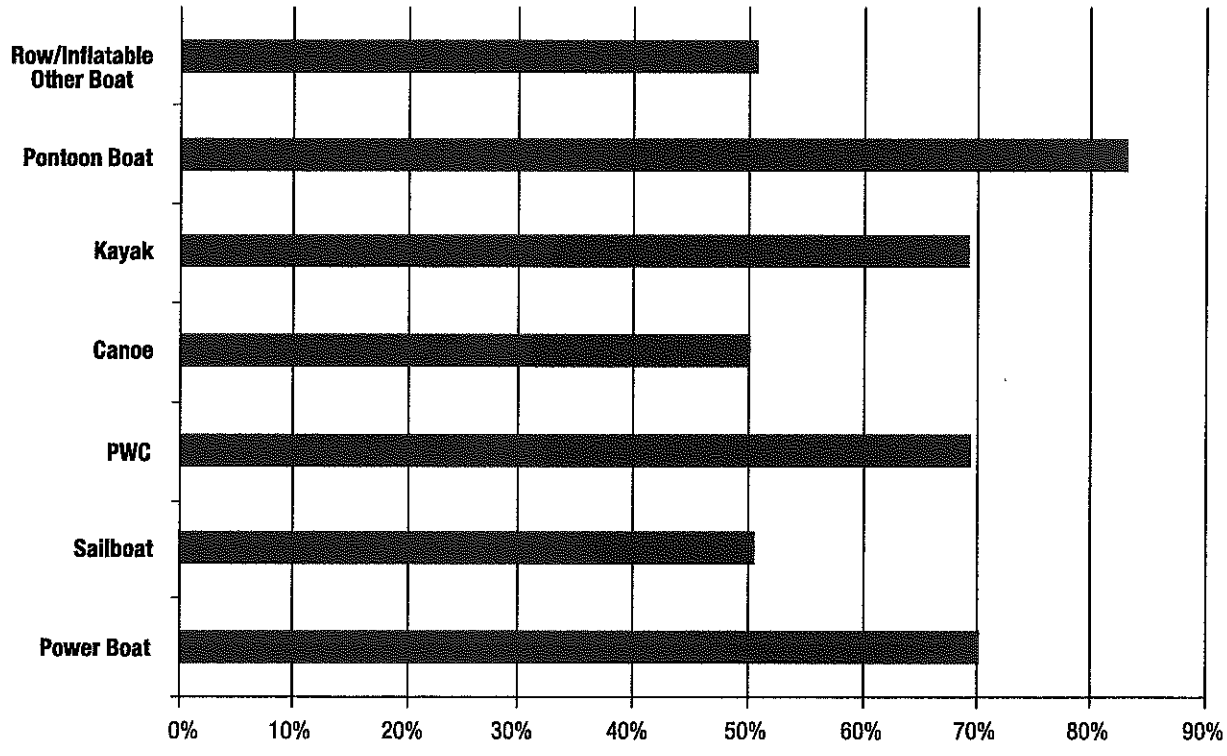


Figure 10: Rate of Recreational Boat Use in 2011 by Boat Type



Boat Use in Different Regions

The Northeast was the region with the highest average percentage of boats used, at 69.1%. The smallest percentage of boats used was in the West, at 61.1%.

Not unexpectedly, the average number of use days was highest in the South (17.5 days per year), and lowest in the West at 14.2 days per year.

Figure 11: Percentage of Boating Person-Hours in U.S. Regions

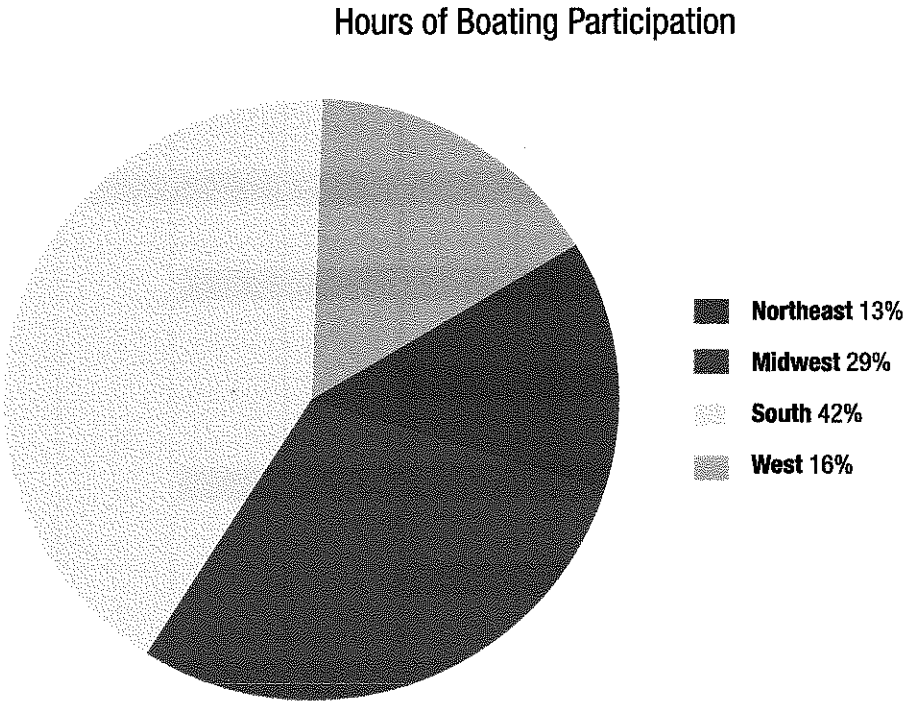


Table 37: Days and Hours of Recreational Boating in 2011 in the U.S. by Boat Type

Boat Type	Number of Boats in the U.S. (000)	Boats Used (%)	Average Number of Use Days Per Year	Average Number of Hours on Water Per Use Day	Average Number of People Aboard Per Use Day	Boating Person-Hours[1] (000)
All Boats	**22,217**	**65.5**	**16.7**	**4.5**	**2.4**	**2,972,999**
Power Boat	10,119	70.3	19.3	5.1	2.9	2,053,042
Sailboat	733	50.4	19.2	4.2	2.3	70,906
PWC	1,689	69.3	16.3	3.9	1.8	130,686
Canoe	2,505	50.1	8.8	3.9	2.1	90,350
Kayak	3,898	69.3	12.8	3.4	1.1	133,125
Pontoon Boat	854	83.4	21.8	4.5	4.3	301,209
Row/Inflatable/Other Boat	2,418	50.7	14.7	4.8	2.3	193,682

[1] The boating person-hour represents the time the average recreational boating participant spent on a boat while it was on the water.

About 42% of all the boating person-hours took place in the South region.

Almost 70% of all boats in the Northeast were used in 2011, and the Northeast region represented 13% of all boating person-hours in the U.S.

Over 856 million boating person-hours were spent in the Midwest, which represents 29% of all boating hours in the U.S., while boaters in the West region logged 16% of all boating person-hours.

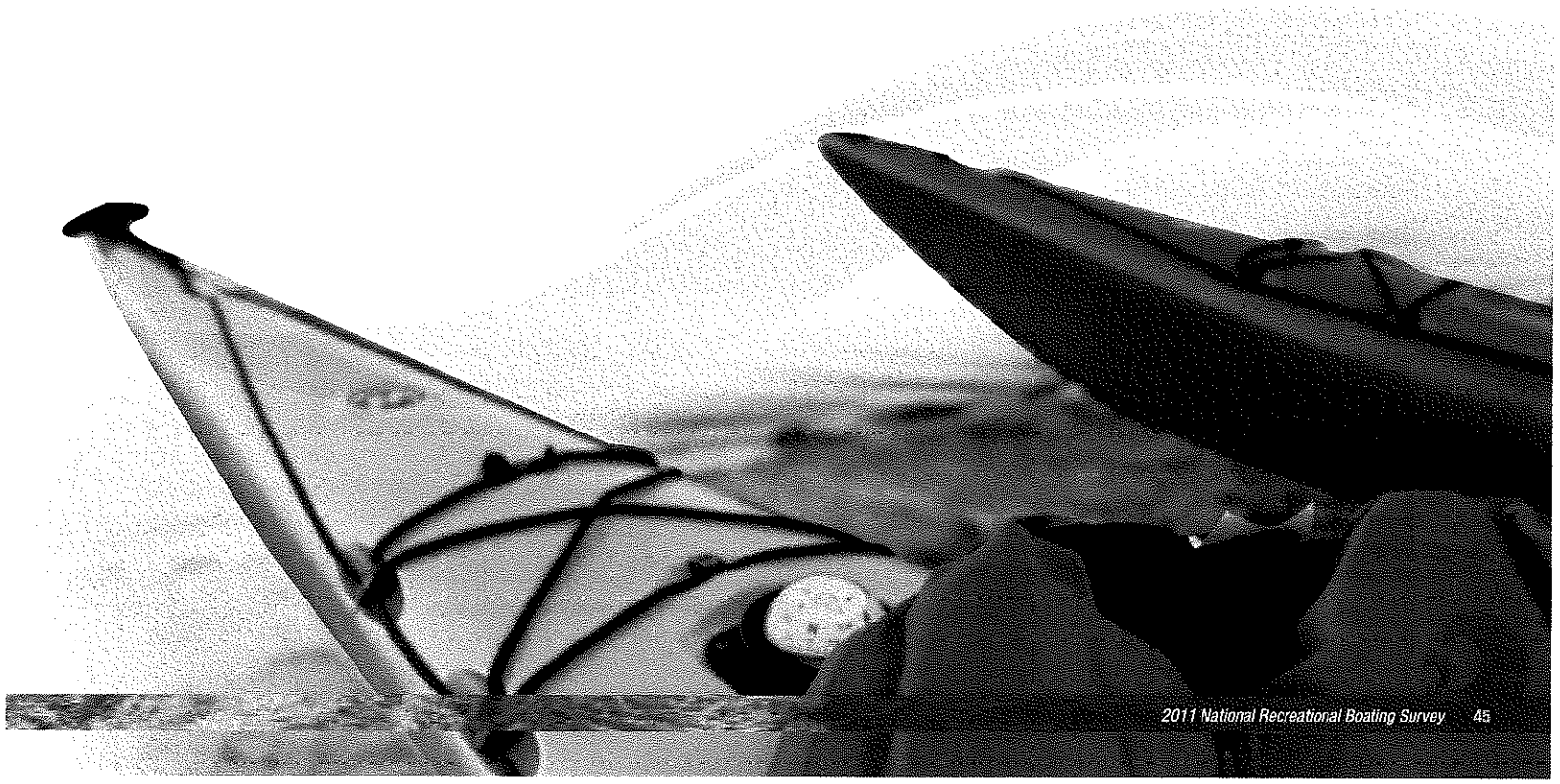


Table 38: Days and Hours of Recreational Boating in 2011 in the Northeast Region by Boat Type

