Enhancing Fishing Access Through a National Assessment of Recreational Boating Access

States Organization for Boating Access • Recreational Boating and Fishing Foundation • National Marine Manufacturers Association BoatUS • Association of Marina Industries Responsive Management

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ENHANCING FISHING ACCESS THROUGH A NATIONAL ASSESSMENT OF RECREATIONAL BOATING ACCESS

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The views contained in this report do not necessarily represent the views of the U.S. Fish and Wildlife Service or the Association of Fish and Wildlife Agencies.

Although numerous people assisted with this project, any errors, omissions, or typographical mistakes in the report are the sole responsibility of Responsive Management.

EXECUTIVE SUMMARY

INTRODUCTION

This study was conducted under a U.S. Fish and Wildlife Service Multistate Conservation Grant to explore how the quality of boating access throughout the United States may affect participation in both recreational boating and fishing. The research proceeds from the understanding that participation in boating and fishing are intertwined, with obstacles or barriers to one activity strongly influencing participation in the other.

Overall, the study included a review of previously published research; a series of focus groups with boaters; a focus group with boating industry representatives; a nationwide survey of boaters, including anglers who fish from a boat; and a national survey of boating industry representatives and boating agency professionals.

Each report user should consider his or her own needs in using this report. For some report users, this executive summary may be more useful, for others, it may be that the extensive data presented in the body of the report are of more utility.

MAJOR FINDINGS

The four main objectives of the project were as follows:

1. Determine whether a lack of boating access has contributed to the decline in boating/fishing participation.
2. Provide a baseline assessment of the adequacy and availability of, obstacles and challenges to, and priorities for boating access against which future access improvements can be measured.
3. Develop recommendations and strategies for improving access that address the key access-related factors limiting participation among boaters, anglers, and other outdoor recreationists.
4. Design an assessment tool (such as a survey) to evaluate boating access that can be replicated and has universal application but is adaptable in scope and provides strategic guidance for actions by federal, state, and local agencies and not-for-profit organizations.

The overall results suggest that lack of boating access contributes to lower participation among some boaters than they otherwise would have with better access. Certainly, if 43% of boaters cite *crowding at launch sites* as a major or minor problem and 30% of boaters say that *not enough boat access areas* is a major or minor problem (both findings from the boater survey), it is logical to posit that a substantial percentage of boaters have had less satisfaction, which can lead to less participation over time.

Regarding the second objective, the results of the boater survey serve as a baseline against which future survey results can be compared. The survey included a series of questions about various problems and challenges with access. Particular strategies aimed at alleviating particular problems should produce changes in the percentage of boaters experiencing that problem. The results presented throughout the report, then, serve as the baseline against which future efforts can be assessed.

The third objective of the study seeks recommendations and strategies for improving access. While there are no blanket solutions—even in a utopian scenario where every state and locality could devote more funds to access could still have problems—the results suggest where efforts can best be spent. The results include lists of potential problems that are ranked in severity. Also included in the report are lists of possible amenities, ranked by their importance and also ranked by the percentage of boaters who say that there are not enough of them. Certainly, these results, and others, can help guide strategies for improving access. However, as noted above, there is no single strategy for improving access, as efforts would need to be tailored to an area's particular problems, and this leads us directly to the fourth objective of the study: creating assessment tools for localities to use to assess access and to assess what problems are the most severe in that locality.

Appendix A contains paper versions of the assessment tools that can be used to help determine what problems are most pressing in an area, as well as to assess boater satisfaction in that area. These survey questionnaires are designed to be printed on paper to be administered, but they can be also used as the basis for both online and telephone surveying methods (provided that the sampling procedure produces a representative sample of the target audience).

The findings are organized around six broad themes. First and foremost is simply the *importance of boating and boating access*. This answers the question why access issues are worthy of study. The second theme is *satisfaction with boating access*, in short, identifying whether a problem exists.

The third theme is the *amount of boating access*. This includes a look at crowding, user conflicts, etiquette, and related educational opportunities. Another aspect of the amount of boating access that is examined is the travel distance to access areas—a lack of nearby access requires longer travel distances, which affects participation in both boating and fishing.

The *quality of boating access* composes the fourth theme. This includes both the desired features and amenities at access areas as well as how the existing amenities are maintained.

The fifth theme examines *specific access problems*, which includes myriad challenges to boaters, such as boat storage and trailering, insufficient parking, lack of amenities at sites, and shallow water, to name only a few.

Finally, the findings include a look at *maintenance of existing access* versus *creation of new access*. In the budgetary climate of the time at which this report is being written, agency and industry wish lists are necessarily prioritized, with some funding requirements eclipsing other requirements. This section simply examines public opinion on this question of maintenance versus creation of new access, if such a decision is necessary.

THE IMPORTANCE OF BOATING AND BOATING ACCESS

The review of previous research shows that boating is important to national, regional, and local economies, contributing billions of dollars to the United States economy and creating thousands of year-round jobs. The review of research in Chapter 3 includes many examples of the economic importance of boating.

Boating, including fishing activities as part of boating, is of economic importance, and the data show that boating access is a necessary component of boating. But one may first ask what *access* means. Comments from the focus groups suggest that "boating access" is an expansive concept referring to the all-encompassing set of barriers and challenges affecting overall boating and fishing participation. In boaters' and boating industry representatives' minds, access includes the number and quality of physical launches and ramps at access points, as well as the availability of information on how to find and use such access points. Access is also affected by the availability of boat storage, including how boaters store their boats and how they transport their boats. Access is affected by concerns regarding the costs, as well. In short, boating access should be considered in broad terms, to include access to various features and amenities, and boating access should be considered important to boaters.

How important is access to boaters? When boaters report being dissatisfied with their boating experiences, they often attribute the dissatisfaction to access problems or mention that their launch facilities need to be improved.

The data also show that *fishing* is an important component of a boating trip for many boaters: to fish was the top reason given by boaters for going boating (41% gave this as their most important reason for boating). Also, fishing was one of the top boating-related activities in which boaters had participated while boating (67% said that they had fished from a boat in the 2 years previous to the survey). Therefore, it is clear that boating access is inextricably linked to fishing access and fishing participation.

AMOUNT OF BOATING ACCESS

Crowding and Lack of Boating Access Sites

The review of previous research suggests that the *amount* of boating access is not fully adequate in the United States. For instance, only 40% of respondents in a North Carolina study agreed that the current number of boat ramps meets their needs (see reference to Kline and Maddalena, 2007, in the review of previous research), while 80% of respondents in a study in Maine indicated that there is a great need for more boat access to the coast (see Maine Department of Natural Resources and Maine Coastal Program/State Planning Office, 2000). These are just some of the examples from the review of previous research suggesting that there is need for more access.

In the focus groups, as well, a substantial number of boaters indicated frustration with crowded boat ramps. While this issue varies considerably based on boater experience, location, time of day/year, and other factors, the focus groups found that the problem of congestion and waiting times at launch ramps appears to be an important issue affecting participation and satisfaction. The focus group participants abounded in stories of sites that had only a limited number of ramps and launch points or sites that are extremely crowded.

The survey directly asked about the amount of boating access, finding that 30% of boaters say that *not enough boat access areas* is a major or minor problem. This was asked as part of a series of 23 potential problems with access about which the survey asked. Also in this series of questions, 43% of boaters cite *crowding at launch sites* as a major or minor problem. Additionally, the boater survey found that those who rated access relatively low most commonly gave as their reasons the simple lack of enough boat access areas, and another common reason was crowding.

In the survey of industry representatives and agency professionals, at least half of respondents (50% of industry representatives and 57% of agency professionals) say that *not enough boat access areas* is a major or minor problem. This survey also had large majorities saying that crowding at launch sites or ramps is a major or minor problem (68% of industry representatives and 71% of agency professionals).

When boaters who said that they had difficulties getting their boat in or out of the water because of crowding were asked in the survey for suggestions on how to address the problem, they mentioned the obvious solutions of increasing the number of boat ramps and increasing the amount of parking, but some also mentioned providing employees or volunteers to help with access, the creation of separate access areas for motorized and non-motorized craft, the increase of outreach to inexperienced boaters to help explain how to use the access sites, and improved signage. In the industry/agency survey, attendants and educating boaters on access use were non-capacity ideas put forth.

User Conflicts, Etiquette, and Related Educational Opportunities

Conflicts between various boating and recreational groups appear fairly common throughout the United States, including conflicts among different types of boaters. Focus group participants mentioned conflicts between manual-powered watercraft and motorized boats, between jet skiers and other recreationists, and between anglers and motorized boats. The focus groups talked about tension between those who wish to engage in quiet water-based recreation (fishing or boating in manual-powered watercraft) and those who use motorized watercraft or who engage in other potentially disruptive activities such as water skiing.

Any discussion of congestion at boat ramps and crowding necessarily leads to a discussion of boater etiquette and the rules and norms of putting in and taking out. The boater survey asked about a list of 23 potential problems with access, and the top one that was cited as a major or minor problem was *lack of knowledge among other boaters* (56% said this was a problem). This was also a top problem in the survey of industry representatives and agency professionals.

Therefore, limitations in the capacity of access sites are apparently compounded by the presence of newer and less experienced boaters attempting to launch and recover—others are forced to wait or maneuver around them. This issue was discussed at length in both the recreational boater and industry focus groups, and suggestions included signs at access areas displaying key information for preparing and launching a boat in a timely manner (a non-classroom form of education), as well as volunteers or paid employees assisting with traffic flow. Fortunately, many boaters throughout the groups said they generally felt an obligation to help less experienced boaters with procedures, although at least a few people in each group expressed a sense of frustration over people taking too long at ramps.

A consistent recommendation across the focus groups concerned the need for more boaters and water recreationists to complete comprehensive educational courses, particularly offerings that specifically address put-in and on-the-water etiquette. There is particular support for such courses to be completed in an on-the-water environment, as opposed to an online or classroom-only format.

Travel Distance To Access Areas

Travel distance is related to the amount of access: the fewer access points, the longer some boaters will need to travel to access the waters. Conversely, a great number of access points, particularly if well distributed, opens up *options* closer to home for boaters, even if they still choose to bypass some access sites and drive a longer distance.

The survey of boaters found that boaters typically travel no more than about an hour to put in their boats. The mean distance they travel is 44.4 miles, the median distance is only 15 miles, and only 17% travel more than 30 miles (the mean is pulled up by the few who travel considerable distances, sometimes hundreds of miles). Nonetheless, the survey found that 19% of boaters say that *having to travel or transport their boat too far* is a major or minor problem (7% say it is a major problem, and 12% say it is a minor one).

Overall, the data suggest that the distribution and/or amount of access could be markedly improved for about 1 in 5 boaters. This is not an insubstantial amount of boaters.

QUALITY OF BOATING ACCESS

Desired Features and Amenities at Access Areas

Boater preferences for various improvements, additions, features, and amenities will vary by location and type of boating. Nonetheless, the focus group and survey results suggest that several key features are widely desired. These include adequate parking, trash dumpsters, and restrooms.

It is worth noting that many of the features that were discussed in the focus groups were put in the context of overall site design. Focus group participants said that a site could provide highly effective ramps or ample parking but be poorly rated overall because it lacks something as elementary as trashcans or restrooms. A related frustration expressed in the focus groups concerns site designs that devote considerable space to little-used features like picnic areas at the expense of more important things such as additional parking.

Maintenance of Boating Access Areas

Maintenance is clearly a top-of-mind issue for boaters. The boater survey conducted as part of this project asked boaters to rate the importance that maintaining existing facilities and areas should have, and 63% give its importance a rating of 10 (on a 0 to 10 scale, with 10 being the most important), and 70% give a high rating of 9 or 10.

The boater survey directly asked boaters to rate how much of a problem *poor maintenance* is, and 31% of them cited it as a major or minor problem. Also, perceptions of how well a site is maintained are affected by how clean it appears to be, yet pollution or litter at access areas was cited as a major or minor problem by 36% of boaters in the boater survey.

OTHER SPECIFIC ACCESS PROBLEMS

The review of previous research, focus groups, and surveys provides a robust list of boating access problems that have been cited by boaters in one context or another (other than a simple lack of access sites or a poor distribution of access sites). These include:

- Problems with the physical access to the water:
  - Poor quality ramps/poorly designed ramps (e.g., too short, too steep).
  - Inadequate space for boats (e.g., lack of tie-ups/mooring/dock space).
  - Shallow water.
- Problems with amenities at access sites:
  - Insufficient parking.
  - Lack of sewage pump-outs/portable dump stations.
  - Lack of or inadequate toilet facilities.
  - Lack of drinking water.
  - Lack of facilities to clean boat.
  - Lack of other amenities such as fish cleaning stations or picnic areas.
- Lack of adequate on-site security at access sites.
- Lack of information that sites exist/about where sites are located.
- Problems with storage and transport of boats.

The severity of the problems that boaters experience varies depending on the access site, the particular body of water, and its location in the United States. Nonetheless, there are some problems that occur in much of the country.

Poor Quality Ramps / Poorly Designed Ramps

More than a quarter of boaters in the boater survey (27%) said that a major or minor problem is "difficulties getting their boat in or out of the water because the access site is poorly designed." In the industry/agency survey, 32% of industry representatives and 41% of agency professionals say that this is a major or minor problem. Relative to other potential problems, this falls in the lower part of the ranking in both surveys.

Inadequate Space for Boats

Just under a third of boaters (30%) and more than a third of industry representatives (34%) and agency professionals (40%) said that not enough slips or moorings was a major or minor problem. Additionally, a third of boaters in the survey (33%) indicated that there are not enough short-term slips or tie-ups, 26% said that there are not enough short-term moorings, 22% said that there are not enough permanent slips or tie-ups, and 20% said that there are not enough permanent moorings. In the industry/agency survey, the amounts were as follows: not enough short-term slips or tie-ups (52% of industry representatives, 49% of agency professionals), not

enough short-term moorings (35% and 32%, respectively), not enough permanent slips or tie-ups (28% and 23%), and not enough permanent moorings (22% and 19%).

Shallow Water

The review of previous research presented many examples where shallow water or the need for dredging affected boating. For instance, in a study of the Minneapolis-St. Paul Metro area, on metropolitan lakes other than Minnetonka, the problem indicated by the greatest number of access site users was *shallow water* (see reference to Office of Management and Budget Services and Minnesota Department of Natural Resources, 2011).

The boater survey touched on the topic of shallow water vis-à-vis whether dredging is important. The survey asked how important it is that maintenance include dredging: 44% give it a high rating (of 9 or 10 on a 0 to 10 scale, with 10 being the most important). In the industry/agency survey, 57% of industry representatives and 34% of agency professionals give it a rating of 9 or 10.

Insufficient Parking

In a national survey, more than a quarter of freshwater boaters (28%) reported parking lots at launch sites as needing improvements (see reference to U.S. Fish and Wildlife Service, 2009, in the review of previous research). This was a common problem encountered in other research, as well. In the Minneapolis-St. Paul Metro area, on metropolitan lakes other than Minnetonka, *not enough parking spaces* was the problem indicated by the second greatest number of users behind *shallow water*, and on Minnetonka, *parking* is the leading problem (see reference to Office of Management and Budget Services and Minnesota Department of Natural Resources, 2011).

In the boater survey conducted for this project, one-third of boaters (33%) said that not enough parking at boat access areas was a major or minor problem, putting it about a third of the way down the ranking. In the industry/agency survey, this was the second ranked item as a major or minor problem, cited by 72% of industry representatives and 70% of agency professionals. Additionally, when given a list of 25 possible amenities or features at access sites, boaters rate parking for vehicles with boat trailers as the third-ranked amenity/feature in importance with a mean rating of 7.05 (on a 0 to 10 scale with 10 being the most important). Also rated higher than the midpoint are parking for those with disabilities (mean rating of 5.87) and parking for single vehicles (5.80).

In another part of the survey, 29% of boaters say that there is not enough parking for vehicles with boat trailers, the seventh ranked item. Among industry representatives, it is the top ranked item, with 60% saying there is not enough of this.

Among boaters, 26% say that there is not enough parking for those with disabilities (ranked about halfway down), and 19% say that there is not enough parking for single vehicles (near the bottom of the ranking). These are also ranked no higher than the middle in the industry/agency survey. Also of note is that parking for single vehicles and parking for vehicles with trailers have the lowest quality ratings of the 25 amenities asked about in the boater survey.

Lack of Sewage Pump-Outs / Portable Dump Stations

Although not all boaters need the facilities, 17% of boaters in the boater survey, nonetheless, say that poor upkeep or maintenance of sewage pump-outs/portable dump stations is a major or minor problem, near the bottom of the ranking. In the industry/agency survey, this is also low in the ranking. Additionally, 33% of boaters say that there are not enough sewage pump-outs/portable dump stations, relatively high in the ranking (but not particularly high in the ranking among industry representatives and agency professionals).

When asked to rate the quality of sewage pump-outs/portable dump stations at the access sites that they typically use, boaters rate their quality just above the midpoint (mean rating of 5.63 on a scale of 0 to 10, with 10 being the most important). An interesting finding is that a common reason for boaters giving low ratings to sewage pump-outs/portable dump stations is that they are difficult to find or are inconveniently located, suggesting that the location of them at the site is almost as important as having them in the first place.

Lack of or Inadequate Toilet Facilities

In a national survey, 40% of freshwater boaters mentioned restroom facilities as needing improvements (see reference to U.S. Fish and Wildlife Service, 2009, in the review of previous research).

When asked to rate the importance of 25 amenities that an access site can have, the fifth-ranked amenity is restrooms, getting a 6.56 mean rating on a 0 to 10 scale (with 10 being the most important). Clearly, this indicates that restrooms should be considered a top-tier amenity, particularly when one also considers that 33% of boaters, 58% of industry representatives, and 45% of agency professionals say that there is not enough availability of restrooms at access sites, second place in the ranking by "not enough" among boaters and industry representatives.

Lack of Drinking Water

Although not ranked high in importance compared to some of the other amenities/features of access sites that were listed in the boater survey, the availability of drinking water is rated highly important (a 9 or 10 rating on a scale of 0 to 10, with 10 being the most important) by 22% of boaters. Additionally, 27% of boaters in the survey say that there is not enough drinking water availability at the access sites that they typically use, about halfway down the ranking. The industry/agency survey found that not enough drinking water is cited by 32% of industry representatives and 35% of agency professionals, although this placed it in the lower part of both rankings.

Lack of Facilities To Clean Boat

This is a problem that was not asked about directly in the boater survey; however, it was cited in the context of environmental problems, particularly invasive species. The hulls of boats should be washed after being in some waters to eliminate the spread of invasive species to other water bodies. However, some boaters' comments suggest that a lack of places to wash a boat is an inhibiting factor in boating participation. While there are no quantitative data on this particular

problem, anecdotal comments in the focus groups and in the surveys (in those places where respondents are given open-ended questions) suggest that this is a moderate problem.

Lack of Other Amenities

Other amenities not discussed elsewhere include trash dumpsters (the fourth-ranked amenity in importance when ranked by the mean rating, 6.69, on a scale of 0 to 10, with 10 being the most important), fueling areas (rated just under the midpoint in importance, at 4.91, but with 29% giving it a rating of 9 or 10), oil disposal (mean rating of 3.76, but with 29% giving it a rating of 9 or 10), electricity (mean rating of 3.63, but with 17% giving it a rating of 9 or 10), and fish cleaning stations (3.54, with 15% giving it a rating of 9 or 10 in importance).

In looking at the percent of boaters who indicated that there are not enough of those amenities, the survey found that 33% of boaters say that there are not enough trash dumpsters, 28% of boaters say that there are not enough fueling areas at the sites that they typically use, 24% say that same about oil disposal facilities, 20% say that there are not enough sites with electricity, and 26% say that there are not enough fish cleaning stations.

Lack of Adequate On-Site Security

A commonly heard idea from various focus group participants concerned the introduction of an affordable user fee at access sites to fund either (or both) a security guard or site attendant position. Security certainly affects boating participation, as some focus group participants indicated that they avoid certain access areas due to security concerns, suggesting that certain sites may be underused because of security concerns.

Other research found that security is important. For instance, security was one of the most important services at marinas for boaters on the Mississippi River (see reference to Minnesota and Wisconsin Departments of Natural Resources and U.S. Fish and Wildlife Service, 2003, in the review of previous research).

In the boater survey for this project, security was rated as the 7th most important amenity or feature of access sites, from a list of 25 possible amenities/features, with a mean rating of 6.03 (on a scale of 0 to 10, with 10 being the most important). Also, 30% of boaters say that there is not enough security at the access site that they typically use, and 50% of industry representatives cite security as a problem. The quality of security at the access sites that boaters typically use was rated just above the midpoint (5.58, on a 0 to 10 scale, with 10 being the best quality).

Lack of Information That Sites Exist / About Where Sites Are Located

While the importance of having enough access sites is important, a lack of awareness of sites that exist among boaters can have the same effect as not having the site at all. In other words, a site is of no utility if boaters are unaware of it. Indeed, one key concern about boating access in the focus groups was the *availability of information* on launch ramp, marina, or park locations, as well as boating procedures at the site; such information is especially critical to new boaters.

While most boaters across the focus groups appeared fairly aware of their state fish and wildlife or boating agency website and had a general familiarity with the types of content included on such sites, there were a number of suggestions for new or updated information delivery methods, including interactive maps, smartphone apps, and webcams at launch sites to gauge parking availability or the general condition of the site. The most common types of information that were wanted were the locations of access areas and updated summaries of the current condition of the sites.

The boater survey also touched on this subject. It found that 23% of boaters said that a lack of information about where access sites are located was a major or minor problem. In the industry/agency survey, not enough information about where boat access areas are located is about halfway down the ranking of major or minor problems, cited by 44% of industry representatives and 36% of agency professionals.

Problems With Storage and Transport of Boats

A small but notable number of boaters throughout the groups mentioned problems associated with boat storage. Costs can inhibit the use of commercial storage facilities, while alternatives can be difficult in some residential neighborhoods—the latter being affected by homeowner association prohibitions or even municipal ordinances in some towns and cities. Several people in the boating industry group echoed the concern regarding residential boat storage constraints, and it is possible that boaters in many areas across the country are facing similar issues.

Storage also entails transporting the boat, which often but not always includes trailering the boat. In fact, the majority of boaters in the survey (56%) said that they use a trailer to put their boat in the water. Trailering is further shown to be important, as the boater survey showed that the majority of boaters in the survey (54%) keep their boat at home and need to transport it from there, and another 11% keep it in a storage yard or area, also requiring transport.

MAINTENANCE OF EXISTING ACCESS VERSUS CREATION OF NEW ACCESS

The final theme covered in this summary of the major findings is a specific look at maintenance of existing sites versus the development of new sites. Members of both the recreational boater and industry focus groups were consistent in their preference for maintenance of and improvements to existing access sites over the creation of new sites. Most boaters seemed to grasp the challenges that agencies and other organizations have attempting to identify suitable areas for new launch sites. For one thing, many boaters in the focus groups pointed out that there is simply a finite amount of sufficient waterfront land on which an access area can be developed.

The boater survey data concur with this preference. The survey found that the importance of *maintaining existing* boat access facilities was rated higher than either the importance of *improving and expanding existing* facilities or the importance of *building new* boat access facilities, the latter being the least preferred.

In the survey of industry representatives and agency professionals, the results were commensurate with the above. *Maintenance of existing facilities and sites* was rated the highest, followed by *improving and expanding existing facilities and sites*, with *building new facilities and sites* being the lowest rated of the three.

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1. INTRODUCTION

This study was conducted under a U.S. Fish and Wildlife Service Multistate Conservation Grant to explore how the quality of boating access throughout the United States may affect participation in both recreational boating and fishing. The research proceeds from the understanding that participation in boating and fishing are intertwined, with obstacles or barriers to one activity strongly influencing participation in the other.

To address hunting, fishing, and boating recruitment and retention as part of the Fish and Wildlife Service's Outdoor Heritage National Conservation Need, this project resulted in the creation of assessment tools for measuring boating access throughout the United States. These tools, in the form of short surveys about specific aspects of boating access, are presented Appendix A.

Overall, the study included a review of previously published research; a series of focus groups with boaters; a focus group with boating industry representatives; a nationwide survey of boaters, including anglers who fish from a boat; and a national survey of boating industry representatives and boating agency professionals. The study was conducted by Responsive Management in partnership with the following organizations:

- The States Organization for Boating Access (referred to as SOBA in the report)
- The Recreational Boating and Fishing Foundation
- The National Marine Manufacturers Association
- BoatUS
- The Association of Marina Industries

The report starts with a summation of the overall findings of the research, bringing all components together. This is followed by a discussion of each component individually, which demonstrates how that component supports the overall findings. Each report user should consider his or her own needs in using this report. For some report users, the summation may be more useful, for others, it may be that the extensive data presented in the subsequent sections of the report are of more utility.

2. MAJOR FINDINGS

The four main objectives of the project were as follows:

1. Determine whether a lack of boating access has contributed to the decline in boating/fishing participation.
2. Provide a baseline assessment of the adequacy and availability of, obstacles and challenges to, and priorities for boating access against which future access improvements can be measured.
3. Develop recommendations and strategies for improving access that address the key access-related factors limiting participation among boaters, anglers, and other outdoor recreationists.
4. Design an assessment tool (such as a survey) to evaluate boating access that can be replicated and has universal application but is adaptable in scope and provides strategic guidance for actions by federal, state, and local agencies and not-for-profit organizations.

The overall results suggest that lack of boating access contributes to lower participation among some boaters than they otherwise would have with better access. Certainly, if 43% of boaters cite *crowding at launch sites* as a major or minor problem and 30% of boaters say that *not enough boat access areas* is a major or minor problem (both findings from the boater survey), it is logical to posit that a substantial percentage of boaters have had less satisfaction, which can lead to less participation over time.

Regarding the second objective, the results of the boater survey serve as a baseline against which future survey results can be compared. The survey included a series of questions about various problems and challenges with access. Particular strategies aimed at alleviating particular problems should produce changes in the percentage of boaters experiencing that problem. The results presented throughout the report, then, serve as the baseline against which future efforts can be assessed.

The third objective of the study seeks recommendations and strategies for improving access. While there are no blanket solutions—even in a utopian scenario where every state and locality could devote more funds to access could still have problems—the results suggest where efforts can best be spent. The results include lists of potential problems that are ranked in severity. Also included in the report are lists of possible amenities, ranked by their importance and also ranked by the percentage of boaters who say that there are not enough of them. Certainly, these results, and others, can help guide strategies for improving access. However, as noted above, there is no single strategy for improving access, as efforts would need to be tailored to an area's particular problems, and this leads us directly to the fourth objective of the study: creating assessment tools for localities to use to assess access and to assess what problems are the most severe in that locality.

Appendix A contains paper versions of the assessment tools that can be used to help determine what problems are most pressing in an area, as well as to assess boater satisfaction in that area. These survey questionnaires are designed to be printed on paper to be administered, but they can be also used as the basis for both online and telephone surveying methods (provided that the sampling procedure produces a representative sample of the target audience).

The findings are organized around six broad themes. First and foremost is simply the *importance of boating and boating access*. This answers the question why access issues are

worthy of study. The second theme is *satisfaction with boating access*, in short, identifying whether a problem exists.

The third theme is the *amount of boating access*. This includes a look at crowding, user conflicts, etiquette, and related educational opportunities. Another aspect of the amount of boating access that is examined is the travel distance to access areas—a lack of nearby access requires longer travel distances, which affects participation in both boating and fishing.

The *quality of boating access* composes the fourth theme. This includes both the desired features and amenities at access areas as well as how the existing amenities are maintained.

The fifth theme examines *specific access problems*, which includes myriad challenges to boaters, such as boat storage and trailering, insufficient parking, lack of amenities at sites, and shallow water, to name only a few.

Finally, the findings include a look at *maintenance of existing access* versus *creation of new access*. In the budgetary climate of the time at which this report is being written, agency and industry wish lists are necessarily prioritized, with some funding requirements eclipsing other requirements. This section simply examines public opinion on this question of maintenance versus creation of new access, if such a decision is necessary.

2.1. THE IMPORTANCE OF BOATING AND BOATING ACCESS

The review of previous research shows that boating is important to national, regional, and local economies, contributing billions of dollars to the United States economy and creating thousands of year-round jobs. For instance, in Massachusetts, boating contributed an estimated $806 million to the state's economy in 2010 (see the reference to Massachusetts Ocean Partnership, 2011, in the review of previous research), and in New Jersey, boaters spent approximately $1.1 billion in expenditures related to boating trips and $938 million in boating purchases (see reference to Marine Trades Association of New Jersey, 2008). The review of research in Chapter 3 includes many other examples of the economic importance of boating.

As we have seen, boating, including fishing activities as part of boating, is of economic importance, and the data show that boating access is a necessary component of boating. But one may first ask what *access* means. Comments from the recreational boaters and boating industry representatives in the focus groups suggest that "boating access" is an expansive concept referring to the all-encompassing set of barriers and challenges affecting overall boating and fishing participation. In boaters' and boating industry representatives' minds, access includes, obviously, the number and quality of physical launches and ramps at access points, but access also includes the availability of information on how to find and use such access points. The perceived amount of boating access relates to boaters' experiences with congestion on the water and with conflicts with other boaters or recreationists, as well.

Access is also affected by the availability of boat storage, including how boaters store their boats and how they transport their boats. Environmental issues specific to certain areas that may influence a boater's decision to frequent an area in the first place is also an aspect of access. Access is affected by concerns regarding the costs, as well.

In short, boating access should be considered in broad terms, to include access to various features and amenities, and boating access should be considered important to boaters. How important is access to boaters? In a study Responsive Management conducted in Washington State, boaters named public boating access as the second most important program or service that the state provides (exceeded only by boating safety), out of 15 programs/services listed (see reference to Responsive Management, 2007b, in the review of previous research). Additionally, when boaters report being dissatisfied with their boating experiences, they often attribute the dissatisfaction to access problems or mention that their launch facilities need to be improved (in the review of previous research, see the references to the U.S. Fish and Wildlife Service, 2009; Minnesota and Wisconsin Departments of Natural Resources, U.S. Fish and Wildlife Service and Army Corps of Engineers, 2003; Office of Management and Budget Services, Minnesota Department of Natural Resources, 2002, 2011).

A final word on the importance of boating access relates to the activities that boaters do while boating. What they want to do affects where they access the water. This line of questioning reveals that *fishing* is an important component of a boating trip for many boaters: to fish was the top reason given by boaters for going boating (41% gave this as their most important reason for boating). Also, fishing was one of the top boating-related activities in which boaters had participated while boating (67% said that they had fished from a boat in the 2 years previous to the survey). Therefore, it is clear that boating access is inextricably linked to fishing access and fishing participation.

2.2. SATISFACTION WITH BOATING ACCESS

In general, a majority of boaters in the focus groups appeared relatively satisfied with the availability of reliable, conveniently located launches and ramps, but many were concerned about related issues, such as the quality of access areas, security at access locations, and the availability of various features and amenities at access areas. These issues contributed to moderate but not extreme concern among most boaters in the focus groups, and therefore do not amount to overwhelming, ongoing barriers to participation. Rather, these issues represent challenges that are influencing where boaters access the water rather than wholly preventing them from boating.

The survey found that, overall, boat access ratings are positive nationally, with one third of boaters (34%) rating access a 10, and almost half (45%) giving a high rating of 9 or 10. Nonetheless, 13%, which is not an insubstantial amount of boaters, give a rating of the midpoint or lower. Additionally, the boater survey found that 13% of boaters agree with the statement, "Issues related to boat access prevent you from going boating as much as you would like." Likewise, 10% agree that "Issues related to boat access prevent you from going fishing as much as you would like."

As many boaters and industry representatives from the focus groups indicated, access to reach the water is a means to an end for boaters who have already made substantial financial and time commitments to the activity—in other words, most boaters will, to a certain extent, take whatever steps are necessary to locate and take advantage of suitable access points. At the same time, however, the focus groups and the surveys provided numerous examples of access areas and sites that are in disrepair or that lack amenities and showed how such problems may affect boating and fishing participation.

2.3. AMOUNT OF BOATING ACCESS

2.3.A. CROWDING AND LACK OF BOATING ACCESS SITES

The review of previous research suggests that the *amount* of boating access is not fully adequate in the United States. For instance, only 40% of respondents in a North Carolina study agreed that the current number of boat ramps meets their needs (see reference to Kline and Maddalena, 2007, in the review of previous research), while 80% of respondents in a study in Maine indicated that there is a great need for more boat access to the coast (see Maine Department of Natural Resources and Maine Coastal Program/State Planning Office, 2000). These are just some of the examples from the review of previous research suggesting that there is need for more access.

In the focus groups, as well, a substantial number of boaters indicated frustration with crowded boat ramps. While this issue varies considerably based on boater experience, location, time of day/year, and other factors, the focus groups found that the problem of congestion and waiting times at launch ramps appears to be an important issue affecting participation and satisfaction. The focus group participants abounded in stories of sites that had only a limited number of ramps and launch points or sites that are extremely crowded.

The survey directly asked about the amount of boating access, finding that 30% of boaters say that *not enough boat access areas* is a major or minor problem. This was asked as part of a series of 23 potential problems with access about which the survey asked. Also in this series of questions, 43% of boaters cite *crowding at launch sites* as a major or minor problem. Additionally, the boater survey found that those who rated access relatively low most commonly gave as their reasons the simple lack of enough boat access areas, and another common reason was crowding.

In the survey of industry representatives and agency professionals, at least half of respondents (50% of industry representatives and 57% of agency professionals) say that *not enough boat access areas* is a major or minor problem. This survey also had large majorities saying that crowding at launch sites or ramps is a major or minor problem (68% of industry representatives and 71% of agency professionals).

When boaters who said that they had difficulties getting their boat in or out of the water because of crowding were asked in the survey for suggestions on how to address the problem, they mentioned the obvious solutions of increasing the number of boat ramps and increasing the amount of parking, but some also mentioned providing employees or volunteers to help with access, the creation of separate access areas for motorized and non-motorized craft, the increase of outreach to inexperienced boaters to help explain how to use the access sites, and improved

signage. In the industry/agency survey, attendants and educating boaters on access use were non-capacity ideas put forth.

2.3.B. USER CONFLICTS, ETIQUETTE, AND RELATED EDUCATIONAL OPPORTUNITIES

Conflicts between various boating and recreational groups appear fairly common throughout the United States, including conflicts among different types of boaters. Focus group participants mentioned conflicts between manual-powered watercraft and motorized boats, between jet skiers and other recreationists, and between anglers and motorized boats. The focus groups talked about tension between those who wish to engage in quiet water-based recreation (fishing or boating in manual-powered watercraft) and those who use motorized watercraft or who engage in other potentially disruptive activities such as water skiing.

Any discussion of congestion at boat ramps and crowding necessarily leads to a discussion of boater etiquette and the rules and norms of putting in and taking out. The boater survey asked about a list of 23 potential problems with access, and the top one that was cited as a major or minor problem was *lack of knowledge among other boaters* (56% said this was a problem). This was also a top problem in the survey of industry representatives and agency professionals.

Therefore, limitations in the capacity of access sites are apparently compounded by the presence of newer and less experienced boaters attempting to launch and recover—others are forced to wait or maneuver around them. This issue was discussed at length in both the recreational boater and industry focus groups, and suggestions included signs at access areas displaying key information for preparing and launching a boat in a timely manner (a non-classroom form of education), as well as volunteers or paid employees assisting with traffic flow. Fortunately, many boaters throughout the groups said they generally felt an obligation to help less experienced boaters with procedures, although at least a few people in each group expressed a sense of frustration over people taking too long at ramps.

