



December 2022

RECREATIONAL BOATING

How Vessel Users Contribute to and Benefit from a Federal Trust Fund

GAO Highlights

Highlights of [GAO-23-105729](#), a report to congressional committees

Why GAO Did This Study

Recreational boating is a popular activity in the U.S. It includes the use of both nonmotorized and motorized vessels. The Trust Fund provides federal funding for boating recreation activities, including improving boating access and promoting boating safety. There have been discussions on the equitability of contributions to the Trust Fund, including which vessel users pay the taxes that fund the Trust Fund, according to stakeholders.

The Infrastructure Investment and Jobs Act includes a provision for GAO to examine recreational boating, along with the use of certain funding from the Trust Fund related to this activity. This report examines (1) the use of nonmotorized and motorized vessels; (2) the extent that users of these vessels have contributed to the Trust Fund; and (3) the extent that the Trust Fund has been used for boating access and safety activities to benefit users of these vessels.

GAO reviewed laws, regulations, and FWS and Coast Guard documents. GAO analyzed two surveys commissioned by the Coast Guard conducted in 2018 (the most recent data available). In addition, GAO analyzed data from the Department of the Treasury. GAO also interviewed FWS and Coast Guard officials; two federal advisory groups (the Sport Fishing and Boating Partnership Council and the National Boating Safety Advisory Committee); nongovernmental organizations involved with boating issues; and boating officials from five states, selected based on geographic diversity and other factors.

View [GAO-23-105729](#). For more information, contact Cardell D. Johnson at (202) 512-3841 or johnsoncd1@gao.gov.

December 2022

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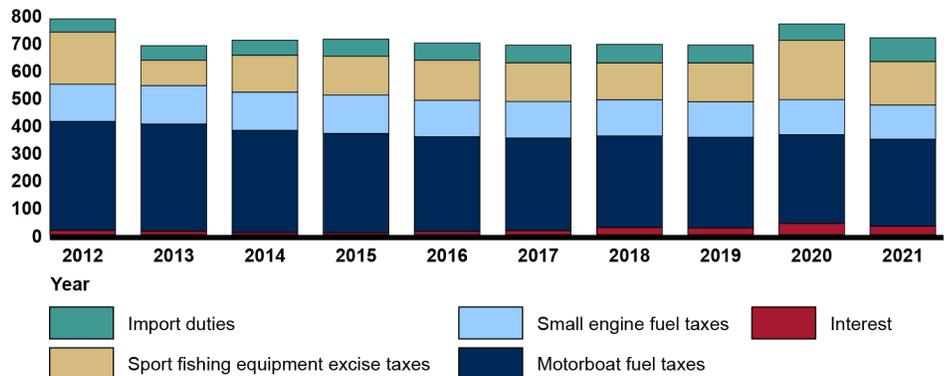
How Vessel Users Contribute to and Benefit from a Federal Trust Fund

What GAO Found

Over a quarter of the U.S. population engaged in recreational boating in 2018, according to a survey commissioned by the U.S. Coast Guard. The survey also estimated that more motorized vessels were used (5.0 million) at least once in 2018, compared with nonmotorized vessels, such as kayaks (3.9 million).

The Sport Fish Restoration and Boating Trust Fund (Trust Fund), managed by the Fish and Wildlife Service (FWS), received tax and import duty revenues averaging about \$713 million for fiscal years 2012 through 2021, adjusted for inflation. Motorboat fuel taxes make up about 49 percent of this funding.

Sport Fish Restoration and Boating Trust Fund Revenues, Fiscal Years 2012 through 2021
Dollars (in millions)



Source: GAO analysis of TreasuryDirect.gov data. | GAO-23-105729

Note: Data have been adjusted for inflation and are presented in fiscal year 2021 dollars. See figure 3 in this report for more information on these revenue sources.

Because of the indirect way that the Trust Fund is supported—through taxes and import duties—GAO was not able to determine the full extent that users of nonmotorized and motorized vessels contribute to the Trust Fund. These taxes are imposed on refiners of gasoline along with manufacturers or importers of certain products, and they may be passed on to consumers as an increased cost when they purchase products, such as tackle boxes, and fishing rods. All vessel users—as well as individuals who do not own a vessel—can purchase these products. An exception is the motorboat fuel tax, where a formula is used to estimate the portion of fuel taxes attributable to motorboats based on the number of registered motorized vessels.

The Trust Fund supports several programs, including the Boating Access program managed by FWS, and the Recreational Boating Safety program managed by the Coast Guard. Grants awarded under these programs fund activities, such as building boat ramps or educating boaters on safety issues, that can benefit both types of vessel users. As a result, GAO was not able to determine the specific extent that nonmotorized and motorized vessels users benefit from these activities.

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Abbreviations

Exposure Survey	National Recreational Boating Safety Exposure Survey
FWS	U.S. Fish and Wildlife Service
IRS	Internal Revenue Service
Trust Fund	Sport Fish Restoration and Boating Trust Fund

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December 15, 2022

Congressional Committees

Recreational boating is a popular activity and, in 2018, an estimated 84.5 million people engaged in recreational boating, according to a national survey commissioned by the U.S. Coast Guard.¹ In general, people use two main groups of vessels for recreational boating:

- nonmotorized vessels, such as canoes, kayaks, standup paddleboards, and rowboats;² and
- motorized vessels, such as open motorboats (those without a cabin), cabin motorboats, pontoon boats, air boats, houseboats, and personal watercraft (e.g., WaveRunner).

The federal government plays a part in supporting recreational boating through funding related to various activities.³ One source of this federal funding is the Sport Fish Restoration and Boating Trust Fund (Trust Fund), managed by the Department of the Interior’s Fish and Wildlife Service (FWS). FWS manages the Trust Fund as part of the Wildlife and Sport Fish Restoration program. The Trust Fund is used to fund both formula and competitive grant programs, such as:

- **The Sport Fish Restoration program.** This is the largest grant program funded from the Trust Fund. FWS apportions funds from the Trust Fund to states using a formula.⁴ States can use the funding for a

¹The Coast Guard contracted with RTI International to conduct this survey. RTI International, *National Recreational Boating Safety Survey: Participation Survey Final Report* (Research Triangle Park, NC: October 2020).

²For the purposes of this report, we exclude sailboats, which can sometimes have an onboard motor, from our scope because some data sources included in our analysis do not indicate whether the sailboat had a motor.

³Funding related to recreational boating activities can also come from state, local, and private sources.