Boat Type	Number of Boats in Northeast Region (000)	Boats Used (%)	Average Number of Use Days Per Year	Average Number of Hours on Water Per Use Day	Average Number of People Aboard Per Use Day	Boating Person-Hours[1] (000)
All Boats	**3,606**	**69.1**	**17.0**	**3.7**	**2.2**	**396,435**
Power Boat	1,324	76.2	20.6	4.3	3.0	267,098
Sailboat	193	54.6	21.7	3.6	2.2	18,367
PWC	177	78.3	17.0	3.9	1.8	16,215
Canoe	537	52.9	9.6	3.8	2.1	22,050
Kayak	1,028	72.6	13.4	2.9	1.1	32,278
Pontoon Boat	64	92.3	24.6	4.0	3.7	21,238
Row/Inflatable/Other Boat	283	52.3	18.5	3.6	2.0	19,190

[1] The boating person-hour represents the time the average recreational boating participant spent on a boat while it was on the water.

Table 39: Days and Hours of Recreational Boating in 2011 in the Midwest Region by Boat Type

Boat Type	Number of Boats in Midwest Region (000)	Boats Used (%)	Average Number of Use Days Per Year	Average Number of Hours on Water Per Use Day	Average Number of People Aboard Per Use Day	Boating Person-Hours[1] (000)
All Boats	**6,258**	**66.0**	**16.7**	**4.4**	**2.6**	**856,563**
Power Boat	3,045	70.4	18.1	4.8	2.9	533,223
Sailboat	171	51.4	14.1	3.9	2.1	10,138
PWC	436	69.5	18.4	3.5	1.8	34,407
Canoe	770	45.9	8.9	4.0	2.1	26,217
Kayak	770	70.6	13.1	3.4	1.1	26,774
Pontoon Boat	423	87.9	22.8	4.4	4.6	169,336
Row/Inflatable/Other Boat	644	50.8	14.8	4.8	2.4	56,469

[1] The boating person-hour represents the time the average recreational boating participant spent on a boat while it was on the water.

Table 40: Days and Hours of Recreational Boating in 2011 in the South Region by Boat Type

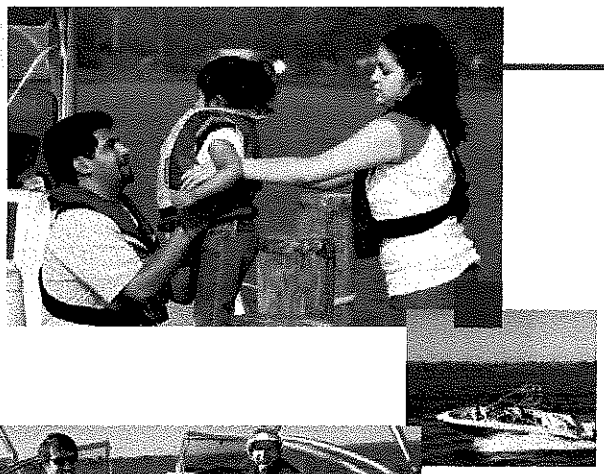
Boat Type	Number of Boats in South Region (000)	Boats Used (%)	Average Number of Use Days Per Year	Average Number of Hours on Water Per Use Day	Average Number of People Aboard Per Use Day	Boating Person-Hours[1] (000)
All Boats	**8,603**	**65.6**	**17.5**	**4.8**	**2.3**	**1,243,137**
Power Boat	4,175	69.5	20.4	5.5	2.8	896,267
Sailboat	243	44.0	21.2	4.6	2.4	24,880
PWC	709	71.1	16.4	4.0	1.8	59,116
Canoe	902	52.7	8.9	4.0	2.0	33,671
Kayak	1,405	69.9	13.1	3.8	1.1	55,841
Pontoon Boat	316	77.2	20.5	4.7	4.1	96,426
Row/Inflatable/Other Boat	853	50.0	16.6	5.0	2.2	76,936

[1] The boating person-hour represents the time the average recreational boating participant spent on a boat while it was on the water.

Table 41: Days and Hours of Recreational Boating in 2011 in the West Region by Boat Type

Boat Type	Number of Boats in West Region (000)	Boats Used (%)	Average Number of Use Days Per Year	Average Number of Hours on Water Per Use Day	Average Number of People Aboard Per Use Day	Boating Person-Hours[1] (000)
All Boats	**3,750**	**61.1**	**14.2**	**4.9**	**2.6**	**476,864**
Power Boat	1,576	67.2	17.6	5.7	3.4	356,455
Sailboat	127	55.1	18.5	5.0	2.6	17,521
PWC	368	61.2	13.1	4.2	1.7	20,948
Canoe	296	48.3	7.1	3.7	2.2	8,412
Kayak	695	61.9	10.8	3.4	1.2	18,231
Pontoon Boat	51	72.6	17.1	5.1	4.4	14,210
Row/Inflatable/Other Boat	638	51.0	10.4	5.0	2.4	41,087

[1] The boating person-hour represents the time the average recreational boating participant spent on a boat while it was on the water.



Boat Owner Safety Training and Self-Assessed Experience Level in Boat Operation

Across all types of boats, 42.6% of owners reported having completed a boating safety course. That ranged from a low of 34.7% for owners of rowboats/ inflatable boats, to a high of 61.7% for owners of sailboats. For the most prevalent boat type (power boat), safety course completion was just under the average, at 40.7%.

At the regional level, the Northeast region had the highest percentage of owners who completed a boating safety course (52.5%) and the Midwest region had the lowest, 36.1% of boat owners.

Across all boat types, a majority (63.4%) of boat owners rated themselves as very experienced. Owners in the South were most likely to rate themselves very experienced (67.8%), while boat owners in the West were least likely to self-rate as very experienced (55.7%).

Figure 12: Owner Self-Assessed Experience Level in Boat Operation in 2011 Across All Boat Types

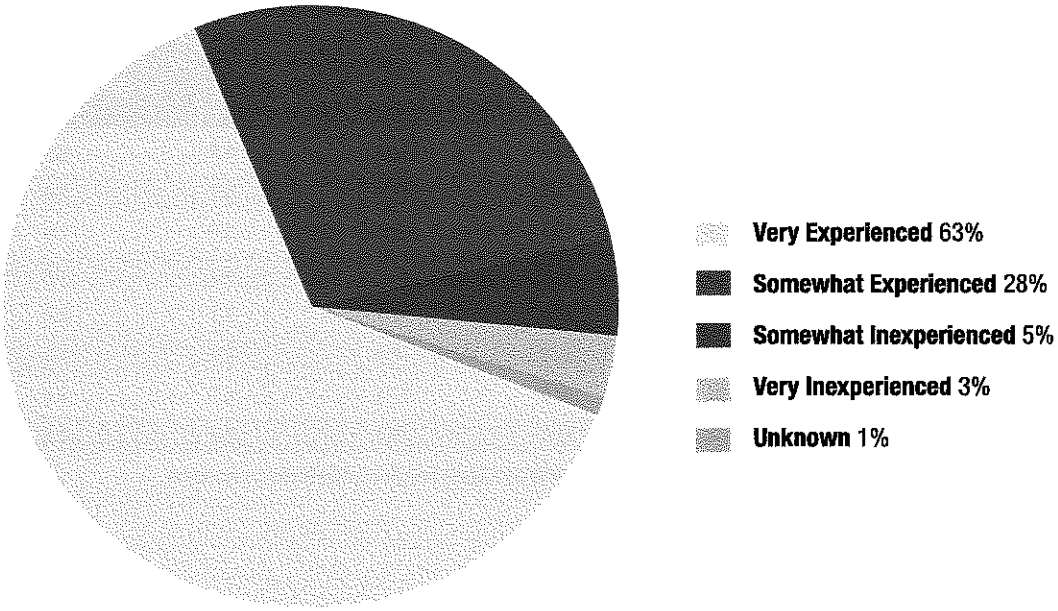


Table 42: Boat Owner's Boating Safety Education and Self-Assessed Experience Level in Boat Operation in 2011 in the U.S. by Boat Type

Boat Type	U.S. Owners with a Boating Safety Course (%)	Owner's Self-Assessed Experience Level in Boat Operation in 2011				
		Very Experienced (%)	Somewhat Experienced (%)	Somewhat Inexperienced (%)	Very Inexperienced (%)	Unknown (%)
All Boats[1]	**42.6**	**63.4**	**27.7**	**5.0**	**3.5**	**<1**
Powerboat	40.7	70.6	21.5	4.4	3.0	<1
Sailboat	61.7	63.5	25.8	5.2	4.9	<1
PWC	47.5	70.5	24.3	3.0	1.9	<1
Canoe	42.6	54.3	35.8	6.3	3.3	<1
Kayak	47.0	51.5	38.5	5.7	4.2	<1
Pontoon Boat	35.3	69.6	23.8	3.6	2.5	<1
Row/Inflatable Boat	34.7	51.1	34.2	7.7	6.7	<1

[1] Recreational boats categorized as "other" boat type are excluded from this total.