A consistent recommendation across the focus groups concerned the need for more boaters and water recreationists to complete comprehensive educational courses, particularly offerings that specifically address put-in and on-the-water etiquette. There is particular support for such courses to be completed in an on-the-water environment, as opposed to an online or classroom-only format.

2.3.C. TRAVEL DISTANCE TO ACCESS AREAS

Travel distance is related to the amount of access: the fewer access points, the longer some boaters will need to travel to access the waters. Conversely, a great number of access points, particularly if well distributed, opens up *options* closer to home for boaters, even if they still choose to bypass some access sites and drive a longer distance.

A few boaters in the focus groups suggested that they must travel a fairly considerable distance to the nearest access point to launch a boat. Common reasons for having to travel a notable distance to an access area included closures of more conveniently located access points or simply a preference for the quality and amenities offered by a more remote access point. The focus group comments suggest that long travel distances tend to be compounded by concerns related to

travel costs (gas, lodging, etc.) as well as time constraints, thereby decreasing avidity among some boaters.

The survey of boaters found that boaters typically travel no more than about an hour to put in their boats. The mean distance they travel is 44.4 miles, the median distance is only 15 miles, and only 17% travel more than 30 miles (the mean is pulled up by the few who travel considerable distances, sometimes hundreds of miles). Nonetheless, the survey found that 19% of boaters say that *having to travel or transport their boat too far* is a major or minor problem (7% say it is a major problem, and 12% say it is a minor one).

Overall, the data suggest that the distribution and/or amount of access could be markedly improved for about 1 in 5 boaters. This is not an insubstantial amount of boaters.

2.4. QUALITY OF BOATING ACCESS

2.4.A. DESIRED FEATURES AND AMENITIES AT ACCESS AREAS

Boater preferences for various improvements, additions, features, and amenities will vary by location and type of boating. Nonetheless, the focus group and survey results suggest that several key features are widely desired. These include adequate parking, trash dumpsters, and restrooms.

It is worth noting that many of the features that were discussed in the focus groups were put in the context of overall site design. Focus group participants said that a site could provide highly effective ramps or ample parking but be poorly rated overall because it lacks something as elementary as trashcans or restrooms. A related frustration expressed in the focus groups concerns site designs that devote considerable space to little-used features like picnic areas at the expense of more important things such as additional parking.

2.4.B. MAINTENANCE OF BOATING ACCESS AREAS

Maintenance is clearly a top-of-mind issue for boaters. The boater survey conducted as part of this project asked boaters to rate the importance that maintaining existing facilities and areas should have, and 63% give its importance a rating of 10 (on a 0 to 10 scale, with 10 being the most important), and 70% give a high rating of 9 or 10. Additionally, the review of previous research found that, in a national survey, 42% of freshwater boaters expressed a need to repair launch ramps (see reference to U.S. Fish and Wildlife Service, 2009, in the review of previous research).

The boater survey directly asked boaters to rate how much of a problem *poor maintenance* is, and 31% of them cited it as a major or minor problem. Also, perceptions of how well a site is maintained are affected by how clean it appears to be, yet pollution or litter at access areas was cited as a major or minor problem by 36% of boaters in the boater survey.

2.5. OTHER SPECIFIC ACCESS PROBLEMS

The review of previous research, focus groups, and surveys provides a robust list of boating access problems that have been cited by boaters in one context or another (other than a simple lack of access sites or a poor distribution of access sites). These include:

- Problems with the physical access to the water:
  - Poor quality ramps/poorly designed ramps (e.g., too short, too steep).
  - Inadequate space for boats (e.g., lack of tie-ups/mooring/dock space).
  - Shallow water.
- Problems with amenities at access sites:
  - Insufficient parking.
  - Lack of sewage pump-outs/portable dump stations.
  - Lack of or inadequate toilet facilities.
  - Lack of drinking water.
  - Lack of facilities to clean boat.
  - Lack of other amenities such as fish cleaning stations or picnic areas.
- Lack of adequate on-site security at access sites.
- Lack of information that sites exist/about where sites are located.
- Problems with storage and transport of boats.
- Environmental concerns that affect access.

The severity of the problems that boaters experience varies depending on the access site, the particular body of water, and its location in the United States. Nonetheless, there are some problems that occur in much of the country.

This section examines specific access problems in detail, other than those already covered. For instance, the discussion of the amount of boating access in one of the previous sections of the report led to a discussion of crowding, so *crowding* as an access problem has been previously discussed in "2.3.A. Crowding and Lack of Boating Access Sites." Likewise, issues surrounding maintenance have also been discussed above. Nonetheless, several other topics are worthy of attention.

2.5.A. POOR QUALITY RAMPS / POORLY DESIGNED RAMPS

More than a quarter of boaters in the boater survey (27%) said that a major or minor problem is "difficulties getting their boat in or out of the water because the access site is poorly designed." In the industry/agency survey, 32% of industry representatives and 41% of agency professionals say that this is a major or minor problem. Relative to other potential problems, this falls in the lower part of the ranking in both surveys.

2.5.B. INADEQUATE SPACE FOR BOATS

Just under a third of boaters (30%) and more than a third of industry representatives (34%) and agency professionals (40%) said that not enough slips or moorings was a major or minor problem. Additionally, a third of boaters in the survey (33%) indicated that there are not enough short-term slips or tie-ups, 26% said that there are not enough short-term moorings, 22% said that there are not enough permanent slips or tie-ups, and 20% said that there are not enough permanent moorings. In the industry/agency survey, the amounts were as follows: not enough

short-term slips or tie-ups (52% of industry representatives, 49% of agency professionals), not enough short-term moorings (35% and 32%, respectively), not enough permanent slips or tie-ups (28% and 23%), and not enough permanent moorings (22% and 19%).

2.5.C. SHALLOW WATER

The review of previous research presented many examples where shallow water or the need for dredging affected boating. For instance, in a study of the Minneapolis-St. Paul Metro area, on metropolitan lakes other than Minnetonka, the problem indicated by the greatest number of access site users was *shallow water* (see reference to Office of Management and Budget Services and Minnesota Department of Natural Resources, 2011).

The boater survey touched on the topic of shallow water vis-à-vis whether dredging is important. The survey asked how important it is that maintenance include dredging: 44% give it a high rating (of 9 or 10 on a 0 to 10 scale, with 10 being the most important). In the industry/agency survey, 57% of industry representatives and 34% of agency professionals give it a rating of 9 or 10.

2.5.D. INSUFFICIENT PARKING

In a national survey, more than a quarter of freshwater boaters (28%) reported parking lots at launch sites as needing improvements (see reference to U.S. Fish and Wildlife Service, 2009, in the review of previous research). This was a common problem encountered in other research, as well. In the Minneapolis-St. Paul Metro area, on metropolitan lakes other than Minnetonka, *not enough parking spaces* was the problem indicated by the second greatest number of users behind *shallow water*, and on Minnetonka, *parking* is the leading problem (see reference to Office of Management and Budget Services and Minnesota Department of Natural Resources, 2011). Insufficient parking spaces is among the top ranked problems in North Central, Northern, Central, and West Central Minnesota, as well (see references to Office of Management and Budget Services and Minnesota Department of Natural Resources, 2002; 2006; 2007; 2009).

In the boater survey conducted for this project, one-third of boaters (33%) said that not enough parking at boat access areas was a major or minor problem, putting it about a third of the way down the ranking. In the industry/agency survey, this was the second ranked item as a major or minor problem, cited by 72% of industry representatives and 70% of agency professionals. Additionally, when given a list of 25 possible amenities or features at access sites, boaters rate parking for vehicles with boat trailers as the third-ranked amenity/feature in importance with a mean rating of 7.05 (on a 0 to 10 scale with 10 being the most important). Also rated higher than the midpoint are parking for those with disabilities (mean rating of 5.87) and parking for single vehicles (5.80).

In another part of the survey, 29% of boaters say that there is not enough parking for vehicles with boat trailers, the seventh ranked item. Among industry representatives, it is the top ranked item, with 60% saying there is not enough of this.

Among boaters, 26% say that there is not enough parking for those with disabilities (ranked about halfway down), and 19% say that there is not enough parking for single vehicles (near the bottom of the ranking). These are also ranked no higher than the middle in the industry/agency

survey. Also of note is that parking for single vehicles and parking for vehicles with trailers have the lowest quality ratings of the 25 amenities asked about in the boater survey.

2.5.E. LACK OF SEWAGE PUMP-OUTS / PORTABLE DUMP STATIONS

Although not all boaters need the facilities, 17% of boaters in the boater survey, nonetheless, say that poor upkeep or maintenance of sewage pump-outs/portable dump stations is a major or minor problem, near the bottom of the ranking. In the industry/agency survey, this is also low in the ranking. Additionally, 33% of boaters say that there are not enough sewage pump-outs/portable dump stations, relatively high in the ranking (but not particularly high in the ranking among industry representatives and agency professionals).

When asked to rate the quality of sewage pump-outs/portable dump stations at the access sites that they typically use, boaters rate their quality just above the midpoint (mean rating of 5.63 on a scale of 0 to 10, with 10 being the most important). An interesting finding is that a common reason for boaters giving low ratings to sewage pump-outs/portable dump stations is that they are difficult to find or are inconveniently located, suggesting that the location of them at the site is almost as important as having them in the first place.

2.5.F. LACK OF OR INADEQUATE TOILET FACILITIES

In a national survey, 40% of freshwater boaters mentioned restroom facilities as needing improvements (see reference to U.S. Fish and Wildlife Service, 2009, in the review of previous research).

When asked to rate the importance of 25 amenities that an access site can have, the fifth-ranked amenity is restrooms, getting a 6.56 mean rating on a 0 to 10 scale (with 10 being the most important). Clearly, this indicates that restrooms should be considered a top-tier amenity, particularly when one also considers that 33% of boaters, 58% of industry representatives, and 45% of agency professionals say that there is not enough availability of restrooms at access sites, second place in the ranking by "not enough" among boaters and industry representatives.

2.5.G. LACK OF DRINKING WATER

Although not ranked high in importance compared to some of the other amenities/features of access sites that were listed in the boater survey, the availability of drinking water is rated highly important (a 9 or 10 rating on a scale of 0 to 10, with 10 being the most important) by 22% of boaters. Additionally, 27% of boaters in the survey say that there is not enough drinking water availability at the access sites that they typically use, about halfway down the ranking. The industry/agency survey found that not enough drinking water is cited by 32% of industry representatives and 35% of agency professionals, although this places it in the lower part of both rankings.

2.5.H. LACK OF FACILITIES TO CLEAN BOAT

This is a problem that was not asked about directly in the boater survey; however, it was cited in the context of environmental problems, particularly invasive species. The hulls of boats should

be washed after being in some waters to eliminate the spread of invasive species to other water bodies. However, some boaters' comments suggest that a lack of places to wash a boat is an inhibiting factor in boating participation. While there are no quantitative data on this particular problem, anecdotal comments in the focus groups and in the surveys (in those places where respondents are given open-ended questions) suggest that this is a moderate problem.

2.5.J. LACK OF OTHER AMENITIES

Other amenities not discussed elsewhere include trash dumpsters (the fourth-ranked amenity in importance when ranked by the mean rating, 6.69, on a scale of 0 to 10, with 10 being the most important), fueling areas (rated just under the midpoint in importance, at 4.91, but with 29% giving it a rating of 9 or 10), oil disposal (mean rating of 3.76, but with 29% giving it a rating of 9 or 10), electricity (mean rating of 3.63, but with 17% giving it a rating of 9 or 10), and fish cleaning stations (3.54, with 15% giving it a rating of 9 or 10 in importance).

In looking at the percent of boaters who indicated that there are not enough of those amenities, the survey found that 33% of boaters say that there are not enough trash dumpsters, 28% of boaters say that there are not enough fueling areas at the sites that they typically use, 24% say that same about oil disposal facilities, 20% say that there are not enough sites with electricity, and 26% say that there are not enough fish cleaning stations.

2.5.K. LACK OF ADEQUATE ON-SITE SECURITY

A commonly heard idea from various focus group participants concerned the introduction of an affordable user fee at access sites to fund either a security guard or site attendant position, or both. Security certainly affects boating participation, as some focus group participants indicated that they avoid certain access areas due to security concerns, suggesting that certain sites may be underused because of security concerns.

Other research found that security is important. For instance, security was one of the most important services at marinas for boaters on the Mississippi River (see reference to Minnesota and Wisconsin Departments of Natural Resources and U.S. Fish and Wildlife Service, 2003, in the review of previous research).

In the boater survey for this project, security was rated as the 7th most important amenity or feature of access sites, from a list of 25 possible amenities/features, with a mean rating of 6.03 (on a scale of 0 to 10, with 10 being the most important). Also, 30% of boaters say that there is not enough security at the access site that they typically use, and 50% of industry representatives cite security as a problem. The quality of security at the access sites that boaters typically use was rated just above the midpoint (5.58, on a 0 to 10 scale, with 10 being the best quality).

2.5.L. LACK OF INFORMATION THAT SITES EXIST / ABOUT WHERE SITES ARE LOCATED

While the importance of having enough access sites is important, a lack of awareness of sites that exist among boaters can have the same effect as not having the site at all. In other words, a site is of no utility if boaters are unaware of it. Indeed, one key concern about boating access in the

focus groups was the *availability of information* on launch ramp, marina, or park locations, as well as boating procedures at the site; such information is especially critical to new boaters.

While most boaters across the focus groups appeared fairly aware of their state fish and wildlife or boating agency website and had a general familiarity with the types of content included on such sites, there were a number of suggestions for new or updated information delivery methods, including interactive maps, smartphone apps, and webcams at launch sites to gauge parking availability or the general condition of the site. The most common types of information that were wanted were the locations of access areas and updated summaries of the current condition of the sites.

The boater survey also touched on this subject. It found that 23% of boaters said that a lack of information about where access sites are located was a major or minor problem. In the industry/agency survey, not enough information about where boat access areas are located is about halfway down the ranking of major or minor problems, cited by 44% of industry representatives and 36% of agency professionals.

2.5.M. PROBLEMS WITH STORAGE AND TRANSPORT OF BOATS

A small but notable number of boaters throughout the groups mentioned problems associated with boat storage. Costs can inhibit the use of commercial storage facilities, while alternatives can be difficult in some residential neighborhoods—the latter being affected by homeowner association prohibitions or even municipal ordinances in some towns and cities. Several people in the boating industry group echoed the concern regarding residential boat storage constraints, and it is possible that boaters in many areas across the country are facing similar issues.

The focus groups found that a component of storage is the distance to the facilities—simply finding or affording storage convenient to the boater's home and/or preferred boating area.

Storage also entails transporting the boat, which often but not always includes trailering the boat. In fact, the majority of boaters in the survey (56%) said that they use a trailer to put their boat in the water. Trailering is further shown to be important, as the boater survey showed that the majority of boaters in the survey (54%) keep their boat at home and need to transport it from there, and another 11% keep it in a storage yard or area, also requiring transport.

2.5.N. ENVIRONMENTAL CONCERNS THAT AFFECT ACCESS

While environmental concerns often do not directly affect access—in other words, not directly block access—such concerns may tangentially or indirectly affect access. Simply put, if an area is not desirable for boating or fishing, a boater may simply not consider it viable access for boating. The environmental concerns were centered around four themes: litter and trash and how that affects a site, water quality, invasive species, and excess silt or debris that affects (even blocks) access.

All of these aspects considered under the broad umbrella of *environmental concerns* came up in the focus groups. The Richmond, Virginia, boater group's environmental concerns included oil residue in the water and the presence of dead fish, although a few participants indicated that state waters are generally cleaner now compared to 5 or 10 years ago. In the Kenosha, Wisconsin,

group, focus group participants were reluctant to swim in Lake Michigan because of poor water quality, but they also discussed the presence of zebra mussels (a major invasive species) and excessive weeds in many lakes. In the Houston, Texas, group, there was mention of the need for increased dredging as well as the deterioration of the area's bays. In the Portland, Oregon, group, there was ample discussion about sea lions, as well as some mention of wood debris in area waters.

The review of previous research also found many environmental concerns that, if left unchecked, could affect access. One of the most commonly reported concerns about recreational boating in New Jersey was related to water quality (see reference to Marine Trades Association of New Jersey, 2008, in the review of previous research). Additionally, when asked why they were dissatisfied with their boating experiences in Georgia in the previous 2 years (asked of boaters who had indicated being dissatisfied), 23% cited litter/trash/polluted waters, the leading response (see reference to Responsive Management, 2004a).

The boater survey and the industry/agency survey asked those respondents who had mentioned environmental concerns as being problematic to say what the specific environmental concerns are. The top concerns include pollution/litter, invasive species, and fish kills/problems with water quality.

2.6. MAINTENANCE OF EXISTING ACCESS VERSUS CREATION OF NEW ACCESS

The final theme covered in this summary of the major findings is a specific look at maintenance of existing sites versus the development of new sites. Members of both the recreational boater and industry focus groups were consistent in their preference for maintenance of and improvements to existing access sites over the creation of new sites. Most boaters seemed to grasp the challenges that agencies and other organizations have attempting to identify suitable areas for new launch sites. For one thing, many boaters in the focus groups pointed out that there is simply a finite amount of sufficient waterfront land on which an access area can be developed.

The boater survey data concur with this preference. The survey found that the importance of *maintaining existing* boat access facilities was rated higher than either the importance of *improving and expanding existing* facilities or the importance of *building new* boat access facilities, the latter being the least preferred.

In the survey of industry representatives and agency professionals, the results were commensurate with the above. *Maintenance of existing facilities and sites* was rated the highest, followed by *improving and expanding existing facilities and sites*, with *building new facilities and sites* being the lowest rated of the three.

3. REVIEW OF PREVIOUS RESEARCH

A component of this project is a review of other research about boating access and about the interaction between boating access and boating and fishing participation. For this review, researchers used a variety of national publications, regional publications, and state sources, including publications and resources produced by project partners, such as SOBA's 2005 boating inventory, as well as many other journals, databases, and agency/organization publications. A limit in the scope of the research review was the paucity of existing studies conducted relating to boating access. A number of states, such as Alaska, Arkansas, Colorado, Idaho, Illinois, and Michigan, do not readily appear to have conducted recent boating access assessments and/or did not reply to Responsive Management's call for boating access research. Boating access research dated earlier than 1998 was not included, as researchers found that information more than 15 years old is either considered in more recent boating access studies through trends or is outdated.

The review of research shows a clear link between boating and fishing. In the research about activities boaters participate in while boating, fishing was the top activity, or one of the top activities, mentioned. Specifically, fishing is the primary activity of Mississippi River boaters, being indicated by half of all Mississippi River boaters in Minnesota and Wisconsin and more than two-thirds of boaters using public access (Minnesota and Wisconsin Departments of Natural Resources, U.S. Fish and Wildlife Service and Army Corps of Engineers, 2003). Additionally, fishing is the primary use of watercraft in Virginia (Murray, 2001). In Arizona, boaters' top boating activity is fishing (27%), just ahead of general pleasure boating (26%) and water skiing (18%) (Arizona Department of Transportation and Arizona Game and Fish Department, 2012). In Delaware, fishing is the most common activity in which boaters participate while boating, indicated by 80% of those who boated in Delaware in the year previous to that survey (in 2007), followed by being with family (52%), cruising (48%), and being with friends (46%) (Responsive Management, 2007a). In Texas, fishing is the second most popular reason for boating (85%), behind relaxation (88%) (Responsive Management, 2001).

Additionally, 58% of both freshwater and Great Lakes boaters and 46% of saltwater boaters indicated that they used a boat launch on at least one of their fishing trips in 2006 (U.S. Fish and Wildlife Service, 2009). Thus, boating access issues can be linked to fishing access issues, and the research reviewed can shed light on both boating and fishing access issues.

3.1. THE IMPORTANCE OF BOATING AND BOATING ACCESS

In a number of economic analyses and studies reviewed, boating proved to be important to national, regional, and local economies. In the *Northeast Recreational Boater Survey*, it was estimated that recreational boating contributed $3.5 billion to the Northeast economy in 2012 and increased the labor demand in the region by the equivalent of nearly 27,000 year-round jobs (Seaplan, 2012). In Massachusetts, boating contributed an estimated $806 million to the state's economy in 2010 (Massachusetts Ocean Partnership, 2011), and in New Jersey, boaters spent approximately $2.1 billion on their pastime in 2006, which included $1.1 billion in trip-related expenditures and $938 million in annual boating-related purchases (registration fees, maintenance, etc.) (Marine Trades Association of New Jersey, 2008).

Access is very important to boaters. In fact, in a study Responsive Management conducted in Washington State, boaters named public boating access as the second most important program or service that the state provides (exceeded only by boating safety), out of 15 programs/services listed (Responsive Management, 2007b).

3.2. BOATER SATISFACTION WITH BOATING

A large majority of boaters on Lake Tahoe (91%) reported being satisfied with their boating experiences on Lake Tahoe (Responsive Management, 2006), and 88% of the general population who had boated and 89% of registered boaters in Indiana reported being satisfied with their boating experiences in Indiana in the 12 months previous to the survey (Responsive Management, 2004b). A large majority of respondents (92%) in a 2001 Texas study reported being satisfied with their boating experiences in Texas in the previous 2 years (Responsive Management, 2001).

3.3. BOATER SATISFACTION WITH PHYSICAL ACCESS

In general, a majority of boaters seem to be satisfied with boating access facilities: 70% of public access boaters surveyed in Minnesota and Wisconsin rated public access quality *good* or *excellent* (Minnesota and Wisconsin Departments of Natural Resources, U.S. Fish and Wildlife Service and Army Corps of Engineers, 2003), 68% of registered boaters in Arizona rated boater access facilities overall as *good* or *excellent* (Responsive Management, 1998), and 76% of Indiana boaters rated overall boating access facilities at the area they most often visit as *good* or *excellent* (Responsive Management, 2004b).

In a survey, 66% of Great Lakes boaters, 60% of freshwater boaters, and 58% of saltwater boaters in a nationwide survey of anglers fishing from boats stated that the facilities that they use did not need any improvements (U.S. Fish and Wildlife Service, 2009). This leaves 34%, 40%, and 42%, respectively, who either think that the facilities they use need improvements or are unsure.

In a South Carolina study of five coastal counties, ratings of public access user satisfaction had a mean rating of 7 out of a possible 10 (Zande-Jon Guerry Taylor, P.E., Inc., 2007). While fairly high, a rating of 7 nonetheless implies that there is room for improvement.

While the majority of boaters appear to be relatively satisfied with boating access facilities in general, the level of satisfaction varies for specific regions, bodies of water, and boating access facilities. On Lake Minnetonka in Minnesota, boaters gave very high marks to the public access facilities for launching and recovering a boat in 2004 (71% gave *excellent* ratings and another 23% gave *good* ratings for a total of 94% positive ratings) (Office of Management and Budget Services and Minnesota Department of Natural Resources, 2005). The report speculated that this increase in ratings, from just 4 years previous, was likely due in part to the opening of a large, new, well-designed facility and the closing of two smaller access sites on the same part of the lake.

3.4. AMOUNT OF BOATING ACCESS

The review of previous research found many instances of access problems. While the positive comments regarding Wildlife Resources Commission ramps outnumbered the negative, only 40% of respondents in a North Carolina study agreed that the current number of boat ramps meets their needs (Kline and Maddalena, 2007). Additionally, a study conducted in Maine stood out, as 80% of respondents indicated that there is a great need for more boat access to the coast (59% indicated that this was a high need, 28% a medium need, and 13% a low need) and 80% noted that their municipality has a need for improvements to its existing public marine infrastructure (Maine Department of Natural Resources and Maine Coastal Program/State Planning Office, 2000). In New Hampshire, one of the main problems with public access sites identified was the lack of public boat launches (Pawlawski, Robertson, and Pfister, 1998).

In the Chesapeake Bay, the number of access sites is very low in comparison to the amount of shoreline in the Chesapeake watershed (there are just 770 existing access sites along a combined length of 11,684 miles), and state agencies report overcrowding at trailerable boat launching facilities along the Bay and tidal tributaries (U.S. National Park Service, 2013).

An access assessment and projected needs project conducted in the Mississippi Coastal zone concluded in its summary that there is "an immediate need for additional recreational boating access infrastructure on the Mississippi Gulf Coast. The shortage of boat ramps and marina space will become more acute as the coastal population and per capita income of coast residents continue to increase in the future" (Burrage, Hollomon, and Posadas, Mississippi State University's Coastal Research and Extension Center, 1999).

3.5. RATINGS OF THE CONDITION OF BOATING ACCESS FACILITIES

In Oregon in 1998, at least half of all access sites were considered to be in poor condition (Oregon State marine Board, 1998).

In some cases, such as in Virginia in 2001, facilities were characterized as *fair* to *good*, but a substantial portion of them (90% in Virginia in 2001) were in need of some improvements or upgrades within the next 10 years (Murray, 2001).

In Sacramento, a backlog of deferred maintenance was identified due to the survey process (California Department of Boating and Waterways, 2002).

3.6. ACCESS PROBLEMS AND BOATING SATISFACTION

When boaters reported not being satisfied with their recent boating experiences, they often indicated that they experienced a problem with access and/or mentioned that their launch facilities need to be improved (U.S. Fish and Wildlife Service, 2009; Minnesota and Wisconsin Departments of Natural Resources, U.S. Fish and Wildlife Service and Army Corps of Engineers, 2003; Office of Management and Budget Services, Minnesota Department of Natural Resources, 2002, 2011).

3.7. TYPES OF ACCESS PROBLEMS

The access-use problems that boaters experience include problems with other boaters who are not prepared to launch, crowding, docks blocked by boats/anglers, shallow water, poor water quality, and various facility deficiencies, such as inadequate toilet facilities or toilet maintenance, not enough parking spaces, access sites being in disrepair, poor directional signs to access, lack of beacon lights visible from water bodies, poor quality fish cleaning stations, lack of adequate security, lack of short term tie-ups, lack of picnic areas, lack of emergency telephones, lack of drinking water outlets, litter/pollution, and insufficient number of launch lanes/ramps. While the frequency and degree to which boaters experience these problems varies between access sites, bodies of water, and regions, there are a few notable problems that are common in much of the country.

The physical access problems mentioned the most frequently (non-physical access problems such as crowding and user conflicts are considered separately in this review) were insufficient number of parking spaces in parking lots, lack of restrooms and/or poorly maintained restrooms, and insufficient number or quality of launch ramps.

In a national survey, 42% of freshwater boaters expressed a need to repair launch ramps, 40% mentioned restroom facilities, and 28% reported parking lots at launch sites as needing improvements (U.S. Fish and Wildlife Service, 2009).

On the Mississippi river, the leading problems that are not crowding, user conflicts, or environmental concerns are *inadequate toilet facilities or toilet maintenance* and *not enough parking spaces* (Minnesota and Wisconsin Departments of Natural Resources, U.S. Fish and Wildlife Service and Army Corps of Engineers, 2003). In Arizona, public restrooms (19%) and launch ramps (18%) continue to be the most frequently mentioned facilities needed at boaters' favorite lakes (Arizona Department of Transportation and Arizona Game and Fish Department, 2012).

In the Minneapolis-St. Paul Metro area, on metropolitan lakes other than Minnetonka, *not enough parking spaces* was the problem indicated by the second greatest number of users behind *shallow water*, and on Minnetonka, *parking* is the leading problem (no other problem on it or the other lakes is indicated by 5% or more of access users) (Office of Management and Budget Services and Minnesota Department of Natural Resources, 2011). Insufficient parking spaces and insufficient number of launch lanes are among the top ranked (if not the top ranked) problems in North Central, Northern, Central, and West Central Minnesota, as well (Office of Management and Budget Services and Minnesota Department of Natural Resources, 2002; 2006; 2007; 2009).

Pollution, trash, and lack of security are also frequently mentioned problems users have with access facilities. On Oregon rivers, the most common problems are trash and litter, vandalism, and trespassing (Oregon State Marine Board, 1998). Two of the most commonly reported concerns about recreational boating in New Jersey were related to water quality and safety (Marine Trades Association of New Jersey, 2008). Security was one of the most important services at marinas for boaters on the Mississippi river (Minnesota and Wisconsin Departments of Natural Resources and U.S. Fish and Wildlife Service, 2003).

When asked why they were dissatisfied with their boating experiences in Georgia in the previous 2 years (asked of boaters who had indicated being dissatisfied), 23% cited litter/trash/polluted waters, the leading response (Responsive Management, 2004a).

Boaters' preferred characteristics of public access sites (physical attributes) correspond with the access problems that are most frequently cited: well-designed and adequate parking, good law enforcement, well-maintained access sites, overall signage for the access facility, a safe area for recreation, and the existence of restroom facilities (Pawlawski, Robertson, and Pfister, 1998).

3.8. CROWDING AND INCREASED USE OF PUBLIC ACCESS

The number of boaters in the U.S. is increasing, and an increasing number of boaters are using public access facilities. According to a study conducted in Virginia, recreational boating activity has reached an all-time high in both Virginia and the United States (Murray, 2001). In Mississippi there was an overall 42% increase in boat registrations between 1992 and 1999 (Burrage, Hollomon, and Posadas, Mississippi State University's Coastal Research and Extension Center, 1999).

In North Central, West Central, and Central Minnesota, the use of public access has increased since 1985 (Office of Management and Budget Services and Minnesota Department of Natural Resources, 2002, 2006, 2009). The Minnesota regional reports hypothesize that the reason for this increase in use of public access is due to the increasing size of boats and motors and the associated need to launch/recover these boats at a well-designed access facility. Corresponding to their increased use, there is increased crowding at public boating access facilities. Crowding is cited and considered as a problem in Oregon, where 70% of boaters indicated that they experience crowding, at some time, on most of the rivers they use in Oregon (Oregon State Marine Board, 1998).

The increased use and crowding of public access facilities is causing more users to experience conflicts with other users and other crowding problems that lower their satisfaction with their boating experiences (Rhodes, Von Harten, and Turner, 2008) and make them want additional and/or improved access (Cherokee CRC, LLC, 2010). The latter report stated that "perceptions of crowding are correlated with the need for more facilities such as boat ramps, parking, and marinas."

Crowding is experienced in varying frequencies and ways at different sites, bodies of water, and regions of the United States: 25% of Arizona boaters believe their favorite lake is too crowded (Arizona Department of Transportation and Arizona Game and Fish Department, 2012), while 58% of boaters in Maine think their preferred site is overcrowded (Maine Department of Natural Resources and Maine Coastal Program/State Planning Office, 2000). Additionally, 23% of

Georgia boaters mentioned that they were dissatisfied with their boating experiences in Georgia in the past 2 years because of overcrowded waters (Responsive Management, 2004a), and 53% of public access users in Central Minnesota have at some point in their past found a public access parking lot full on the lake that they wanted to use (Office of Management and Budget Services and Minnesota Department of Natural Resources, 2002).

Commonly, the problems associated with crowding are experienced in parking lots and at launch ramps more frequently than they are on the water. In a study conducted in Washington, 24% of boaters indicated that they consider crowding *at boat launch ramps* to be a major problem, compared with just 10% boaters who consider crowding *on the water* to be a major problem (Responsive Management, 2007b).

While most people who experienced crowding and/or were not able to find a parking space were able to find a way to boat that day, some were not. According to a Lake Superior study, "As a rule, users of a place tend to indicate lack of amenities as a barrier to the place's use," and in situations in which users cannot find a place to park, problems with access can become barriers to access.

In some cases of crowding, such as was reported in a Texas study, boaters tended to employ several coping strategies in response to encountering or the anticipation of encountering crowding: they changed the timing of their boating, avoided certain locations on the lake, and/or accommodated the conditions and maintained an enjoyable outing (Responsive Management, 2001).

3.9. SITE IMPROVEMENTS AND AMENITIES

When boaters see a need for improvements, they tend to cite improvements that would solve problems they have experienced with access facilities. Most often, boaters cited trash containers, toilets, parking spaces, and more launch lanes/ramps. When asked if/which boating access facilities they would like to see improved (in vicinity of the body of water in Indiana which they most often visit), Indiana boaters' top desired amenities were launch ramps, restrooms, and parking areas (Responsive Management, 2004b). The top-ranked improvement for Minnesota lakes is providing more parking spots in the access lot, followed by requests for trash containers, more launch lanes/ramps, and beacon lights visible from the lake (Office of Management and Budget Services and Minnesota Department of Natural Resources, 2009).

In South Carolina, the most commonly suggested improvement to boating access sites was more parking, followed by restroom facilities and trash receptacles (Zande-Jon Guerry Taylor, P.E., Inc, 2007). In Sacramento, marina owners identified their facility replacement, upgrade, and repair needs in the following order of priority: dredging, docks/slips, dry boat storage, launch ramp lanes, parking, and transient docks (California State University Sacramento Foundation and NewPoint Group, 2002).

3.10. MAINTENANCE OF EXISTING ACCESS VERSUS CREATION OF NEW ACCESS

The data suggest that most boaters do not think that more public access is needed, but rather they show preference for the maintenance of existing access over the creation of new access (although few studies explicitly asked boaters whether they prefer the creation of new access or the maintenance of existing access).

In a study Responsive Management conducted in Washington, maintenance ranked ahead of development in importance ratings in surveys of both providers and boaters (Responsive Management, 2007b).

If existing access sites are well-maintained and/or expanded, it could reduce calls for the creation of new access, in some cases, considering the correlation between perceptions of crowding and the need for more facilities such as boat ramps (Cherokee CRC, LLC, 2010). Indeed, in some studies, the creation of new sites and the maintenance of existing access sites were both deemed important. In Washington, majorities of boating providers indicated that more time and money should be directed toward public access, including the development of new boat launch ramps and the management of existing boat launch ramps (Responsive Management, 2007b).

3.11. TRAVEL DISTANCE TO ACCESS AREAS

The results of a national study indicated that saltwater boaters use boat launches that are relatively close to home: 52% traveled 20 miles or less to their preferred launch. A substantial portion of Great Lakes and freshwater boaters traveled a relatively short distance to access boat launches as well: 40% of Great Lakes boaters and 44% of other freshwater boaters traveled 20 miles or less to boat launch they used most often (U.S. Fish and Wildlife Service, 2009).

In a study conducted on Table Rock Lake in Missouri, most boaters interviewed lived in Missouri and traveled less than 30 miles to the lake (Missouri, 2010). A study conducted in North Carolina found that 72% of coastal residents drive less than 15 miles to launch their boat, although Piedmont and Mountain Region residents drove farther than Coastal Region residents to launch their boat (Kline and Maddalena, 2007). In a study of 5 counties in South Carolina, boat ramps are being used primarily by recreational boaters, with local resident boating parties making up 79% of the total boat landing user population in the study area (Zande-Jon Guerry Taylor, P.E., Inc., 2007).

3.12. USER CONFLICTS, ETIQUETTE, AND RELATED EDUCATIONAL OPPORTUNITIES

While conflicts with other users were not mentioned as often in the research reviewed as in the focus groups that Responsive Management facilitated, a few were identified, such as other boaters not being prepared to launch and other boaters' general interference. In a study conducted in Texas, 46% of respondents stated that they did not experience any interference by others that took away from their enjoyment while boating in the previous 2 years, but 38% cited other boaters as a source of interference (Responsive Management, 2001). In a study conducted on the Mississippi River, the leading overall problem had to do with other boaters who are not prepared to launch (Minnesota and Wisconsin Departments of Natural Resources and U.S. Fish and Wildlife Service, 2003).