⁴By statute, the formula for the Sport Fish Restoration program is based on the area of each state, which includes inland and coastal water areas, along with the number of paid fishing license holders in each state. See 16 U.S.C. § 777c(c). There is a statutory maximum and minimum percentage of funding that a state can receive. *Id.* Additionally, FWS is authorized to provide funding to American Samoa, the District of Columbia, Guam, the Commonwealth of the Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands. See 16 U.S.C. § 777k.

variety of projects, including those related to boating access, outreach, education, and restoring and managing sport fish for the benefit of the public. A subprogram under the Sport Fish Restoration program, the **Boating Access program** provides federal funds for facilities that create or increase access for recreational boating purposes, such as boat ramps.

- **The Recreational Boating Safety program.** The U.S. Coast Guard administers this program, which distributes grants for boating safety activities to states and nonprofit organizations.

The Infrastructure Investment and Jobs Act includes a provision for GAO to examine recreational boating access, including the use of nonmotorized vessels, as well as the use of certain federal funding from the Trust Fund related to recreational boating.⁵ Our report examines what is known about (1) the use of nonmotorized and motorized vessels in the U.S., (2) the extent that users of these vessels have contributed to the Trust Fund, and (3) the extent that the Trust Fund has been used for boating access and safety activities to benefit users of nonmotorized and motorized vessels.

To examine what is known about the use of nonmotorized and motorized vessels in the U.S., we analyzed national survey data from two studies commissioned by the Coast Guard on the number of boating vessels, which contained the most recently available data. These studies are (1) the National Recreational Boating Safety Participation Survey and (2) the National Recreational Boating Safety Exposure Survey (Exposure Survey).⁶ The studies administered questionnaire surveys to representative samples of households across all 50 states and the District

⁵Pub. L. No. 117-58, § 28001(c), 135 Stat. 429, 889 (2021). Specifically, the provision is for GAO to submit a report that, to the extent practicable, given available data, documents the use of nonmotorized vessels in each state and how the increased use of nonmotorized vessels is impacting motorized and nonmotorized vessel access; user conflicts at waterway access points; the use of Sport Fish Restoration program funds to improve nonmotorized access at waterway entry points and the reasons for providing that access; and Recreational Boating Safety program funds for nonmotorized boating safety programs. While this provision focuses primarily on nonmotorized vessels, we also included motorized vessels in our scope to provide a fuller picture of recreational boating and because motorized vessel users contribute to, and benefit from, the Sport Fish Restoration and Boating Trust Fund. Additionally, during our audit work, we did not find any sources of data on user conflicts and, therefore, are not reporting on such conflicts.

⁶RTI International, *National Recreational Boating Safety Survey: Participation Survey Final Report*; and *National Recreational Boating Safety Survey: Exposure Survey Final Report* (Research Triangle Park, NC: October 2020).

of Columbia on a quarterly (for the Participation Survey) or monthly (for the Exposure Survey) basis during 2018 to estimate, for example, the extent to which types of nonmotorized and motorized vessels were owned and operated in the U.S. in 2018.

To assess the reliability of the estimates made in the two Coast Guard studies, we reviewed the technical documentation of questionnaire development, sample design, data collection, data processing, statistical adjustment, and analysis in the two surveys.⁷ Due to the practical difficulties of conducting these tasks in complex surveys, errors may arise that cannot be fully measured. As a result, the numbers we may report from the two surveys are estimates, and not all apparent differences between estimates for small groups may be statistically significant. However, we determined that the estimates that we cite from these two surveys were of sufficient quality to describe the state of nonmotorized and motorized vessel use and ownership in the U.S. in 2018.

We also reviewed Coast Guard data from 2012 through 2021 on the number of registered motorized vessels in the U.S. To assess the reliability of the data, we interviewed Coast Guard officials about the process used to collect data from states and the completeness and accuracy of the data. We determined that the data were sufficiently reliable for our purposes. To describe the number of motorized vessels sold from 2012 through 2021, we collected data from the National Marine Manufacturers Association. We assessed the reliability of the data by interviewing officials from this association to understand how the data were collected from manufacturers and maintained. We determined that the data were sufficiently reliable for our purposes. As a secondary source of information, we also examined Physical Activity Council data on estimates of sports, recreation, and leisure activity participation in the U.S. We interviewed the Outdoor Industry Association and reviewed documentation obtained from the Physical Activity Council on the survey's methodology, but we found these estimates to be of undetermined reliability.

We interviewed a range of officials to obtain their perspectives on the number and use of nonmotorized and motorized vessels in the U.S. and any relevant data sources. Interviewees included officials from FWS and

⁷RTI International, *National Recreational Boating Safety Survey: Final Methodology Report* (Research Triangle Park, NC: March 2020).

the Coast Guard, along with two federal advisory groups—the Sport Fishing and Boating Partnership Council and the National Boating Safety Advisory Committee—which advise FWS and Coast Guard, respectively.⁸ We also spoke with officials from five states—Arizona, California, Florida, New York, and Wisconsin. We selected this nongeneralizable sample of states to ensure that we had one state from each of the four U.S. Census regions. Within these regions, we generally selected states that had the largest estimated number of vessels based on the Exposure Survey Final Report.⁹ We also selected one land-locked state—Arizona—to obtain a different perspective.

In addition to federal and state officials, we interviewed stakeholders from six nongovernmental organizations that included boating industry and boating nonmotorized and motorized user groups.¹⁰ We selected this nongeneralizable sample of stakeholders to gather a range of views, and the selection of stakeholders was based on factors such as familiarity with the use of different types of vessels. Views from government officials and stakeholders cannot be generalized to those we did not select and interview as part of our review. We asked those we interviewed for any perspectives they had about conflicts between nonmotorized and motorized vessel users and whether they were aware of any data

⁸The Sport Fishing and Boating Partnership Council advises the Secretary of the Interior, through the Director of FWS, on aquatic conservation endeavors benefiting recreational fishery resources and recreational boating, and encouraging partnerships among industry, public, and government. Starting January 1, 2023, the Sport Fishing and Boating Partnership Council will also advise the Secretary of the Commerce, through the Administrator of National Oceanic and Atmospheric Administration. See Pub. L. No. 117-58, § 28001(d), 135 Stat. 429, 889 (2021). The National Boating Safety Advisory Committee advises the Secretary of Homeland Security, through the Commandant of the Coast Guard, on a broad range of boating safety matters and consults on federal regulations for major boating safety matters.

⁹RTI International, *National Recreational Boating Safety Survey: Exposure Survey Final Report*. These regions were based on the four regions that the U.S. Census Bureau uses: Northeast, Midwest, South, and West. For a link to a map of these census regions, see U.S. Census Bureau, “Census Regions and Divisions of the United States” (Suitland, MD: Apr. 17, 2013), accessed May, 3, 2022. https://www2.census.gov/geo/pdfs/maps-data/maps/reference/us_regdiv.pdf. For the Midwest region, we substituted the state with the largest estimated number of vessels—Michigan—with the state with the second-largest estimated number of vessels—Wisconsin—because Michigan did not respond to our interview request.