Table 43: Boat Owner's Boating Safety Education and Self-Assessed Experience Level in Boat Operation in 2011 in the Northeast Region by Boat Type

Boat Type	Northeast Region's Owners with a Boating Safety Course (%)	Owner's Self-Assessed Experience Level in Boat Operation in 2011				
		Very Experienced (%)	Somewhat Experienced (%)	Somewhat Inexperienced (%)	Very Inexperienced (%)	Unknown (%)
All Boats[1]	**52.5**	**62.0**	**29.5**	**4.6**	**3.5**	**<1**
Powerboat	60.7	72.1	22.3	2.7	2.3	<1
Sailboat	55.3	63.5	28.1	4.2	3.7	<1
PWC	78.4	76.7	16.6	4.8	1.5	<1
Canoe	42.6	54.9	36.9	4.8	3.4	<1
Kayak	46.2	52.9	36.9	6.8	3.2	<1
Pontoon Boat	59.9	74.0	20.2	1.2	3.5	1.0
Row/Inflatable Boat	33.4	45.3	34.0	6.3	13.9	<1

[1] Recreational boats categorized as "other" boat type are excluded from this total.

Table 44: Boat Owner's Boating Safety Education and Self-Assessed Experience Level in Boat Operation in 2011 in the Midwest Region by Boat Type

Boat Type	Midwest Region's Owners with a Boating Safety Course (%)	Owner's Self-Assessed Experience Level in Boat Operation in 2011				
		Very Experienced (%)	Somewhat Experienced (%)	Somewhat Inexperienced (%)	Very Inexperienced (%)	Unknown (%)
All Boats[1]	**36.1**	**62.7**	**27.3**	**6.0**	**3.6**	**<1**
Powerboat	32.3	68.6	22.3	5.4	3.3	<1
Sailboat	58.5	58.3	27.0	8.1	4.9	1.5
PWC	43.3	69.6	26.0	2.3	1.7	<1
Canoe	34.8	53.9	34.7	8.5	2.4	<1
Kayak	46.7	48.5	39.8	6.2	5.4	<1
Pontoon Boat	34.4	67.3	24.4	5.3	2.6	<1
Row/Inflatable Boat	32.4	52.1	31.9	8.8	7.2	<1

[1] Recreational boats categorized as "other" boat type are excluded from this total.

Table 45: Boat Owner's Boating Safety Education and Self-Assessed Experience Level in Boat Operation in 2011 in the South Region by Boat Type

Boat Type	South Region's Owners with a Boating Safety Course (%)	Owner's Self-Assessed Experience Level in Boat Operation in 2011				
		Very Experienced (%)	Somewhat Experienced (%)	Somewhat Inexperienced (%)	Very Inexperienced (%)	Unknown (%)
All Boats[1]	**41.9**	**67.8**	**24.8**	**3.8**	**3.3**	**<1**
Powerboat	38.9	73.8	19.4	3.4	2.9	<1
Sailboat	67.6	70.4	21.5	2.5	5.4	<1
PWC	45.5	73.0	22.7	3.1	1.0	<1
Canoe	48.0	57.1	33.8	4.9	4.0	<1
Kayak	46.5	56.0	35.5	4.1	4.3	<1
Pontoon Boat	31.1	72.1	23.2	1.6	2.5	<1
Row/Inflatable Boat	33.4	59.6	29.3	6.2	4.8	<1

[1] Recreational boats categorized as "other" boat type are excluded from this total.

Table 46: Boat Owner's Boating Safety Education and Self-Assessed Experience Level in Boat Operation in 2011 in the West Region by Boat Type

Boat Type	West Region's Owners with a Boating Safety Course (%)	Owner's Self-Assessed Experience Level in Boat Operation in 2011				
		Very Experienced (%)	Somewhat Experienced (%)	Somewhat Inexperienced (%)	Very Inexperienced (%)	Unknown (%)
All Boats[1]	**45.3**	**55.7**	**33.4**	**6.7**	**3.9**	**<1**
Powerboat	45.2	64.5	25.1	6.7	3.5	<1
Sailboat	64.4	57.0	29.1	8.0	5.8	<1
PWC	41.7	63.9	29.1	2.5	4.2	<1
Canoe	46.3	45.4	42.6	7.4	3.2	1.3
Kayak	49.7	43.8	45.6	6.6	4.0	<1
Pontoon Boat	37.4	66.9	27.1	5.3	<1	<1
Row/Inflatable Boat	38.2	44.4	41.0	9.0	5.2	<1

[1] Recreational boats categorized as "other" boat type are excluded from this total.

Table 47: Primary Operator's Boating Safety Education and Self-Assessed Experience Level in Boat Operation in 2011 in the U.S. Regions

Regions	Primary Operators with a Boating Safety Course (%)	Primary Operator's Self-Assessed Experience Level in Boat Operation in 2011				
		Very Experienced (%)	Somewhat Experienced (%)	Somewhat Inexperienced (%)	Very Inexperienced (%)	Unknown (%)
United States	**45.3**	**72.2**	**24.5**	**2.3**	**<1**	**<1**
Northeast	56.4	68.0	27.8	2.6	1.2	<1
Midwest	38.4	72.5	23.8	2.6	<1	<1
South	43.5	76.3	21.1	1.8	<1	<1
West	50.3	65.8	30.5	2.6	<1	<1

Table 48: Non-Primary Operator's Boating Safety Education and Self-Assessed Experience Level in Boat Operation in 2011 in the U.S. Regions

Regions	Non-Primary Operator with a Boating Safety Course (%)	Non-Primary Operator's Self-Assessed Experience Level in Boat Operation in 2011				
		Very Experienced (%)	Somewhat Experienced (%)	Somewhat Inexperienced (%)	Very Inexperienced (%)	Unknown (%)
United States	**33.0**	**31.2**	**39.5**	**14.8**	**13.6**	**<1**
Northeast	39.8	41.9	35.1	11.2	11.3	<1
Midwest	28.1	28.3	39.5	17.6	13.7	<1
South	35.0	31.1	40.6	12.1	15.1	1.0
West	30.7	26.1	41.8	18.5	12.9	<1

Boat Ownership by Type

Boats are very diverse in terms of types, sizes, propulsion, and the materials from which they are made (wood, fiberglass, aluminum, etc.).

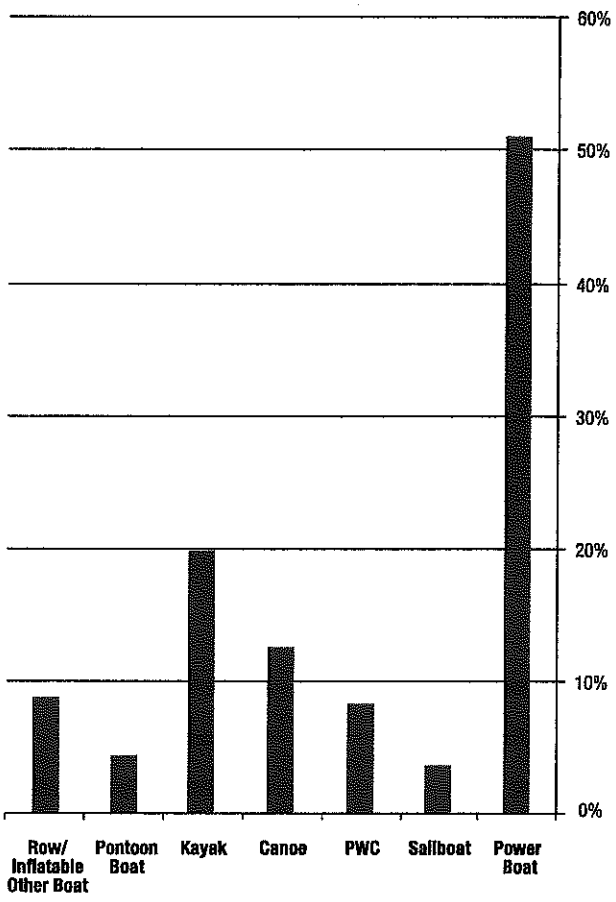
At the national level, 51% of boat-owning households owned power boats, 3.7% owned sailboats, 8.5% owned personal watercraft (PWCs), 12.6% owned canoes, 19.7% owned percent kayaks, 4.3% owned pontoon boats, and 8.8% owned row boats or inflatable boats.