Opportunities for education were identified in the research when survey questions yielded results that showed that boaters are not aware of boating programs and/or regulations, as well as when boaters explicitly mention that there is a need for additional education. In a study Responsive Management conducted in Washington, large majorities of boaters and boat service providers indicated a need for increased education (Responsive Management, 2007b).

3.14. RESEARCH REVIEWED

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4. RECREATIONAL BOATER FOCUS GROUP RESULTS

Focus groups are small group discussions, guided by a moderator, that explore focus group participants' feelings about the subject of discussion. The use of focus groups is an accepted research technique for qualitative exploration of attitudes, opinions, perceptions, motivations, constraints, participation, and behaviors. Focus groups provide researchers with insights, new hypotheses, and understanding through the process of interaction.

Four focus groups of boaters and anglers who boated were conducted for this project in the following locations: Richmond, Virginia; Kenosha, Wisconsin; Houston, Texas; and Portland, Oregon. A fifth focus group was held of boating industry representatives in Washington, D.C. The methodology section of this report contains a full discussion of the procedures for conducting focus groups.

A separate report as part of this overall project was issued of the focus group findings. Those results have been summarized here, but the focus group report can be accessed for a more in-depth discussion of the groups, as well as selected quotations from participants.

4.1. GENERAL BOATING PREFERENCES AND OPINIONS ON ISSUES AFFECTING BOATING

4.1.A. PREFERRED BOATING ACTIVITIES

An initial discussion in each of the focus groups assessed the recreational activities in which boaters most enjoyed participating (note that all focus group attendees were active anglers, as fishing and boating participation were the central recruitment criteria for the study). In addition to fishing, many participants named other water- and boat-based activities in which they regularly participated, the most prominent of which included wildlife viewing, swimming, wakeboarding, water skiing, tubing, and pleasure cruising.

4.1.B. SATISFACTION WITH BOATING AND GENERAL ISSUES AFFECTING PARTICIPATION

Focus group participants were encouraged to discuss things that affected their boating satisfaction, with the discussions not being limited strictly to access-related concepts and issues. These broad discussions on boating satisfaction helped to place access-related issues into the context of major factors influencing overall satisfaction and participation.

Although some factors that were mentioned were not related to access, other factors that were mentioned either directly or tangentially affected access. Common factors not related to access that were mentioned included available free time, weather, and the price of fuel. Nonetheless, various access-related concepts were prominent in focus group participants' minds.

The following access-related issues came up in the focus group discussions:

- Crowding at access sites, particularly during peak months.
- Lack of parking at access sites.

- Seemingly high fees for access.
- Closing of access sites.
- Conflicts with landowners near or adjacent to access sites.
- Poor maintenance of access sites. Some sites can become unusable because of poor maintenance.
- Excessive travel distances to access sites.
- Restrictive neighborhood regulations concerning boat storage (which can also increase travel distance when boaters must first retrieve boats from a storage location).

In addition, some factors are tangentially related to access in that they either affect the perceptions regarding access or make access sites less desirable (even if not completely impeding access), and these include:

- Poor or reckless behavior, sometimes exacerbated by alcohol use, from other boaters or recreationists at access sites and on waterways. This may have a substantial effect on perceptions of access, as boaters may stop using access sites that they consider dangerous.
- Related to poor behavior is lack of boating etiquette. While strictly speaking not reckless behavior, poor etiquette negatively influences access, such as when parking spots designed for a truck and a trailer are occupied by only a single car or truck.
- Lack of navigational signage and buoy markers near landings, and lack of signage designating shallow waters. Again, sites considered dangerous may be avoided by boaters.
- Invasive species, such as zebra mussels or milfoil. In some situations where boats are used in multiple waters, the boats must be washed clean of possible invasive species before they can be put in, thereby adding to the labor involved with putting in.
- Presence of wildlife that is not invasive/exotic but that may cause problems. The primary culprit mentioned here were sea lions, which can damage access sites and/or otherwise make access sites undesirable. Sea lions can also interfere with fishing, thereby creating "access" problems among anglers seeking a place to put in their boats for fishing.
- Sightings of dead fish, oil residue, and sewage. Obviously, while these would not directly impede access to boating, such problems may affect boaters' perceptions of access.
- Poor water quality, including mercury pollution. These environmental concerns, particularly such things like mercury pollution, may limit fishing access because they make the fish inedible. This, in turn, would affect anglers' perceptions of boating access in that they would not think of the site in question as providing access (even though, strictly speaking, it does).

4.2. SATISFACTION WITH BOATING ACCESS

Following the discussions on general issues and concerns affecting boating participation and overall satisfaction, the discussion turned to satisfaction with boating access specifically. Of course satisfaction is not divorced from the specific access sites available to boaters and the sites that they use. The focus groups had a good cross-section of boaters vis-à-vis access sites used. Some boaters used public sites, and some used private access sites. Some paid for access at marinas, while others mentioned having relationships with private landowners who allow them to access the water.

In general, satisfaction levels with access were more positive than negative. Satisfaction was associated with the perception that sites had been recently built and/or expanded. It was also associated with sites that had attendants who helped direct traffic and assisted with putting in and taking out (even if such sites typically charged fees), as well as with sites that had security (again, even if a fee was necessary to ensure security). The simple aesthetic quality of the site—often meaning a lack of litter—was associated with being satisfied with access sites.

On the other hand, dissatisfaction was linked to inadequate maintenance of sites (sometimes exacerbated by droughts), poor distribution of sites, crowding, and lack of security at sites. Conflicts with landowners, which sometimes caused some sites to become unusable (if not officially closed), were mentioned as detracting from satisfaction, as well. Parking was an issue that often detracted from satisfaction, including in locations where there were seemingly enough launch lanes but lack of places to park after the boats were launched. The simple design of some sites detracted from satisfaction, such as ramps that were prohibitively steep or that had cracked and pockmarked concrete.

It is worth noting that many focus group participants had adapted to access site shortcomings, learning where to go or ways to make the put-in and take-out experience better despite problems. While this adaptation is good, the need for it may negatively affect satisfaction in the long term.

4.3. OPINIONS ON SPECIFIC ACCESS-RELATED ISSUES AND RESOURCES

4.3.A. Needed Improvements and Additions to Access Areas

Using a list of major boating access site amenities and features, the focus group moderators asked boaters in each of the four groups about the major features or improvements most needed at the sites they regularly use. The summary below reflects the amenities and features that received the most discussion time in the four boater groups:

Parking. Demand for parking varies from day to day and at various times during the day, with parking problems not equally distributed temporally. Nonetheless, some problems associated with parking are not necessarily tied to the day or time of day. For instance, some focus group participants discussed parking being located far from the boat launches, ramps, and other facilities. Poorly maintained parking areas also present a problem to boaters, such as when parking pads are pockmarked or cracked.

Restrooms. This amenity was perceived in the focus groups as a moderate problem. Security was tied to this concern in that some focus group participants indicated that providing restrooms at access sites then, in turn, required some sort of security to ensure that the restrooms are safe. There was also a noted gender difference in attitudes toward restrooms: male focus group participants indicated more willingness to relieve one's self outside of a restroom (e.g., the bushes). Female focus group participants indicated that a lack of restrooms at access sites discouraged some female family members from going on boating excursions.

Trash receptacles. The provision of trash receptacles also entails periodically emptying them. Therefore, there are two aspects of this issue: the provision of receptacles—some sites do not have them at all—as well as the emptying of them. One point made in the focus groups was that having trashcans did little good if they are regularly overflowing. There was recognition in the

focus groups that the number of trashcans (or the frequency of emptying them) is dependent on the time of year, with peak seasons requiring more trash receptacles or a greater frequency of emptying them. Another point made was that trash receptacles attract wildlife.

Launch ramps and launch lanes. Typical problems with launch ramps and launch lanes that were mentioned include poor maintenance of them, negatively affecting their utility. Another problem noted in the focus groups was the large variability in quality and amenities at various access sites, leading to unpredictability when boaters choose to try an access site. Design problems may also negatively affect launch ramps, particularly those that are too steep.

Access for disabled individuals. There was little consensus in the focus groups regarding whether there were too few or too many access sites catering to disabled boaters. Some non-disabled boaters noted that many of the parking slots designated for disabled individuals went unused while other parking areas were crowded. Obviously, there is a need to maintain the balance between providing disabled access and efficiently using the access areas.

Security. The two main components of security discussed in the focus groups are safety of boaters themselves (e.g., disagreements with other recreationists) and the security of unattended vehicles. Enforcement presence in various areas was discussed at length, and several participants said they were willing to pay a fee to use a site patrolled by a security guard or other law enforcement representative.

4.3.B. Maintenance of Existing Access Versus Creation of New Access

In each focus group, the moderator asked participants whether it was more important to build new access areas or maintain existing ones, such as through repairs and improvements. Interestingly, the overwhelming response across all four groups was to improve existing sites, rather than construct new ones. The most common reasons included the cost-effective nature of adding improvements and maintaining upkeep, compared to erecting brand new sites; the relative scarcity in most areas of suitable, affordable waterfront property on which to build new access areas; and examples of underused, poorly planned new access areas.

4.3.C. Opinions on User Conflicts

User conflicts on waterways, such as conflicts between larger boats and jet skiers, were often mentioned in the focus groups during the discussions of factors affecting boating satisfaction, but the moderators also returned to the topic at later points in the discussions to give participants an opportunity to continue discussing these concerns.

- A few people commented that many boaters (including personal watercraft operators) simply have not been properly trained and educated as to the "rules of the road," particularly in terms of right-of-ways on the water. Another major aspect of the discussion concerned obligations of common courtesy, cooperation, and mutual respect among recreationists sharing the same area or water body.
- It was also mentioned that motor boats are a frequent source of frustration to anglers.
- A later portion of the discussion focused on conflicts with waterfront property owners, and a few people mentioned property owners who closed the areas near their land to parking due to poorly behaved canoeists and kayakers.

4.4. POTENTIAL POLICIES AND PROGRAMS TO IMPROVE BOATING ACCESS

Participants were asked if they had any ideas for policies or programs that could help to improve boating access.

- Much of the conversation concerned the need for a greater enforcement presence on the water. A focus group participant indicated that authorities on the water focused on enforcing fish catch limits rather than policing unruly behavior. One person reiterated the need for operators of personal watercraft to complete a boater safety course.
- Maintenance came up in the focus group discussions, as well. A person commented about the need for regular, consistent inspections of boating access areas to determine needed repairs, maintenance, or additional features.
- Dredging was also commonly mentioned, which was said to be needed to maintain the quality of the shallow areas near ramps, but it was noted that it seemed difficult for the state agency to receive authorization for such measures.
- One person recommended a website providing updates for boaters looking for information on boating access throughout the state. A few participants reacted positively to the idea of a website or smartphone app providing updates and general information on boating access, particularly if such a service allowed users to search by various preferred features. (A couple of participants mentioned a webcam and an app that are already available in their state.) Suggestions were also made to post signs at boat ramps and access sites displaying key information on boat launching and recovering procedures. Finally in this vein, there was a suggestion to create integrated websites displaying updated, real-time parking availability information for busier launch areas.
- There was also some discussion about standardizing the fees charged to launch on various lakes throughout the focus group participant's state, with a few people indicating frustration over the apparent inconsistency in such user fees. One participant recommended that the state decide on a standard set of rates, although another countered that a small pond could become as expensive as a major lake.
- A few focus group participants also commented about the difficulties of storing a boat in a residential neighborhood in some areas, with some people being faced with the option of paying high prices for dry boat storage.

4.5. ISSUES AFFECTING FISHING PARTICIPATION SPECIFICALLY

Participants were also asked specifically about issues that affected their fishing participation, including access-related issues as well as more general concerns. Many of the comments echoed remarks from the earlier discussion concerning factors affecting boating participation (e.g., available free time, weather, costs of fuel and other supplies).

In general, boating access-related concerns appeared to be of moderate importance to overall fishing participation to most people in the focus groups. Additionally, earlier conversations in the focus groups (in Oregon) on fishing issues addressed frustrations with sea lions.

5. BOATING INDUSTRY FOCUS GROUP RESULTS

The focus group of industry representatives was held in Washington, D.C., at the 2013 American Boating Congress. Participants included representatives from boat and engine manufacturers, boat dealers, marina operators, industry service providers, and marine trade associations.

5.1. OPINIONS ON ISSUES AFFECTING BOATING

Boating industry representatives discussed several key issues affecting boating participation.

- Urban boating access for boaters residing in cities was an early topic in the discussion, with one participant noting the potential difficulties in trying to find a place to keep a boat in an urban environment, not to mention locating sufficient launch areas.
- It was also mentioned that access in more rural areas can also be challenging if boaters are unfamiliar with the locations of specific access points.
- The focus group included a discussion of the importance of education and service made available to boaters from within the industry to ensure that those new to the activity are given proper assistance in helping them to learn.
- Differences in federal, state, and local environmental regulations and ordinances were discussed as a possible obstacle to the development of new boating access (e.g., conflicting steps for mitigating seagrass).
- Finally, the focus group touched on the concept of competing user groups and associated conflicts, particularly between motorized boaters and human-powered watercraft—it was mentioned that the industry has an obligation to help strengthen communication and mutual understanding between such competing groups to consolidate the boating constituency and ensure a better experience for all participants.

5.2. MAINTENANCE OF EXISTING ACCESS VERSUS CREATION OF NEW ACCESS

Adding some notable commentary to the consensus in the recreational boater groups that maintenance of existing access areas is more important than the building of new access locations, most industry representatives agreed that it is generally much easier for states and municipalities to budget the creation of a new ramp or access area than to allot funds for continuous maintenance and upkeep of such areas. This prioritization of new access over existing access runs counter to the desires of both boaters and boating professionals. In discussing this point, several people in the group recommended that the budgets for boating access areas apportion funds specifically for future maintenance.

5.3. BOATER BEHAVIOR LAUNCHING AND RECOVERING AT ACCESS AREAS

In talking about one of the recurring discussion points from the boater focus groups, many boating industry representatives agreed that boat launch areas and ramps can become congested with people waiting to put in or take out—such scenarios are exacerbated by the presence of newer or inexperienced boaters. Several industry representatives noted that site design has a great deal of influence on the ability for a launch area to efficiently move boaters in and out of the site, and site design also plays a role in whether the site becomes congested.

A few professionals in the focus group supported the idea of signs or prominent displays of key information for efficiently launching or recovering a boat, while others emphasized the importance of experienced individuals taking the time to assist or provide guidance to those struggling or taking an inordinate amount of time to execute launch procedures. There was also discussion on the potential for volunteers or paid employees to act as marshals or attendants assisting with traffic and flow at access sites.

5.4. OPINIONS ON USER CONFLICTS

As in the recreational boater focus groups, the industry focus group included ample discussion of user conflicts and congestion on waterways. However, somewhat in contrast to the boater groups in which participants discussed problems with jet skiers at length, the focus of the industry group discussion concerned friction between motorized boaters and human-powered watercraft such as kayakers and paddle boarders. A few people in the group also pointed out that kayakers and other human-powered watercraft operators seem be increasing in number.

One of the main topics in this conversation was the potential to encourage a registration requirement among personal watercraft operators (currently, many states do not require such operators to register their watercraft). One major motivation for this suggestion was to encourage operators of smaller watercraft to contribute to the funding used to maintain and conserve the resources used by all boater groups; a second major point was to engender among smaller personal watercraft operators a feeling of solidarity and identification with the boating community as a whole, leading to a stronger overall constituency. There was discussion of how important it is for factions within the overall boating community to put aside their respective differences to the benefit of all parties.

5.5. POTENTIAL POLICIES AND PROGRAMS TO IMPROVE BOATING ACCESS AND PARTICIPATION

The industry focus group discussed programmatic and industry-wide approaches to improve boating access and increase boating participation as a whole. Several industry representatives emphasized how important it is for the industry to make it easy for new boaters to become involved with the activity—a repeated suggestion was to minimize barriers whenever possible, such as how to afford a boat, how and where to get the boat into the water, and options for boat storage.

The discussion touched on invasive species checks at boat launches, which some boaters may view as intimidating or overreaching, particularly those unfamiliar with such procedures. Later comments in the discussion addressed the potential for the U.S. Fish and Wildlife Service's Boating Infrastructure Grant Program to be used for boat ramp and launch maintenance funding. There was also some discussion of the potential for fishing regulations to act as a deterrent to boating participation (red snapper regulations in Florida were mentioned as a primary example).

6. SURVEY OF BOATERS

The survey of boaters was a central component of this project. More than three thousand boaters from across the United States were contacted for their opinions.

For the survey, telephones were selected as the preferred sampling medium because of the almost universal ownership of telephones among boaters (both landlines and cell phones were called). Additionally, telephone surveys, relative to mail or Internet surveys, allow for more scientific sampling and data collection, provide higher quality data, obtain higher response rates, are more timely, and are more cost-effective. Telephone surveys also have fewer negative effects on the environment than do mail surveys because of reduced use of paper and reduced energy consumption for delivering and returning the questionnaires.

The telephone survey questionnaire was developed cooperatively by Responsive Management and the research partners. Responsive Management conducted pre-tests of the questionnaire to ensure proper wording, flow, and logic in the survey.

Telephone surveying times are Monday through Friday from 9:00 a.m. to 9:00 p.m., Saturday from noon to 5:00 p.m., and Sunday from 5:00 p.m. to 9:00 p.m., local time. A five-callback design was used to maintain the representativeness of the sample, to avoid bias toward people easy to reach by telephone, and to provide an equal opportunity for all to participate. When a respondent could not be reached on the first call, subsequent calls were placed on different days of the week and at different times of the day. The survey was conducted in November and December 2013. The software used for data collection was Questionnaire Programming Language.

To qualify for the survey, respondents either had to have owned a boat of at least 12 feet or had to have boated on a boat of at least 12 feet in the previous 2 years. Most respondents had both owned a boat *and* had boated in the previous 2 years; however, some boat owners had not boated in the previous 2 years, and some of those who had boated had not owned a boat in the previous 2 years. Any use of the terms "boaters" or "overall" results refers to boat owners and/or participants in boating. Otherwise, note that some questions were specifically asked only of boat owners, and others were asked only of those who had boated. A full discussion of the survey methodology is included in Chapter 8.

Appendix B shows the number of registered *boats* in each state. While the numbers do not match the number of *boaters* eligible for the survey in each state, the numbers can serve as a proxy to help determine the scale of problems when mention is made that a certain percentage of boaters experienced a problem. The mismatch in numbers is caused by two primary factors. First, the number of registered boats and the number of owners of registered boats is not a 1:1 correlation, as some boaters can own more than one registered boat and other boaters may not have a boat that is registered; and second, the survey was not restricted to only owners of registered boats.

6.1. RATINGS OF BOATING ACCESS OVERALL AND GENERAL PROBLEMS WITH ACCESS

Overall, boat access ratings are positive nationally: on a 0 to 10 scale, with 0 being poor and 10 being excellent, one third of boaters (34%) rate access a 10, and almost half (45%) give a high rating of 9 or 10 (Figure 6.1.1). Nonetheless, 13% give a rating of the midpoint or lower. Regionally, the best ratings are in the South Atlantic Region and the East South Atlantic Region (Table 6.1.1).

Figure 6.1.1. Overall Ratings of Boating Access

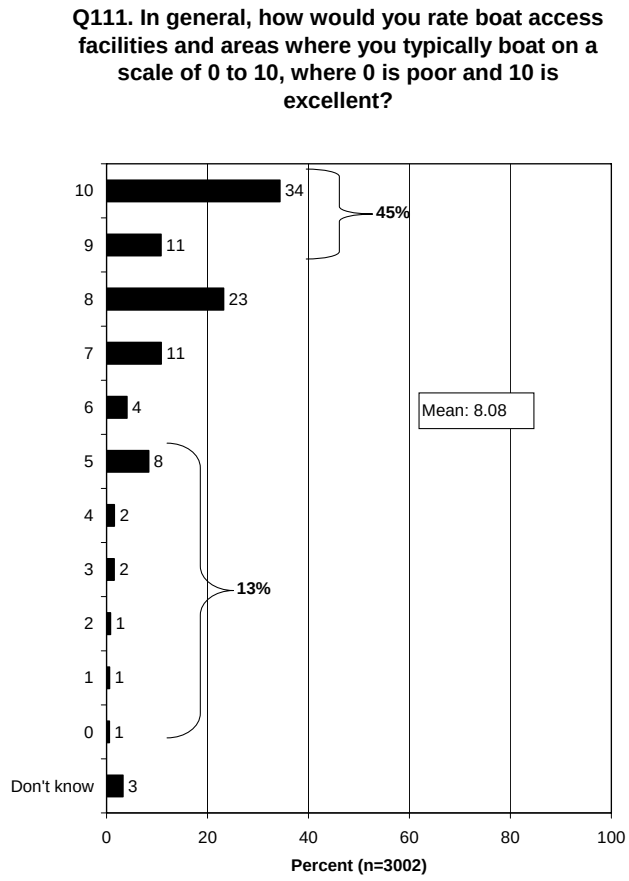


Table 6.1.1. Overall Ratings of Boating Access, by Region

Table shows the percent of boaters giving the following ratings (last row shows the mean rating).	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
10	31	36	29	35	43	41	30	27	30
9 or 10	36	48	41	45	53	52	41	40	40
Above midpoint (6-10)	81	79	85	85	84	86	78	86	83
Midpoint (5)	6	9	7	7	7	10	12	8	10
Below Midpoint (0-4)	7	8	4	4	5	2	7	6	4
Mean	7.87	7.94	8.06	8.14	8.34	8.36	7.76	7.89	7.95

Those who did not rate access higher than 7 were asked in a follow-up question, which was open-ended meaning that no answer set was provided, to give their reasons for not rating access higher. Most commonly, they indicated that there was not enough boat access, that the boat access areas were poorly maintained, or that the areas were crowded (Figure 6.1.2). The regional results are shown in Table 6.1.2.

Figure 6.1.2. Reasons for Not Rating Access Higher

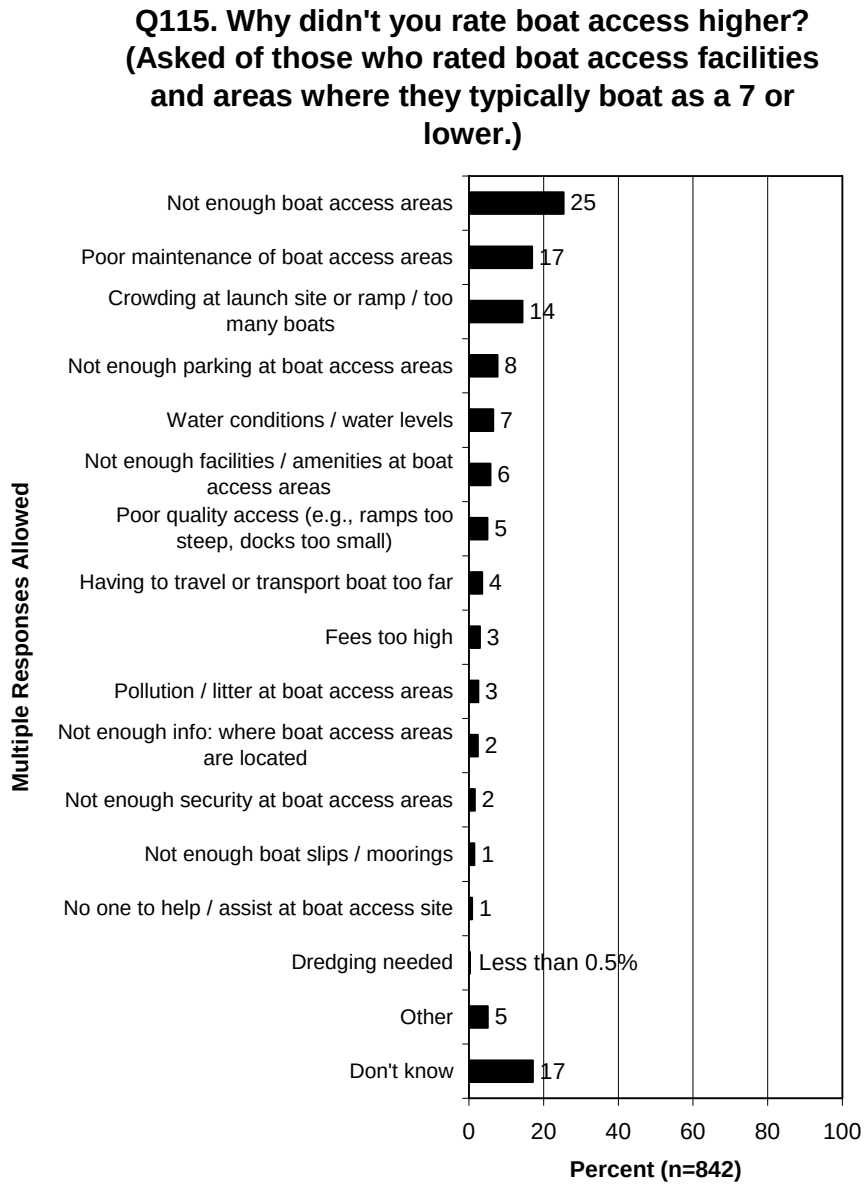


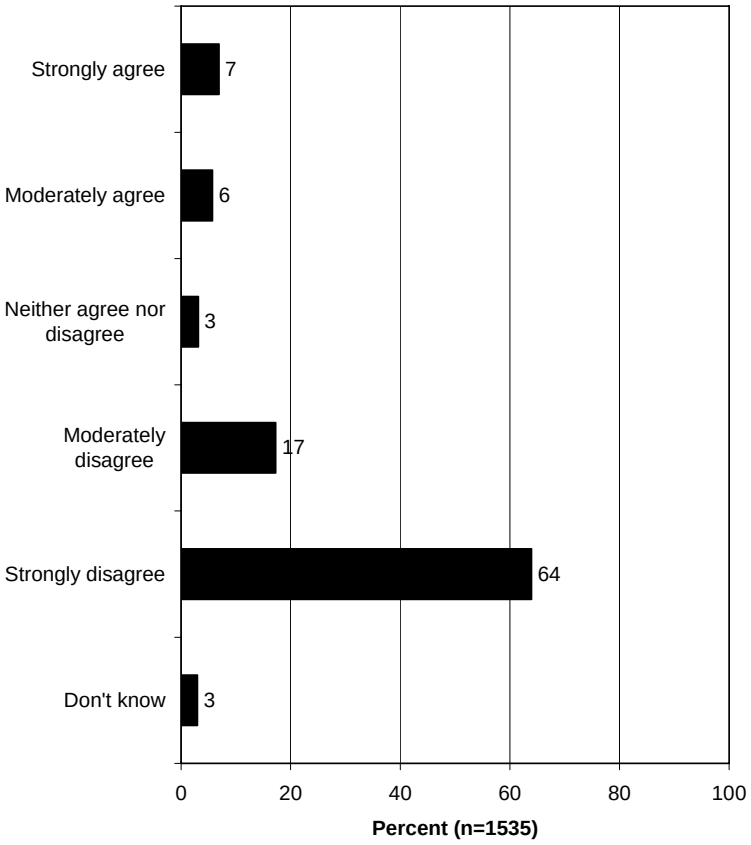
Table 6.1.2. Reasons for Not Rating Access Higher, by Region

Table shows the percent of those who gave a rating of 7 or less giving the following responses.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
Not enough boat access areas	42	39	18	26	27	31	18	24	25
Poor maintenance of boat access areas	18	17	18	15	10	21	26	17	15
Crowding at launch site or ramp / too many boats	11	7	17	18	15	3	11	18	20
Not enough parking at boat access areas	17	3	8	4	11	4	8	4	9
Water conditions / water levels	6	3	7	5	1	5	14	18	8
Not enough facilities / amenities at boat access areas	4	9	3	4	4	10	10	3	7
Poor quality access (e.g., ramps too steep, docks too small)	9	1	7	5	4	2	8	6	3
Having to travel or transport boat too far	0	5	3	6	4	0	2	6	3
Fees too high	5	5	1	0	4	1	4	3	5
Pollution / litter at boat access areas	0	2	3	1	3	2	3	2	3
Not enough info: where boat access areas are located	0	0	1	0	11	2	0	2	0
Not enough security at boat access areas	0	7	1	1	0	0	5	1	0
Not enough boat slips / moorings	1	3	2	1	0	0	2	0	2
No one to help / assist at boat access site	0	0	0	0	0	0	4	3	2
Dredging needed	0	1	0	1	0	0	0	1	0

Another way to examine general ratings of access is to ask boaters if they agree or disagree that issues related to boat access prevent them from going boating as much as they would like. Fortunately, the large majority of boaters (81%) disagree that boat access issues constrain their boating participation; however, 13% agree (Figure 6.1.3).

Figure 6.1.3. Opinion Regarding Whether Issues Related to Boating Access Prevent Respondents From Boating

Q162. Issues related to boat access prevent you from going boating as much as you would like. Do you agree or disagree with this statement?



When examining this question regionally (whether boat access prevents them from going boating as much as they would like), the range is from 8% agreeing in the South Atlantic Region to a high of 17% agreeing in three regions: the West South Atlantic Region, the Mountain Region, and the Pacific Region (Table 6.1.3).

Table 6.1.3. Opinion Regarding Whether Issues Related to Boating Access Prevent Respondents From Boating, by Region

Table shows the percent of boaters giving the following responses.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
Strongly agree	3	11	5	4	5	6	12	13	10
Overall agree	11	16	14	10	8	9	17	17	17
Strongly disagree	67	61	64	68	62	68	62	66	62
Overall disagree	83	75	81	86	82	85	81	81	75

A similar question to the one above asked whether boat access issues prevent boaters from going *fishing* as much as they would like. The results are consistent with the aforementioned question regarding boating as much as they would like. The large majority disagree (81%), while only 10% agree that issues related to boating access prevent them from *fishing* as much as they would like (Figure 6.1.4). Regional results are also shown (Table 6.1.4), with the highest percent agreeing in the West South Atlantic Region, the Mountain Region, and the Pacific Region.

Figure 6.1.4. Opinion Regarding Whether Issues Related to Boating Access Prevent Respondents From Fishing

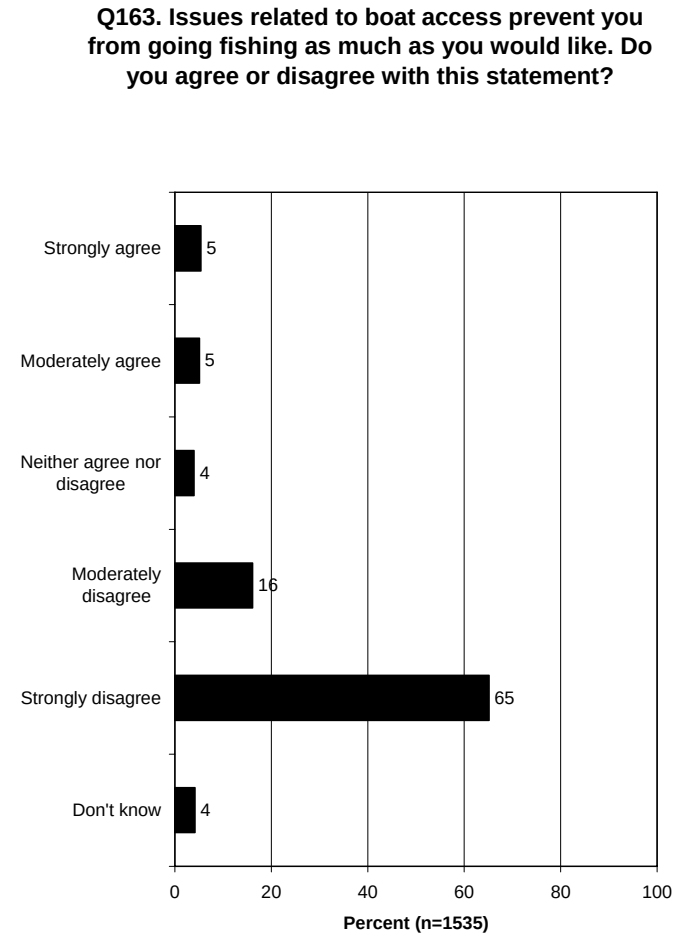


Table 6.1.4. Opinion Regarding Whether Issues Related to Boating Access Prevent Respondents From Fishing, by Region

Table shows the percent of boaters giving the following responses.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
Strongly agree	2	4	3	6	2	5	14	9	9
Overall agree	6	7	10	12	7	9	17	14	14
Strongly disagree	69	69	66	65	66	60	62	66	63
Overall disagree	83	80	81	84	83	80	80	82	76
Neutral (neither, don't know)	11	13	8	4	9	11	3	4	11

The survey examined opinions on priorities for boating access facilities overall. Specifically, the survey asked three questions, all using a 0 to 10 rating scale: the importance of *maintaining existing* boat access facilities and areas, the importance of *improving and expanding existing* facilities and areas, and the importance of *building new* boat access facilities and areas. Boaters' opinions, given the current budgetary climate, favor *maintaining existing* facilities and areas over either *improving and expanding* facilities/areas or *building new* boat access facilities/areas (Figures 6.1.5 through 6.1.7). Specifically, 70% give a high rating of importance (a rating of 9 or 10) to maintaining existing boat access facilities and areas, but only 38% give a high rating to improving and expanding them, and 26% give a high rating to building new facilities and areas. The regional results of these questions are shown in Table 6.1.5, suggesting that New England Region boaters are particularly concerned about maintaining existing facilities and areas.