¹⁰We interviewed the following nongovernmental stakeholder groups: American Canoe Association, Association of Fish and Wildlife Agencies, National Association of State Boating Law Administrators, National Marine Manufacturers Association, Outdoor Industry Association, and River Management Society.

capturing conflicts between users of these vessels. The officials and stakeholders consistently reported that they were not aware of such data.

To examine what is known about the extent that users of nonmotorized and motorized vessels have contributed to the Sport Fish Restoration and Boating Trust Fund, we reviewed documents from FWS. We also reviewed documents from the Internal Revenue Service (IRS), a bureau of the Department of the Treasury, that explain how the excise taxes and import duties are collected for the Trust Fund. We interviewed officials from Treasury's Office of Tax Analysis, about the transfer of tax revenues to the Trust Fund.

In addition, we analyzed data from TreasuryDirect.gov on the amount of revenue collected on excise taxes and import duties for the Trust Fund for fiscal years 2012 through 2021.¹¹ The processes and systems used to generate monthly financial reports on TreasuryDirect.gov by the Bureau of the Fiscal Service are subject to review by Treasury's Office of Inspector General, through work performed by an independent certified public accounting firm, to examine the effectiveness of controls over the systems. We determined that the data generated from these systems were sufficiently reliable for our purposes. We interviewed Office of Tax Analysis and FWS officials to learn how excise taxes and import duties are collected for the Trust Fund. We also obtained perspectives from representatives of five of the nongovernmental organizations and two federal advisory groups to obtain their perspectives on the Trust Fund.

To examine what is known about the extent that the Trust Fund has been used for boating access and safety activities to benefit users of vessels, we reviewed agency documents from FWS and Coast Guard on the Boating Access and Recreational Boating Safety programs, respectively. We focused on these two programs because they promote recreational boating access and safety, according to FWS and Coast Guard documents. We obtained the views of state officials and the representatives of nongovernmental organizations regarding the grants awarded by the programs. During our state interviews, we spoke with four boating access coordinators and five boating law administrators, the officials responsible for receiving and managing funds received under the

¹¹TreasuryDirect.gov is a website that provides monthly and other periodic reporting on federal trust funds, including the Sport Fish Restoration and Boating Trust Fund. The Bureau of the Fiscal Service, under Treasury, manages TreasuryDirect.gov.

Boating Access and the Recreational Boating Safety programs, respectively.

We conducted this performance audit from February 2022 to December 2022, in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

Boating is a common recreational activity in the U.S. Boaters use a variety of vessels on different bodies of water, such as lakes, rivers, and oceans. Some vessels are propelled physically by boaters using paddles (nonmotorized), while some vessels use motors for propulsion (motorized). In many areas, users of nonmotorized and motorized vessels share the same waterways.

The federal government supports recreational boating by funding various activities through the Sport Fish Restoration and Boating Trust Fund. Multiple revenue streams support the Trust Fund, including

- excise taxes on sport fishing equipment and fuel;¹²
- import duties on fishing tackle, pleasure boats, and yachts; and
- interest earned on the Trust Fund.

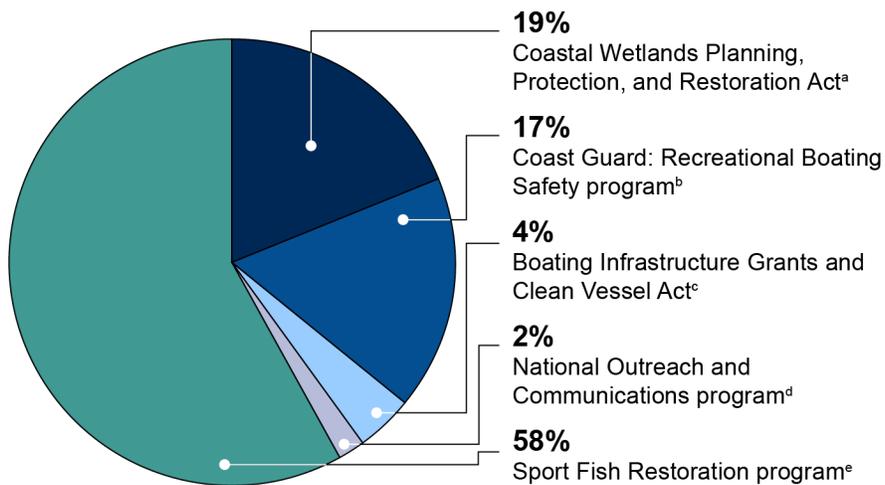
¹² For the purposes of funding the Trust Fund, fuel taxes include motorboat fuel taxes and small engine fuel taxes. Motorboat fuel taxes are (1) taxes imposed under 26 U.S.C. § 4041(a)(2) with respect to special motor fuels used as fuel in motorboats; and (2) taxes imposed under 26 U.S.C. § 4081 with respect to gasoline used as fuel in motorboats, but only to the extent such taxes are deposited in the Highway Trust Fund. See 26 U.S.C. § 9503(c)(3)(C). After a certain amount is transferred to the Land and Water Conservation Fund, the funds of such motorboat fuel taxes are transferred to the Trust Fund from the Highway Trust Fund. This amount is, by statute, to be determined in accordance with the methodology described in Treasury's June 1986 Report to Congress entitled "Gasoline Excise Tax Revenues Attributable to Fuel used in Recreational Motorboats." See 26 U.S.C. § 9503(c)(3)(D). Treasury's methodology calculates the annual estimated number of registered motorboats and fuel consumption for various sizes of motorized vessels.

Small engine fuel taxes are the taxes imposed under 26 U.S.C. § 4081 with respect to gasoline used as a fuel in the nonbusiness use of small engine outdoor power equipment, but only to the extent such taxes are deposited in the Highway Trust Fund. See 26 U.S.C. § 9503(c)(4)(B). Small engine fuel taxes are also to be transferred to the Trust Fund from the Highway Trust Fund.

According to FWS officials, FWS’s Wildlife and Sport Fish Restoration program distributes funds annually from the Trust Fund in two rounds for the following purposes:

1. Initial deductions are made for administrative expenses, as well as funding for four fisheries commissions and one boating council.¹³
2. After these initial deductions, the amount remaining is distributed to five federal programs. Of these programs, the Sport Fish Restoration program receives the largest percentage, about 58 percent of the funding.¹⁴ The Coast Guard’s Recreational Boating Safety program receives about 17 percent of the funding. Three other programs also receive funding, as shown in figure 1.