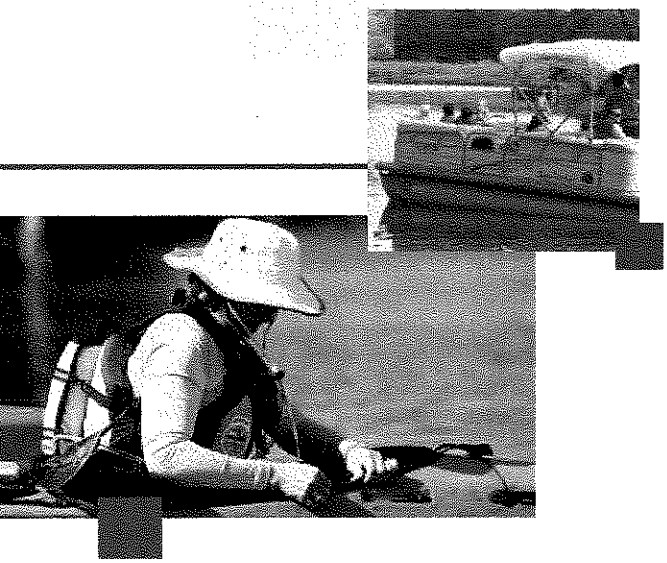
The distribution of all boats owned by households across the United States was similar, with power boats representing 45.5% of all boats; sailboats about 3.3%; PWCs 7.6%, canoes about 11.3%, kayaks 17.5%, pontoon boats 3.8%, row/inflatable boats 7.9%, and other boats 3%.

The Northeast had the lowest percentage of power boats (36.7%) and PWCs (4.9%) in comparison with other regions, and had the highest percentage of canoes and kayaks (43.4%) and sailboats (5.4%).

The Midwest and the South had the highest proportions of power boats at 48.6% and 48.5% respectively.

Figure 13: Distribution of Households in 2011 by Type of Recreational Boat Owned

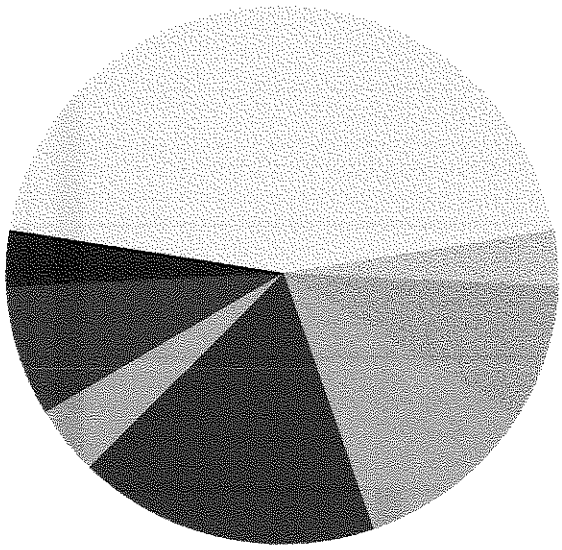




Boat Size

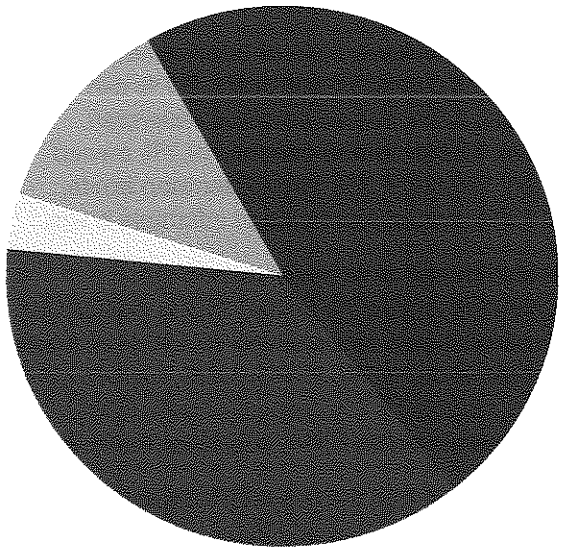
About 48% of recreational boats owned in the U.S. were less than 16 feet long, and about 85% were less than 26 feet in length. Small boats were particularly common in the Northeast, with more than half (56.5%) being less than 16 feet in length. This explains, in part, the high percentage of boats in this region that were not registered. Boats 40 feet or longer constituted a very small share of all recreational boats in the U.S., less than half of one percent.

Figure 14: Distribution of Recreational Boats in 2011 by Boat Type



- **Power Boat** 46%
- **Sailboat** 3%
- **PWC** 8%
- **Canoe** 11%
- **Kayak** 17%
- **Pontoon Boat** 4%
- **Row/Inflatable Boat** 8%
- **Other Boat** 3%

Figure 15: Distribution of Recreational Boats in 2011 by Boat Size



- **Under 16 feet** 48%
- **16-25 feet** 37%
- **28-39 feet** 3%
- **Unknown** 12%

Note: The share of recreational boats 40 feet or longer was below 0.5%.

Table 49: Distribution of Recreational Boats in 2011 in the United States by Boat Type and Size

Boat Type	Recreational Boats in the U.S. by Boat Size												All Boats	
	Under 16 ft		16 ft to 25 ft		26 ft to 39 ft		40 ft to 65 ft		Over 65 ft		Unknown			
	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)
All Boats	10,636	100.0	8,262	100.0	684	100.0	...	...	...	...	2,536	100.0	22,217	100.0
Power Boat	3,250	30.6	5,840	70.7	463	67.7	...	...	...	...	495	19.5	10,119	45.5
Sailboat	336	3.2	262	3.2	94	13.7	25	25	...	...	16	0.6	733	3.3
PWC	1,194	11.2	134	1.6	...	...	...	...	...	...	362	14.3	1,689	7.6
Canoe	1,276	12.0	908	11.0	...	...	...	...	...	...	319	12.6	2,505	11.3
Kayak	3,155	29.7	389	4.7	...	...	...	...	...	...	354	14.0	3,898	17.5
Pontoon Boat	42	0.4	614	7.4	119	17.4	...	...	...	...	77	3.0	854	3.8
Row/Inflatable Boat	1,383	13.0	115	1.4	...	...	...	...	...	...	243	9.6	1,747	7.9
Other Boat	...	...	...	...	...	...	...	...	...	...	671	26.4	671	3.0

"..."These numbers and percentages are not reported because of the low numbers of responses for these types and sizes of boats.

Table 50: Distribution of Recreational Boats in 2011 in the Northeast Region by Boat Type and Size

Boat Type	Recreational Boats in the Northeast Region by Boat Size												All Boats	
	Under 16 ft		16 ft to 25 ft		26 ft to 39 ft		40 ft to 65 ft		Over 65 ft		Unknown			
	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)
All Boats	2,036	100	1,086	100	143	100	...	...	...	...	319	100	3,606	100
Power Boat	473	23.2	705	64.9	104	72.6	13	...	...	...	27	8.3	1,324	36.7
Sailboat	96	4.7	61	5.6	26	17.9	5	...	...	...	5	1.6	193	5.4
PWC	158	7.8	6	0.5	...	...	...	...	...	...	13	4.1	177	4.9
Canoe	288	14.1	172	15.8	...	...	...	...	...	...	76	24	537	14.9
Kayak	824	40.5	92	8.5	...	...	...	...	...	...	112	35	1,028	28.5
Pontoon Boat	6	0.3	40	3.7	8	5.3	...	...	...	...	10	3.1	64	1.8
Row/Inflatable Boat	191	9.4	10	0.9	6	4	...	...	...	...	23	7.2	229	6.4
Other Boat	...	...	...	...	...	...	...	...	...	...	53	16.7	53	1.5

"..."These numbers and percentages are not reported because of the low numbers of responses for these types and sizes of boats.

Table 51: Distribution of Recreational Boats in 2011 in the Midwest Region by Boat Type and Size

Boat Type	Recreational Boats in the Midwest Region by Boat Size												All Boats	
	Under 16 ft		16 ft to 25 ft		26 ft to 39 ft		40 ft to 65 ft		Over 65 ft		Unknown			
	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)
All Boats	2,724	100	2,645	100	165	100	...	...	...	...	713	100	6,258	100
Power Boat	1,025	37.6	1,768	66.9	94	56.9	...	...	...	...	148	20.8	3,045	48.6
Sailboat	80	2.9	70	2.6	14	8.6	2	...	...	...	5	0.6	171	2.7
PWC	275	10.1	55	2.1	...	...	...	...	...	...	106	14.9	436	7
Canoe	335	12.3	341	12.9	...	...	...	...	...	...	94	13.2	770	12.3
Kayak	640	23.5	71	2.7	...	...	...	...	...	...	59	8.3	770	12.3
Pontoon Boat	16	0.6	311	11.8	56	34.2	...	...	...	...	39	5.5	423	6.8
Row/Inflatable Boat	354	13	29	1.1	...	...	...	...	...	...	48	6.8	432	6.9
Other Boat	...	...	...	...	...	...	...	...	...	...	213	29.9	213	3.4

"..." These numbers and percentages are not reported because of the low numbers of responses for these types and sizes of boats.