Figure 6.1.5. Importance of Maintaining Existing Boat Access Facilities and Areas

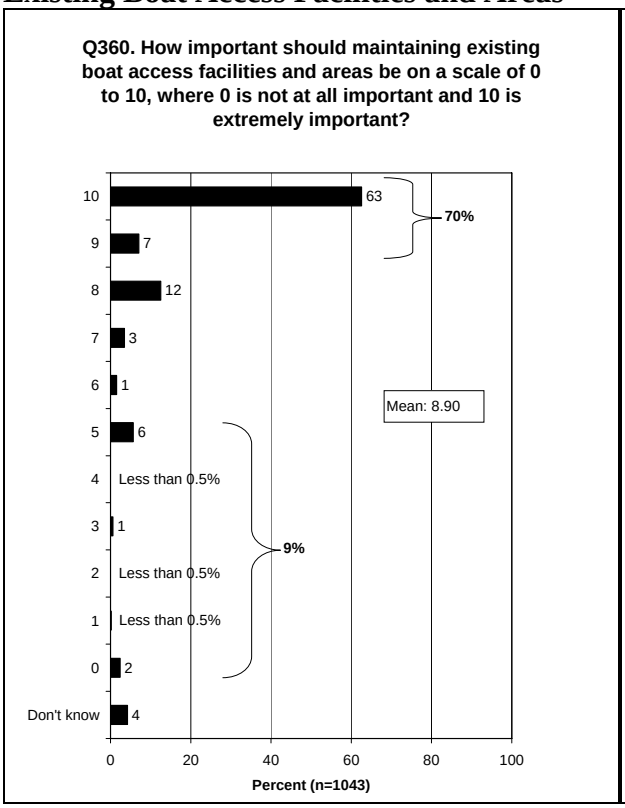


Figure 6.1.6. Importance of Improving and Expanding Boat Access Facilities and Areas

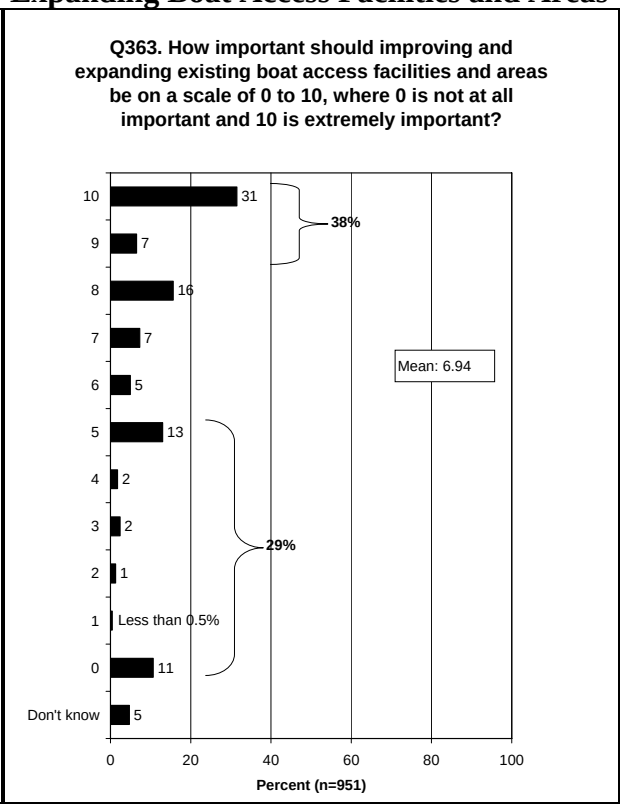


Figure 6.1.7. Importance of Building New Boat Access Facilities and Areas

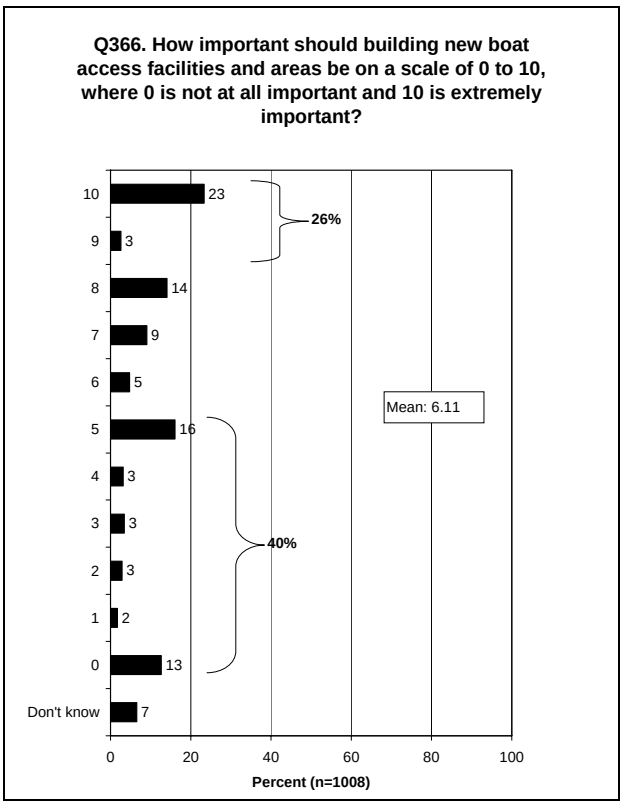


Table 6.1.5. Importance of Maintaining Existing, Improving and Expanding Existing, and Building New Boat Access Facilities and Areas, by Region

Table shows the percent of boaters giving the following responses.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
Q360. Maintaining Existing Boat Access Facilities and Areas									
10	74	66	57	61	59	80	68	64	59
9 or 10	84	69	63	69	66	85	75	74	68
Above midpoint (6-10)	98	81	91	89	81	93	86	91	85
Midpoint (5)	0	4	6	5	8	2	6	5	7
Below Midpoint (0-4)	0	5	2	4	5	2	3	2	2
Mean	9.52	8.95	8.77	8.80	8.66	9.49	9.04	9.06	8.93
Q363. Improving and Expanding Existing Boat Access Facilities and Areas									
10	31	42	22	31	38	34	34	22	27
9 or 10	35	47	31	35	48	40	39	25	30
Above midpoint (6-10)	65	66	63	61	72	70	69	50	62
Midpoint (5)	18	16	11	17	8	14	14	23	16
Below Midpoint (0-4)	15	10	21	17	13	11	16	25	17
Mean	6.73	7.57	6.55	6.74	7.46	7.22	6.91	5.80	6.70
Q366. Building New Boat Access Facilities and Areas									
10	26	26	17	16	26	25	34	23	25
9 or 10	27	26	21	17	29	26	36	28	30
Above midpoint (6-10)	57	58	55	45	62	42	60	48	51
Midpoint (5)	2	11	14	21	17	20	17	16	16
Below Midpoint (0-4)	31	25	27	30	14	30	18	32	19
Mean	6.27	6.02	5.89	5.41	6.92	5.49	6.66	5.64	6.35

Question used a 0 to 10 scale, with 0 being not at all important and 10 being extremely important.

In this section that pertains to boating and fishing access in general, the final questions asked boaters whether they had problems with a plethora of boating and fishing access issues. In all, the survey asked about 23 items, and the results are examined together to see how the items relate to one another.

The top problem of all is a perceived lack of knowledge among other boaters and anglers: 56% of boaters say that this is a major or minor problem at the boat access facilities and areas where they typically boat or would like to boat (Figure 6.1.8). No other item has a majority saying it is a problem. The second tier below this sole item consists of four items, each of them above 35% thinking the item is a problem, but not with any particular theme in common; instead, the items run the gamut: crowding at launch sites/ramps (43%), environmental concerns (38%), not enough facilities/amenities at access areas (37%), and pollution/litter (36%).

A third tier includes six items of more than 30% up to 35%, many of them related to having too many people trying to use the existing areas: difficulties getting boats in and out of the water because of crowding (33%), not enough parking (33%), not enough security (31%), poor maintenance of access areas (31%), not enough boat access areas (30%), and not enough boat slips or moorings (30%).

The regional results are shown in Table 6.1.6. The table shows the percent who rated the item as a major problem, the percent who rated it as a minor problem, and then the sum of major and minor for a total percent saying the item is a problem. The results vary widely from region to region.

Figure 6.1.8. Major or Minor Problems With Boating and Fishing Access

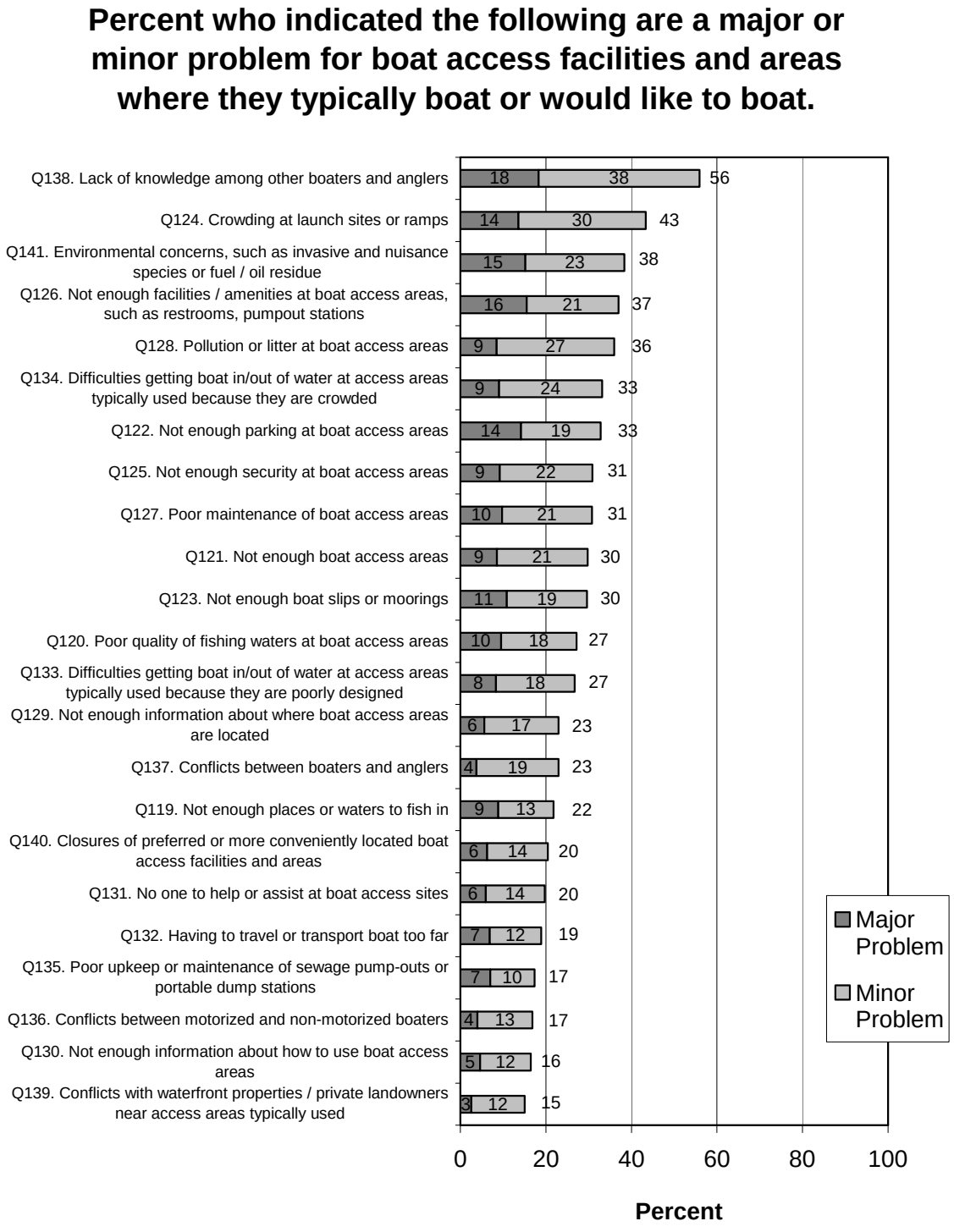


Table 6.1.6. Major or Minor Problems With Boating and Fishing Access, by Region (Ranked the Same as Figure 6.1.8 Above)

Table shows the percent of boaters saying the items were major problems or minor problems; it then shows the sum of the percent saying "major" and the percent saying "minor."	New England Region			Mid-Atlantic Region			East North Central Region			West North Central Region			South Atlantic Region			East South Atlantic Region			West South Atlantic Region			Mountain Region			Pacific Region		
	Major	Minor	Total	Major	Minor	Total	Major	Minor	Total	Major	Minor	Total	Major	Minor	Total	Major	Minor	Total	Major	Minor	Total	Major	Minor	Total	Major	Minor	Total
Lack of knowledge among other boaters and anglers	26	33	58	28	47	76	8	39	47	11	38	49	28	38	66	20	45	65	24	29	53	14	27	41	10	39	49
Crowding at launch sites or ramps	12	25	37	7	20	27	9	36	44	14	24	39	18	31	49	11	25	36	14	40	54	22	16	37	17	35	52
Environmental concerns	22	18	39	13	31	45	21	22	43	14	28	42	11	19	30	13	21	34	12	26	37	15	18	33	17	27	44
Not enough facilities / amenities at boat access areas	14	36	50	35	16	51	6	20	26	8	13	21	30	17	47	10	32	43	12	35	47	17	17	33	10	27	37
Pollution or litter at boat access areas	3	48	51	11	22	33	9	38	46	5	18	23	9	27	36	6	21	27	12	25	37	9	35	44	9	24	34
Difficulties getting boat in/out of water at access areas typically used because they are crowded	19	34	53	2	9	11	8	28	36	6	31	38	13	22	35	6	22	28	9	16	25	16	26	42	6	28	35
Not enough parking at boat access areas	34	16	51	4	25	29	11	21	32	12	19	31	24	12	35	7	22	28	8	20	28	10	21	31	15	20	36
Not enough security at boat access areas	16	26	42	13	21	35	7	17	24	8	10	19	7	33	40	16	26	42	11	22	33	9	22	32	7	16	23
Poor maintenance of boat access areas	17	29	46	14	24	38	4	21	25	7	13	20	14	19	34	6	37	43	8	24	31	13	24	37	13	15	28
Not enough boat access areas	7	25	33	8	36	44	13	25	39	8	12	20	5	13	18	5	20	25	5	28	33	10	20	30	14	24	38
Not enough boat slips or moorings	17	15	33	19	17	36	1	22	23	3	15	19	17	12	29	13	27	40	13	23	36	7	23	30	16	21	38
Poor quality of fishing waters at boat access areas	7	22	29	12	24	36	9	14	23	10	19	29	11	14	25	4	13	17	8	17	24	12	13	24	9	29	38
Difficulties getting boat in/out of water at access areas typically used because they are poorly designed	9	36	45	7	8	14	10	21	31	5	17	22	4	16	21	7	26	33	19	15	34	7	16	23	9	17	27
Not enough information about where boat access areas are located	14	31	45	11	11	22	5	14	19	3	18	22	4	25	29	8	20	27	7	8	15	5	11	16	3	19	21
Conflicts between boaters and anglers	1	37	38	2	23	25	4	20	24	8	17	25	3	16	19	5	16	21	2	24	26	4	25	29	4	12	16
Not enough places or waters to fish in	0	19	19	5	18	24	11	7	18	6	12	18	9	6	15	4	8	12	11	19	30	14	13	27	12	28	40
Closures of preferred or more conveniently located boat access facilities and areas	8	15	22	12	20	32	5	12	17	3	17	20	5	14	18	4	0	4	12	20	32	5	13	18	8	13	20
No one to help or assist at boat access sites	4	30	34	15	6	22	6	11	17	3	15	18	7	11	18	2	15	17	7	16	22	4	12	15	4	17	21
Having to travel or transport boat too far	15	19	34	4	6	10	9	16	24	2	10	12	7	9	16	5	10	15	8	7	16	5	15	20	6	17	23
Poor upkeep or maintenance of sewage pump-outs or portable dump stations	4	18	22	12	11	23	6	13	19	4	7	11	11	9	20	4	10	14	4	9	13	7	10	17	8	8	16
Conflicts between motorized and non-motorized boaters	2	28	30	9	21	29	5	14	19	3	9	13	6	11	17	1	13	14	0	7	7	4	17	21	2	10	12
Not enough information about how to use boat access areas	3	35	38	10	15	24	6	8	14	0	14	14	6	10	16	2	10	12	4	7	11	0	15	15	6	13	19
Conflicts with waterfront properties / private landowners near access areas typically used	0	12	13	2	18	19	2	13	15	1	9	10	7	13	19	0	8	8	1	16	17	4	9	13	2	11	13

Rounding in tabulation may cause apparent discrepancy in the sums; calculations made on unrounded numbers.

6.2. DESIRED FEATURES AND AMENITIES AT ACCESS AREAS

The survey asked boaters to rate the importance of 25 access site features or amenities in their decision on what access sites to use. In looking at the mean ratings (the ratings were on a 0 to 10 scale, with 10 being the most important), four tiers emerge (Figure 6.2.1). The first tier (all with mean ratings of importance above 6.50) consists of very general features/amenities: access for motorized boats (mean of 7.29), launch ramps (7.06), parking for vehicles with boat trailers (7.05), trash dumpsters (6.69), and restrooms (6.56).

A second tier, from 5.5 to 6.5, consists of more specialized items (e.g., parking for those with disabilities) or items more associated with non-motorized craft rather than motorized boats (e.g., parking for single vehicles, carry-down walkways to the water). Below that second tier, the items are typically very specific (e.g., sewage pump-outs, oil disposal, fish cleaning stations, dry stack storage).

In addition to the mean rating, a graph shows the percent who rate the feature/amenity as a 9 or 10 in importance (Figure 6.2.2). This gives an idea of the portion of the boating population with a strong desire to have the items. The ranking is similar, but not exactly the same, as the ranking by mean rating. Table 6.2.1 shows both sets of data together (the mean rating and the percent giving a high rating), and it shows that sewage pump-outs may be more important than the mean suggests: it is ranked 18th by the mean, but it is ranked 12th by the percent giving it a high rating. This suggests that sewage pump-outs, while not important to many boaters (therefore pulling its mean down), are highly important to a substantial portion of boaters (thus its higher rank in the percent giving a rating of 9 or 10).

The regional results are included (Table 6.2.2), showing that boaters have a large range of opinion on some of the features/amenities across the regions. For instance, the mean ratings of the importance of sewage pump-outs/portable dump stations range from a low of 2.85 to a high of 7.36, and the range for the mean importance ratings of fueling areas is from a low of 2.85 to a high of 7.26, both ranges of more than 4 points in the scale.

Figure 6.2.1. Mean Ratings of Importance of Features and Amenities at Access Sites

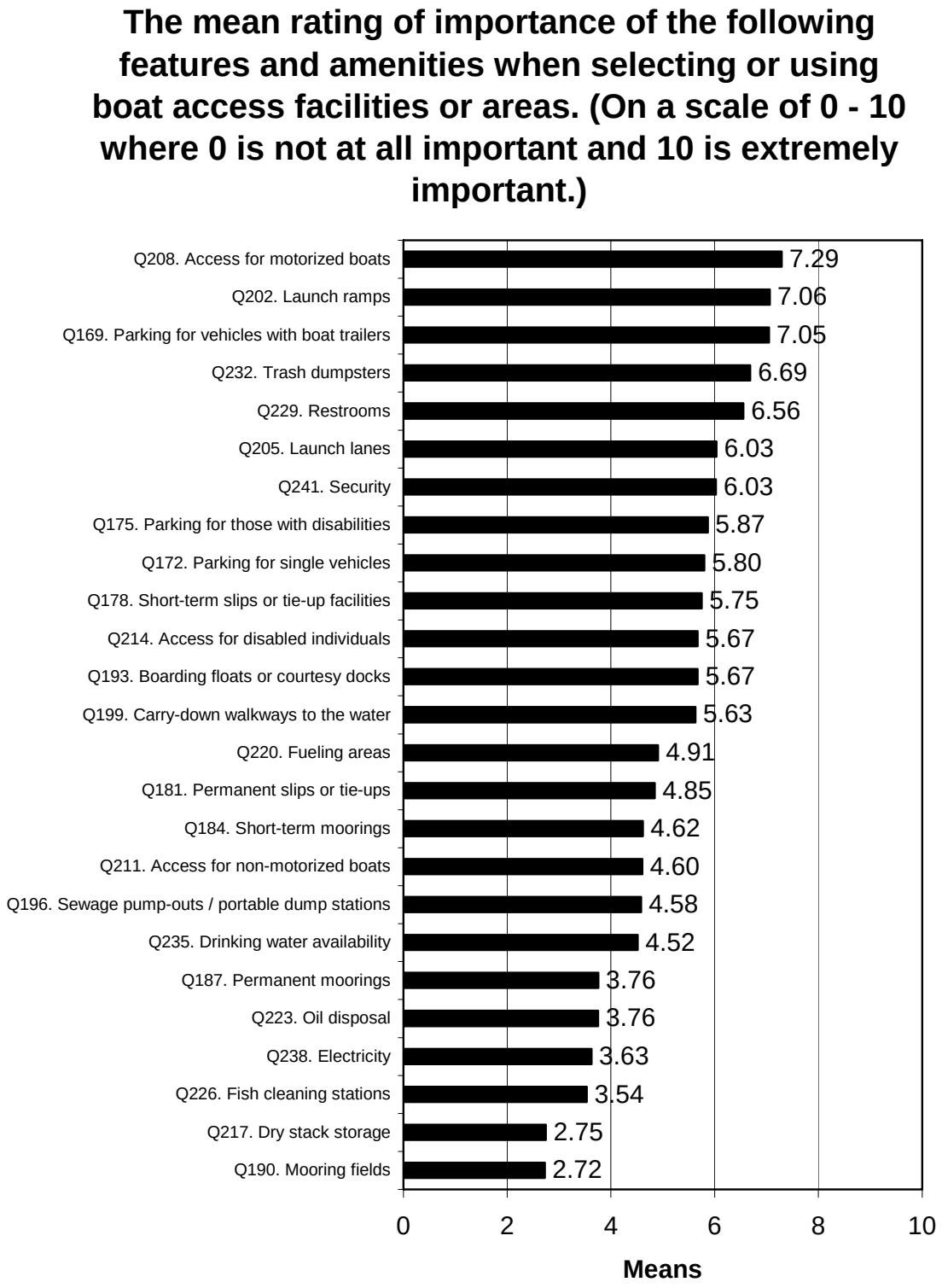


Figure 6.2.2. Percent Giving High Rating of Importance of Features and Amenities at Access Sites

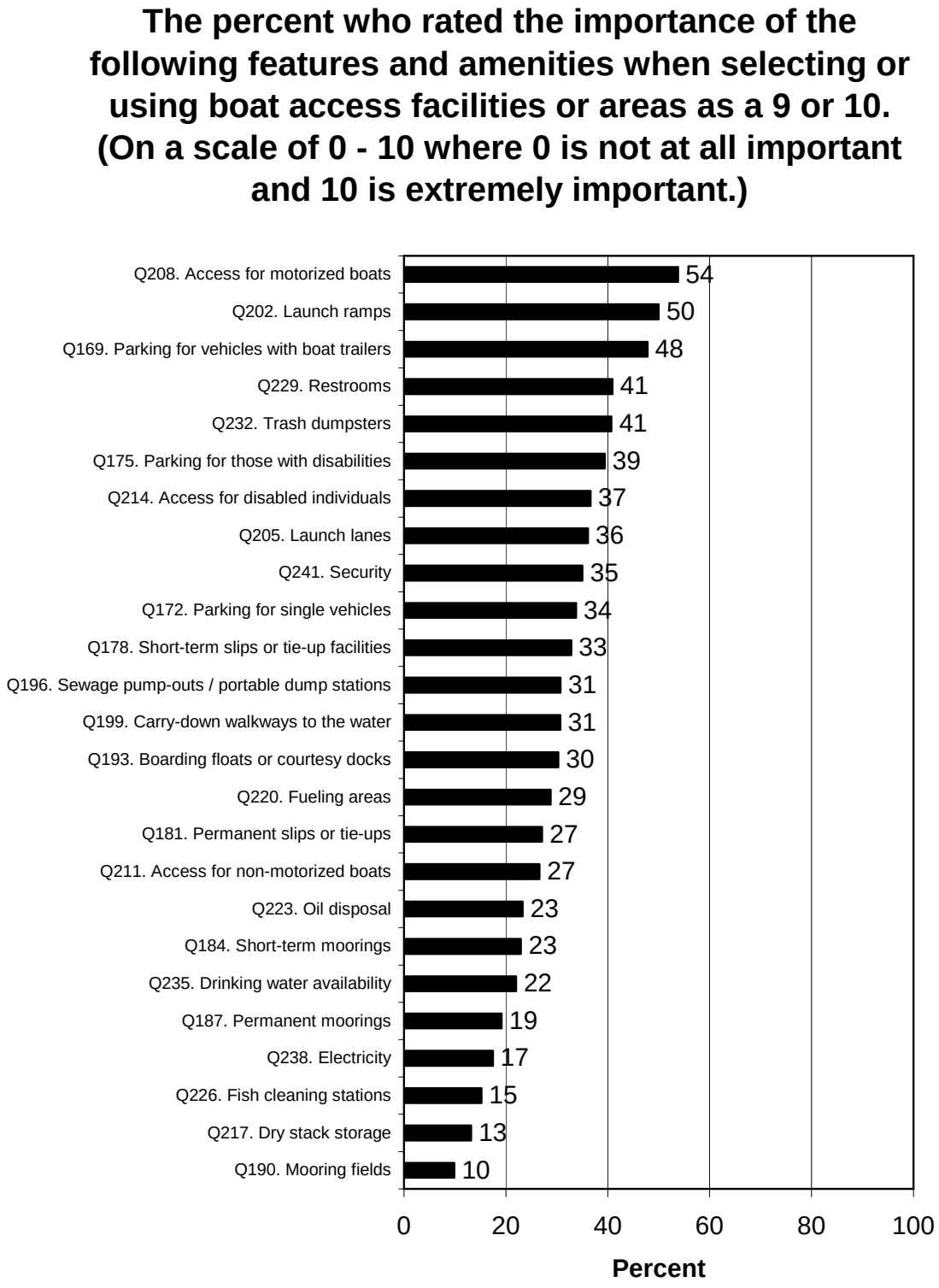


Table 6.2.1. Ratings of Importance of Features and Amenities at Access Sites

Feature or Amenity	Mean Rating	Rank of the Means	Percent Rating It a 9 or 10	Rank by Percent Rating It a 9 or 10
Access for motorized boats	7.29	1	54	1
Launch ramps	7.06	2	50	2
Parking for vehicles with boat trailers	7.05	3	48	3
Trash dumpsters	6.69	4	41	5
Restrooms	6.56	5	41	4
Launch lanes	6.03	6	36	8
Security	6.03	7	35	9
Parking for those with disabilities	5.87	8	39	6
Parking for single vehicles	5.80	9	34	10
Short-term slips or tie-up facilities	5.75	10	33	11
Access for disabled individuals	5.67	11	37	7
Boarding floats or courtesy docks	5.67	12	30	14
Carry-down walkways to the water	5.63	13	31	13
Fueling areas	4.91	14	29	15
Permanent slips or tie-ups	4.85	15	27	16
Short-term moorings	4.62	16	23	19
Access for non-motorized boats	4.60	17	27	17
Sewage pump-outs / portable dump stations	4.58	18	31	12
Drinking water availability	4.52	19	22	20
Oil disposal	3.76	21	23	18
Permanent moorings	3.76	20	19	21
Electricity	3.63	22	17	22
Fish cleaning stations	3.54	23	15	23
Dry stack storage	2.75	24	13	24
Mooring fields	2.72	25	10	25

Note that apparent ties in the above ranking (for instance, two that are rated as 5.67) are not actually tied when unrounded numbers are considered; therefore, the ranking does not show that any items are tied.

Table 6.2.2. Mean Ratings of Importance of Features and Amenities at Access Sites, by Region (Ranked by the Mean Overall)

Table shows the mean rating among boaters for each item.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
Access for motorized boats	7.16	6.68	6.99	7.49	6.75	7.37	8.02	7.96	8.07
Launch ramps	7.74	4.55	7.11	7.07	7.03	6.30	6.85	8.01	8.41
Parking for vehicles with boat trailers	6.55	5.34	6.93	6.96	6.99	7.47	7.97	7.67	7.48
Trash dumpsters	5.97	7.63	6.25	6.81	5.96	6.67	7.62	6.85	7.30
Restrooms	6.26	6.88	6.28	6.63	5.98	6.14	7.15	6.65	7.57
Launch lanes	6.75	3.73	6.20	6.20	5.64	5.86	5.65	6.89	7.33
Security	5.78	7.23	4.86	5.21	5.95	7.33	7.45	5.40	6.31
Parking for those with disabilities	6.75	5.76	5.49	6.13	6.24	5.62	5.44	5.83	5.81
Parking for single vehicles	6.66	5.43	4.85	5.41	5.84	7.45	6.06	6.36	6.38
Short-term slips or tie-up facilities	6.48	5.49	4.86	4.56	6.78	6.62	5.51	5.18	6.38
Access for disabled individuals	6.43	4.45	5.72	5.95	4.80	5.79	6.52	6.77	5.79
Boarding floats or courtesy docks	7.20	4.58	4.72	5.33	6.73	5.79	5.41	6.18	6.31
Carry-down walkways to the water	6.86	5.27	5.08	4.74	6.60	5.94	5.47	6.05	5.86
Fueling areas	5.63	7.26	3.38	2.85	6.43	6.51	4.77	3.11	4.73
Permanent slips or tie-ups	4.68	4.68	3.90	3.27	6.46	6.41	5.19	3.06	4.60
Short-term moorings	5.49	3.65	4.13	3.77	5.26	5.52	4.90	4.38	5.09
Access for non-motorized boats	6.24	4.17	5.05	5.10	3.79	3.44	4.89	5.08	4.64
Sewage pump-outs / portable dump stations	7.36	5.86	2.85	3.02	6.60	5.80	4.29	3.33	4.01
Drinking water availability	4.51	6.33	4.27	3.77	3.81	4.68	4.88	4.75	4.98
Oil disposal	5.11	5.03	3.30	2.06	4.42	4.44	4.03	2.35	3.46
Permanent moorings	5.76	3.50	3.13	2.37	4.95	4.72	3.96	2.50	3.72
Electricity	2.23	5.64	2.49	2.84	3.73	4.82	5.17	2.75	3.47
Fish cleaning stations	2.81	3.34	3.61	3.92	3.59	2.88	3.78	3.82	3.48
Dry stack storage	3.86	2.53	2.36	2.79	2.85	2.62	3.09	1.99	3.04
Mooring fields	5.42	3.29	1.92	2.04	3.25	2.82	2.26	2.01	3.21

In addition to asking about the importance of the 25 items, the survey asked boaters if they thought there are too many, about the right amount, or not enough of the same 25 features/amenities in their state. In looking at a ranking of the items of which there are *not enough* (Figure 6.2.3), at the top by itself is access for disabled individuals (42% say that there is not enough of this). This is then followed by four items, each with 33% saying that there are not enough of them, with no general theme to the items: restrooms, sewage pump-outs/portable dump stations, trash dumpsters, and short-term slips or tie-ups. Table 6.2.3 shows the regional results on these questions; the results vary widely by region on some questions.

Figure 6.2.3. Features and Amenities of Which There Are Not Enough in the State

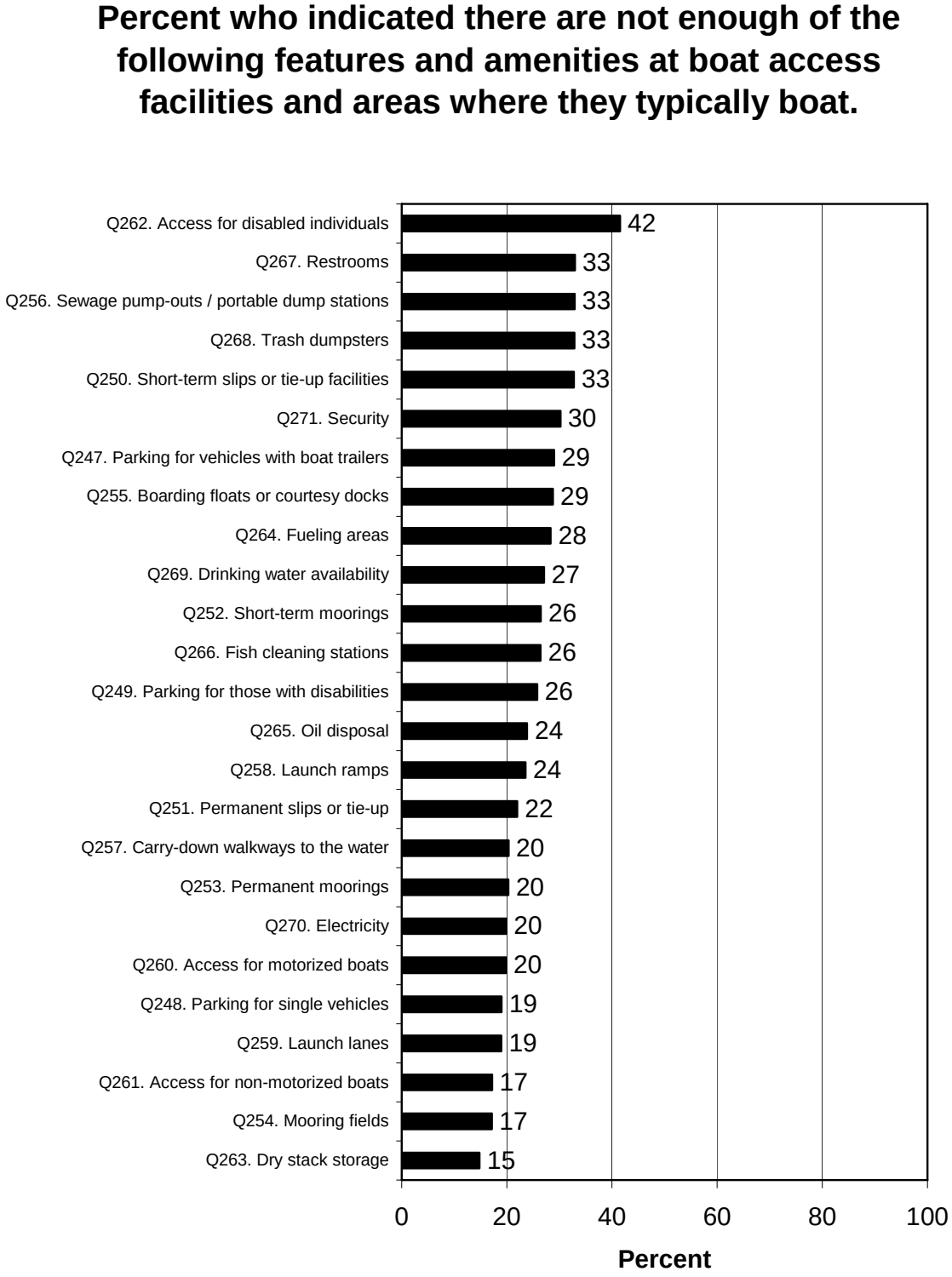


Table 6.2.3. Percent Saying That There Are Not Enough of the Features and Amenities in the State, by Region

Table shows the percent of boaters saying that there are not enough of the following items.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
Access for disabled individuals	54	31	39	35	43	56	46	36	38
Restrooms	39	26	39	33	24	48	41	29	25
Sewage pump-outs / portable dump stations	52	51	20	13	54	53	31	24	20
Trash dumpsters	54	30	31	31	28	33	41	30	34
Short-term slips or tie-up facilities	47	31	24	27	40	31	33	31	39
Security	35	41	26	18	38	39	34	15	22
Parking for vehicles with boat trailers	47	24	33	28	26	35	26	28	27
Boarding floats or courtesy docks	47	35	24	16	39	27	32	29	23
Fueling areas	46	39	21	14	35	24	36	19	33
Drinking water availability	21	21	34	29	20	26	37	36	21
Short-term moorings	47	23	19	20	32	34	27	26	29
Fish cleaning stations	28	25	29	31	16	20	35	32	29
Parking for those with disabilities	45	23	23	35	23	27	26	23	19
Oil disposal	43	45	12	11	28	20	27	25	26
Launch ramps	44	20	20	21	21	20	31	28	26
Permanent slips or tie-up	24	12	19	15	30	25	26	17	24
Carry-down walkways to the water	43	26	18	12	24	14	27	27	12
Permanent moorings	36	19	15	15	25	18	20	22	26
Electricity	41	10	23	16	17	29	25	24	13
Access for motorized boats	13	21	15	15	24	14	22	24	28
Parking for single vehicles	36	14	20	17	20	23	15	15	17
Launch lanes	30	14	22	17	15	11	26	24	17
Access for non-motorized boats	23	15	21	11	18	10	22	14	16
Mooring fields	34	12	9	12	26	12	19	15	25
Dry stack storage	26	15	7	7	17	23	19	12	20

In addition to the having the right number of certain features and amenities (and access sites themselves), the quality of those features/amenities is important. Having poor quality access sites can be just as bad as not having the sites as a constraint to boating participation. The survey asked boaters to rate those previously discussed features and amenities in their state.

The graph of the means is ranked from worst to best so that the top of the graph shows the features/amenities that are perceived to be in the most need of improvement (Figure 6.2.4). In looking at the mean ratings, parking emerges as an issue: the top two spots are parking for single vehicles (mean of 4.81) and parking for vehicles with boat trailers (5.09), and the third spot, access for disabled individuals (5.14), also has a parking component.