Figure 1: Distribution of Funds from the Fish and Wildlife Service’s Sport Fish Restoration and Boating Trust Fund to Five Federal Programs



Source: GAO analysis of relevant provisions of the U.S. Code and Fish and Wildlife Service information. | GAO-23-105729

Notes: The percentages shown reflect those specified by statute to be distributed to each program from the amount remaining after initial distributions to four U.S. fisheries commissions, the Sport Fishing and Boating Partnership Council, and for administrative expenses. Some percentages were

¹³Specifically, funding from the Trust Fund is first to be used up to a certain amount for administrative expenses, \$200,000 for each of the four U.S. fisheries commissions, and \$400,000 for the Sport Fishing and Boating Partnership Council established by FWS. See 16 U.S.C. §§ 777c(a), (b), 777m(e).

¹⁴Of the approximately 58 percent that goes to the Sport Fish Restoration program, the amounts used for the Multistate Conservation Grant program, up to \$3 million, are first deducted, and the balance is apportioned to the states based on a statutory formula. See 16 U.S.C. §§ 777c(c), 777m(a).

rounded for presentation purposes. The Fish and Wildlife Service manages all programs except the Recreational Boating Safety program, which is managed by the U.S. Coast Guard.

^aThe Coastal Wetlands Planning, Protection, and Restoration Act established the National Coastal Wetlands Conservation Grants program, a competitive grant program that provides funding to coastal states and U.S. territories to protect, restore, and enhance coastal wetland ecosystems and associated uplands.

^bThe Recreational Boating Safety program provides grants to states, the District of Columbia, U.S. territories, and nonprofits in furtherance of the Coast Guard's mission to minimize the loss of life, personal injury, property damage, and environmental impact associated with the use of recreational boats, in order to maximize safe use and enjoyment of U.S. waterways by the public.

^cThe Boating Infrastructure Grants program provides grants to states, the District of Columbia, and U.S. territories for constructing, renovating, and maintaining facilities for transient recreational vessels at least 26 feet long. The Clean Vessel Act program provides grants to states and U.S. territories for the construction, renovation, operation, and maintenance of pumpout stations and waste reception facilities.

^dThe National Outreach and Communication program is a competitive grant program aiming to improve communications on angling and boating opportunities, among other goals.

^eThe Sport Fish Restoration program provides funds to fish and wildlife agencies of the states, the District of Columbia, and U.S. territories for a variety of projects, including those related to boating access, outreach, education, and restoring and managing sport fish for the benefit of the public. Of the approximately 58 percent that goes to the Sport Fish Restoration program, the amounts used for the Multistate Conservation Grant program, up to \$3 million, are first deducted, and the balance is apportioned to the states based on a statutory formula. See 16 U.S.C. §§ 777c(c), 777m(a).

Sport Fish Restoration program. States often use these grants to help their fish and wildlife agencies (1) restore, enhance, and manage sport fish resources; and (2) provide public access to those resources, according to FWS documents. FWS distributes grants to fish and wildlife agencies operated by states, the District of Columbia, and U.S. territories. FWS apportions these grants based on the size of each state and the number of fishing license holders in each state.¹⁵

For the Boating Access program, under the Sport Fish Restoration program, states are required to use 15 percent of their total Sport Fish Restoration funds on boating access projects, as averaged over a 5-year

¹⁵Specifically, funds are apportioned 40 percent in the ratio of the area of each state, including coastal and Great Lakes waters, bears to the total area of all states, and 60 percent in the ratio of the number of persons holding paid sport or recreational fishing licenses in each state bears to the total number of such license holders in all states. By statute, no state is to receive more than 5 percent or less than 1 percent of the total amount apportioned. 16 U.S.C. § 777c(c)(1). Additionally, FWS is authorized to apportion amounts not exceeding 1 percent of the total amount available for apportionment to Puerto Rico and one-third of 1 percent to the District of Columbia, Guam, American Samoa, the U.S. Virgin Islands, and the Commonwealth of the Northern Mariana Islands. 16 U.S.C. § 777k.

period.¹⁶ Funding is to be used for the acquisition, development, renovation, or improvement of facilities that create, or add to, public access to U.S. waters to improve the suitability of such waters for recreational boating purposes.¹⁷ These projects can include building or maintaining boat ramps, docks, or bathroom facilities. States may use their boating access funding to pay up to 75 percent of the costs of the projects and fund the remaining percentage with state funds or by partnering with local governments or other entities.

From fiscal years 2012 through 2021, FWS data show that funds distributed from the Sport Fish Restoration program averaged \$392 million, with a high of about \$415 million in 2013 and a low of about \$368 million in 2014, after adjusting for inflation. During this period, Alaska, Texas, and California received the most funding each year.

Recreational Boating Safety program. This program provides grants in furtherance of the Coast Guard’s mission to minimize the loss of life, personal injury, property damage, and environmental impact associated with the use of recreational boats and to maximize safe use and enjoyment of U.S. waterways by the public. Under this program, the Coast Guard awards two types of grants:

- **Formula grants.** The Coast Guard awards formula grants to states, the District of Columbia, and U.S. territories in amounts based on a statutory formula.¹⁸ Currently, all states participate in the program and

¹⁶16 U.S.C. § 777g(b)(1). In addition to the Boating Access program, several other programs are funded through the Sport Fish Restoration program. The Aquatic Resource Education program provides states with funding to establish a program for the purpose of increasing public understanding of the nation's water resources and associated aquatic life forms. The Outreach and Communication program provides states with funding to, among other things, improve communications with anglers, boaters, and the general public on sport fishing and boating opportunities.

¹⁷16 U.S.C. § 777g(b)(1).

¹⁸By statute, the Coast Guard is to allocate the funding based on the following formula: (1) one-third is to be allocated equally among eligible states; (2) one-third is to be allocated among eligible states that maintain approved vessel numbering and marine casualty reporting systems, in the same ratio as the number of vessels numbered in the state bears to the number of vessels numbered in all eligible states; and (3) one-third is to be allocated to eligible states in the same ratio as the amount of the state's prior-year expenditures for its recreational boating safety program bears to the total prior-year expenditures for state recreational boating safety programs of all eligible states. See 46 U.S.C. § 13104(a). For the purposes of this report, we refer to Recreational Boating Safety program formula grant recipients as “states.”

must provide matching funds.¹⁹ Allowable uses of the grant funds include, for example, conducting boating safety inspections; acquiring, constructing, or repairing public access sites used primarily by recreational boaters; and training state law enforcement personnel.