Table 52: Distribution of Recreational Boats in 2011 in the South Region by Boat Type and Size

Boat Type	Recreational Boats in the South Region by Boat Size												All Boats	
	Under 16 ft		16 ft to 25 ft		26 ft to 39 ft		40 ft to 65 ft		Over 65 ft		Unknown			
	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)
All Boats	4,005	100	3,213	100	269	100	...	...	...	...	1,077	100	8,603	100
Power Boat	1,334	33.3	2,375	73.9	192	71.4	...	...	...	...	247	22.9	4,175	48.5
Sailboat	109	2.7	92	2.9	30	11.3	10	...	...	...	...	...	243	2.8
PWC	476	11.9	53	1.6	...	...	...	...	...	...	180	16.7	709	8.2
Canoe	498	12.4	282	8.8	...	...	...	...	...	...	122	11.3	902	10.5
Kayak	1,160	29	133	4.1	...	...	...	...	...	...	112	10.4	1,405	16.3
Pontoon Boat	15	0.4	234	7.3	46	17.1	...	...	...	...	20	1.9	316	3.7
Row/Inflatable Boat	413	10.3	43	1.4	...	...	...	...	...	...	82	7.6	538	6.3
Other Boat	...	...	...	...	...	...	...	...	...	...	315	29.2	315	3.7

"..." These numbers and percentages are not reported because of the low numbers of responses for these types and sizes of boats.

Table 53: Distribution of Recreational Boats in 2011 in the West Region by Boat Type and Size

Boat Type	Recreational Boats in the West Region by Boat Size												All Boats	
	Under 16 ft		16 ft to 25 ft		26 ft to 39 ft		40 ft to 65 ft		Over 65 ft		Unknown			
	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)
All Boats	**1,870**	**100**	**1,318**	**100**	**107**	**100**	**...**	**...**	**...**	**...**	**427**	**100**	**3,750**	**100**
Power Boat	418	22.4	992	75.2	74	68.7	16	16.2687	...	...	73	17.2	1,576	42
Sailboat	51	2.7	39	3	24	22	8	7.7737	...	...	5	1.2	127	3.4
PWC	285	15.2	21	1.6	...	...	...	...	...	...	63	14.6	368	9.8
Canoe	156	8.3	113	8.6	...	...	...	...	...	...	27	6.3	296	7.9
Kayak	530	28.3	93	7	...	...	...	...	...	...	72	16.8	695	18.5
Pontoon Boat	5	0.3	29	2.2	9	8.8	...	...	...	...	7	1.7	51	1.4
Row/Inflatable Boat	425	22.7	32	2.4	...	...	...	...	...	...	90	21.1	548	14.6
Other Boat	...	...	...	...	...	...	...	...	...	...	90	21	90	2.4

"These numbers and percentages are not reported because of the low numbers of responses for these types and sizes of boats.

Boat Registration

State boat registration requirements (e.g., size, types of boats that must be registered) differ widely from state to state. Registration requires a title, the payment of a fee, and the issuance of a registration number and decal that must be affixed to the vessel. In most states, all recreational boats over a certain size and those powered by a motor or engine of some sort are required to be registered. In some states, only boats with mechanical propulsion must be registered, but in states such as Ohio all boats must be registered.

Nearly 12.75 million, or 57% of the estimated total number of recreational boats in 2011, were registered. It is estimated that about 9.5 million of the recreational boats owned in the country were not registered.

About 44% of the boats in the Northeast were registered in 2011. In comparison, two-thirds of boats owned in the Midwest region were registered.

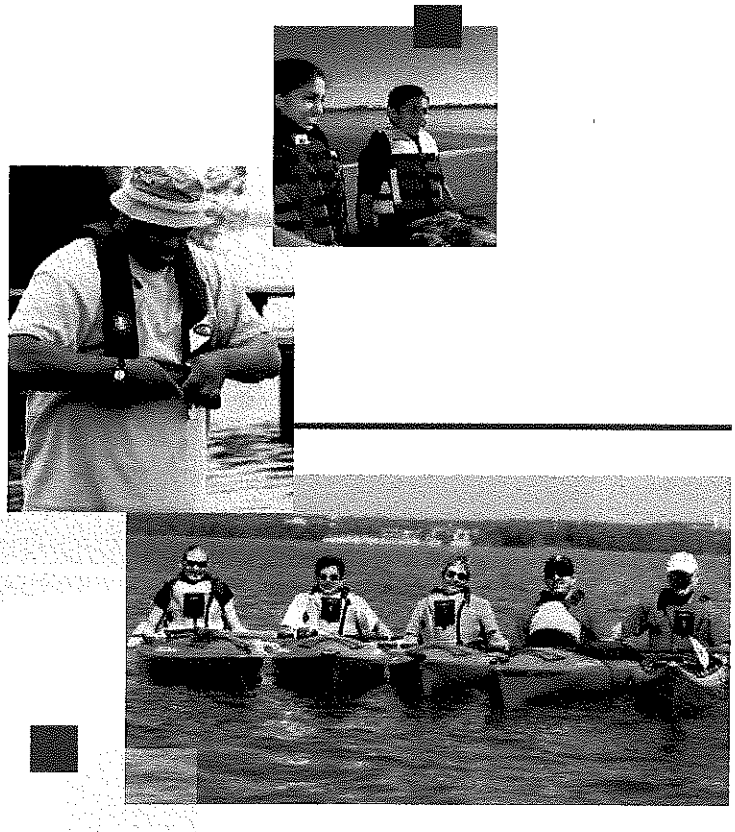


Figure 16: Recreational Boat Registration Status in 2011 in U.S. Regions

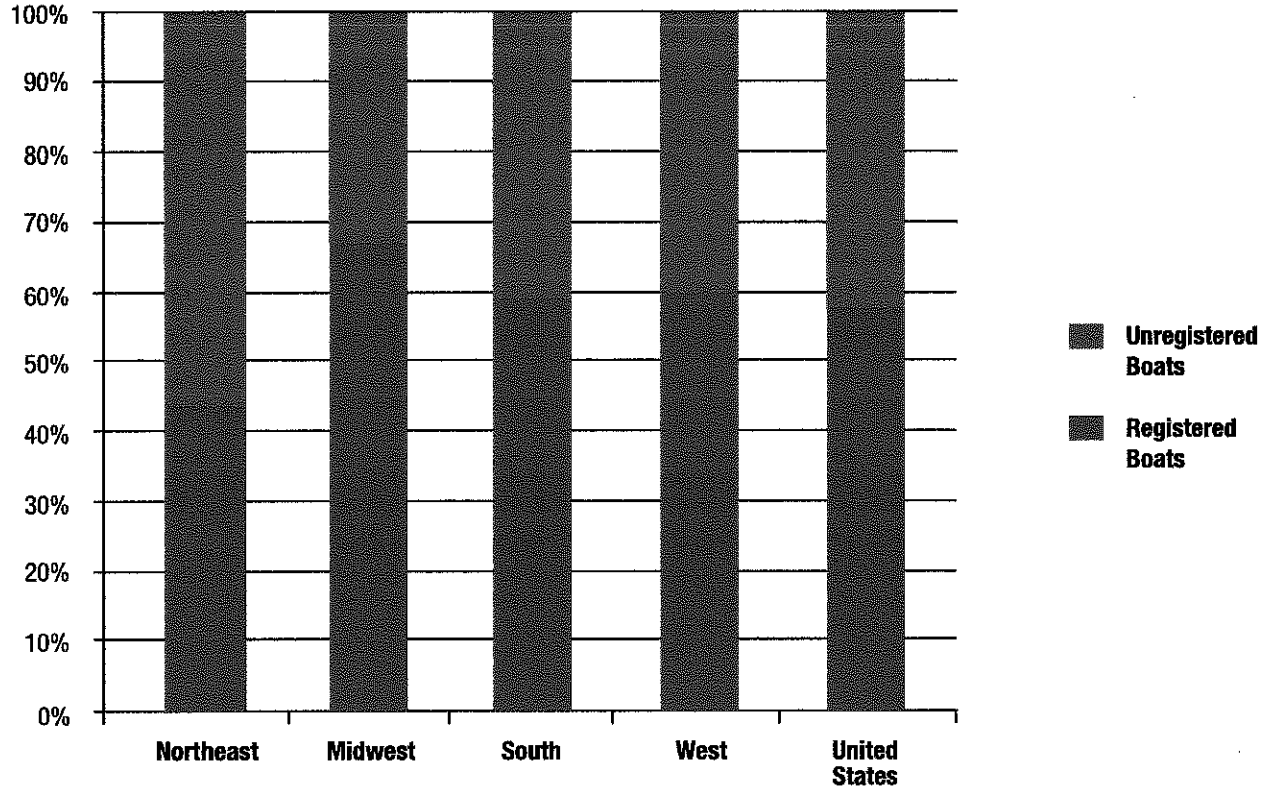


Table 54: Distribution of Recreational Boats in 2011 in the U.S. Regions by Registration Status

Regions	Registered Boats[1] (000)	Non-registered Boats[2] (000)	All Boats (000)
United States	**12,749**	**9,468**	**22,217**
Northeast	1,592	2,014	3,606
Midwest	4,211	2,047	6,258
South	5,059	3,544	8,603
West	1,887	1,863	3,750

[1] For registered boats, the region represents the region of registration. The state of residence was used when respondents did not know the state of registration or the owner refused to reveal it.

[2] For unregistered boats, the region represents the state of residence of boat owners.