Also included near the top of the graph (with the worst features at the top) are some general features: electricity (5.31), drinking water (5.36), and security (5.58). Some of the other features rated relatively low are more specific: oil disposal (5.41), fish cleaning stations (5.48), sewage pump-outs/portable dump stations (5.63), and dry stack storage (5.74).

Features and amenities that do *not* appear to be problematic, as far as their quality goes, include mooring facilities, launch ramps, and launch lanes. These have the highest ratings of quality.

Note that it is not as useful to look at the percent who rated quality a 9 or 10 because a relatively large portion answered that they do not know what rating to give for some items, such as mooring fields (48% did not know what rating to give), short-term moorings (30% did not know), and permanent moorings (35% did not know). This would tend to drive down the percent who gave a high rating simply because there are fewer giving a rating, leading to false conclusions if one were to see that mooring facilities had a relatively low percentage giving them high ratings and then conclude that the quality of mooring facilities is low.

Table 6.2.4 shows the regional results regarding the quality of features and amenities in the state. The mean ratings across the region are fairly consistent; the range from the minimum mean rating to the maximum mean rating across the regions is relatively small for each feature/ amenity. For instance, mean ratings of quality of access for non-motorized boats range from 6.31 to 7.63, ratings of parking for those with disabilities range from 5.61 to 7.14, ratings for trash dumpsters range from 5.67 to 6.98, and ratings of restrooms range from 5.36 to 6.76—all with ranges of less than 2.00 points. Nonetheless, a few items have larger ranges, such as mooring fields (6.09 to 9.86 mean ratings).

Figure 6.2.4. Mean Ratings of Quality of Features and Amenities in Respondent's State

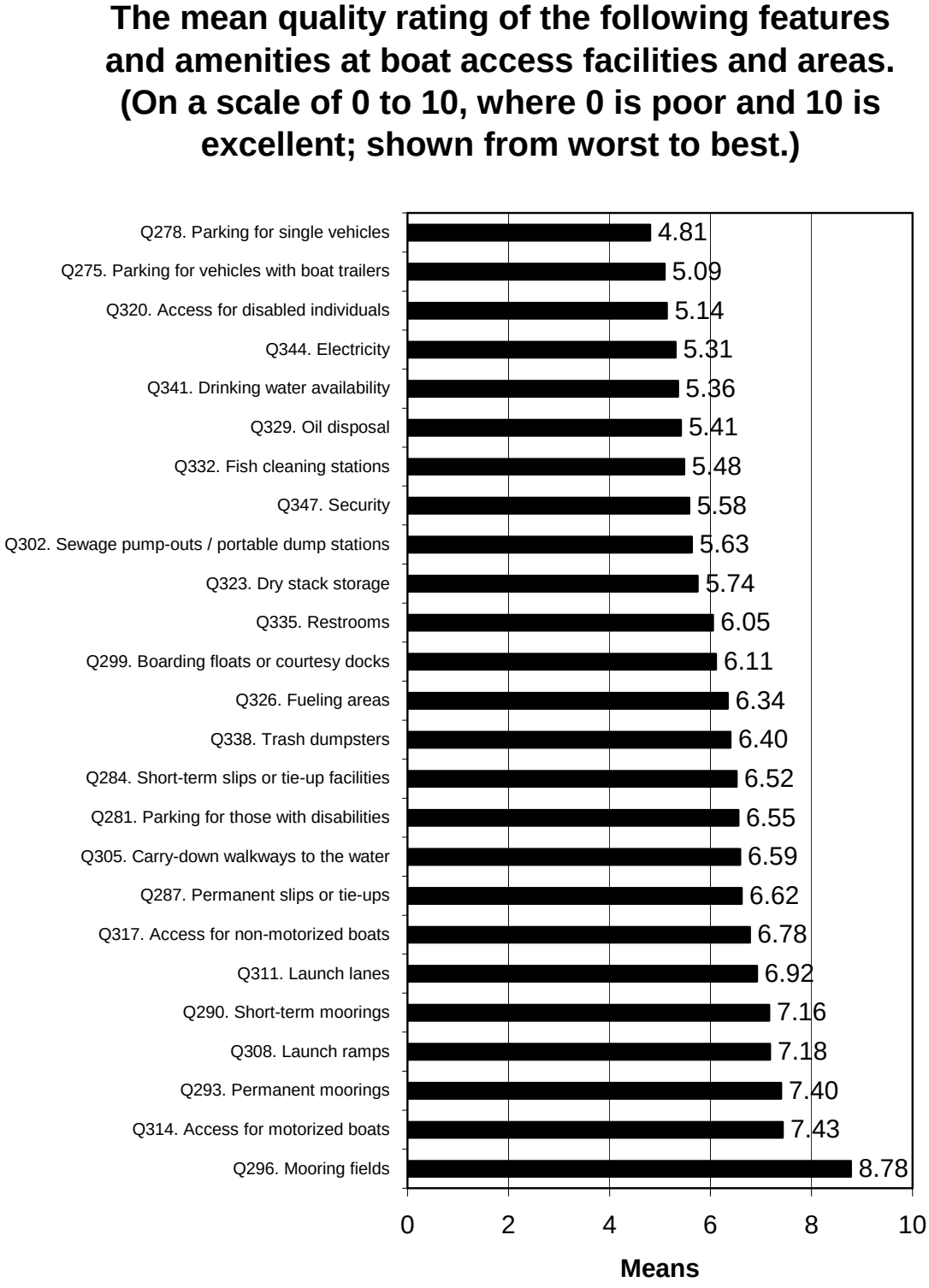


Table 6.2.4. Ratings of Quality of Features and Amenities in Respondent's State, by Region

Table shows the mean ratings of quality of the following items.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
Parking for single vehicles	4.87	6.61	5.00	4.35	4.70	4.55	4.13	4.15	4.86
Parking for vehicles with boat trailers	6.45	7.35	4.93	4.46	5.14	5.08	4.35	4.34	4.97
Access for disabled individuals	5.13	5.05	5.56	5.03	4.61	4.68	5.60	5.77	5.38
Electricity	4.52	6.18	5.07	5.16	4.95	5.69	5.84	5.23	5.32
Drinking water availability	5.42	6.38	5.47	5.29	5.09	5.18	4.71	5.28	5.55
Oil disposal	4.39	5.07	5.27	4.98	6.36	5.97	5.70	5.12	4.48
Fish cleaning stations	3.98	5.21	5.12	6.07	5.91	5.38	5.96	5.76	5.11
Security	4.39	5.68	5.35	6.23	5.20	5.76	5.68	6.22	6.01
Sewage pump-outs / portable dump stations	7.33	5.54	5.43	5.65	5.55	5.42	5.23	6.26	5.92
Dry stack storage	4.92	6.64	5.27	5.24	6.50	5.71	5.98	5.49	4.86
Restrooms	5.40	6.33	5.89	6.24	5.97	5.36	5.90	6.76	6.54
Boarding floats or courtesy docks	5.47	6.77	6.60	5.77	6.19	4.98	6.62	5.32	5.64
Fueling areas	5.43	7.18	5.96	5.48	6.52	7.77	6.27	5.98	5.97
Trash dumpsters	5.67	6.15	6.89	6.23	5.82	6.39	6.43	6.98	6.88
Short-term slips or tie-up facilities	7.16	6.73	6.67	7.56	6.14	4.43	6.21	7.20	6.71
Parking for those with disabilities	7.14	6.39	6.31	6.38	6.56	5.61	7.06	7.11	7.02
Carry-down walkways to the water	6.78	6.49	6.28	6.64	6.63	6.17	5.97	7.68	7.62
Permanent slips or tie-ups	5.58	5.67	7.10	7.71	6.38	4.36	6.73	7.51	6.94
Access for non-motorized boats	7.21	6.31	6.66	7.35	6.31	7.63	6.58	7.44	6.46
Launch lanes	6.84	5.66	6.56	7.33	6.80	7.80	6.19	7.59	7.86
Short-term moorings	6.05	6.88	7.49	8.10	6.41	6.86	7.13	6.95	7.62
Launch ramps	6.85	6.26	6.59	7.64	7.22	7.48	7.08	7.60	7.93
Permanent moorings	5.23	6.48	7.81	8.68	6.36	6.96	7.62	8.28	7.74
Access for motorized boats	7.19	6.39	6.99	7.68	7.37	7.97	7.42	7.84	8.00
Mooring fields	6.09	8.01	9.13	9.21	8.27	8.46	9.86	9.11	9.06

An additional way to look at both importance *and* quality of features and amenities is to plot them on a scatter graph. One axis shows the mean ratings of importance; the other axis shows the mean ratings of quality. Figure 6.2.5 shows the 25 items on a scatter graph that includes the entire scale of 0 to 10 for both questions (axes). The diagonal line is where importance and quality are equal. Ideally, it is desirable for a state to have quality ratings exceed importance ratings (i.e., to the right/below the diagonal line), rather than having highly important features or

amenities receive low ratings of quality (i.e., to the left/above the diagonal line). Therefore, the six items to the left/above the line are more highly rated in importance than quality.

Figure 6.2.6 shows a close-up, or inset, of the overall graph, and it identifies the feature or amenity on the graph. Again, the diagonal line shows where importance and quality are equal on the graph; the farther away from that diagonal line a feature/amenity is, the more unequal are its ratings. Five features/amenities in particular are far to the left/above the diagonal line, suggesting that their quality is not at all commensurate with their importance: parking for vehicles with boat trailers, parking for single vehicles, access for disabled individuals, restrooms, and security.

Figure 6.2.5. Comparison of Importance and Quality Ratings, Overall

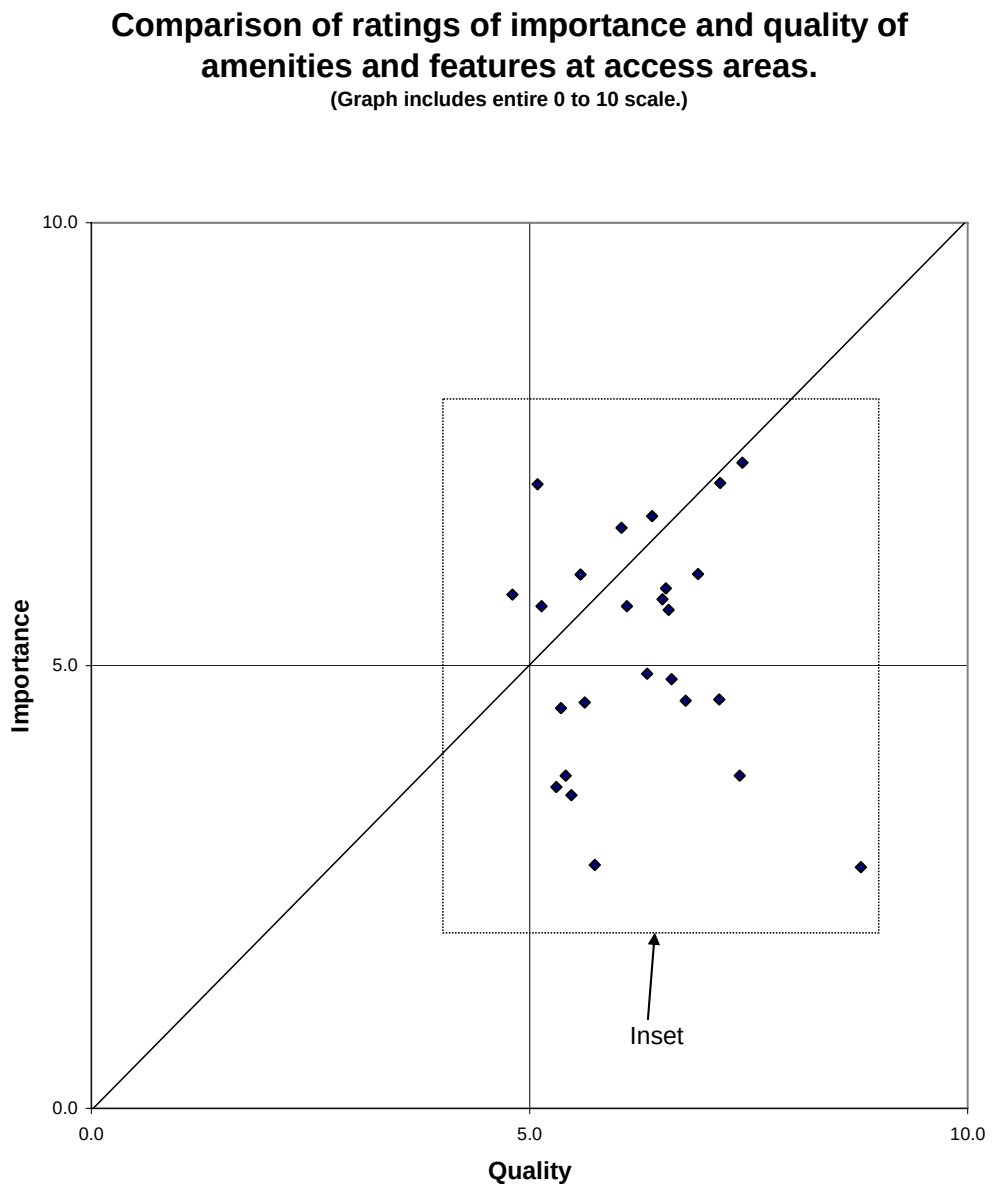
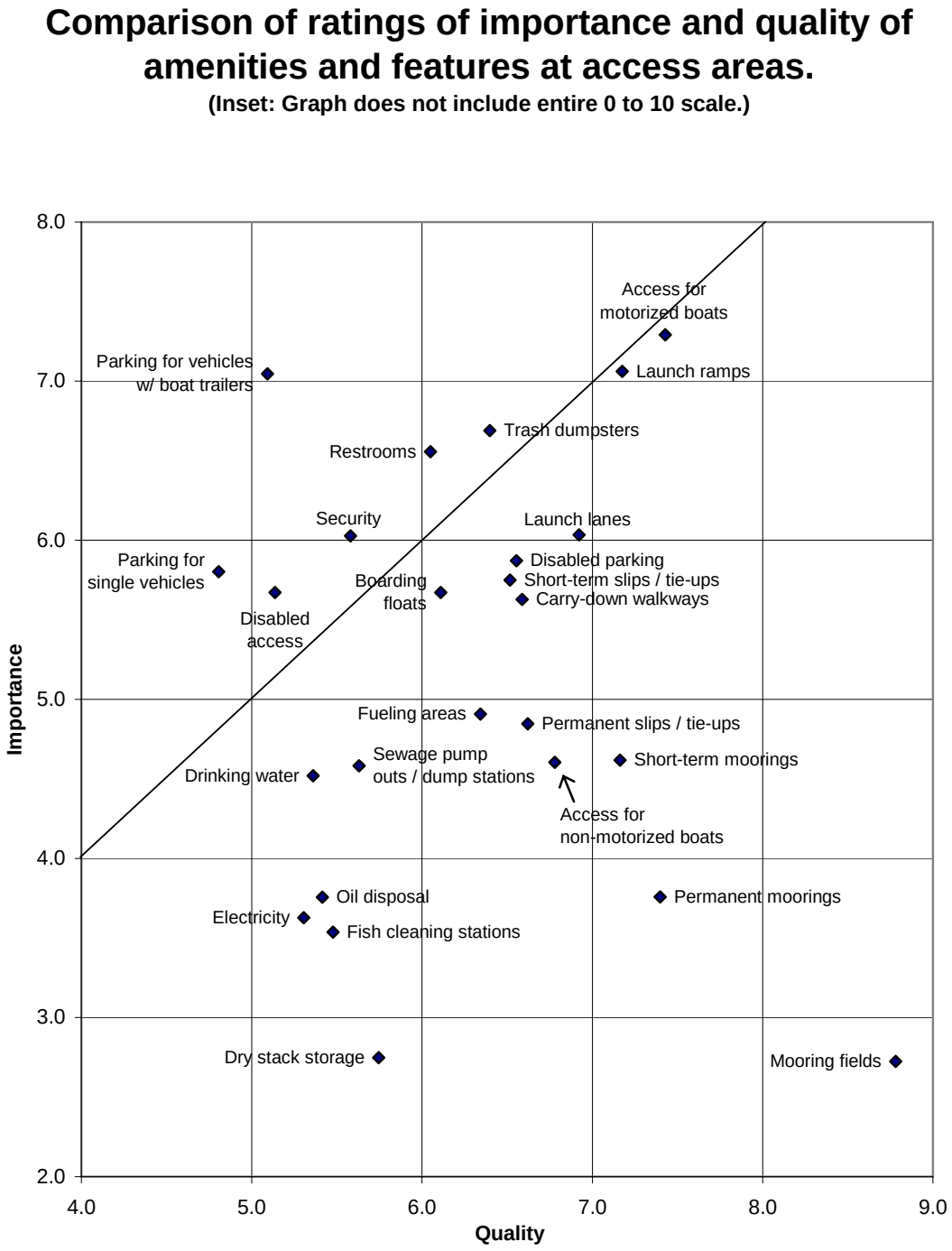


Figure 6.2.6. Comparison of Importance and Quality Ratings, Inset



In follow-up to the series of questions asking boaters to rate the quality of various features and amenities, the survey asked those who did not give high ratings to the quality of sewage pump-outs and portable dump stations to say their reasons for not giving a higher rating. Figure 6.2.7 shows that difficulty finding them is the top complaint. A perceived inconvenient

location or that they are broken/out of service too often are other common reasons for low to middling ratings. Table 6.2.5 shows the regional results.

Figure 6.2.7. Reasons Not Rating Sewage Pump-Outs/Portable Dump Stations Higher

Q353. You rated the quality of sewage pump-outs and portable dump stations at boat access facilities lower than an 8. Why didn't you rate them higher? (Asked of those who rated the quality of sewage pump-outs and portable dump stations at boat access facilities lower than an 8.)

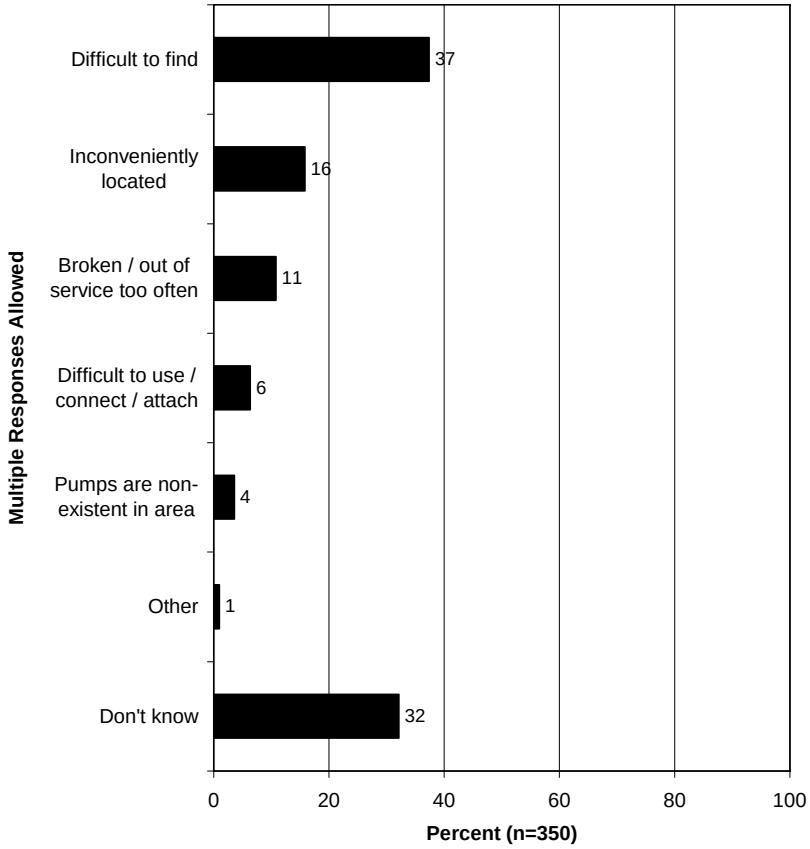


Table 6.2.5. Reasons for Not Rating Sewage Pump-Outs/Portable Dump Stations Higher, by Region

Table shows the percent of those who gave a rating of 7 or less to sewage pump-outs/portable dump stations giving the following responses.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
Difficult to find	64	36	25	43	41	57	35	39	32
Inconveniently located	17	24	6	11	29	16	10	4	16
Broken / out of service too often	12	32	4	0	17	2	16	13	11
Difficult to use / connect / attach	1	6	4	9	7	0	14	9	8
Pumps are non-existent in area	0	0	2	3	5	11	3	13	3
Other	10	0	0	0	1	0	0	0	5
Don't know	3	15	59	37	17	22	24	30	32

6.3. MAINTENANCE OF BOATING ACCESS AREAS

As part of a trio of questions that compared *maintenance* with *improvements/expansions* and *new construction* of boat access facilities and areas (which found that maintenance of existing facilities was a higher priority than improving/expanding existing facilities or building new facilities), the survey asked boaters to rate the importance that maintaining existing facilities and areas should have. Nearly two-thirds of boaters (63%) give its importance a rating of 10, and 70% give a high rating of 9 or 10 (see Figure 6.1.5; the regional results were shown in Table 6.1.5). Furthermore, only 9% rate it at the midpoint or lower. Clearly, this shows that maintaining existing facilities and areas is considered highly important.

Another aspect of maintenance is dredging (where necessary) to keep waterways open and deep enough to be of utility. The survey asked how important it is that maintenance includes dredging. Boaters are somewhat split on this, with 44% giving it a high rating (9 or 10), but a substantial percentage (30%) giving it a rating of the midpoint or lower (Figure 6.3.1).

Figure 6.3.1. The Importance of Dredging as Part of Maintenance

Q356. How important is it to you that maintenance at boat access facilities or areas include dredging, on a scale of 0 to 10, where 0 is not at all important and 10 is extremely important?

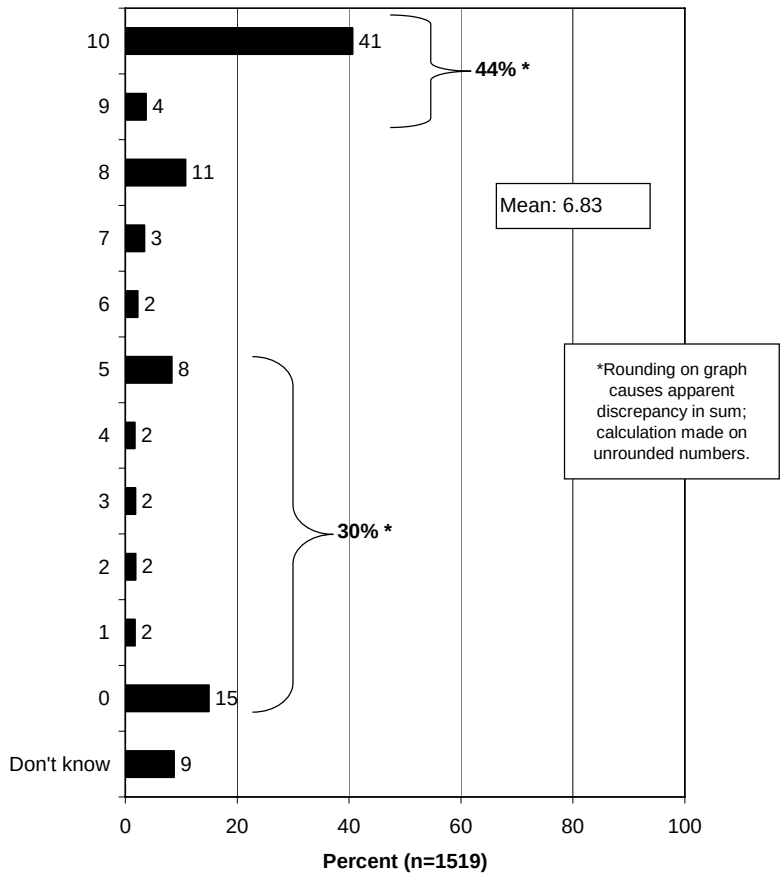


Table 6.3.1 shows the regional results. The results suggest that dredging is more of an issue in New England and the Mid-Atlantic Regions, and the East South Atlantic Region to a lesser extent. These regions all had more than 50% of boaters giving a rating of 9 or 10 to the importance of dredging.

Table 6.3.1. The Importance of Dredging as Part of Maintenance, by Region

Table shows the percent of boaters giving the following responses.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
10	56	60	34	32	48	49	40	27	29
9 or 10	62	63	42	36	49	54	41	28	32
Above midpoint (6-10)	75	66	61	58	66	61	60	44	49
Midpoint (5)	4	9	8	10	9	7	6	7	10
Below Midpoint (0-4)	18	14	24	23	15	25	26	35	29
Mean	7.84	7.89	6.69	6.43	7.39	6.91	6.54	5.20	5.94

6.4. BOAT STORAGE, TRAILERING, AND PUTTING IN / TAKING OUT AT ACCESS SITES

The large majority of boaters disagree that boat access issues have caused them to *stop using access facilities or areas they previously used*; nonetheless, 10% of boaters agree that this has happened (Figure 6.4.1) (note that rounding causes the apparent discrepancy in the sum who agree; the sum is of unrounded numbers). Figures 6.4.2 and 6.4.3 show that slightly higher percentages agree that boat access issues have *caused problems or frustration at access facilities or areas that they currently use* (15%) or that boat access issues have *prevented them from using access facilities or areas that they would like to use* (13%).

The regional results of these questions are shown in Table 6.4.1. The Mountain and Pacific Regions on all three questions have relatively high percentages agreeing with the statements.

Figure 6.4.1. Access Issues and Use of Access Facilities and Sites

Q164. Issues related to boat access have caused you to stop using access facilities or areas you previously used. Do you agree or disagree with this statement?

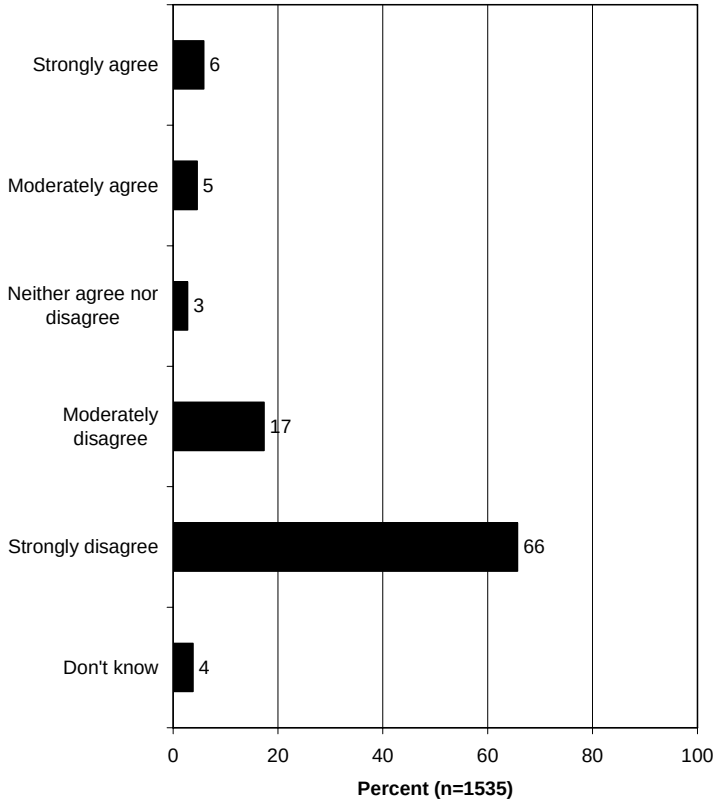


Figure 6.4.2. Access Issues and Frustration Using Access Facilities and Areas

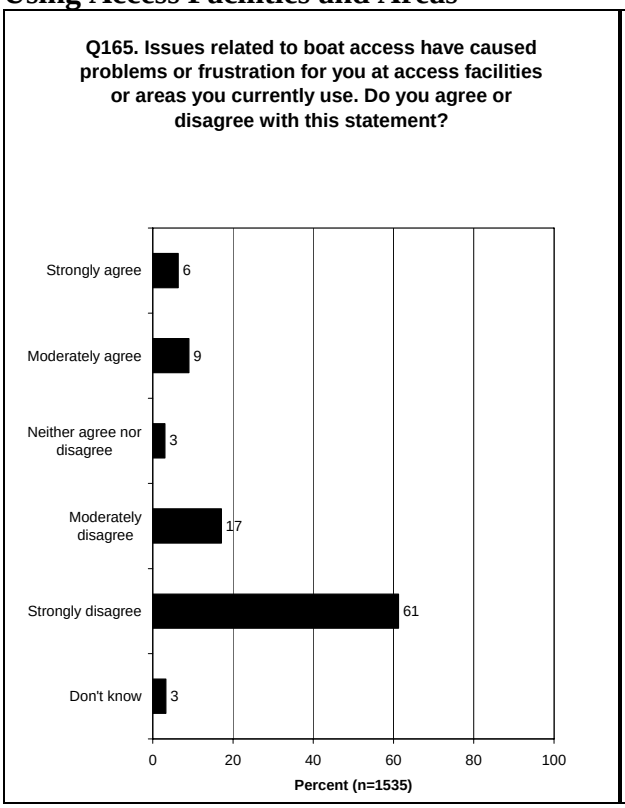


Figure 6.4.3. Access Issues and Abandoning Desired Access Facilities and Areas

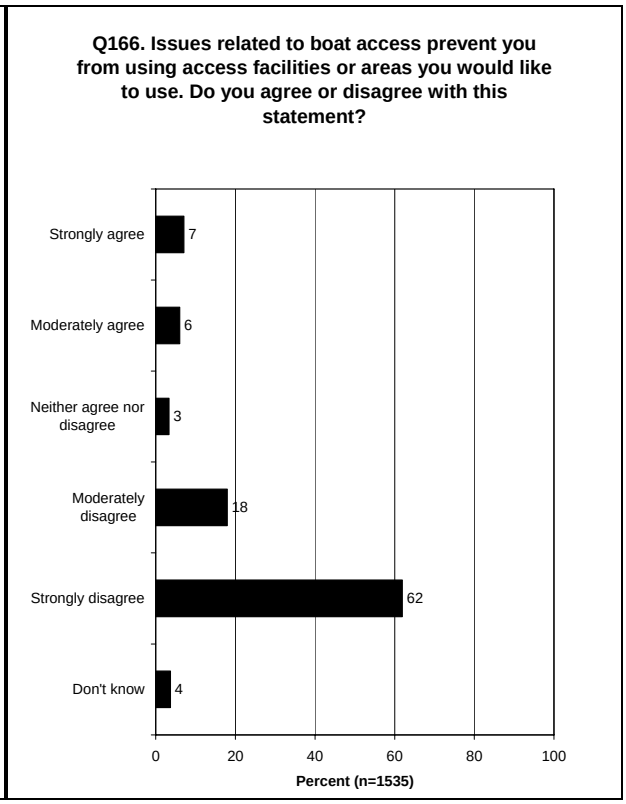


Table 6.4.1. Use of, Frustration With, and Abandonment of Access Facilities and Areas Because of Boat Access Issues, by Region

Table shows the percent of boaters giving the following responses.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
Issues related to boat access...									
164. ...have caused you to stop using access facilities or areas you previously used.									
Strongly agree	5	3	4	5	6	4	6	11	12
Overall agree	8	8	8	10	10	7	11	19	17
Strongly disagree	77	66	71	65	61	67	64	64	62
Overall disagree	88	79	89	85	80	87	82	79	75
Neutral (neither, don't know)	4	13	4	5	10	5	7	2	8
165. ...have caused problems or frustration for you at access facilities or areas you currently use.									
Strongly agree	5	6	5	4	4	5	12	9	11
Overall agree	16	12	13	16	14	12	22	20	18
Strongly disagree	71	54	62	61	61	65	59	63	59
Overall disagree	76	74	83	81	76	84	74	78	75
Neutral (neither, don't know)	7	13	4	3	10	4	4	2	7
166. ...prevent you from using access facilities or areas you would like to use.									
Strongly agree	11	8	4	5	5	5	10	11	13
Overall agree	21	15	9	10	12	13	14	20	18
Strongly disagree	58	61	66	61	58	64	64	66	59
Overall disagree	73	74	86	84	77	82	82	78	74
Neutral (neither, don't know)	5	11	5	5	11	5	4	2	8

One of the series of questions discussed above included several questions that are valuable to examine individually. One question asked if "not enough boat access areas" was a major problem, a minor problem, or not a problem at all. This is a basic, general question that explores the simple perception of whether there are enough boat access areas. Figure 6.4.4 shows that 9% of boaters think this is a major problem, and another 21% think it is a minor problem (a sum of 30%). Table 6.4.2 shows the regional results on this question. The percent thinking not enough boat access is a problem ranges from 18% in the South Atlantic Region to 44% in the Mid-Atlantic Region.