- **Competitive grants.** The Coast Guard awards grants to eligible applicants for specific projects based on a competitive process. To be eligible to apply for a grant, an applicant must be a nongovernmental, nonprofit organization; be able to provide public boating safety benefits that are national in scope or dimension; and primarily exist to provide “public service” and serve the general public.²⁰

From fiscal years 2012 through 2021, the formula grants awarded by the Coast Guard averaged about \$115 million per year, while the average for competitive grants was about \$6 million per year, after adjusting for inflation. Each year, three states (Florida, California, and Michigan) received the most grant funding, with Florida consistently receiving about 8 to 10 percent of the funding awarded to states through formula grants.

People Used Motorized Vessels More Frequently than Nonmotorized Vessels Based on a Variety of Measures

While there were more operable nonmotorized than motorized vessels in 2018, a greater number of motorized vessels were used at least once during the year (5.0 million motorized vessels compared with 3.9 million nonmotorized vessels), according to estimates from the Exposure Survey.²¹ This survey also provides additional information on vessel ownership and use of vessels.

Number of households owning a vessel. According to the Exposure Survey, about 14.5 million households (11.9 percent of U.S. households)

¹⁹A state cannot receive federal funding from the program for more than one-half of the total cost of its state program and must provide matching funds generally from general state revenues, undocumented vessel numbering and license fees, or state marine fuel taxes.

²⁰By statute, the Coast Guard may allocate not more than 5 percent of the amounts available for allocation and distribution in a fiscal year for national boating safety activities of national nonprofit public service organizations. 46 U.S.C. § 13104(c).

²¹We included canoes, kayaks, standup paddleboards, and rowboats in the nonmotorized vessel category; for the motorized vessel category, we included open motorboats, cabin motorboats, pontoon boats, and personal watercraft.

reported owning or co-owning at least one vessel in 2018.²² These households most commonly reported owning open motorboats (those without a cabin) or kayaks (see table 1).

Table 1: Estimated Number of Households That Owned or Co-Owned Recreational Boating Vessels, by Vessel Type, 2018

Vessel type	Estimated number of households (in millions)
Open motorboat	6.0
Kayak	4.2
Rowboat	2.3
Canoe	2.1
Pontoon boat	1.4
Personal watercraft (e.g., WaveRunner)	0.9
Cabin motorboat	0.8
Standup paddleboard	0.7
Other boat types ^a	0.5

Source: GAO analysis of data presented in the *National Recreational Boating Safety Survey: Exposure Survey Final Report (2020)*. | GAO-23-105729

Note: The number of households owning particular boat types does not sum to the number of households owning any boat because a household in the survey can own more than one type of boat.

^aThe “Other boat types” category includes air boats, houseboats, and other boats not mentioned above, such as kiteboards and dragon boats. It excludes inflatable tubes.

Number of vessels. There are limited data on the number of nonmotorized vessels in the U.S. over time because many states do not require these vessels to be registered, according to Coast Guard officials.²³ However, there is evidence that there were a greater estimated number of nonmotorized vessels (12.8 million) that were in operating condition than motorized vessels (9.9 million) in 2018 based on the 2018

²²According to the American Community Survey, a household includes all the persons who occupy a housing unit as their usual place of residence. A housing unit is a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied (or, if vacant, is intended for occupancy) as separate living quarters. The American Community Survey estimates that there were about 122.4 million households in the U.S. from 2016 through 2020.

²³Some states, including Pennsylvania, Texas, Wisconsin, and Ohio, have voluntary or compulsory state registration programs for nonmotorized vessels, according to a Coast Guard official. For example, Ohio requires most nonmotorized vessels to be registered; and owners of such vessels must pay \$20 or \$25 every 3 years to register the vessel with the state. See OHIO REV. CODE ANN. § 1547.54 (West).

Exposure Survey.²⁴ Further, the number of nonmotorized vessels used on waters in the U.S. has grown in recent years, according to Coast Guard officials, officials from four states, and representatives from the Sport Fishing and Boating Partnership Council and the National Boating Safety Advisory Committee. This growth has occurred in part due to these vessels being less expensive than motorized vessels, according to officials from two states. Additionally, estimates from an annual industry survey of sports participation suggest that one nonmotorized boating activity—kayaking—increased from 2017 through 2021.²⁵

Most states require that owners of motorized vessels register them with their state of residence or where they are stored, according to the Exposure Survey. State registration programs generally require a user fee and periodic renewal of the registration, according to the Coast Guard. The number of registered motorized vessels in the U.S. has remained about the same, at about 11.0 million vessels, from 2014 through 2021, according to Coast Guard data.²⁶

Use of vessels. In 2018, estimates from the Exposure Survey show differences in the use of nonmotorized and motorized vessels. More motorized vessels (about 5.0 million) were used at least once in 2018, compared with nonmotorized vessels (about 3.9 million), according to the survey.²⁷ Among these vessels, motorized vessels were used an average

²⁴We included kayaks, canoes, standup paddleboards, and rowboats in the nonmotorized vessels category; for the motorized vessels category, we included open motorboats, cabin motorboats, pontoon boats, and personal watercrafts.