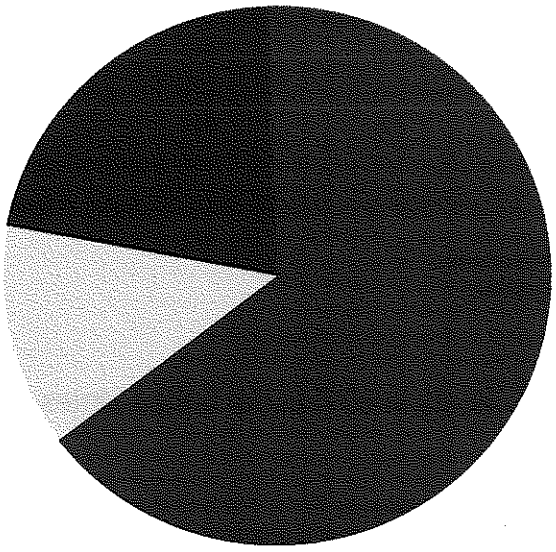
Motorized/Mechanically-Propelled Boats

It is estimated that approximately 62% of all recreational boats that were owned, whether registered or non-registered, whether in-use or not, had an engine or motor of some type, including auxiliary power, while 38% had no motor or engine and were manually propelled, or propelled by sail powered only.

Outboard engines represented almost two-thirds (65.1%) of known engine types on motorized recreational boats, and inboard engines, nearly 22% of known engine types on motorized boats, including PWCs. Inboard/Outboard engines were least prevalent and accounted for 13.3% of known engine types that powered boats.

About 14% of recreational boats with known engine size (horsepower) were powered by engines with 10 horsepower or less, and more than 27% of boats with known horsepower were propelled by engines with up to 25 horsepower. Nearly 40% of boats were powered by engines with horsepower ranging between 76 and 250. About 10% of the boats with known engine size had over 250 horsepower.

Figure 17: Motorized Recreational Boats in 2011 by Engine Type



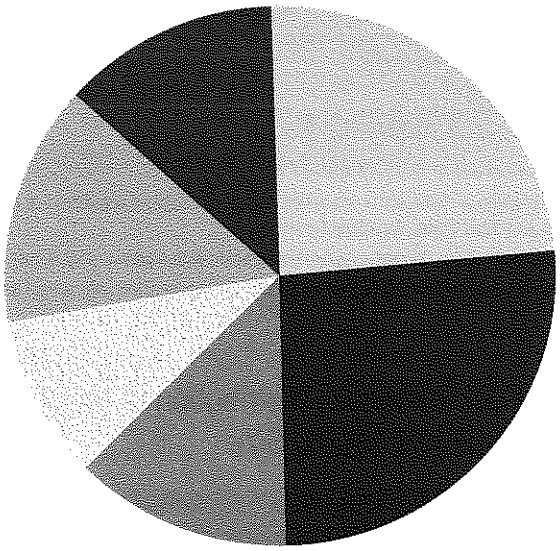
Inbound 22%

Outboard 65%

Inboard/Outboard 13%

Note: Motorized recreational boats with unknown or not reported engine type are excluded.

Figure 18: Motorized Recreational Boats in 2011 by Engine Horsepower



Up to 10 hp 14%

11-25 hp 13%

26-75 hp 24%

76-150 hp 26%

151-250 hp 13%

Over 250 hp 10%

Note: Motorized recreational boats with unknown or not reported engine horsepower are excluded.

Table 55: Estimated Distribution of Recreational Boats with Motor/Engine in 2011 in the United States

	Recreational Boats in the U.S.															
	Power Boat		Sailboat[1]		PWC		Canoe		Kayak		Pontoon Boat		Rowboat/ Inflatable Boat		All Boats[2]	
	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)
All Boats	10,119	100.0	733	100.0	1,689	100.0	2,505	100.0	3,898	100.0	854	100.0	1,747	100.0	21,546	100.0
Motorized Boats[3]	10,119	100.0	147	20.0	1,689	100.0	112	4.5	35	0.9	854	100.0	487	27.9	13,443	62.4
Non-Motorized	0	0.0	586	80.0	0	0.0	2,393	95.5	3,863	99.1	0	0.0	1,260	72.1	8,103	37.6

[1] The number of sailboats with engines was estimated using the results from the survey in conjunction with national registration statistics for 2011. The registration statistics included the numbers of registered sailboats with inboard and auxiliary engines.

[2] Recreational boats categorized as "other" boat type are excluded from this total estimate.

[3] The number of motorized boats represents recreational boats owned by households, including those that were registered and non-registered in 2011, and those that were used and not used in 2011. Survey respondents were asked whether the boat that they owned had a motor.

Table 56: Estimated Distribution of Motorized Recreational Boats in 2011 in the United States by Boat and Engine Type

Engine Type	Motorized Recreational Boats in the U.S.				
	Power Boat	Sailboat	PWC[1]	Pontoon Boat	All Boats[2]
	Percent (%)	Percent (%)	Percent (%)	Percent (%)	Percent (%)
Reported Engine Types[3]	100.0	100.0	100.0	100.0	100.0
Inboard	9.8	37.5	100.0	1.9	21.6
Outboard	73.1	61.1	0.0	94.4	65.1
Inboard/Outboard	17.1	1.4	0.0	3.6	13.3

[1] The engines in PWCs are re-classified as inboard engines regardless of how they were categorized by respondents. Some states also classify PWC engines as inboard only, and other states, as inboard-outboard.

[2] Motorized canoes, kayaks, row/inflatable boats with a known engine type are included in this total estimate.

[3] Motorized recreational boats with unknown or not reported engine type are excluded from this estimate.

Table 57: Estimated Distribution of Motorized Recreational Boats in 2011 in the United States by Boat Type and Engine Size

Boat Engine Horsepower	Motorized Recreational Boats in the U.S.							
	Power Boat	Sailboat	PWC	Canoe	Kayak	Pontoon Boat	Rowboat/ Inflatable Boat	All Boats[1]
	Percent (%)	Percent (%)	Percent (%)	Percent (%)	Percent (%)	Percent (%)	Percent (%)	Percent (%)
Reported Engine Horsepower[2]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Up to 10 hp	13.1	55.4	6.6	86.2	100.0	5.0	77.1	14.2
11 to 25 hp	14.4	19.8	5.3	13.8	0.0	7.4	11.7	13.1
26 to 75 hp	21.6	21.2	22.1	0.0	0.0	55.6	7.7	23.7
76 to 150 hp	25.5	...	42.0	0.0	0.0	27.8	...	26.2
151 to 250 hp	14.0	...	17.9	0.0	0.0	2.5	...	12.9
Over 250 hp	11.4	...	6.2	0.0	0.0	1.9	...	9.8

[1] Recreational boats categorized as "other" boat type are excluded from this total estimate.

[2] Motorized recreational boats with unknown or not reported engine horsepower are excluded from this estimate.

"..." These percentages are not reported because of the low numbers of responses for these types boats and engine sizes.

Boat Fuel Type

Gasoline was by far the most prevalent fuel type, used by an estimated 94.7% of motorized boats across the U.S. Electricity powered 3% of recreational boats, while diesel fuel was used by nearly 2% of motorized boats.

Boat Hull Composition

Boat hulls are comprised of many materials, but fiberglass (about 44.5% of boats) and aluminum (about 27.5%) were most common. Plastic/Poly hulls accounted for another 11.9% of boats, with carbon fiber, rubber, vinyl, and wood each comprising less than 3% of boat hulls.

Table 58: Estimated Distribution of Motorized Recreational Boats in 2011 in the United States by Boat and Fuel Type

Engine Type	United States by Boat and Fuel Type				
	Power Boat	Sailboat	PWC	Pontoon Boat	All Boats[1]
	Percent (%)	Percent (%)	Percent (%)	Percent (%)	Percent (%)
Reported Fuel Types[2]	100.0	100.0	100.0	100.0	100.0
Diesel	1.7	32.5	...	...	1.8
Electric	2.0	3.2	2.4	2.5	3.0
Gasoline	95.9	64.3	94.6	96.3	94.7
Other	...	...	2.5	...	...

[1] Motorized canoes, kayaks, row/inflatable boats with a known fuel type are included in this total estimate.

[2] Motorized recreational boats with unknown or not reported fuel type(s) are excluded from this estimate.

"..." These percentages are not reported because of the low numbers of responses for these boat and fuel types.

Table 59: Distribution of Recreational Boats in 2011 in the United States by Boat Type and Hull Material

Hull Material	Recreational Boats in the U.S.															
	Power Boat		Sailboat		PWC		Canoe		Kayak		Pontoon Boat		Row/ Inflatable Boat		All Boats[1]	
	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)
All Boats	10,119	100.0	733	100.0	1,699	100.0	2,605	100.0	3,998	100.0	654	100.0	1,747	100.0	21,546	100.0
Wood	102	1.0	55	7.6	...	...	85	3.4	...	...	31	3.6	59	3.3	381	1.8
Aluminum	3,701	36.6	20	2.8	140	8.3	722	28.8	...	...	598	81.5	634	36.3	5,921	27.5
Fiberglass	5,625	55.6	596	81.3	1,234	73.0	968	38.6	935	24.0	61	7.2	170	9.7	9,589	44.5
Plastic/Poly	...	...	12	1.7	59	3.5	310	12.4	2,041	52.4	...	...	111	6.4	2,579	12.0
Rubber	...	...	...	...	28	1.7	...	...	101	2.6	...	...	248	14.2	436	2.0
Vinyl	...	...	...	...	...	...	63	2.5	260	6.7	...	...	192	11.0	569	2.6
Carbon Fiber	...	...	...	...	...	...	61	2.4	85	2.2	...	...	24	1.4	247	1.1
Steel	...	...	...	...	...	...	...	...	...	...	11	1.3	...	...	...	...
Rigid Hull Inflatable	...	...	...	...	...	...	...	...	43	1.1	...	...	67	3.8	...	...
Canvas	...	...	...	...	...	...	...	...	...	...	...	...	26	1.5	...	...
Other	...	...	21	2.9	27	1.6	87	3.5	73	1.9	...	...	...	...	242	1.1
Unknown	393	3.9	20	2.7	137	8.1	176	7.0	286	7.3	41	4.8	194	11.1	1,248	5.8

[1] Recreational boats categorized as "other" boat type are excluded from this total estimate.