Figure 6.4.4. Severity of the Problem: Not Enough Boat Access Areas

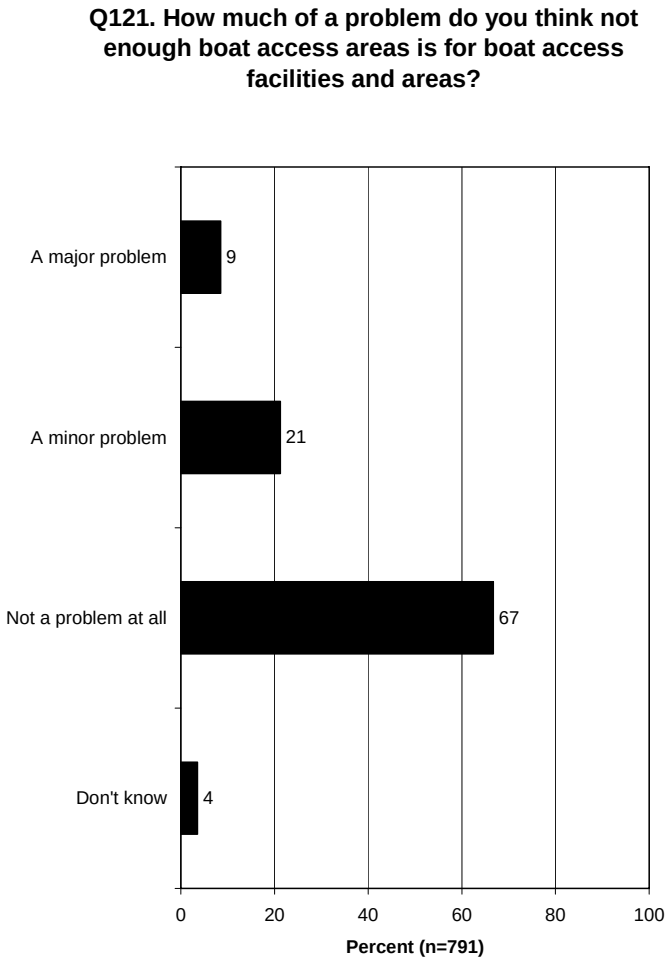


Table 6.4.2. Severity of the Problem: Not Enough Boat Access Areas, by Region

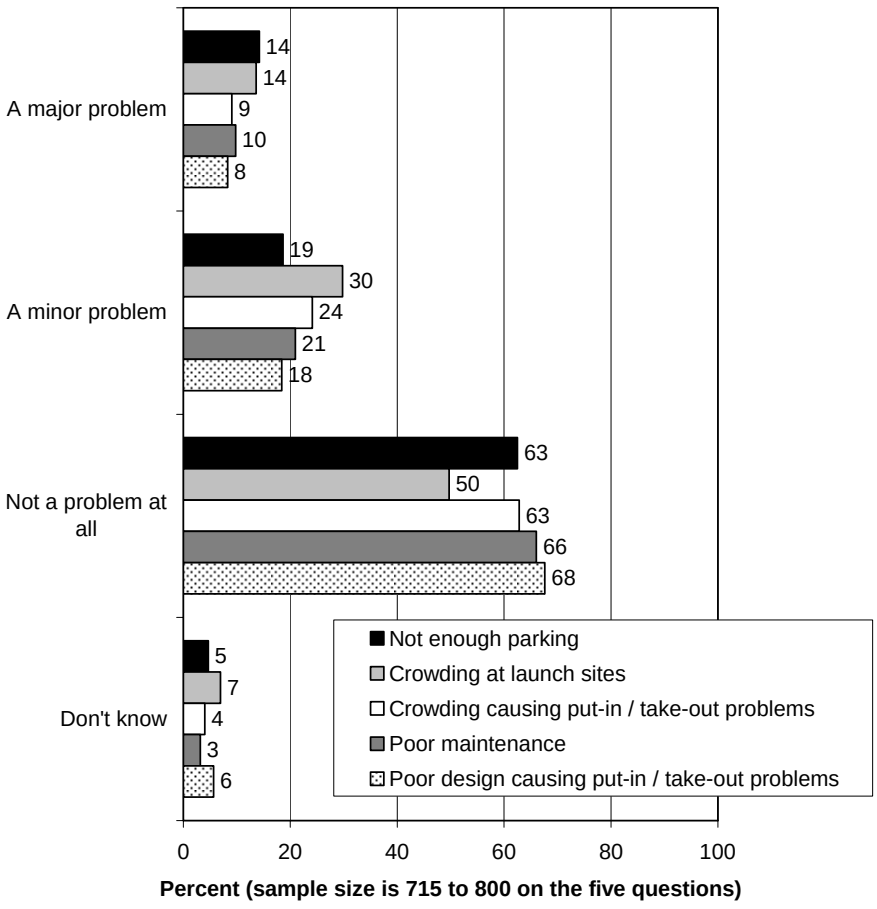
Table shows the percent of boaters giving the following responses.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
Major problem	7	8	13	8	5	5	5	10	14
Minor problem	25	36	25	12	13	20	28	20	24
Major or minor problem*	33	44	39	20	18	25	33	30	38
Not a problem	65	56	60	79	75	68	63	67	56

*Rounding in tabulation may cause apparent discrepancy in the sums; calculations made on unrounded numbers.

Several other individual questions from the aforementioned series of questions are interesting to examine and pertain to putting in and taking out (Figure 6.4.5). The issues examined were:

- Parking at boat access areas. A third cite this as a problem (14% major, 19% minor, a sum of 33%).
- Crowding at launch sites or ramps. More than 2 in 5 boaters cite this as a problem (14% major, 30% minor, a sum of 43%—sum is of unrounded numbers). This is the highest sum, by far, of the questions examined in this section.
- Crowding that causes difficulties getting boats in or out of the water. A third cite this as a problem (9% major, 24% minor, a sum of 33%).
- Poor maintenance of boat access areas. A little less than a third cite this as a problem (10% major, 21% minor, a sum of 31%).
- Poor design (i.e., layout) of access areas that causes difficulties getting boats in or out of the water. About a quarter of boaters cite this as a problem (8% major, 18% minor, a sum of 27%).

Figure 6.4.5. Severity of Various Problems Putting In and Taking Out



The regional results on these five questions are shown in Table 6.4.3. The range is fairly wide; for instance, not enough parking at boat access sites ranges from a low of 28% of boaters saying it is a problem to 51% saying so. Likewise, difficulty putting in and taking out because of crowding ranges from 11% to 53% saying it is a problem.

Table 6.4.3. Severity of the Various Problems, by Region

Table shows the percent of boaters giving the following responses.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
Do you think this is a major problem, a minor problem, or not a problem at all?									
Q122. Not enough parking at boat access areas.									
Major problem	34	4	11	12	24	7	8	10	15
Minor problem	16	25	21	19	12	22	20	21	20
Major or minor problem	51	29	32	31	35	28	28	31	36
Not a problem	43	70	66	65	55	70	68	67	60
Q124. Crowding at launch sites or ramps.									
Major problem	12	7	9	14	18	11	14	22	17
Minor problem	25	20	36	24	31	25	40	16	35
Major or minor problem	37	27	44	39	49	36	54	37	52
Not a problem	57	66	53	59	35	57	42	63	40
Q134. Difficulties getting your boat in or out of the water at the access areas you typically use because they are crowded.									
Major problem	19	2	8	6	13	6	9	16	6
Minor problem	34	9	28	31	22	22	16	26	28
Major or minor problem	53	11	36	38	35	28	25	42	35
Not a problem	45	82	60	61	59	69	71	58	62
Q127. Poor maintenance of boat access areas.									
Major problem	17	14	4	7	14	6	8	13	13
Minor problem	29	24	21	13	19	37	24	24	15
Major or minor problem	46	38	25	20	34	43	31	37	28
Not a problem	50	57	74	75	61	54	69	62	69
Q133. Difficulties getting your boat in or out of the water at the access areas you typically use because they are poorly designed.									
Major problem	9	7	10	5	4	7	19	7	9
Minor problem	36	8	21	17	16	26	15	16	17
Major or minor problem	45	14	31	22	21	33	34	23	27
Not a problem	53	62	66	74	73	59	62	76	71

In follow-up to two of the five questions discussed immediately above, the survey asked boaters for their thoughts on the best way to address the problems. In the first, those who said that getting their boats in and out of the water was difficult because of *crowding* most commonly said in follow-up that the best way to address that problem is increase the number of boat ramps, increase parking, and/or increase the number of launch points or launch lanes (Figure 6.4.6). In fact, most responses relate to simply increasing capacity. However, also on the list are providing employees to assist boaters at access areas, creating separate launch points for motorized and non-motorized craft, increasing outreach/information to inexperienced boaters, and improving signage. The regional results are shown in Table 6.4.4.

Figure 6.4.6. Ways to Address Crowding Problems at Access Areas

Q151. You said difficulties getting your boat in and out of the water because the access areas are crowded is a (major / minor) problem. In your opinion, what is the best way to address this problem? (Asked of those who have had difficulites getting their boat in or out of the water at the access areas they typically use because the areas are crowded.)

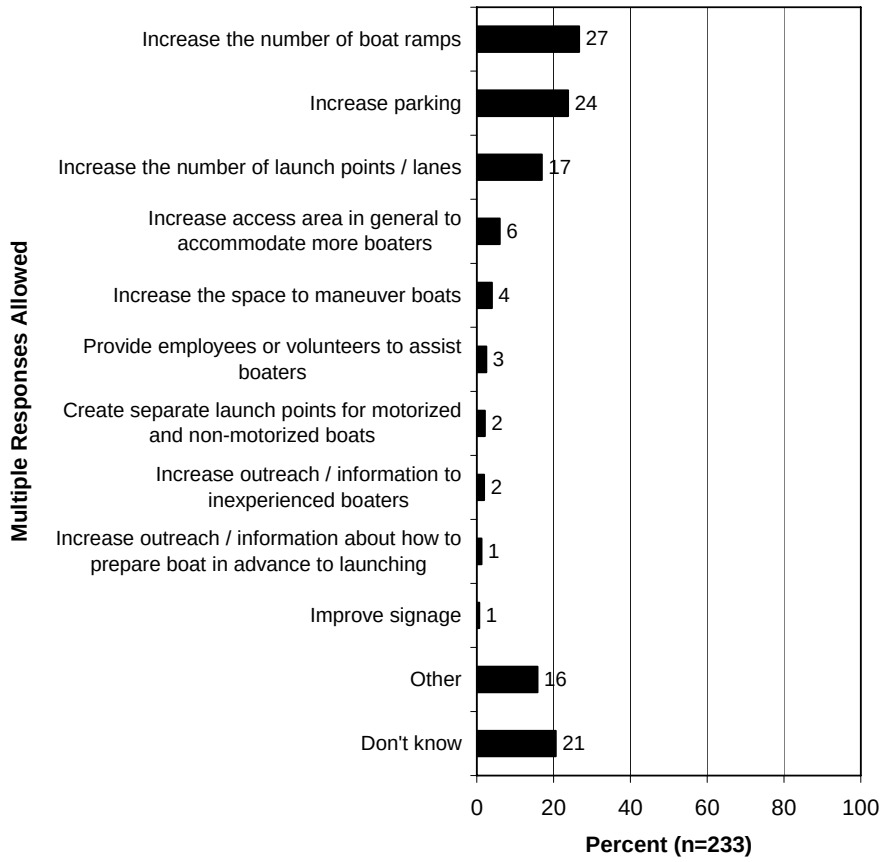


Table 6.4.4. Ways to Address Crowding Problems at Access Areas, by Region

Table shows the percent of those who said that they had difficulties getting their boat in or out of the water because of crowding giving the following responses as ways to address the problem.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
Increase the number of boat ramps	35	31	20	27	34	11	27	42	37
Increase parking	28	41	23	17	36	36	18	17	11
Increase the number of launch points / lanes	1	30	20	23	15	26	16	14	11
Inc. access area to accommodate more boaters	0	13	0	7	11	4	0	3	19
Increase the space to maneuver boats	5	3	3	0	8	0	0	8	7
Provide employees or volunteers to assist boaters	0	0	6	7	0	2	4	0	0
Create separate launch points for motorized and non-motorized boats	0	0	3	3	0	0	0	3	7
Increase outreach / info. to inexperienced boaters	5	0	0	10	0	2	0	3	4
Increase outreach / information about how to prepare boat in advance to launching	5	1	0	0	0	0	4	3	4
Improve signage	5	1	0	0	0	0	0	6	0

Likewise, those who said that getting their boats in and out of the water was difficult because the access areas are *poorly designed* most commonly said in follow-up that the best way to address that problem is to increase the number of ramps and/or lanes, increase parking, or improve ramps in general (Figure 6.4.7). Again, in general, most responses relate to increasing capacity. However, also on the list are creating separate launch points for motorized and non-motorized craft, providing employees to assist boaters at access areas, dredging the channels, and improving signage and lighting. Regional results are shown in Table 6.4.5.

Figure 6.4.7. Ways to Address Poorly Designed Access Areas

Q146. You said difficulties getting your boat in and out of the water because the access areas are poorly designed is a (major / minor) problem. In your opinion, what is the best way to address this problem? (Asked of those who have had difficulites getting their boat in or out of the water at the access areas they typically use because the access areas are poorly designed.)

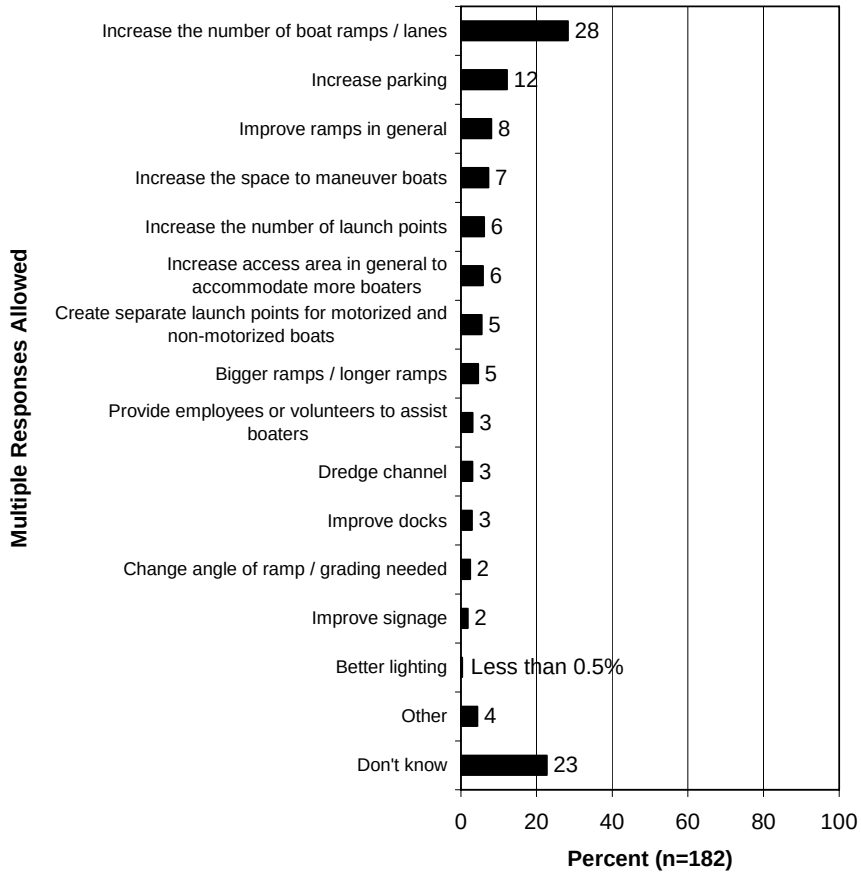


Table 6.4.5. Ways to Address Poorly Designed Access Areas, by Region

Table shows the percent of those who said that they had difficulties getting their boat in or out of the water because access area is poorly designed giving the following responses as ways to address the problem.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
Increase the number of boat ramps / lanes	8	32	20	16	52	15	29	25	55
Increase parking	7	0	13	11	17	3	26	10	5
Improve ramps in general	43	0	0	5	10	13	3	20	0
Increase the space to maneuver boats	7	7	7	5	18	3	3	15	0
Increase the number of launch points	0	1	7	11	0	12	3	0	20
Increase access area in general to accommodate more boaters	1	29	10	11	0	1	0	5	5
Create separate launch points for motorized and non-motorized boats	0	0	13	0	3	0	0	0	15
Bigger ramps / longer ramps	4	15	0	5	10	2	6	0	5
Provide employees or volunteers to assist boaters	0	0	3	11	3	0	3	5	0
Dredge channel	0	25	3	0	0	0	3	5	5
Improve docks	0	17	0	0	0	23	0	5	0
Change angle of ramp / grading needed	0	0	7	0	0	0	2	0	5
Improve signage	0	16	0	0	0	0	0	5	10
Better lighting	0	0	0	0	0	0	3	0	0

Another aspect of access involves where the boat is kept when not in use, how far the boat needs to be transported to water, the method used to do so, and the method to put the boat in the water once it is transported. Figure 6.4.8 shows that just under half of boaters keep their boat (the survey asked about their only boat or their most commonly used boat if they owned multiple boats) at home on a trailer (45% do so). Another 8% keep it at home, but not on a trailer, which sums to 54% keeping their boat at home. A further 10% keep their boat at a waterfront property that they own, rent, or lease. However, a third (33%) keep it at a marina or a storage yard/area, presumably having to pay for the space at either place. The regional results are shown in Table 6.4.6.

The next question to examine is how far boaters transport their boat (Figure 6.4.9). While 38% do not transport their boat, 62% do so (although 6% do not know how far they do). A quarter of boaters (25%) transport their boat no more than 10 miles. Nonetheless, just under a third (31%) transport their boat more than 10 miles. The mean of those who transport their boat (and know the approximate distance) is 44.4 miles.

Table 6.4.7 shows regional results, with huge variation. To start with, while only approximately 26% of Mid-Atlantic Region boaters transport their boat, fully 94% of Mountain Region boaters do so (calculated as 100% minus the percent who indicated that they do not transport their boat; this assumes that those who answered, "don't know," do not know *how far* they transport the boat, not that they do not know *if* they transport their boat or not). The data also suggest that Mountain and Pacific Region boaters typically travel the farthest—both regions have more than 30% of their boaters traveling more than 30 miles.

Figure 6.4.8. Where Boat Is Kept When Not in Use

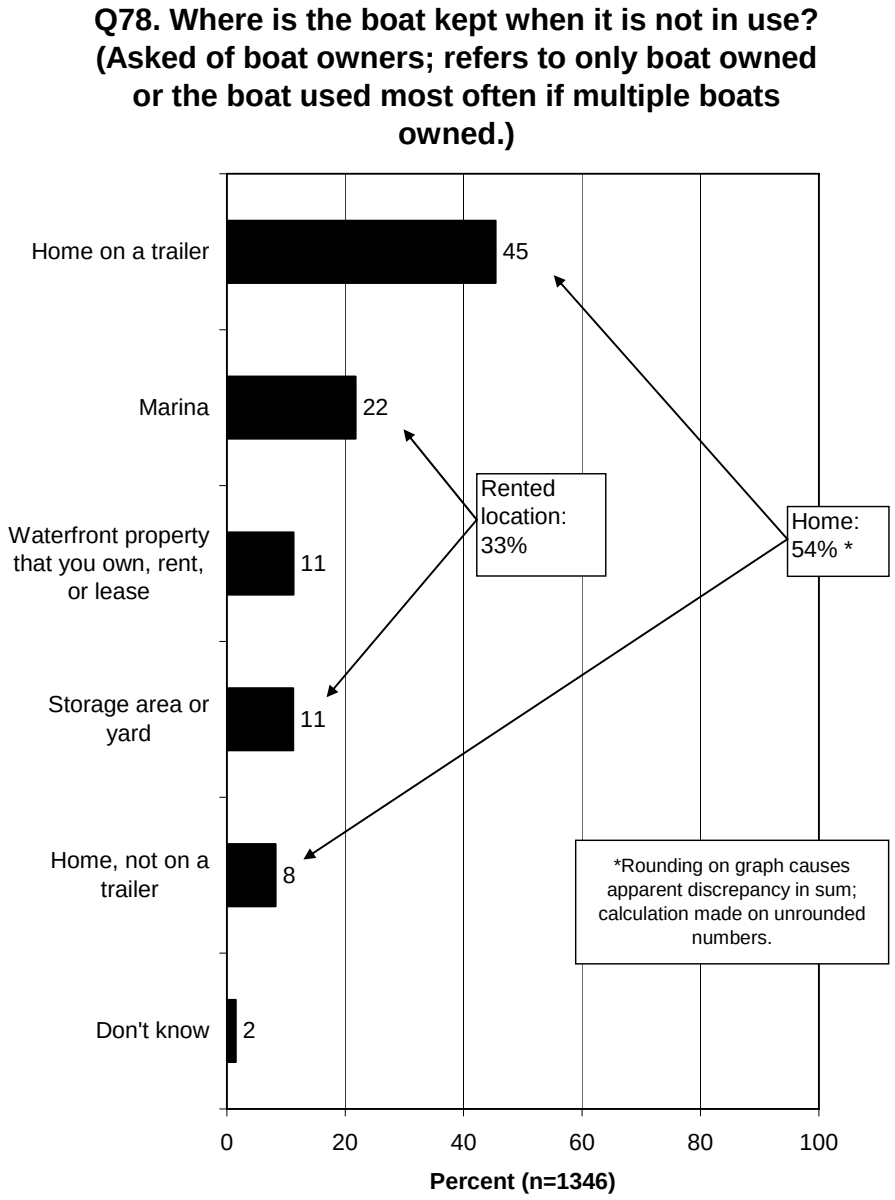


Table 6.4.6. Where Boat Is Kept When Not in Use, by Region

Table shows the percent of boaters giving the following responses.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
Home on a trailer	21	8	46	56	35	27	64	75	67
Marina	55	57	10	4	31	34	14	6	15
Waterfront property owned, rented, or leased	4	11	14	16	15	16	6	1	3
Storage area or yard	13	15	18	12	5	11	10	7	10
Home, not on a trailer	6	5	11	11	10	9	4	9	4

Figure 6.4.9. Distance Boat Transported

Q82. How far, in miles, do you typically transport the boat over land to go put it in the water? (Asked of boat owners; refers to only boat owned or the boat used most often if multiple boats owned.)

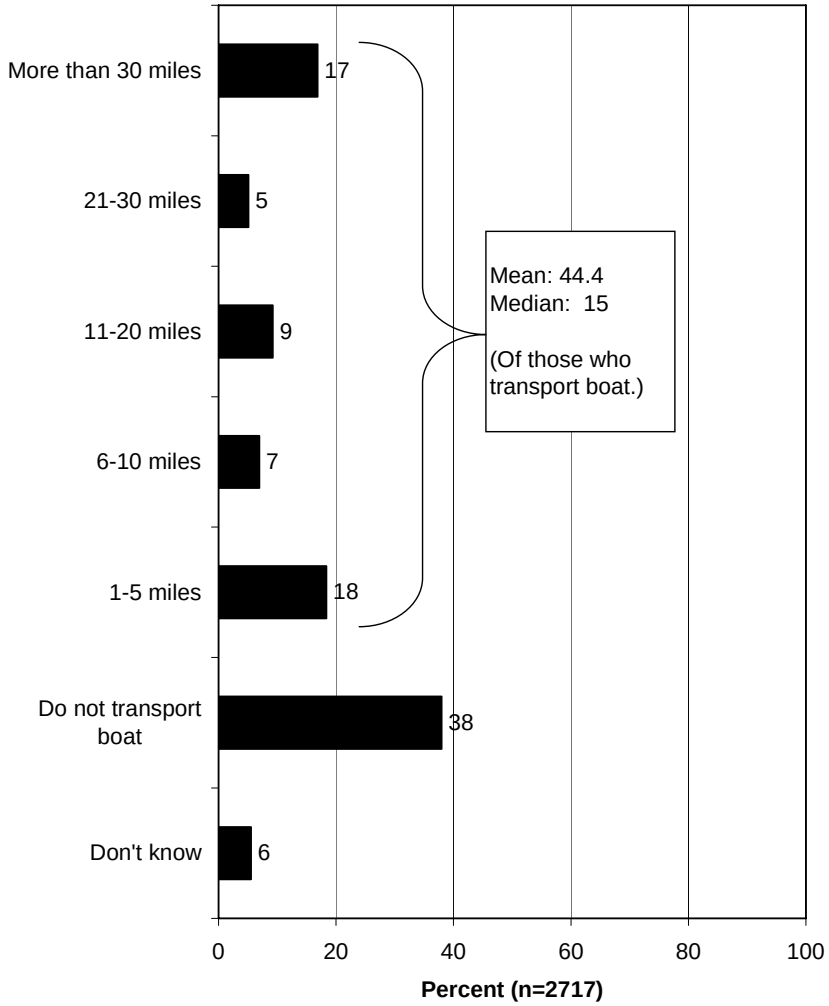


Table 6.4.7. Distance Boat Transported, by Region

Table shows the percent of boaters giving the following responses.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
More than 30 miles	5	2	15	20	8	15	29	39	32
21-30 miles	11	3	6	7	3	0	6	11	4
11-20 miles	3	1	15	10	7	8	9	10	12
6-10 miles	9	2	10	11	5	2	5	9	10
1-5 miles	28	14	27	21	14	12	15	18	15
Mean of those who transport boat	15.1	18.8	31.0	42.7	49.1	47.3	49.8	67.8	65.0
Do not transport boat	39	74	20	26	60	55	30	6	22

Another question that delved into the distance that boaters transport their boat to put in asked them if having to travel or transport their boat too far was a major or minor problem or not a problem at all. This gives an idea of the distribution of access sites. A little less than a fifth of boaters cite this as a problem (7% major, 12% minor, a sum of 19%) (Figure 6.4.10). There are interesting regional differences, however, as those with the farthest travel distances are not the same ones who most commonly cite travel as a problem (Table 6.4.8).

Figure 6.4.10. Excessive Travel Distance Transporting Boat as a Problem

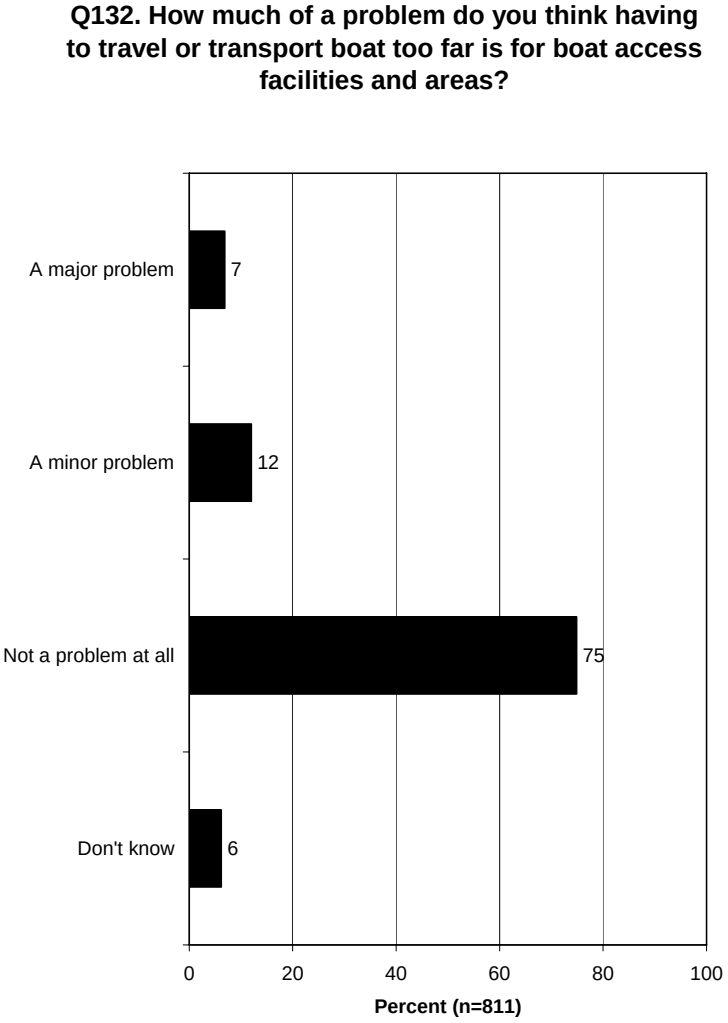


Table 6.4.8. Excessive Travel Distance Transporting Boat as a Problem, by Region

Table shows the percent of boaters giving the following responses.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
Major problem	15	4	9	2	7	5	8	5	6
Minor problem	19	6	16	10	9	10	7	15	17
Major or minor problem	34	10	24	12	16	15	16	20	23
Not a problem	58	67	69	85	76	82	81	80	76

Once the boater arrives at the access area, the next issue is how the boat is put into the water. The majority of boaters use a trailer (56% do so), while 15% use a boat lift and 5% carry it to the water (Figure 6.4.11). The regional results are shown in Table 6.4.9, which shows that Mid-Atlantic and South Atlantic Region boaters have the highest percent who do *not* have to put their boat in the water.

Figure 6.4.11. How Boat Is Typically Put Into the Water

Q80. How do you typically put the boat in the water? (Asked of boat owners; refers to only boat owned or the boat used most often if multiple boats owned.)

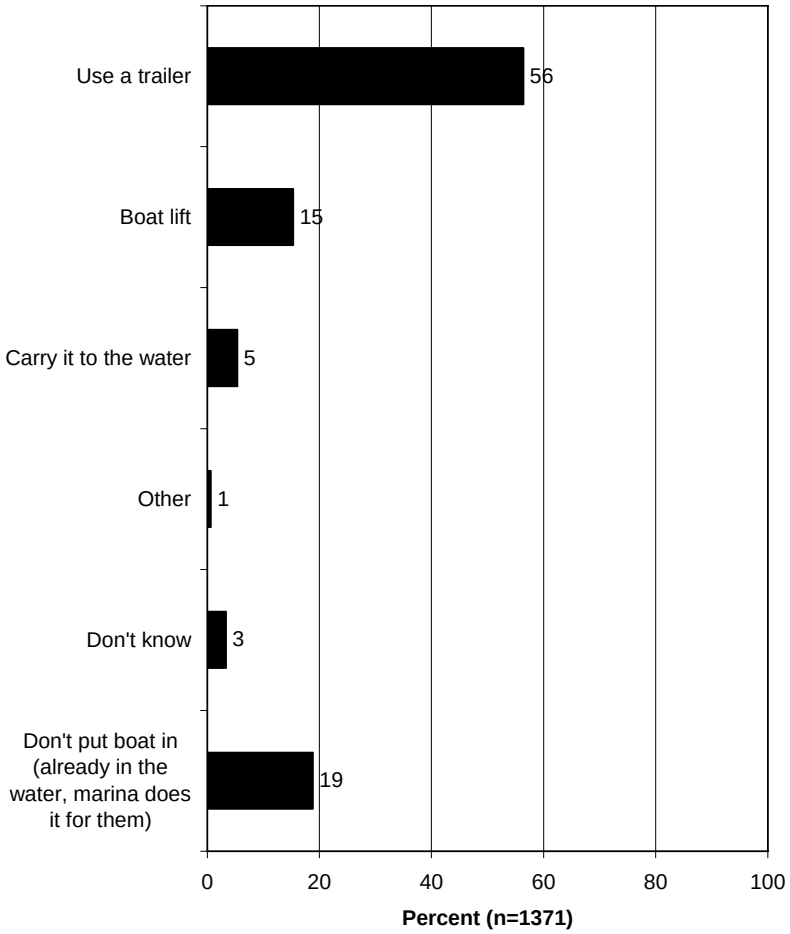


Table 6.4.9. How Boat Is Typically Put Into the Water, by Region

Table shows the percent of boaters giving the following responses.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
Use a trailer	62	18	72	69	34	38	64	84	78
Boat lift	14	35	8	10	21	23	20	3	4
Carry it to the water	6	4	9	11	3	2	2	9	2
Don’t put boat in	17	38	8	6	37	25	12	2	12

Finally in this section of the report is an examination of whether boaters use public or private access facilities and areas. Figure 6.4.12 shows that a majority use public access mostly (53%), and a large majority use public access mostly or at least half the time (70%). On the other hand, private access is used mostly by 27%; it is used at least half the time by 44%. In the regional results, boaters from the Mid-Atlantic and South Atlantic Regions are the biggest users of private access facilities and areas—the only two regions with a majority using private access mostly or at least half the time (Table 6.4.10).

Figure 6.4.12. Use of Public or Private Access Facilities and Areas

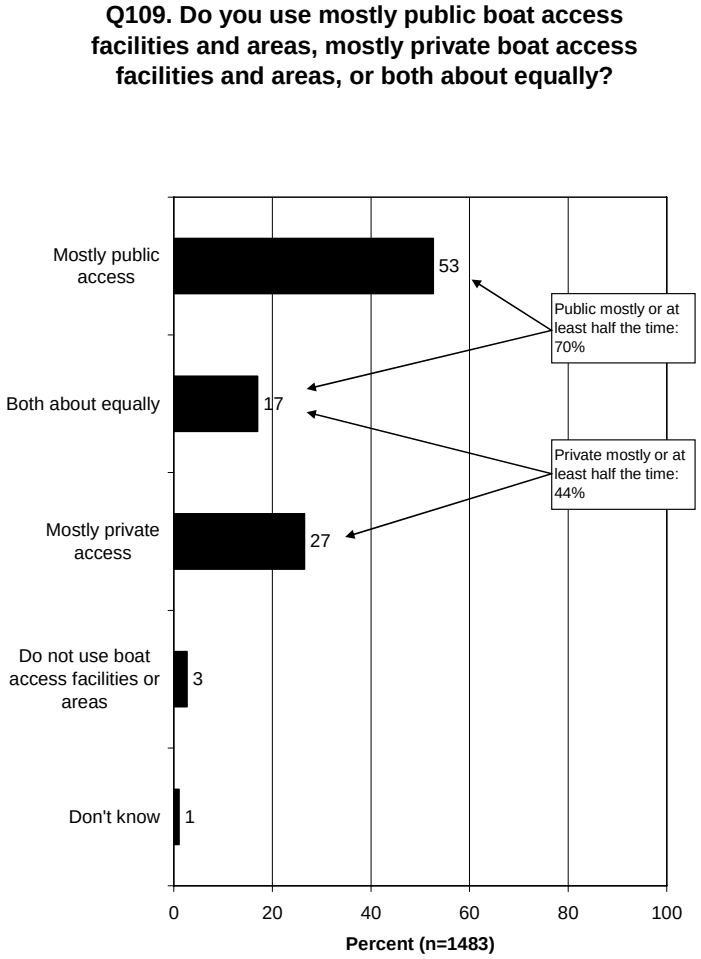


Table 6.4.10. Use of Public or Private Access Facilities and Areas, by Region

Table shows the percent of boaters giving the following responses.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
Public mostly or at least half the time	61	33	78	84	50	69	75	90	86
Mostly public	50	15	63	71	29	50	59	79	65
Both about equally	11	18	15	14	21	20	16	10	20
Mostly private	37	58	18	15	43	26	22	10	13
Private mostly or at least half the time	48	76	34	29	64	46	38	20	33

6.5. SATISFACTION WITH AND CONSTRAINTS TO BOATING PARTICIPATION

A basic question asked boaters if they were satisfied or dissatisfied with their boating experiences over the past 2 years. Overall, satisfaction is high: 94% of boaters surveyed reported being satisfied (Figure 6.5.1). Nonetheless, 5% gave an answer indicating not being satisfied. The regional results are shown in Table 6.5.1.

Figure 6.5.1. Satisfaction or Dissatisfaction With Boating

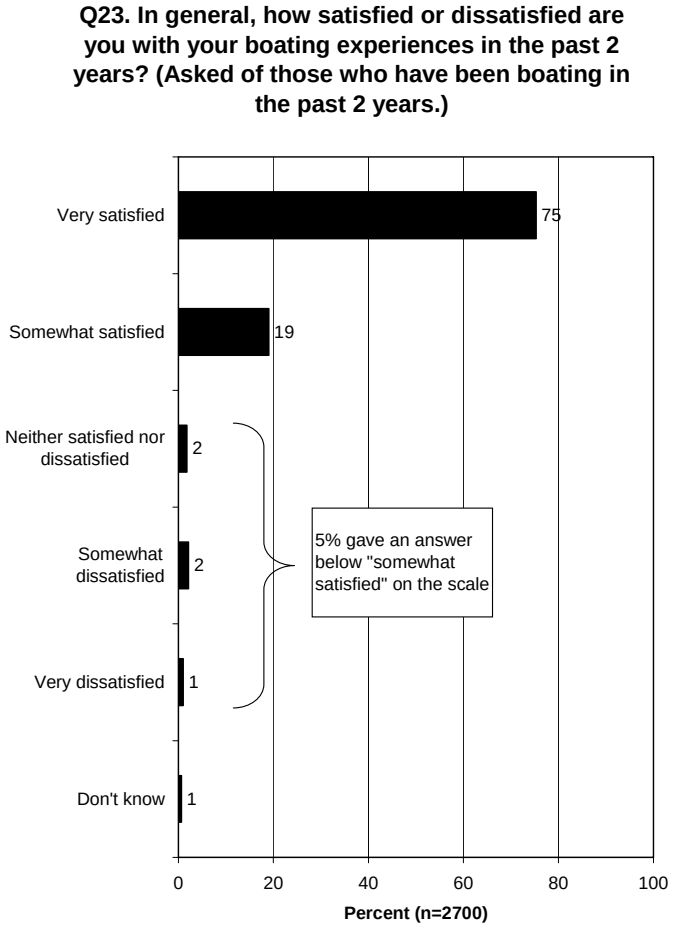


Table 6.5.1. Satisfaction or Dissatisfaction With Boating, by Region

Table shows the percent of boaters giving the following responses.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
Very satisfied	79	65	72	74	80	78	83	69	75
Overall satisfied	98	92	94	96	94	93	96	94	94
Very dissatisfied	0	1	0	1	1	1	1	1	3
Overall dissatisfied	2	7	3	2	3	2	2	5	4
Neutral	0	2	2	2	2	4	2	1	2
Overall not satisfied (dissatisfied or neutral)	2	8	5	4	5	6	4	6	6

Despite the high level of satisfaction, boaters still have some dissatisfactions and constraints, which were explored in several questions in the survey. As was discussed previously in section 6.1 of the report (Ratings of Boating Access Overall and General Problems With Access), 13% of boaters agree with the statement, "Issues related to boat access prevent you from going boating as much as you would like." Also, 10% agree with the statement, "Issues related to boat access prevent you from going fishing as much as you would like." Although not large percentages, they are, nonetheless, not insubstantial.