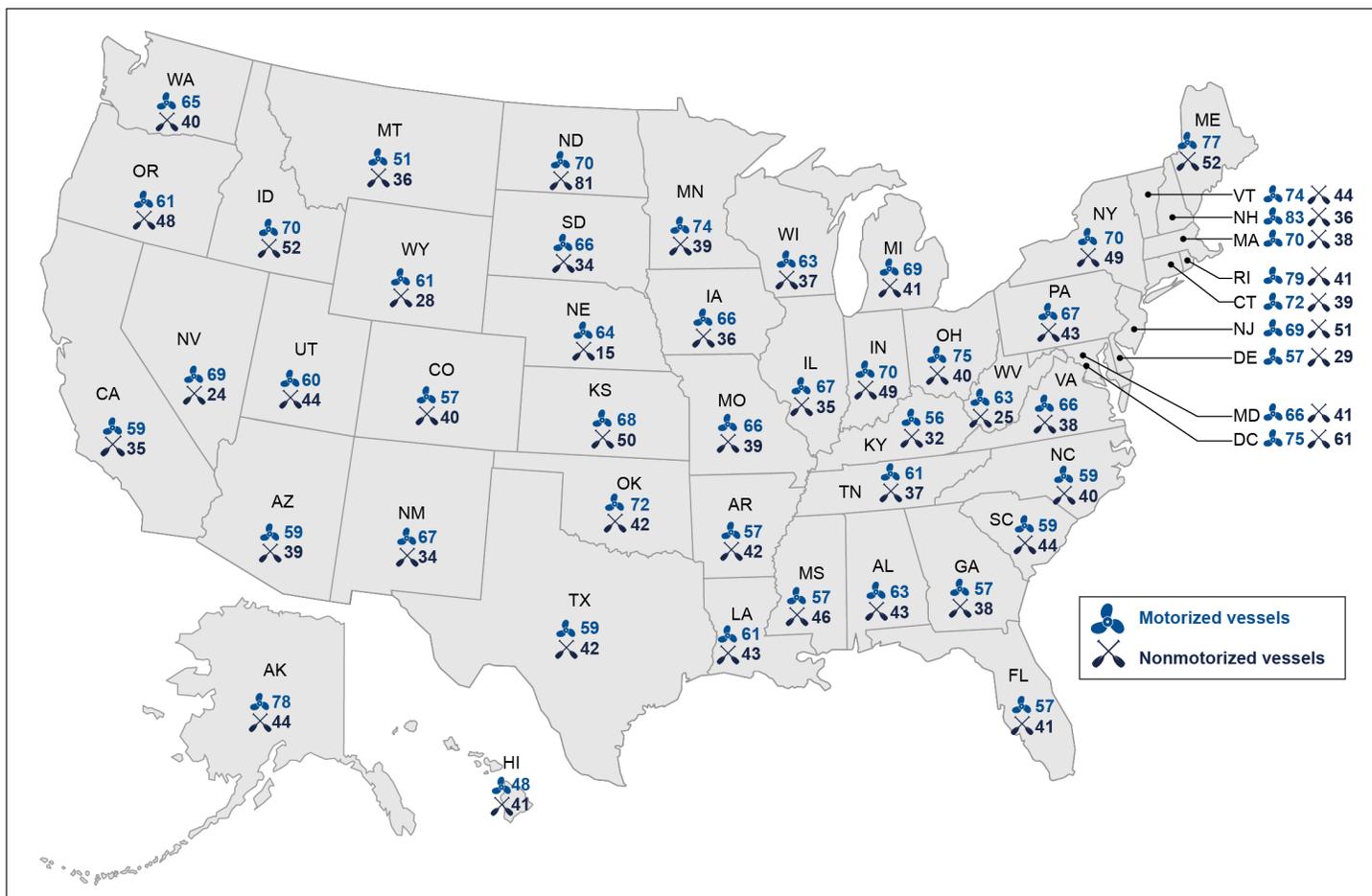
²⁵The Physical Activity Council (a group consisting of eight sports industry associations) has published estimates of sports, recreation, and leisure activity participation in the U.S. since 2007. We are unable to assess the accuracy or precision of individual estimates from these surveys because the 2017 through 2021 surveys were conducted by different research vendors, obtained respondents from a mixture of internet user panels not constructed by probability-based recruitment, and for which response rates or other fieldwork statistics were not published. However, the estimates of continuously increasing participation rates in recreational kayaking in each of the 5 years is consistent with other evidence of growing nonmotorized vessel use in recent years. For example, Coast Guard officials confirmed that the number of accidents that occurred during kayak usage has increased over the past decade, which they suggest indicates that the activity is growing in popularity.

²⁶The total number of motorized vessels registered in a particular state decreases when a vessel is retired, placed in a nonoperational status, or sold to an out-of-state owner.

²⁷RTI International, *National Recreational Boating Safety Survey: Exposure Survey Final Report*.

of 64 days in 2018, compared with 40 days for nonmotorized vessels (see fig. 2). While we do not have data on trends in the use of vessels, officials from three states and three stakeholder groups told us that there was an increase in the use of both nonmotorized and motorized vessels on waterways during the COVID-19 pandemic. Further, data from the National Marine Manufacturers Association show that since 2008 the greatest year-to-year increase in new motorized vessel sales occurred in 2020, which they attribute to pandemic-related sales trends.²⁸

Figure 2: Estimated Average Number of Days That People Used Nonmotorized and Motorized Vessels, by State, 2018



Source: : GAO analysis of data presented in the *National Recreational Boating Safety Survey: Exposure Survey Final Report (2020)*. | GAO-23-105729

²⁸The National Marine Manufacturers Association reported that approximately 319,000 new boats (boats that are 66 feet or less in length) were sold in the U.S. in 2020 based on state registration data of new vessels.

Notes: These data are for vessels that people reported using at least once in 2018. The “Nonmotorized vessels” category includes kayaks, canoes, standup paddleboards, and rowboats. The “Motorized vessels” category includes open motorboats, cabin motorboats, pontoon boats, and personal watercrafts. We attribute vessels to states and the District of Columbia based on the state within which vessels are registered or stored. Because these survey estimates are subject to sampling error, small percentage differences between nonmotorized and motorized vessels and between states may not be statistically significant.

People used motorized vessels for a greater number of hours than nonmotorized vessels in 2018, according to estimates from the 2018 Exposure Survey. For example, the survey indicates that motorized vessel users spent approximately three times the number of hours boating than nonmotorized vessel users in 2018 (about 2.5 billion hours compared with about 825 million hours).

With regard to safety while using vessels, data from the Coast Guard’s Boating Accident Report Database indicate that from 2012 through 2021, there were 4,352 deaths involving motorized vessels compared with 1,611 for nonmotorized vessels.²⁹ According to Coast Guard officials, the amount of time spent boating is one factor that contributes to the number of boating deaths, so differences in the number of deaths can be partially attributed to the fact that motorized vessel users generally spend more days and hours boating than nonmotorized vessel users.