"..." These numbers and percentages are not reported because of the low numbers of responses for these boat types and hull materials.

Table 60: Distribution of Recreational Boats in 2011 in the United States by Boat Size and Hull Material

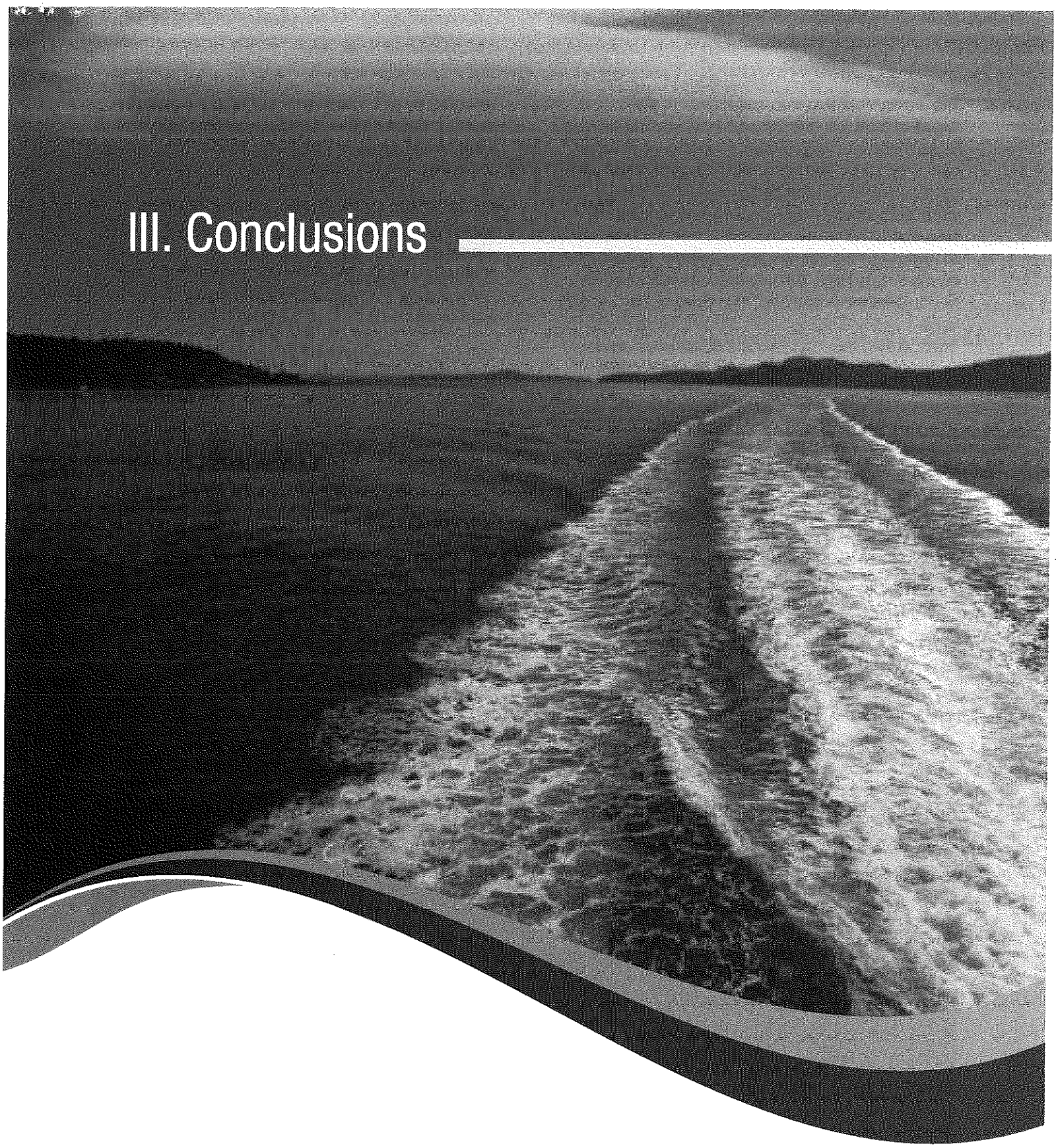
Boat Type	Recreational Boats in the U.S. by Boat Size												All Boats	
	Under 16 ft		16 ft to 25 ft		26 ft to 39 ft		40 ft to 65 ft		Over 65 ft		Unknown			
	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)	Number (000)	Percent (%)
All Boats	10,116	100.0	8,168	100.0	651	100.0	94	100.0	9	100.0	2,508	100.0	21,546	100.0
Wood	185	1.8	146	1.8	13	1.9	11	12.1	0	3.1	26	1.0	381	1.8
Aluminum	2,771	27.4	2,556	31.3	71	10.9	6	6.0	5	53.4	513	20.4	5,921	27.5
Fiberglass	3,425	33.9	4,643	56.8	535	82.2	70	74.7	3	30.9	912	36.4	9,589	44.5
Plastic/Poly	2,016	19.9	361	4.4	...	...	...	...	...	...	202	8.0	2,579	12.0
Rubber	360	3.6	...	...	...	...	...	...	...	...	50	2.0	436	2.0
Vinyl	498	4.9	...	...	...	...	...	...	1	6.8	34	1.3	569	2.6
Carbon Fiber	143	1.4	...	...	9	1.4	...	...	...	...	26	1.0	247	1.1
Steel	...	...	...	...	...	...	5	4.9	1	5.8	...	...	...	...
Rigid Hull Inflatable	158	1.6	...	...	...	...	...	...	...	...	...	...	...	...
Canvas	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other	147	1.4	...	...	...	...	...	...	...	...	...	...	242	1.1
Unknown	341	3.4	192	2.4	13	2.0	2	1.8	...	...	700	27.9	1,248	5.8

[1] Recreational boats categorized as "other" boat type are excluded from this total estimate.

"..." These numbers and percentages are not reported because of the low numbers of responses for these boat sizes and hull materials.

Zero represents a number of boats that is smaller than 1,000.

III. Conclusions

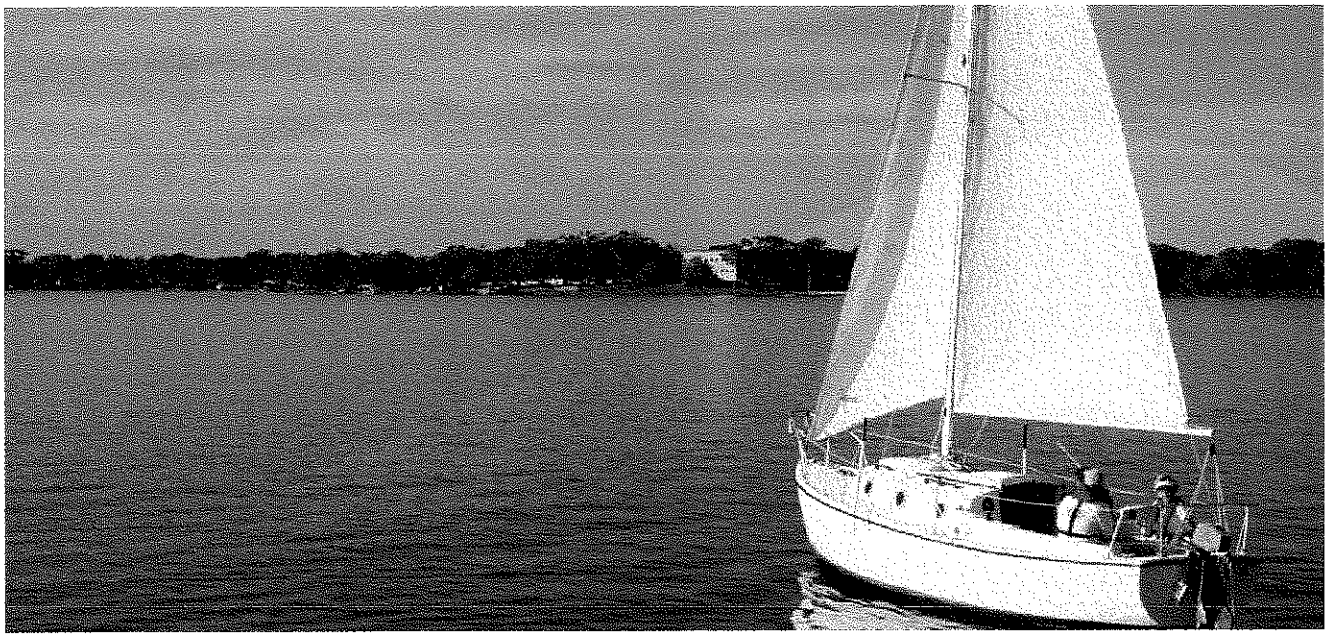


The survey revealed that, regardless of the lingering troubles with the economy and continuing fluctuations in energy prices, recreational boating continued to be one of the nation's most popular outdoor recreational activities as well as an important generator of income and employment. Men and women, adults and children residing in all regions of the country enjoy boating. Based on the survey data, it is estimated that about 73.6 million persons boated in 2011. Boating participants logged nearly 3 billion hours aboard recreational boats during the year. About 2.05 billion of these hours were on board various types and sizes of power boats.