Additionally, as reported in section 6.4 (Boat Storage, Trailering, and Putting In/Taking Out at Access Sites), 10% of boaters agree that boat access issues have caused them to *stop using access facilities or areas they previously used*; 15% agree that boat access issues have caused *problems or frustration at access facilities or areas that they currently use*; and 13% agree that boat access issues have *prevented them from using access facilities or areas that they would like to use*. Again, although not large percentages, they are not insubstantial.

The survey then asked a basic open-ended question (meaning that no answer set was provided, allowing respondents to say anything that comes to mind) of those who had been boating in the previous 2 years: Are there any things that took away from your enjoyment of boating or caused you to boat less than you would have liked in the past 2 years? A majority of boaters (56%) indicated that something had done so, the most common things being costs in general, lack of time, age/health, and weather (Figure 6.5.2). Note that three of these (time, age/health, and weather) are entirely out of control of boating agencies and industry. Other items on the list are things over which agencies/industry have some influence, including crowding on the water/conflicts with other recreationists, fishing issues other than lack of fish, access problems (named by 2% of boaters), and pollution/water quality—each with at least 2% of boaters citing it. Table 6.5.2 shows the regional results.

A similar question delved into reasons that some respondents in the survey had not gone boating in the previous 2 years (a screener in the survey ensured that respondents either had owned a boat of at least 12 feet in the previous 2 years or had gone boating on a boat of at least 12 feet in the previous 2 years, but they need not have done both; 10% owned a boat but had not gone boating). Again, the top reasons are more personal or social rather than reasons on which agencies and industry would have some influence: not enough time, age/health, and simple lack of interest (Figure 6.5.3). Nonetheless, some of the reasons on the list include costs, access problems (named by 2% of those who had not boated), and pollution/water quality. Regional results on this question are shown in Table 6.5.3.

Figure 6.5.2. Dissatisfactions With and Constraints to Boating Participation

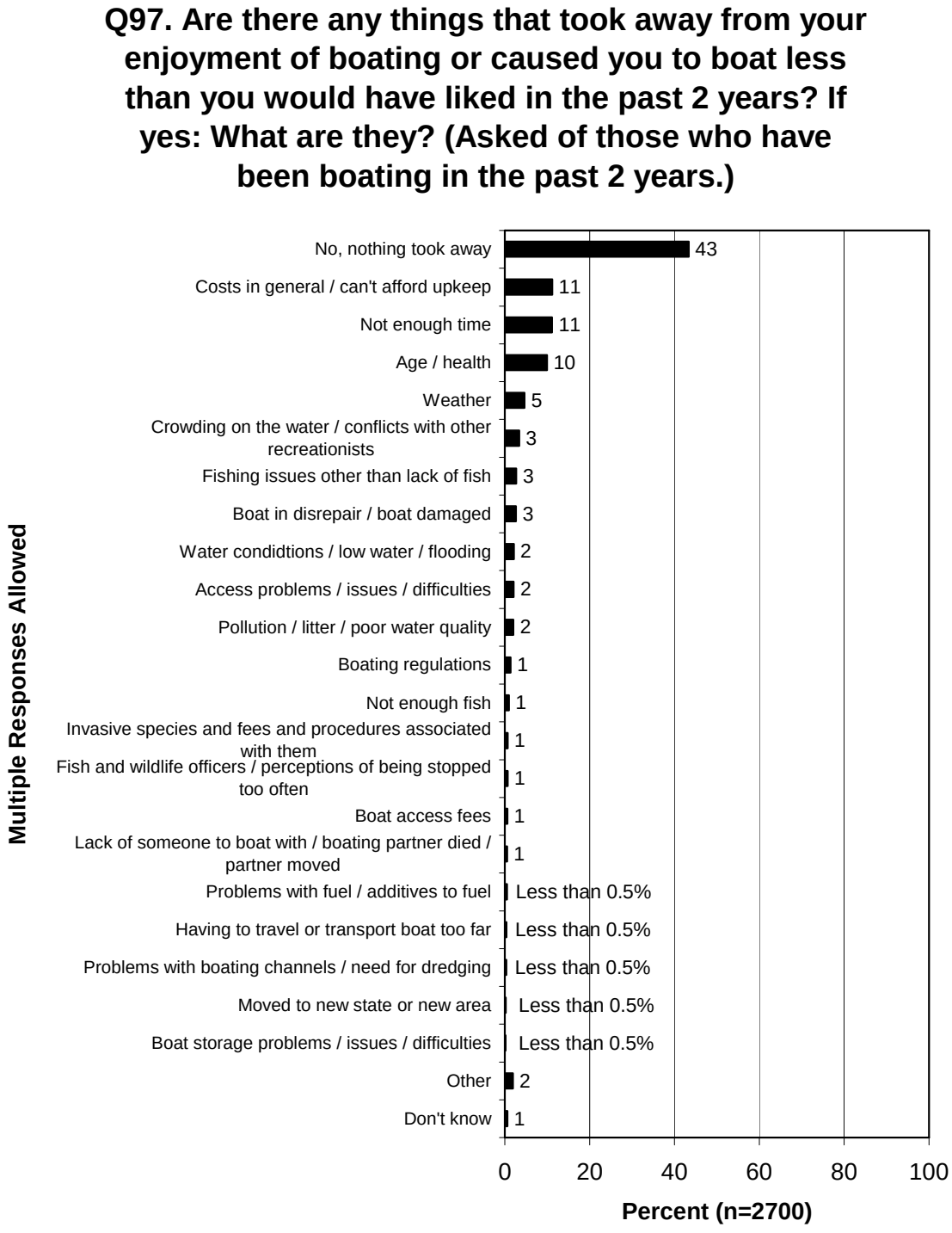


Table 6.5.2. Dissatisfactions With and Constraints to Boating Participation, by Region

Table shows the percent of boaters giving the following responses.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
No, nothing took away	51	32	47	51	38	43	45	44	45
Costs in general / can't afford upkeep	16	18	6	3	21	13	6	7	9
Not enough time	12	11	12	16	8	7	13	11	12
Age / health	2	9	11	10	10	9	12	10	10
Weather	6	12	6	3	3	5	5	1	2
Crowding on the water / conflicts with other recreationists	0	1	3	4	4	2	5	6	4
Fishing issues other than lack of fish	2	5	1	0	4	5	2	2	4
Boat in disrepair / boat damaged	1	3	3	1	4	2	4	3	2
Water conditions / low water / flooding	1	1	2	4	1	1	4	6	2
Access problems / issues / difficulties	2	1	3	1	2	2	2	4	2
Pollution / litter / poor water quality	0	0	3	1	2	5	2	1	1
Boating regulations	1	2	0	1	3	3	0	1	1
Not enough fish	0	2	2	0	0	0	0	2	2
Invasive species and fees and procedures associated with them	1	0	1	1	0	2	0	1	1
Fish and wildlife officers / perceptions of being stopped too often	0	0	0	0	2	2	0	1	0
Boat access fees	0	1	0	0	1	0	1	0	2
Lack of someone to boat with / boating partner died / partner moved	0	2	0	1	0	0	1	0	0
Problems with fuel / additives to fuel	0	0	0	0	1	1	0	0	0
Having to travel or transport boat too far	0	0	1	0	0	1	0	0	1
Problems with boating channels / need for dredging	1	1	0	0	1	0	0	0	0
Moved to new state or new area	0	0	0	1	0	0	0	0	0
Boat storage problems / issues / difficulties	0	1	0	0	0	0	0	0	0

Figure 6.5.3. Reasons for Not Boating

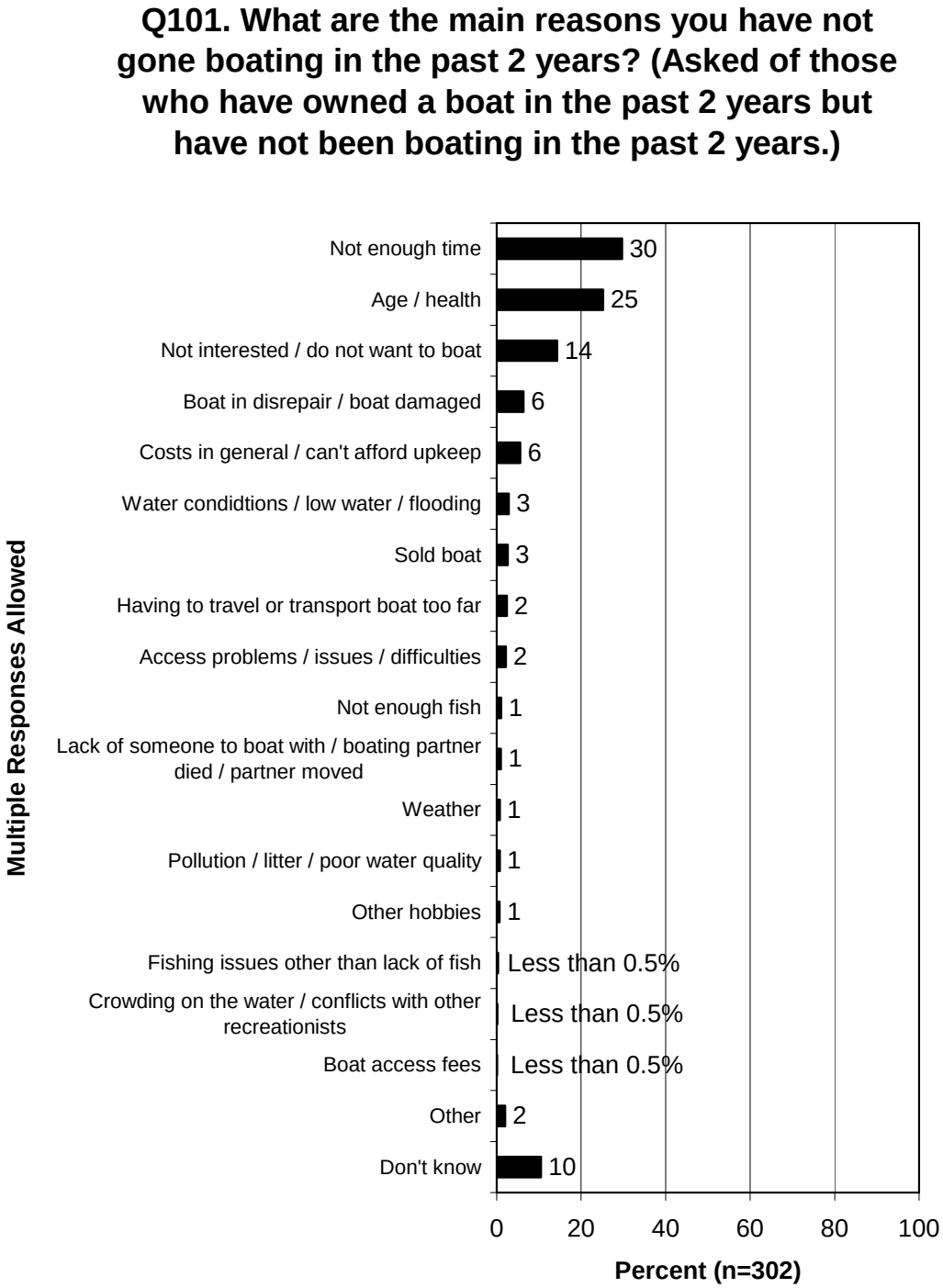


Table 6.5.3. Reasons for Not Boating, by Region

Table shows the percent of those who own a boat but did not go boating giving the following responses.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
Not enough time	23	10	36	32	11	23	41	32	26
Age / health	32	19	29	30	27	13	14	9	28
Not interested / do not want to boat	14	48	18	8	11	19	17	14	14
Boat in disrepair / boat damaged	9	16	2	6	11	7	1	5	16
Costs in general / can't afford upkeep	1	0	2	2	18	9	2	16	7
Water conditions / low water / flooding	0	0	2	0	0	0	15	7	0
Sold boat	0	0	2	6	6	5	0	0	0
Having to travel or transport boat too far	0	1	2	4	0	0	2	2	5
Access problems / issues / difficulties	0	0	2	4	6	0	0	2	0
Not enough fish	0	0	0	4	0	9	0	0	0
Lack of someone to boat with / boating partner died / partner moved	0	0	0	0	6	0	2	0	0
Weather	5	0	0	0	0	1	0	5	2
Pollution / litter / poor water quality	0	0	0	4	0	0	0	0	0
Other hobbies	1	0	0	0	0	11	1	2	0
Fishing issues other than lack of fish	0	0	0	2	0	0	0	0	0
Crowding on the water / conflicts with other recreationists	1	0	0	0	0	0	0	2	0
Boat access fees	0	0	0	0	0	0	0	2	0

In follow-up to the two questions above (dissatisfactions with boating; reasons for not boating), respondents who named access as an issue were asked (again, in an open-ended question) to name the specific access problems that they had encountered. Figure 6.5.4 shows that the top access issues are a lack of enough access areas, poor maintenance of them, crowding at them, not enough information about where they are, and no one to provide assistance at the sites. Table 6.5.4 contains the regional results to this question. Part of the large variation from region to region is caused by the low sample sizes in each region (because the question was asked only of those who had named access as a problem).

Figure 6.5.4. Access Issues Cited by Boaters

Q105. You mentioned access. What are the specific issues related to access that affected your boating? (Asked of those who said access problems have taken away from their enjoyment of boating, caused them not to boat as much as they would have liked, or caused them to not boat at all in the past 2 years.)

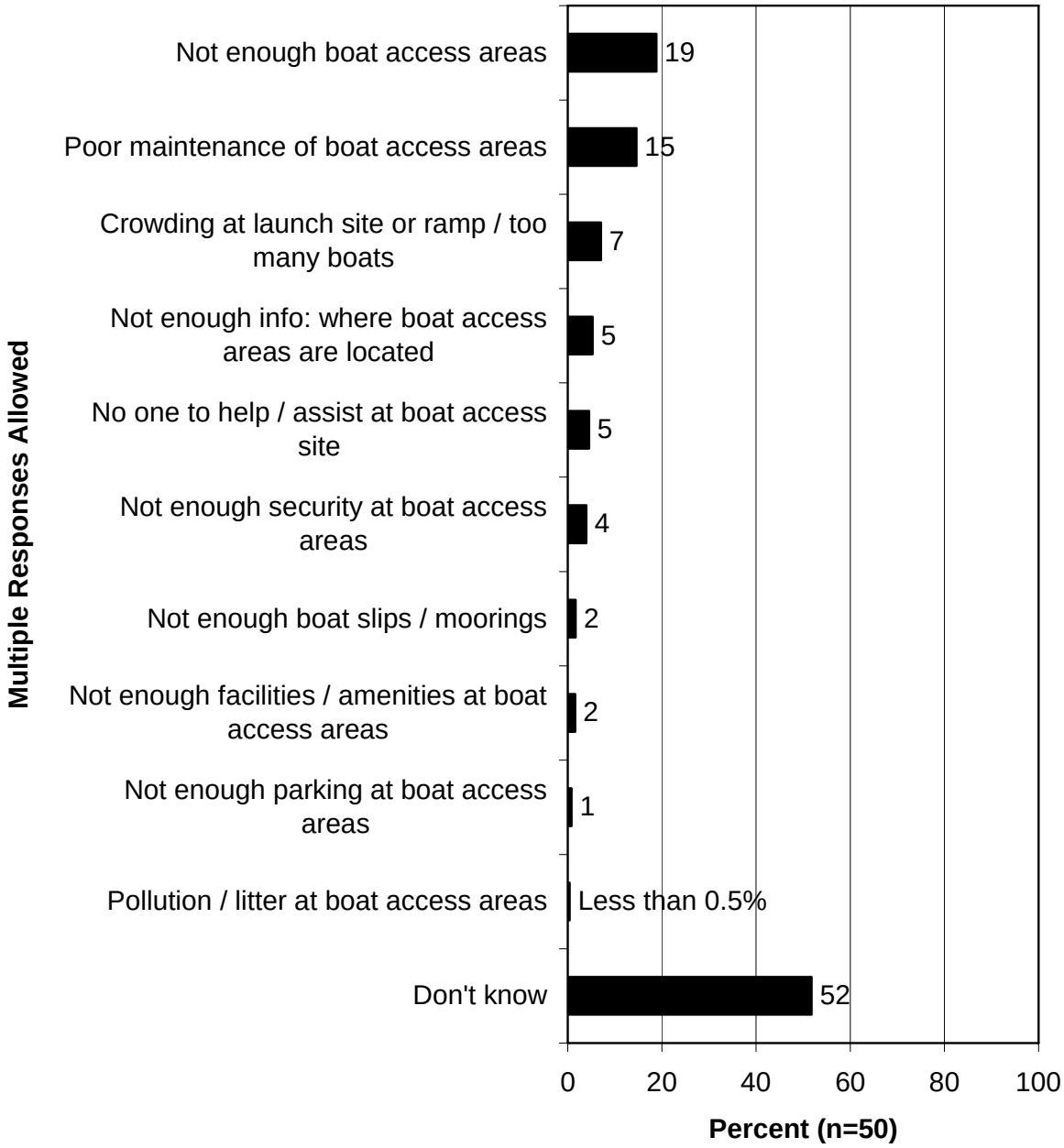


Table 6.5.4. Access Issues Cited by Boaters, by Region

Table shows the percent of boaters who mentioned access as a problem giving the following responses.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
Not enough boat access areas	67	0	13	0	8	55	45	14	25
Poor maintenance of boat access areas	0	26	25	0	0	0	18	14	25
Crowding at launch site or ramp / too many boats	0	53	13	0	0	0	0	0	0
Not enough info: where boat access areas are located	0	9	0	0	20	0	0	0	0
No one to help / assist at boat access site	0	0	0	0	19	0	0	0	0
Not enough security at boat access areas	0	0	13	0	0	0	0	0	0
Not enough boat slips / moorings	11	3	0	0	0	31	0	0	0
Not enough facilities / amenities at boat access areas	0	0	0	0	0	0	0	29	0
Not enough parking at boat access areas	0	0	0	0	0	0	0	14	0
Pollution / litter at boat access areas	0	0	0	0	0	0	3	0	0
Don't know	22	12	50	100	53	14	82	29	50

Those who had responded in the screener that they had owned a boat in the previous 2 years but also indicated in the survey that they *currently* do *not* own a boat were asked to name (in an open-ended question) the reasons that they no longer own a boat. The three top reasons are personal/social: age/health, lack of time, and lack of interest (Figure 6.5.5). However, the fourth item is costs. Access is named by only 1% of those respondents as a reason that they no longer own a boat. The regional results are shown in Table 6.5.5 (note that the sample sizes are low in each region because only those who had owned a boat but no longer do so were asked the question).

Figure 6.5.5. Reasons Respondents No Longer Own a Boat

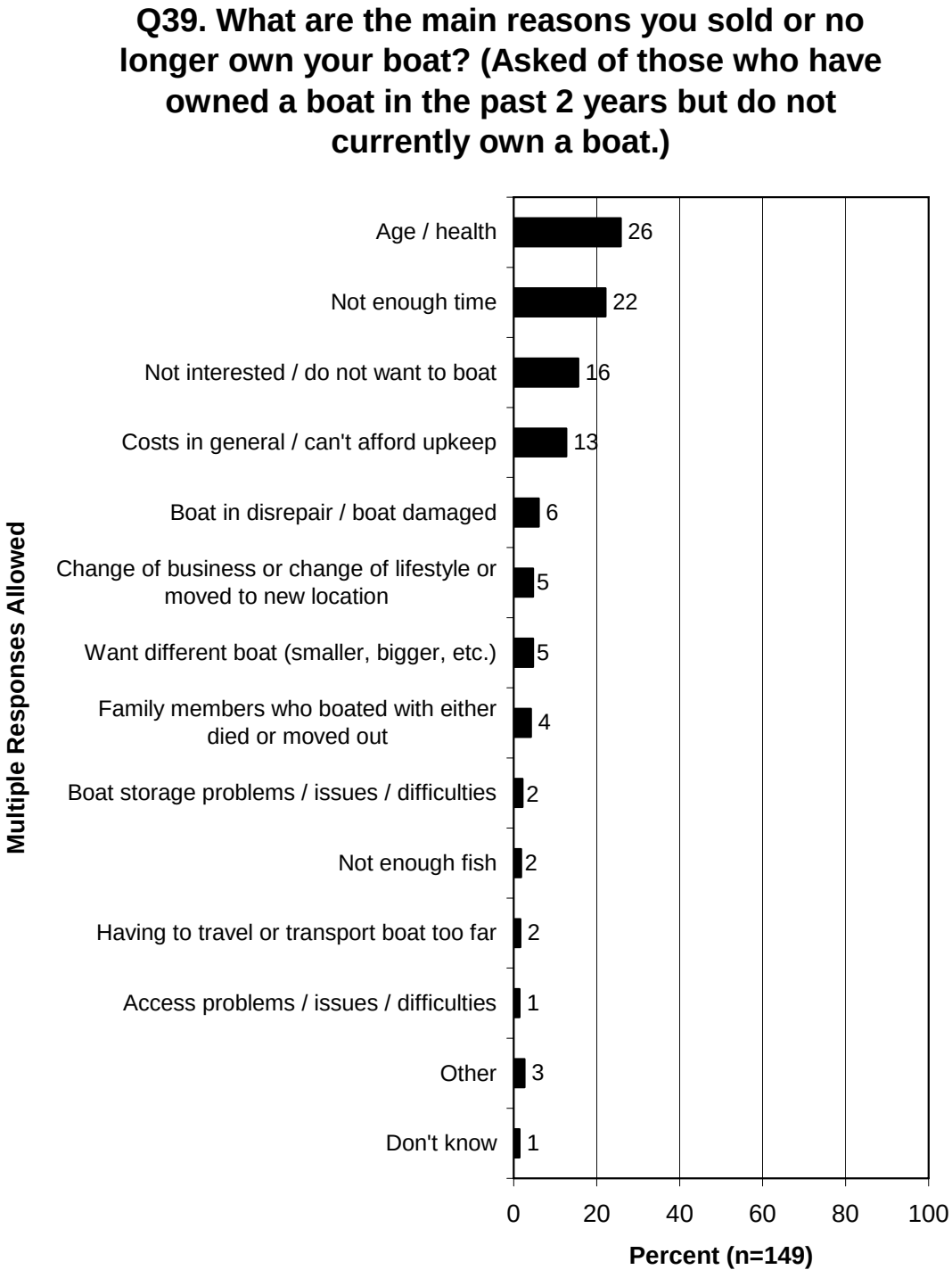


Table 6.5.5. Reasons Respondents No Longer Own a Boat, by Region

Table shows the percent of those who owned a boat in the past 2 years but no longer own a boat giving the following responses.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
Age / health	50	25	19	47	18	36	50	6	21
Not enough time	8	12	38	20	23	18	21	6	16
Not interested / do not want to boat	8	8	6	20	18	45	21	25	11
Costs in general / can't afford upkeep	17	25	6	0	18	9	0	19	16
Boat in disrepair / boat damaged	0	17	6	7	0	0	7	6	16
Change of business or change of lifestyle or moved to new location	0	4	0	7	9	0	0	19	0
Want different boat (smaller, bigger, etc.)	8	0	6	0	9	9	0	0	0
Family members who boated with either died or moved out	0	4	6	7	0	0	0	0	16
Boat storage problems / issues / difficulties	0	0	0	7	5	0	0	0	0
Not enough fish	0	0	6	0	0	0	0	0	5
Having to travel or transport boat too far	0	4	6	0	0	0	0	0	0
Access problems / issues / difficulties	0	0	6	0	0	0	0	6	0
Other	8	0	0	7	5	0	0	6	0
Don't know	0	12	0	0	0	0	0	6	0

It is worth recalling in this section some of the results from section 6.1 (Ratings of Boating Access Overall and General Problems With Access), which showed some of the common reasons that boaters do not rate access higher (among those who rate it as a 7 or less). Most commonly, they indicate that there is not enough boat access, that the boat access areas are poorly maintained, or that the areas are crowded. These problems, if left unchecked, could turn from a dissatisfaction that does not necessarily inhibit boating participation to a full-fledged constraint that prevents boating participation.

Likewise, those who had indicated that environmental concerns were a major or minor problem were asked to name their specific environmental concerns. Four concerns in particular were named by substantial percentages who were asked the question: pollution/litter, algae blooms, zebra mussels, and fuel/oil residue (Figure 6.5.6). It is worth noting that the concern about invasive species was named by a substantial percentage of boaters who were asked the question; these species named include zebra mussels, Asian carp, milfoil, and “other” invasive species. Obviously, the regional results show great variation in the concerns, particularly invasive species because some of the invasive species are found only in certain areas, although the concern about pollution/litter is commonly named across all regions (Table 6.5.6).

Figure 6.5.6. Environmental Concerns of Boaters

Q156. You mentioned environmental concerns as a (major / minor) problem. What are the specific concerns related to the environment that affect your boating? (Asked of those who indicated that environmental concerns are a problem.)

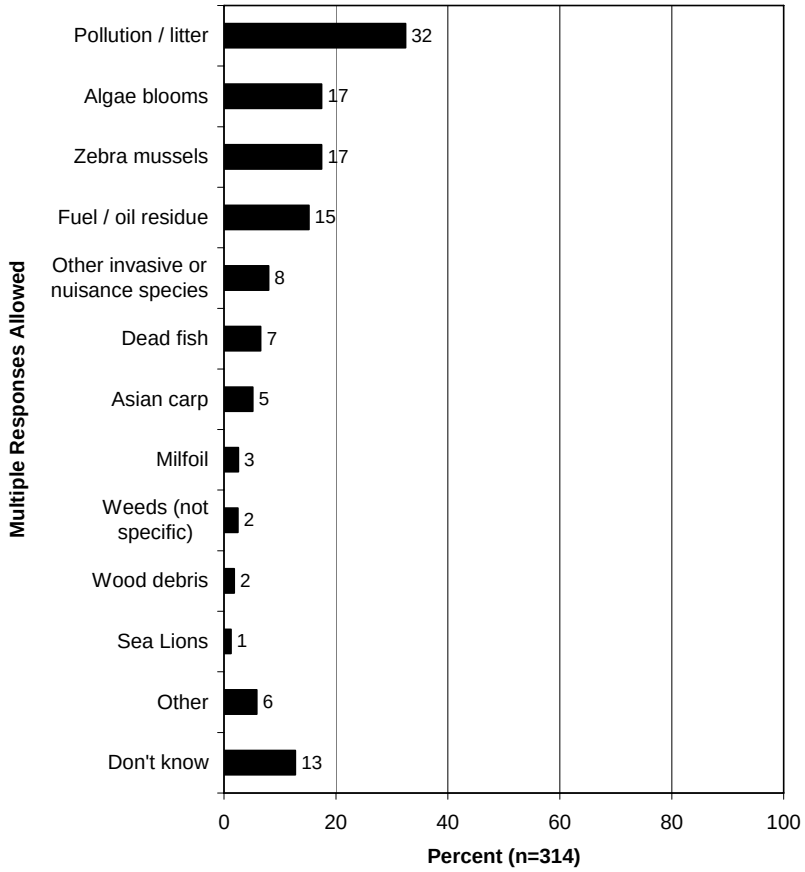


Table 6.5.6. Environmental Concerns of Boaters, by Region

Table shows the percent of boaters who mentioned environmental concerns as a problem giving the following responses.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
Pollution / litter	49	66	15	34	35	38	33	14	36
Algae blooms	15	3	26	14	11	17	35	17	8
Zebra mussels	0	2	26	32	6	4	22	34	13
Fuel / oil residue	6	19	5	14	19	35	26	10	15
Other invasive or nuisance species	2	8	10	7	8	8	11	3	5
Dead fish	0	0	3	2	25	0	3	3	5
Asian carp	0	0	15	7	0	5	0	0	3
Milfoil	21	0	3	5	0	0	0	7	0
Weeds (not specific)	3	1	3	7	0	4	0	3	3
Wood debris	14	7	0	2	1	2	0	3	0
Sea Lions	0	0	0	2	0	0	0	0	8
Other	15	5	3	2	16	0	2	14	3
Don't know	6	18	18	9	13	4	2	14	21

A final consideration in this section on constraints to boating participation is a quick look at some data already presented that also pertain to this section. Previously, the report looked at a series of questions in which various potential problems were presented to boaters, who were asked to indicate if the item was a major problem, a minor problem, or not a problem at all. Obviously, those items that were considered problems can negatively affect participation and can be, therefore, considered a constraint to boating participation.

As was shown in section 6.1 (Ratings of Boating Access Overall and General Problems With Access), the biggest problems of the 23 listed potential problems are lack of knowledge among other boaters and anglers, crowding at launch sites/ramps, environmental concerns, not enough facilities/amenities at access areas, and pollution/litter. Additionally, also in a previously reported series of questions in section 6.2 (Desired Features and Amenities at Access Areas), those features and amenities that had the biggest quality issues of the 25 listed features/amenities were parking for single vehicles, parking for vehicles with boat trailers, access for disabled individuals, electricity, drinking water, and security. Quality problems can be considered constraints to participation as well, when poor quality exceeds the boaters' capacity for coping with the problem, thereby causing the boater to cease to participate.

6.6. OTHER ASPECTS OF BOATING

6.6.A. MOTIVATIONS FOR BOATING

In an open-ended question (for which no response set is presented to respondents), boaters were asked to name their most important reason for boating in the past 2 years (Figure 6.6.1). Boating to fish is an important reason (41% of those who have been boating give this reason). However, other important reasons pertain to the simple pleasure of boating (to be on the water/like boating in general is the second-ranked reason, and for relaxation is the third-ranked reason). Table 6.6.1 shows the regional results, with wide variation from region to region. For instance, 62% of boaters in the West North Central Region boat primarily to fish, compared to only 26% of Mid-Atlantic Region boaters.

Figure 6.6.1. Most Important Reasons for Boating

Q14. What was your most important reason for boating in the past 2 years? (Asked of those who have been boating in the past 2 years.)

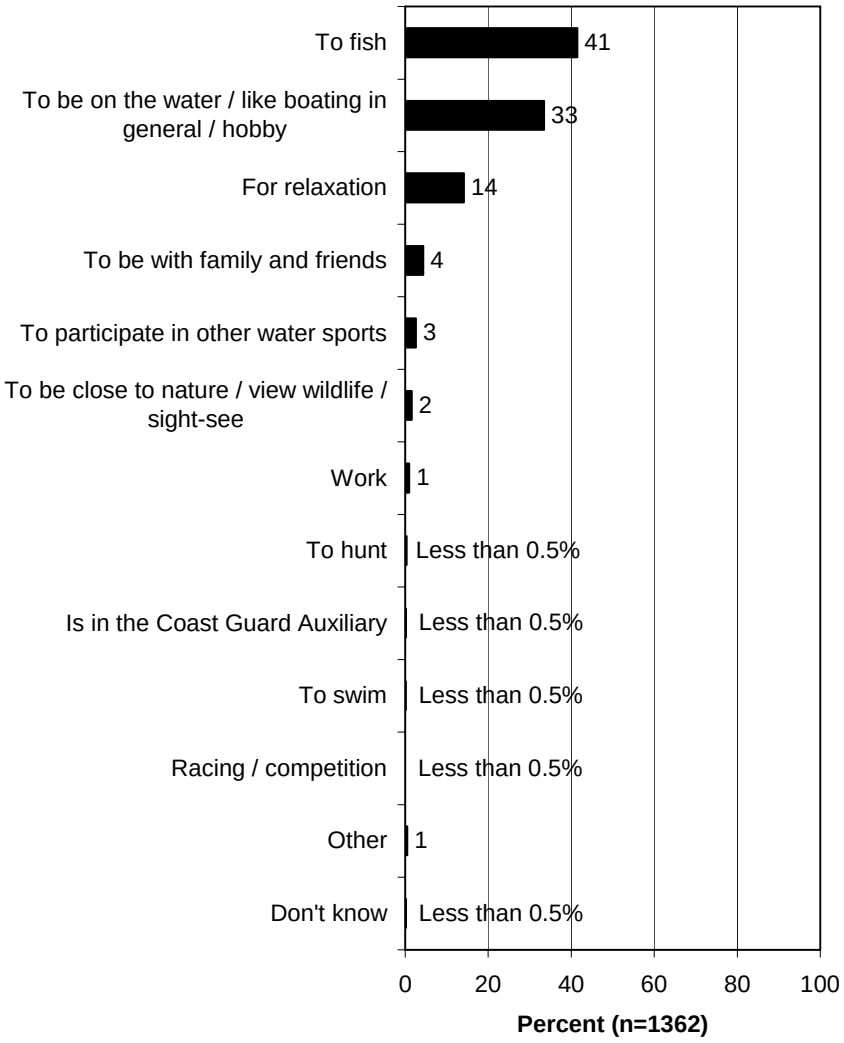


Table 6.6.1. Most Important Reasons for Boating, by Region

Table shows the percent of boaters giving the following responses.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
To fish	33	26	52	62	26	32	48	55	45
To be on the water / like boating in general / hobby	43	41	25	17	45	43	37	27	25
For relaxation	15	22	12	12	17	19	8	10	12
To be with family and friends	2	6	5	5	2	4	5	4	9
To participate in other water sports	3	1	2	0	6	0	1	1	5
To be close to nature / view wildlife / sight-see	0	1	3	2	2	0	0	1	2
Work	2	1	0	0	3	1	0	0	0
To hunt	2	0	1	1	0	0	0	1	0
Is in the Coast Guard Auxiliary	1	1	0	0	0	0	0	0	1
To swim	0	0	0	0	0	0	1	0	0
Racing / competition	0	0	0	0	0	0	0	0	0

6.6.B. PARTICIPATION AVIDITY AND TRENDS IN AMOUNT OF PARTICIPATION

The mean number of days that boaters go boating each year is 37.6 days; the median is 20 days (Figure 6.6.2). The regional results are shown in Table 6.6.2.