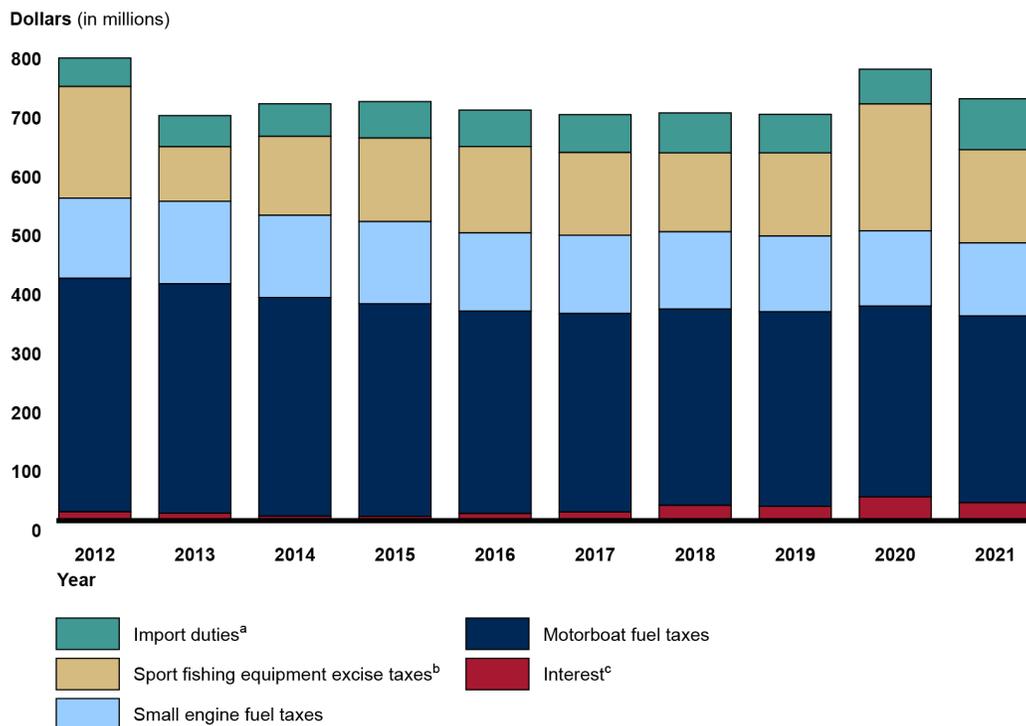
²⁹To calculate the number of deaths that occurred during vessel use, we aggregated all deaths reported in 2012 through 2021 for certain types of vessels and categorized them by propulsion type (nonmotorized and motorized). For nonmotorized vessels, we included canoes, kayaks, rowboats, and standup paddleboards; for motorized vessels, we included airboats, cabin motorboats, open motorboats, houseboats, personal watercraft, and pontoon boats. The Coast Guard’s National Recreational Boating Safety program data do not capture every incident while boating that resulted in a death reported by states. For example, some types of incidents are considered “nonreportable,” such as an incident when a person dies from natural causes while aboard a vessel, where the vessel did not contribute to the death.

Revenue from Multiple Taxes Support the Trust Fund, and the Processes to Collect Them Do Not Allow for a Determination of the Full Extent That Nonmotorized and Motorized Vessel Users Contribute

The Sport Fish Restoration and Boating Trust Fund received tax and import duty from multiple revenue sources averaging about \$713 million for fiscal years 2012 through 2021, after adjusting for inflation (see fig. 3). According to TreasuryDirect.gov data, these revenue sources include:

- **Fuel taxes.** Two fuel taxes, referred to as the “motorboat fuel tax” and the “small engine fuel tax,” contributed approximately 49 percent and 19 percent, respectively, of the revenue stream for fiscal years 2012 through 2021.
- **Excise taxes and import duties on certain products.** These taxes accounted for approximately 30 percent of the revenue stream during this period.
- **Interest earned on Trust Fund.** Interest, based on interest rates, is earned on funds invested prior to disbursement to the programs, accounted for approximately 3 percent of the revenue stream during fiscal years 2012 through 2021.

Figure 3: Sport Fish Restoration and Boating Trust Fund Revenues, Fiscal Years 2012 through 2021



Source: GAO analysis of TreasuryDirect.gov data. | GAO-23-105729

Note: The data have been inflation adjusted and are presented in fiscal year 2021 dollars.

^aImport duties are those imposed on imported fishing tackle, pleasure crafts, and yachts.

^bSport fishing equipment excise taxes are taxes imposed on any article of sport fishing equipment, including electric outboard motors, fishing tackle boxes, and fishing rods and poles.

^cInterest is earned on funds invested prior to disbursement to the programs and is based on interest rates.

IRS documents and officials from FWS and the Office of Tax Analysis lay out the general process for how these taxes and import duties are collected:³⁰

- **Fuel taxes.** Refineries generally pay these excise taxes on fuel at the time the fuel leaves the refinery, and the taxes are then passed through to consumers at the gas pump, according to a report from the Department of Energy.³¹ IRS collects these taxes from the refineries, and then Treasury transfers the taxes to the Highway Trust Fund.³² Treasury transfers a portion of these fuel taxes, the motorboat fuel tax, to the Sport Fish Restoration and Boating Trust Fund based on a Treasury methodology that calculates the annual estimated number of registered motorboats and fuel consumption for various sizes of motorized vessels. Treasury also calculates the small-engine fuel tax portion and transfers this to the Trust Fund based on the portion of fuel that is attributable to nonbusiness use of small-engine outdoor equipment, such as lawnmowers.
- **Excise taxes and import duties on certain products.** IRS collects excise taxes from the manufacturer or importer of sport fishing equipment, such as tackle boxes and fishing rods, as well as import duties on fishing tackle, yachts, and pleasure craft. Treasury transfers the taxes and duties to the Trust Fund.

There have been past discussions over whether nonmotorized and motorized vessel users were contributing an equitable amount to the

³⁰Department of the Treasury, Internal Revenue Service, *Excise Taxes (Including Fuel Tax Credits and Refunds)*, Publication 510 (Washington, D.C.: July 21, 2021); and *Field Directive Federal Excise Tax on the Importation and Manufacture of Fishing and Archery Products* (Washington, D.C.: July 7, 2006).

³¹Department of Energy, Office of Energy Efficiency and Renewable Energy, *A Primer on Motor Fuel Excise Taxes and the Role of Alternative Fuels and Energy Efficient Vehicles*, NREL/TP-5400-60975 (Golden, CO: August 2015). The tax is paid on a per-gallon basis when the fuel leaves what is called the “terminal rack.” This can occur when fuel leaves via a pipeline or a truck to then enter the fuel distribution system.

³²For the purposes of this report, we have simplified the steps that IRS takes to collect the excise taxes and transfer revenue to the Trust Fund.

Trust Fund, according to stakeholder groups and two federal advisory groups.³³ Because of the indirect nature in which the Trust Fund is supported—through the taxes and import duties—we were not able to determine the full extent that nonmotorized and motorized vessel users contribute to the Trust Fund. These taxes are imposed on refineries or manufacturers or importers of certain products and can be passed on to consumers as an increased cost when they purchase certain products.

There are no detailed data about the final consumers of these products, including whether they use a certain type of vessel, according to FWS and Treasury officials. All vessel users—as well as individuals who do not own a vessel—purchase some of the products that are taxed, such as tackle boxes and fishing poles, or fuel for certain outdoor power equipment. For example, according to two stakeholders, in addition to users of motorized vessels, a large subset of kayakers are anglers who purchase fishing equipment, as well as those who fish off of docks or piers and do not use a vessel.

One exception is the motorboat fuel taxes, where Treasury uses the number of registered motorized vessels to estimate the portion of fuel they consume in order to transfer a portion of the gas taxes from the Highway Trust Fund to the Sport Fish Restoration and Boating Trust Fund.³⁴ As previously mentioned, the motorboat fuel tax funds roughly half of the Trust Fund and is attributable, according to a Treasury methodology required by statute, to the amount of fuel used by motorized vessels.