About 17% of U.S. households owned an estimated 22.2 million boats, and the majority of these boats were used in 2011. The survey verified the great diversity of recreational boats in terms of types, sizes, mode of power (e.g., sail, motors, manually-propelled) and hull materials. It is estimated that 62% of recreational boats were powered by an engine of some type; 38% had no mechanical propulsion and were manually propelled, or powered by sail only. Nearly half of all recreational vessels were less than 16 feet in length. These small boats are involved in a higher proportion of boating accidents, injuries, and fatalities.

About 57% of the recreational boats owned by households were registered in 2011. The other 43%, many of them canoes, kayaks, and other manually-propelled vessels, as well as inflatables and small sailboats are not required by most states to be registered.

Since government-provided boating services (law enforcement, search and rescue, public education, etc.) and facilities (boat ramps, parking areas, docks, restrooms, pump-outs, etc.) are funded through different combinations of boating-related fuel taxes and registration fees, there is concern that if the relative proportion of registered boats continues to decrease, funding for the maintenance and upkeep of the entire boating system will decline. This includes diminished funding for dredging, boating access, law enforcement and search and rescue.



The results also verified the changing popularity of different recreational boats. Recreational paddling is now very popular, as measured in terms of the number of participants, boats, and exposure hours. Approximately 29% of the recreational boats that were owned by U.S. households were canoes and kayaks, and half of all canoes and two-thirds of kayaks were used in 2011. Boaters logged nearly a quarter of a billion hours in kayaks and canoes. The changing demographics of the boaters and the population in general are reflected in the increasing popularity (i.e., numbers owned, use rates) of pontoon boats. A very high proportion (83.4%) of pontoon boats were used in 2011, and their owners used them for more days on average than owners of other types of boats.

Federal agencies, such as the U.S. Coast Guard, will be required to do more with less by implementing more effective performance management practices, including the clear expression of performance objectives and the valid and reliable measurement of progress toward those objectives. The survey produced necessary information to estimate boating person-hours reliably. These estimates are similar in many ways to the Department of Transportation's Federal Highway Commission's estimate of vehicle miles traveled. The table below includes ratios of boating-related deaths and casualties per 100 million person-hours for the major types of recreational boats. Among other uses, these ratios will be employed to track boat use trends and to assess more realistically performance of efforts to reduce boating accidents involving injuries and deaths.

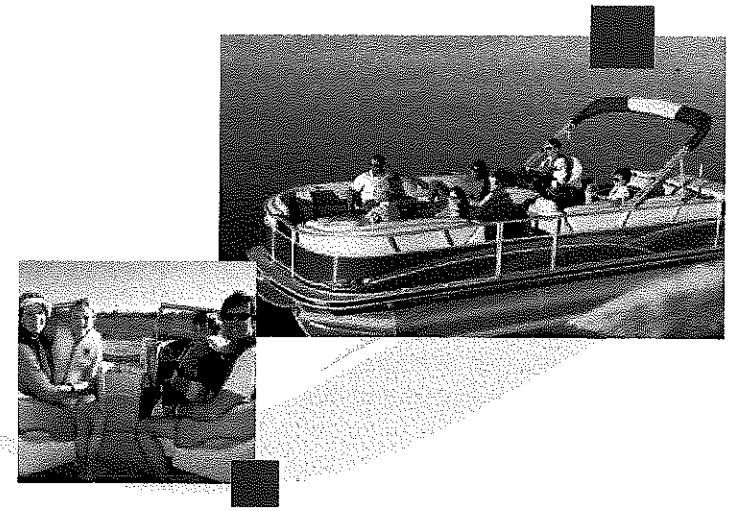


Table 61. Boating Casualty Numbers and Ratios Per 100 Million Exposure Hours for 2011

Boat Type	Boating Person – Hours[a] (Exposure Hours)	Deaths	Injuries	Casualties	Deaths/100M Exposure Hours	Casualties/100M Exposure Hours
All Boats	**2,973**	**758**	**3,081**	**3,839**	**25.5**	**129.1**
Power Boat[b]	2,053	425	1,933	2,358	20.7	114.8
PWC	131	44	764	808	33.7	618.3
Pontoon Boat	301	32	87	119	10.6	39.5
Canoe	90	66	60	126	73.0	139.4
Kayak	133	68	56	124	51.1	93.1
Sailboat[c]	71	28	77	105	39.4	148.1
Row, Inflatable Boat[d]	194	82	79	161	42.3	83.1
Unknown Boat Type	-	13	25	38	-	-

[a] Numbers in millions.

[b] Power boat type does not include PWCs or pontoon boats. It does include airboats, cabin motorboats, houseboats, and open motorboats.

[c] Sailboat type includes auxiliary sailboats, sailboats (only), and sailboats (unknown).

[d] Row, inflatable type includes inflatable boats, rowboats, and other (unspecified) boat types.

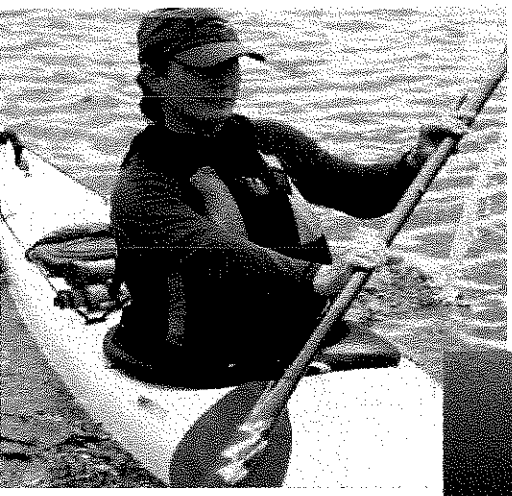
The information on the amount that boat owners spend to store and maintain their boats (boat spending) as well as the amount that they spend on boating trips (e.g., fuel, meals) is being used to develop a national tool for estimating the economic significance and impact of different types and sizes of boats. This model will be freely available to document the economic importance associated with developing boating facilities (e.g., marinas, boat launches) and maintaining them (e.g., dredging), as well as changing volumes of boating.

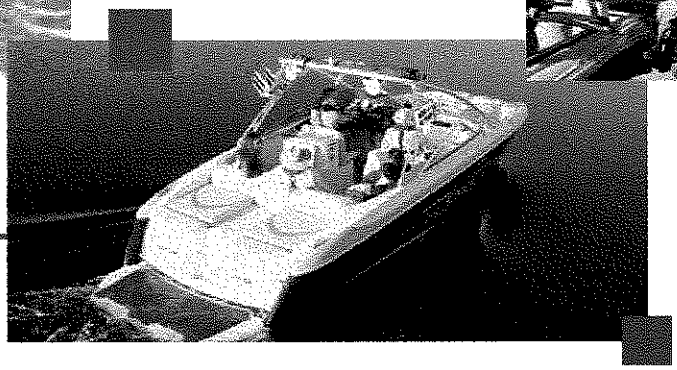
The National Recreational Boating Survey was conducted again in 2012 and at the beginning of 2013. Two different surveys have been designed to collect data needed to measure boats and boaters in the United States.

A new, multi-mode monthly trip survey was administered to the panel of recreational, registered and non-registered, boat owners recruited as part of the 2011 surveys. This monthly trip survey, which was conducted by telephone and web application in 2012, collected detailed information about exposure hours, trip-related spending, safety behaviors, and negative events that may have occurred during the trip. The monthly trip survey using a panel sample, rather than a once-a-year survey, was considered a more efficient way to collect accurate data about the number and duration of actual trips taken on recreational boats. Approximately 15,500 panel members from all 50 states, the District of Columbia, and Puerto Rico completed almost 35,000 surveys during the course of 2012. This is one of the most comprehensive surveys on boating trips ever conducted.

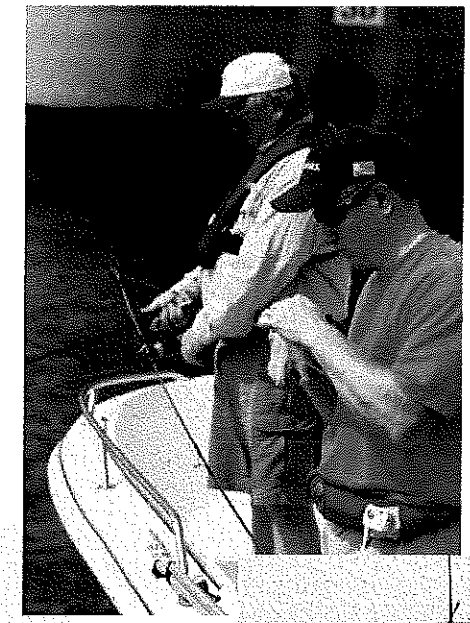
The second NRBS survey, a population-based Participant survey of U.S. residents regarding their 2012 boating participation, was conducted during the first quarter of 2013. This survey collected data similar to that collected about boating participation in 2011.

In conclusion, this survey provides the National Recreational Boating Safety Program with important, current, and reliable information to evaluate and plan its programs better. Continuing to conduct the survey every two years will provide a more accurate means of identifying and responding to boating trends.





The 2011 and 2012 surveys will be carefully assessed to identify possible ways to improve the reliability and validity of the survey methods (e.g., instruments, sampling). Additional reports on special topics will be produced from the data generated from the survey and made available on the U.S. Coast Guard's Boating Safety Resource Center web site. Moreover, the Recreational Marine Research Center at Michigan State University will analyze how much boaters spend on boats (e.g., on boat fuel, storage, repairs) and during their boating trips, and will use this data to develop web-based recreational boating economic impact models.



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