³³As previously mentioned, the Sport Fishing and Boating Partnership Council advises the Secretary of the Interior, through the Director of FWS, on aquatic conservation endeavors benefiting recreational fishery resources and recreational boating, and encourages partnerships among industry, public, and government. The National Boating Safety Advisory Committee advises the Secretary of Homeland Security, through the Commandant of the Coast Guard, on a broad range of boating safety matters and consults on federal regulations for major boating safety matters.

³⁴The methodology used to estimate the amount of fuel consumed by motorized vessels is based on the number of registered motorized vessels and fuel consumption of various sizes. For more information on the methodology used for this calculation, see Department of the Treasury, Office of Tax Analysis, *Report to Congress on the Gasoline Excise Tax Revenues Attributable to Fuel Used in Recreational Motorboats* (Washington, D.C.: June 13, 1986).

Boating Access and Safety Programs Fund Activities That Benefit Both Nonmotorized and Motorized Vessel Users

Boating Access program and Recreational Boating Safety program grants support activities that can benefit both users of nonmotorized and motorized vessels, according to documents that we reviewed and interviews with agency and state officials. However, based on the type of information available, we were not able to determine the specific extent to which nonmotorized and motorized vessel users benefit from particular projects.

Boating Access program grants. State officials from the five states (Arizona, California, Florida, New York, and Wisconsin) we spoke with said that they primarily use Boating Access program funds to maintain or improve boat ramps (see fig. 4). For example, Arizona officials told us that they have used funds to repair a dock, increase the capacity for a boating access facility, and upgrade a facility to improve accessibility for those with disabilities. Officials from Florida, New York, and Wisconsin reported using funds to renovate or maintain boat ramps. Officials from Wisconsin said that they rarely use Boating Access program funds exclusively for nonmotorized or motorized vessel access; rather they seek to support boating access projects that benefit the most users.

Figure 4. Example of a Boat Access Site with Amenities Serving Users of Both Nonmotorized and Motorized Vessels



Source: City of Jacksonville, FL. | GAO-23-105729

Note: In general, both nonmotorized and motorized vessel users can use the amenities at boat access sites. According to an official from the Fish and Wildlife Service, examples of boat access amenities include access roads; bridges; docks; fish cleaning stations; fishing tournament weigh-in structures, such as fish holding tanks; launching facilities, such as ramps and boat lifts; parking; restrooms; shade structures and shelters; vessel cleaning stations; Americans with Disabilities Act accessible features, such as assistance entering vessels; and trash receptacles.

In a 2021 article, FWS and the Association of Fish and Wildlife Agencies provided examples for how three states had used their Boating Access program grants.³⁵ Two of these funded projects benefitted both nonmotorized and motorized vessel users, according to the article. The projects included:

³⁵Tim Allard, "Industry Excise Taxes Increase Boating And Fishing Access Nationwide" (Partner with a Payer: July 13, 2021), accessed July 27, 2022. <https://partnerwithapayer.org/industry-excise-taxes-increase-boating-and-fishing-access-nationwide/>. According to its website, the Association of Fish and Wildlife Agencies aims to advance favorable fish and wildlife conservation policy and funding, and the association works to ensure that all entities work collaboratively on the most important issues.

-
- **McQuade Public Access and Small Craft Harbor, Minnesota.** Development of three boat ramps with height-adjustable docks and a kayak launch. The project received \$100,000 in program funding.
 - **Big Bend State Recreation Area, Nevada.** Improvements to boat ramp to combat erosion and drainage issues. The project received \$590,150 in program funding, with an additional state funding match of \$196,717.³⁶
 - **Green Pond Landing and Event Center, South Carolina.** Development of a boat landing containing a three-lane boat ramp and an event center. The project received \$2.4 million in program funding.

Boating Safety program grants. State grantees from the five states we interviewed told us that they use Recreational Boating Safety program funds for life jacket loaner programs and educational safety programs, along with other projects, as discussed below.³⁷

- **Arizona.** A life jacket loaner program and boater education classes.
- **California.** Public service announcements promoting life jacket usage on social media, TV, radio, highway billboards, and marina signs; life jacket loaner stations for the public; and safety equipment and continuing education courses for law enforcement.
- **Florida.** Salaries for about seven state staff (two grant coordinators, and five field team staff); law enforcement activities to enforce against users operating motorized vessels while under the influence; boating safety courses; and educational kiosks.
- **New York.** Educational classes and outreach. Officials said, for example, that the state used grant funds to contract with the American Canoe Association to train New York State Parks employees across the state in basic kayak safety. These employees can then return to their home parks to guide trips and teach safety classes.
- **Wisconsin.** Life jacket loaner stations and boater education and media outreach (e.g., billboards, public service announcements, and social media campaigns).

³⁶As mentioned earlier, states may use their boating access funding to pay up to 75 percent of the costs of the projects, and fund the remaining percentage with state funds or by partnering with local governments or other entities.

³⁷Life jacket loaner programs provide the public with free life jackets from jacket loaner stations. Stations offer various sizes of life jackets, from infant to adult. The jackets are to be returned the same day they are borrowed.

Some Recreational Boating Safety program grants also are awarded to nonprofit groups who may use the funds for similar activities that benefit nonmotorized and motorized vessel users. For example:

- An official from the American Canoe Association told us that the organization has used Recreational Boating Safety program funds to produce safety videos for all age groups and experience levels. The videos cover a range of topics, such as life jacket safety and sea kayak self-rescue. With funds from its fiscal year 2020 grant for \$150,000, the association created safety advertisements for social media sites.
- The Water Sports Foundation, which works to promote boating safety, received six grants totaling over \$1 million in fiscal year 2019, according to documents that we reviewed. The foundation used its largest award of \$400,000 for a year-round boating safety campaign, which targeted both nonmotorized and motorized vessel users.

Agency Comments

We provided a draft of this report to the Departments of Homeland Security and the Interior for review and comment. The Coast Guard and FWS provided technical comments, which we incorporated as appropriate.

We are sending copies of this report to the appropriate congressional committees and to the Secretaries of Homeland Security and the Interior. In addition, the report will be available at no charge on the GAO website <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-3841 or johnsoncd1@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff members who made key contributions to this report are listed in appendix I.



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Acting Director, Natural Resources and Environment

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Appendix I: GAO Contact and Staff Acknowledgments

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Staff Acknowledgments

In addition to the contact above, Scott Heacock (Assistant Director), Elizabeth Jimenez (Analyst in Charge), Adrian Apodaca, Mark Braza, Andrew Curry, Andrew Edkins, Estelle Tsay Huang, Patricia Moye, Carl Ramirez, Caitlin Scoville, Lisa Vojta, and Jack Wang made key contributions to this report.

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