Figure 6.6.2. Annual Days of Boating Participation

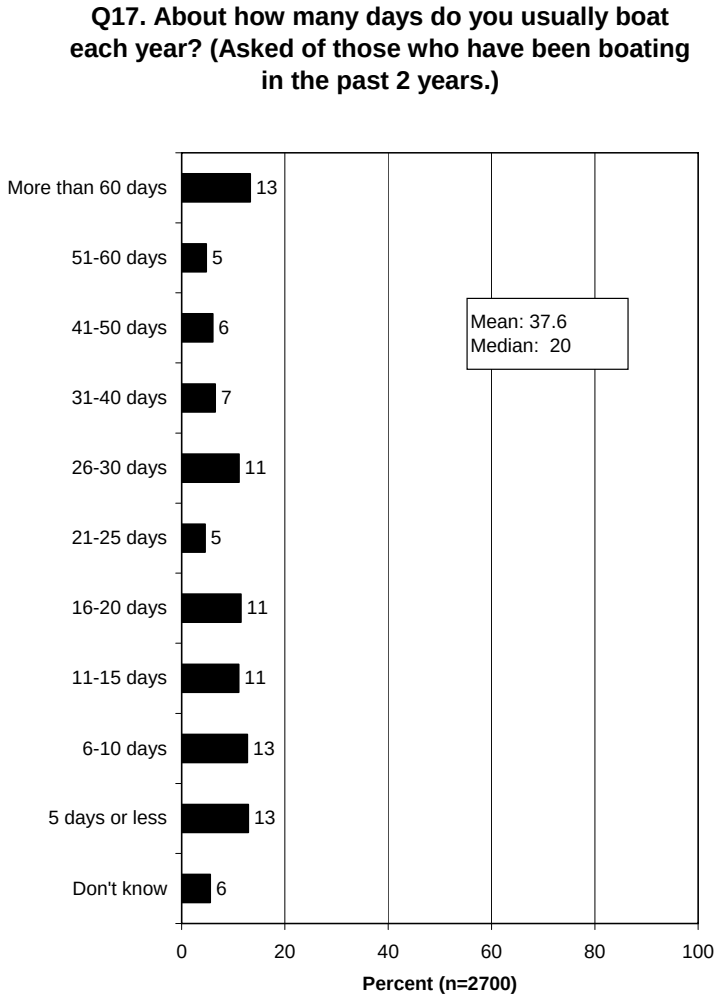


Table 6.6.2. Annual Days of Boating Participation, by Region

Table shows the percent of boaters giving the following responses (among those who boated in the past 2 years).	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
More than 60 days	22	17	8	6	22	20	13	4	6
51-60 days	3	7	4	4	6	6	4	2	3
41-50 days	5	5	4	5	7	13	7	2	5
31-40 days	15	14	4	4	7	7	7	3	4
26-30 days	11	14	13	11	11	13	9	8	8
21-25 days	1	8	4	5	4	5	5	4	6
16-20 days	15	10	11	15	11	10	11	10	13
11-15 days	8	5	14	12	11	7	11	17	12
6-10 days	7	9	15	17	9	6	15	16	18
5 days or less	10	6	15	19	7	8	10	31	21
Don't know	3	6	6	3	5	7	9	3	5

The survey also asked about days of fishing participation and days of fishing from a boat each year. Boaters in the survey who also fish (regardless of whether they fish from a boat or not) go fishing 32.7 days per year (Figure 6.6.3), and they go fishing from a boat 27.5 days per year (Figure 6.6.4). The regional results are shown in Tables 6.6.3 and 6.6.4.

Figure 6.6.3. Annual Days of Fishing Participation

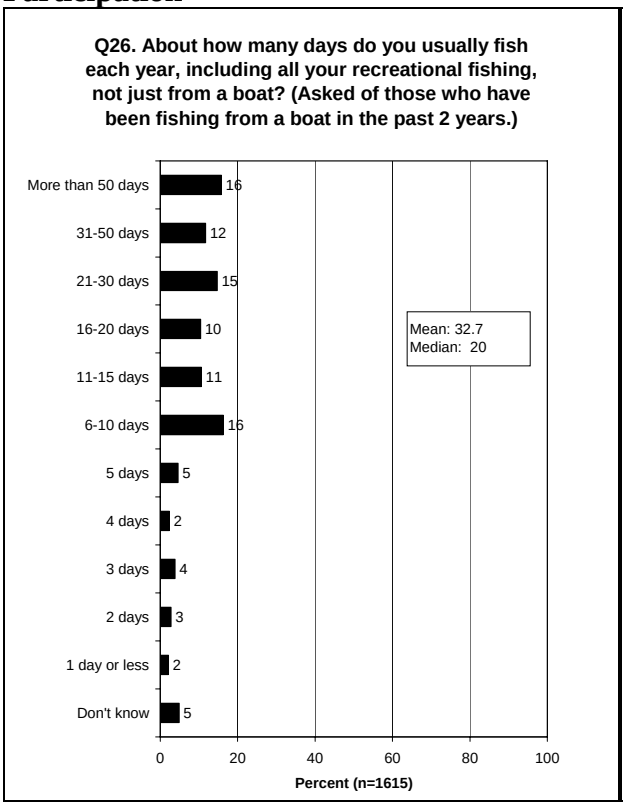


Figure 6.6.4. Annual Days Fishing From a Boat

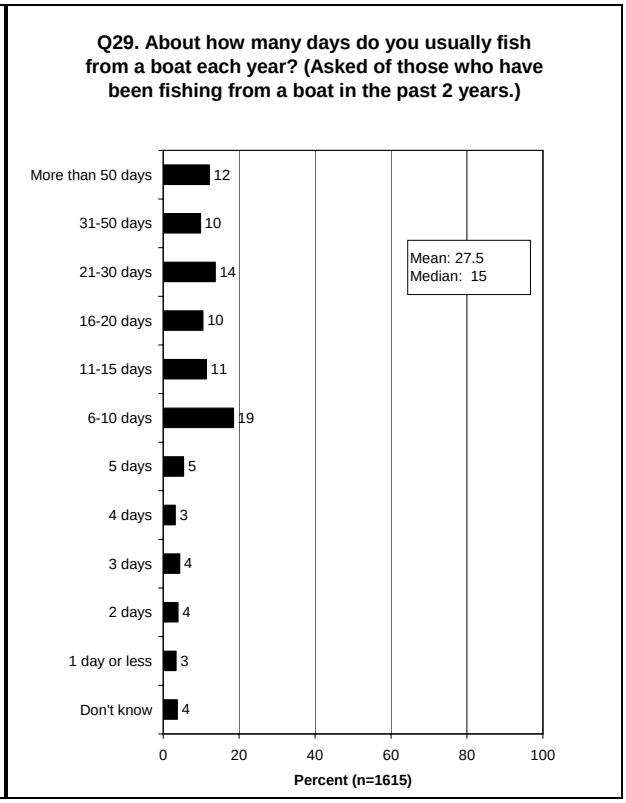


Table 6.6.3. Annual Days of Fishing Participation, by Region

Table shows the percent of those who fished from a boat giving the following responses.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
More than 50 days	20	14	17	11	18	23	16	12	12
31-50 days	4	16	12	12	13	16	12	6	9
21-30 days	21	13	17	14	13	19	12	18	13
16-20 days	8	12	7	14	9	10	10	13	14
11-15 days	8	6	11	12	11	9	15	9	9
6-10 days	23	21	14	16	17	9	18	21	15
5 days or less	14	14	16	17	15	9	12	17	24
Don't know	2	4	6	5	6	5	6	2	4

Table 6.6.4. Annual Days of Fishing From a Boat, by Region

Table shows the percent of those who fished from a boat giving the following responses.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
More than 50 days	11	13	13	7	16	20	13	6	8
31-50 days	11	14	9	7	11	15	12	5	6
21-30 days	13	13	16	14	13	17	11	13	13
16-20 days	12	11	10	12	10	9	10	11	11
11-15 days	12	6	11	13	11	11	14	14	10
6-10 days	20	23	15	18	20	13	20	21	19
5 days or less	19	19	21	24	17	12	15	28	30
Don't know	2	1	5	4	4	3	5	2	3

Two other questions in the survey asked boaters if their boating participation and their fishing participation had increased, stayed the same, or decreased over the past 2 years. For both, the most common response is that participation has stayed the same; otherwise, respondents are more likely to say their participation has decreased than increased (Figures 6.6.5 and 6.6.6). The regional results on these questions are shown in Tables 6.6.5 and 6.6.6.

Figure 6.6.5. Trend in Boating Participation Over the Past 2 Years

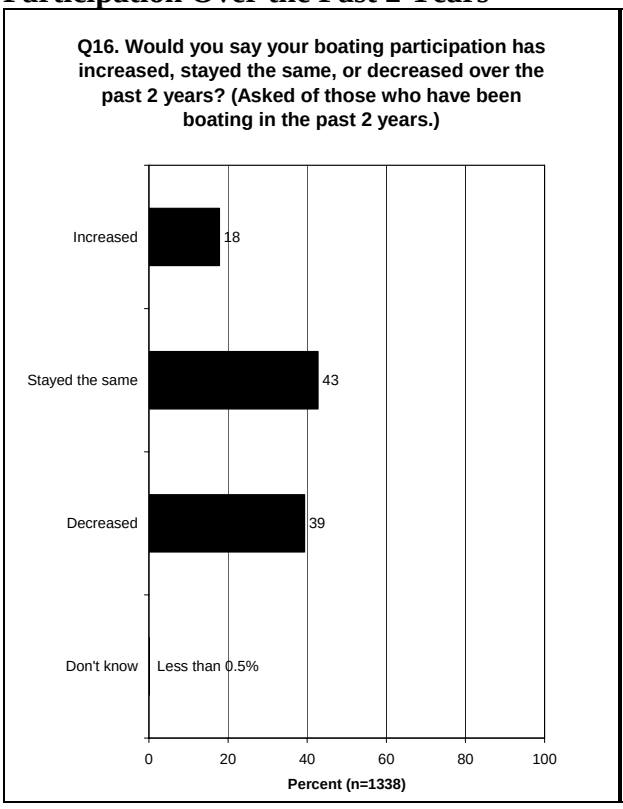


Figure 6.6.6. Trend in Fishing Participation Over the Past 2 Years

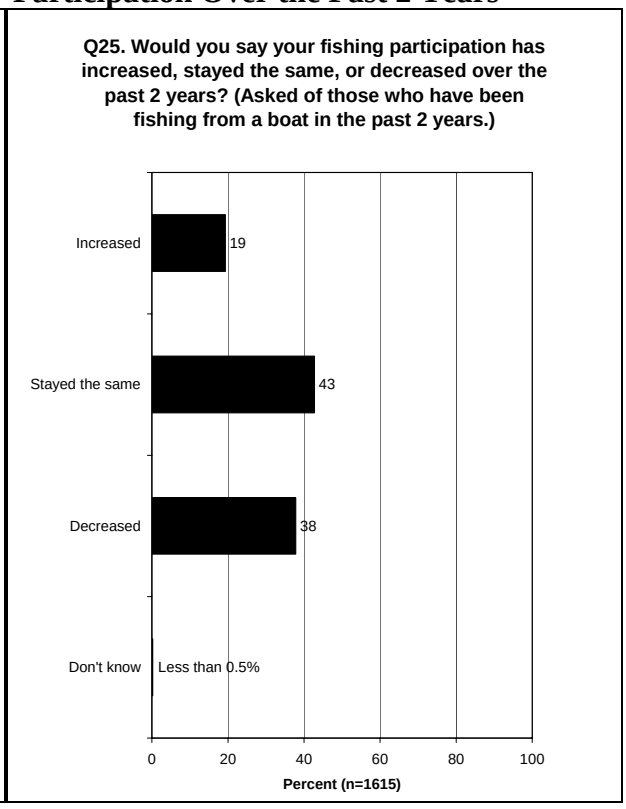


Table 6.6.5. Trend in Boating Participation Over the Past 2 Years, by Region

Table shows the percent of boaters giving the following responses (among those who boated in the past 2 years).	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
Increased	16	7	18	20	17	24	23	16	17
Stayed the same	66	36	41	47	40	38	41	44	45
Decreased	18	57	41	32	43	38	35	40	38
Don't know	0	0	0	1	0	0	0	0	0

Table 6.6.6. Trend in Fishing Participation Over the Past 2 Years, by Region

Table shows the percent of those who fished from a boat giving the following responses.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
Increased	25	10	24	23	12	22	23	17	17
Stayed the same	53	31	44	43	42	41	39	46	49
Decreased	22	59	31	33	45	37	38	36	34
Don't know	0	0	0	1	0	0	0	1	0

6.6.C. PARTICIPATION IN VARIOUS BOATING ACTIVITIES

A list of 14 boating-related activities were read to boaters, and they were asked if they had participated in each while boating in the past 2 years. The top tier is made up of fishing (67% had done it while boating), being with family and friends (also 67%), and pleasure cruising (56%) (Figure 6.6.7). A second tier—less than a majority but more than a third—is made up of sightseeing (40%), visiting other people on/near the water (40%), and swimming (38%). The remaining activities lower on the ranking are more specialized, such as water tubing, snorkeling or diving, water skiing, hunting, and rafting. The regional results regarding boating-related activities are presented in Table 6.6.7.

Figure 6.6.7. Participation in Boating-Related Activities

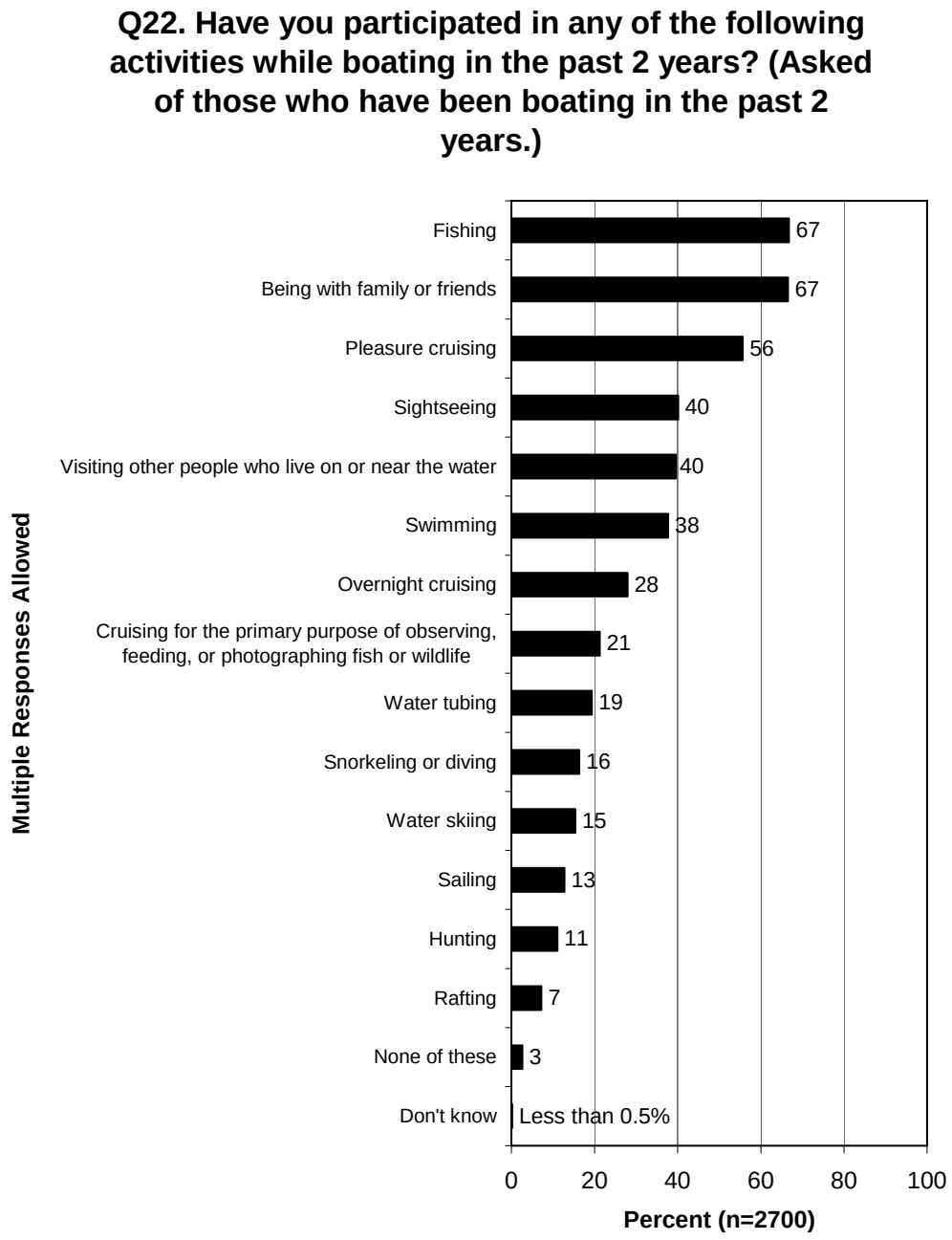


Table 6.6.7. Participation in Boating-Related Activities, by Region

Table shows the percent of boaters giving the following responses (among those who boated in the past 2 years).	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
Fishing	66	56	69	73	60	63	77	73	68
Being with family or friends	77	67	64	65	69	68	69	63	62
Pleasure cruising	67	72	48	46	66	67	46	46	48
Sightseeing	56	42	37	31	47	54	34	33	34
Visiting other people who live on or near the water	60	41	38	39	37	51	45	26	31
Swimming	47	40	36	38	40	45	33	30	33
Overnight cruising	44	47	13	8	44	49	18	17	21
Cruising for the primary purpose of observing, feeding, or photographing fish or wildlife	33	16	21	19	24	24	17	22	21
Water tubing	20	15	19	27	13	24	23	21	22
Snorkeling or diving	24	14	9	11	25	18	16	13	17
Water skiing	9	11	15	18	10	21	16	23	23
Sailing	30	14	10	5	18	17	10	7	12
Hunting	7	5	11	13	9	13	20	15	9
Rafting	19	9	4	8	6	11	6	9	7
None of these	1	2	3	2	4	3	2	3	2

Another question examined where those who fish from a boat do so vis-à-vis fresh or saltwater. Just over half of boaters fish from a boat in freshwater exclusively, while about a quarter do so in saltwater exclusively, and a quarter fish from a boat in both (Figure 6.6.8). There is, as would be expected, huge variation from one region to the next for the very reason that saltwater boating is hundreds of miles away for some boaters. The Mid-Atlantic, South Atlantic, and New England Regions have the greatest participation in fishing from a boat in saltwater (Table 6.6.8).

Figure 6.6.8. Participation in Fishing From a Boat in Freshwater and Saltwater

Q32. Have you been freshwater fishing from a boat, saltwater fishing from a boat, or both in the past 2 years? (Asked of those who have been fishing from a boat in the past 2 years.)

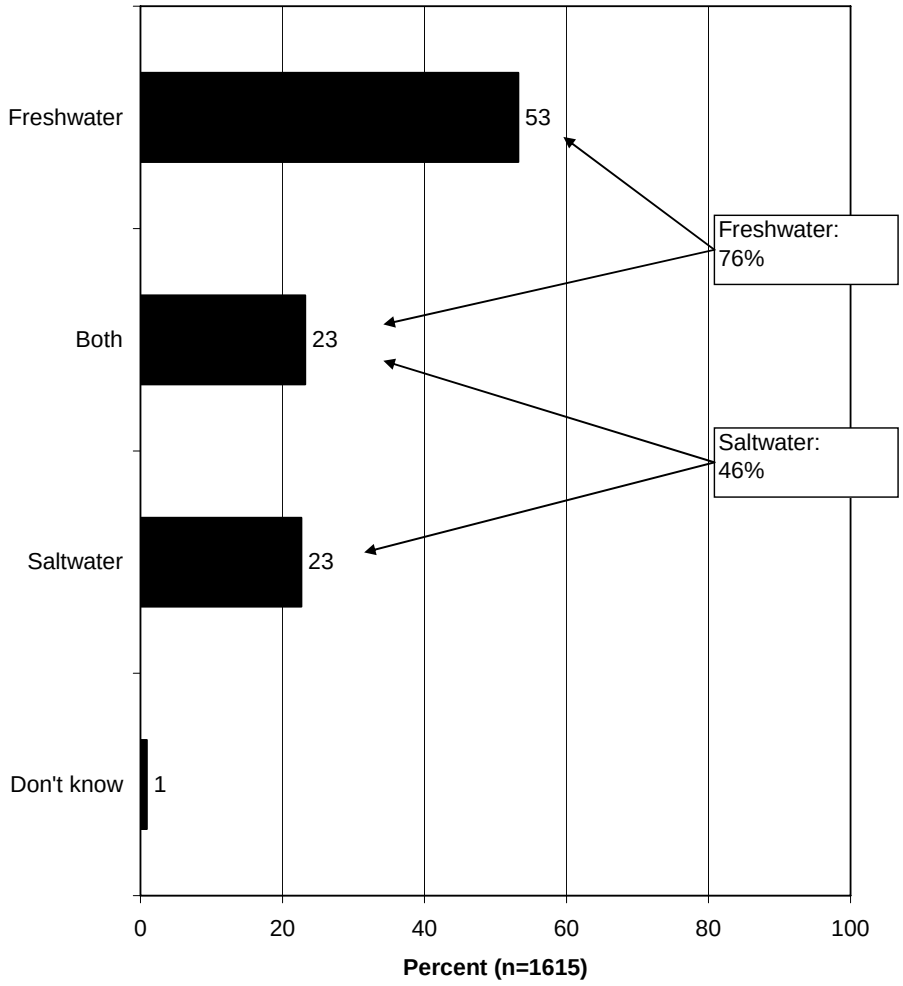


Table 6.6.8. Participation in Fishing From a Boat in Freshwater and Saltwater, by Region

Table shows the percent of those who fished from a boat giving the following responses.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
Freshwater	17	17	85	89	15	35	57	89	51
Both	41	13	13	6	36	43	28	9	27
Saltwater	42	70	2	1	47	22	15	1	21
Don’t know	0	0	0	3	1	0	0	1	2

The survey asked those who had fished from a boat in the previous 2 years to indicate how often they typically fish from the boat they use most often (or their only boat, if they own only one). Figure 6.6.9 shows that the majority of those angler-boaters fish from that boat *frequently* (55%), and another 27% do so *sometimes* (a sum of 81%—note that rounding causes the apparent discrepancy in the sum). However, 17% do so rarely or never, suggesting that, for some of this 17%, their fishing is primarily on another boat that they own or is on another person's boat; the rest of this 17% are simply not avid anglers. Table 6.6.9 shows the regional results.

Figure 6.6.9. Frequency of Fishing From a Boat

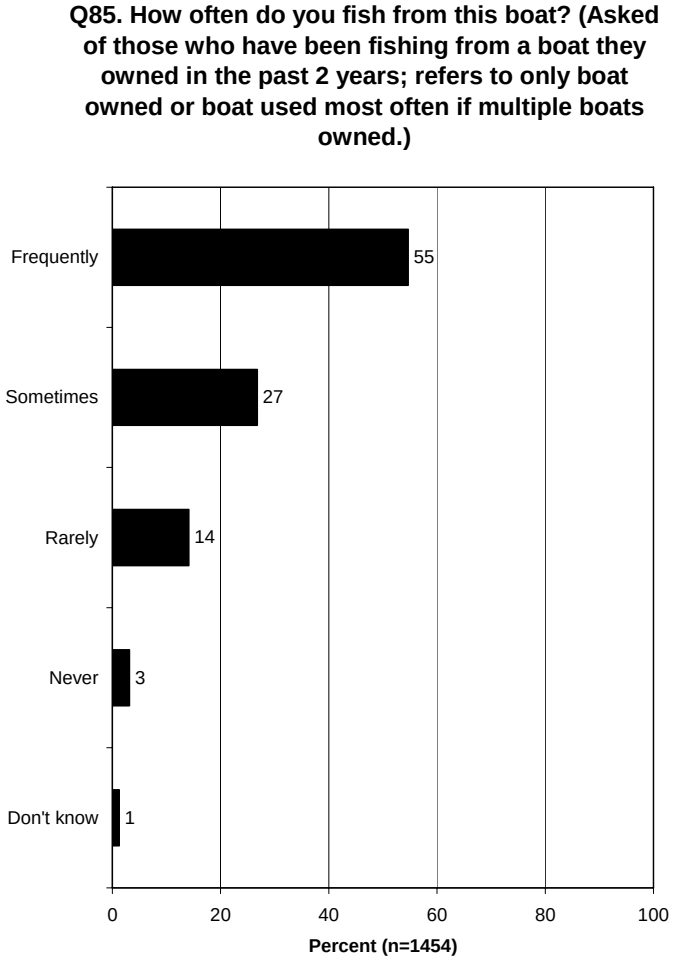


Table 6.6.9. Frequency of Fishing From a Boat, by Region

Table shows the percent of those who fished from a boat giving the following responses.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
Frequently	56	51	55	61	44	53	62	61	59
Sometimes	26	19	27	24	33	31	21	28	27
Rarely	18	18	8	12	22	11	15	10	11
Never	0	5	9	2	0	4	2	1	1
Don't know	0	6	1	1	0	2	2	1	2

Two questions explored the interaction between boating and fishing, among those who indicated that they had fished from a boat in the previous 2 years. One question asked how important boating was to their fishing experiences, and the other question asked how important fishing was to their boating experiences, using a 0 to 10 scale, with 10 being the most important. Each question was asked of only a random half of the sample.

The results suggest that, for those who had fished from a boat in the previous 2 years, the large majority of them think of boating and fishing as inextricably linked: 66% give a rating of 9 or 10 for the importance of boating to their fishing experiences (Figure 6.6.10), and 55% do so for the importance of fishing to their boating experiences (Figure 6.6.11). The regional results are shown in Tables 6.6.10 and 6.6.11.

Figure 6.6.10. Importance of Boating to Their Fishing Experiences

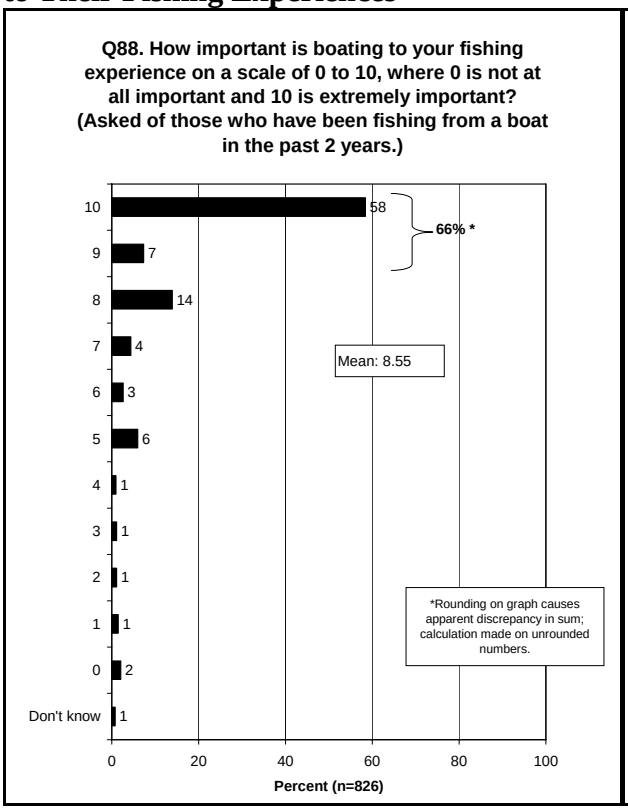


Figure 6.6.11. Importance of Fishing to Their Boating Experiences

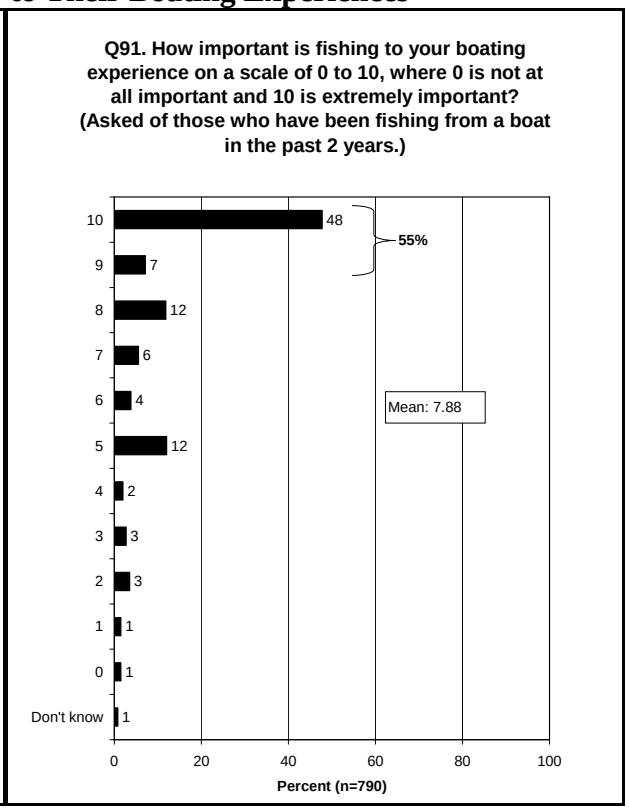


Table 6.6.10. Importance of Boating to Their Fishing Experiences, by Region

Table shows the percent of those who fished from a boat giving the following responses.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
Mean rating	9.06	7.63	8.64	8.60	8.68	8.92	8.74	7.91	8.31
10	66	45	56	58	61	62	62	53	61
9	8	17	5	6	6	9	13	0	3
8	8	9	14	15	18	11	10	19	15
7	11	0	10	4	3	2	1	5	2
6	1	3	5	2	1	2	3	3	2
5	2	9	7	10	3	6	3	4	8
4	0	0	1	0	1	2	2	0	1
3	0	2	0	0	2	0	2	3	1
2	1	1	1	2	1	0	1	1	1
1	0	11	0	0	2	1	0	2	1
0	1	2	0	2	1	1	3	6	5
Don’t know	0	0	0	1	1	5	0	2	0

Table 6.6.11. Importance of Fishing to Their Boating Experiences, by Region

Table shows the percent of those who fished from a boat giving the following responses.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
Mean rating	7.40	8.34	7.79	8.27	7.19	7.66	8.50	8.58	8.08
10	41	59	43	50	45	42	58	52	47
9	0	1	10	10	4	9	3	9	12
8	15	15	15	9	8	6	16	16	12
7	8	5	5	8	3	7	3	10	5
6	8	0	2	8	1	7	3	6	4
5	18	11	12	5	19	17	10	4	8
4	1	0	2	4	1	5	1	1	1
3	2	2	2	2	4	0	3	1	5
2	4	2	3	1	9	1	1	0	4
1	3	2	2	0	3	1	0	1	1
0	1	1	2	2	2	2	1	1	0
Don’t know	0	0	0	2	1	2	1	0	1

The final question that pertains to this section examines the types of boats that are used for recreational fishing. Figure 6.6.12 shows the results of the survey regarding boats used for fishing, with "bass boat" or "jon boat" the most common response (33% of those who own a boat and fished from a boat), followed closely by open motor boat (26%). Regional results are shown in Table 6.6.12.

Figure 6.6.12. Boats Used for Fishing

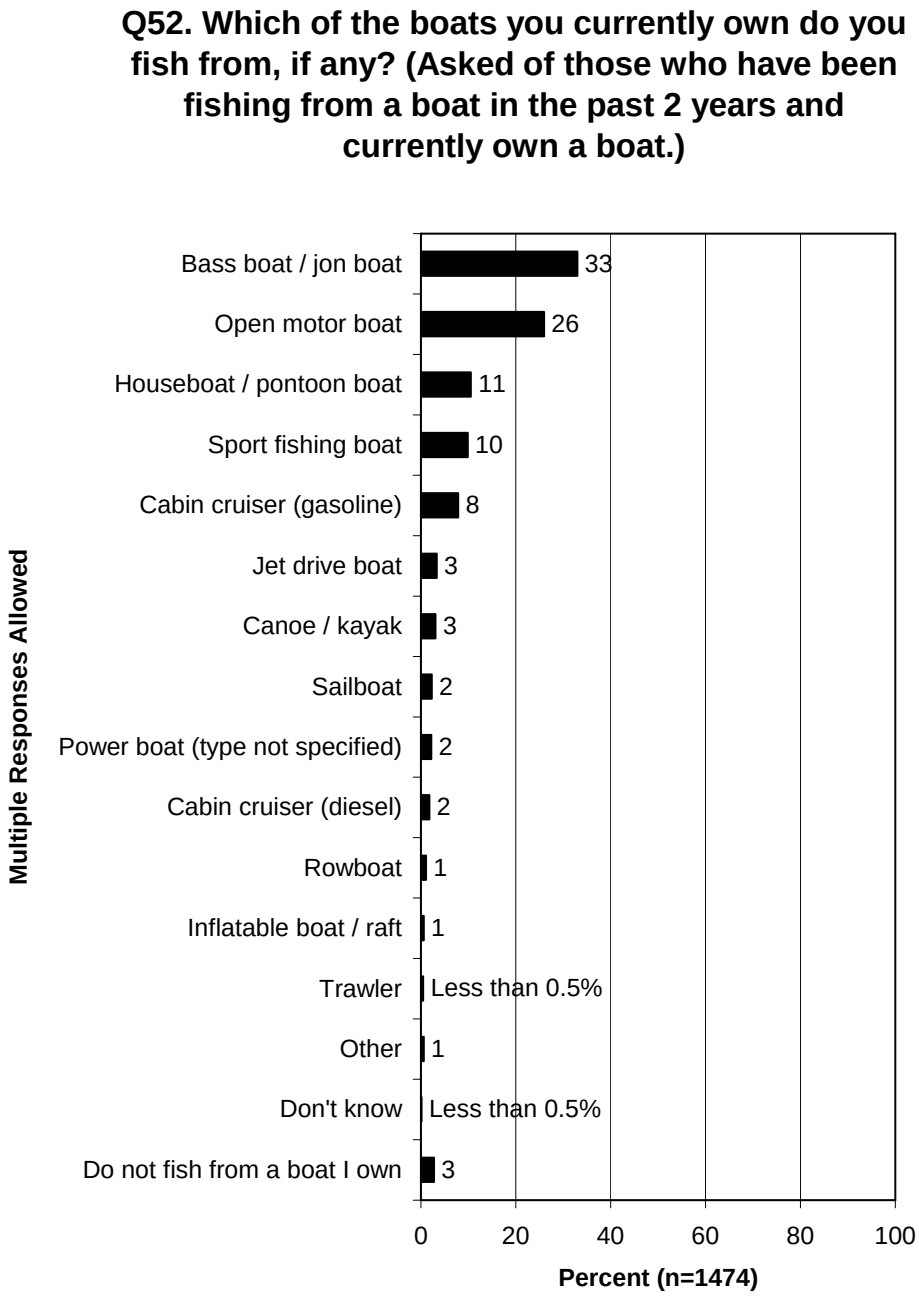


Table 6.6.12. Boats Used for Fishing, by Region

Table shows the percent of those who fished from a boat and who own a boat giving the following responses.	New England Region	Mid-Atlantic Region	East North Central Region	West North Central Region	South Atlantic Region	East South Atlantic Region	West South Atlantic Region	Mountain Region	Pacific Region
Bass boat / jon boat	36	13	29	30	32	52	51	33	26
Open motor boat	31	35	24	26	30	19	19	28	26
Houseboat / pontoon boat	13	13	14	16	5	13	10	9	3
Sport fishing boat	6	15	15	14	10	3	4	2	9
Cabin cruiser (gasoline)	8	7	7	1	12	8	7	7	12
Jet drive boat	3	6	2	1	2	3	4	8	8
Canoe / kayak	3	5	4	6	2	1	1	3	1
Sailboat	2	1	1	0	6	1	2	2	2
Power boat (type not specified)	1	3	4	3	3	0	0	2	1
Cabin cruiser (diesel)	1	1	0	0	5	2	1	0	2
Rowboat	0	1	2	1	0	0	0	2	4
Inflatable boat / raft	0	1	0	1	1	0	2	3	0
Trawler	0	0	0	0	1	1	1	1	1
Other	0	1	0	1	1	1	0	1	1
Don't know	0	0	0	1	0	0	1	0	0
Do not fish from a boat I own	0	1	4	4	1	4	2	2	4

7. INDUSTRY AND PROFESSIONALS SURVEY

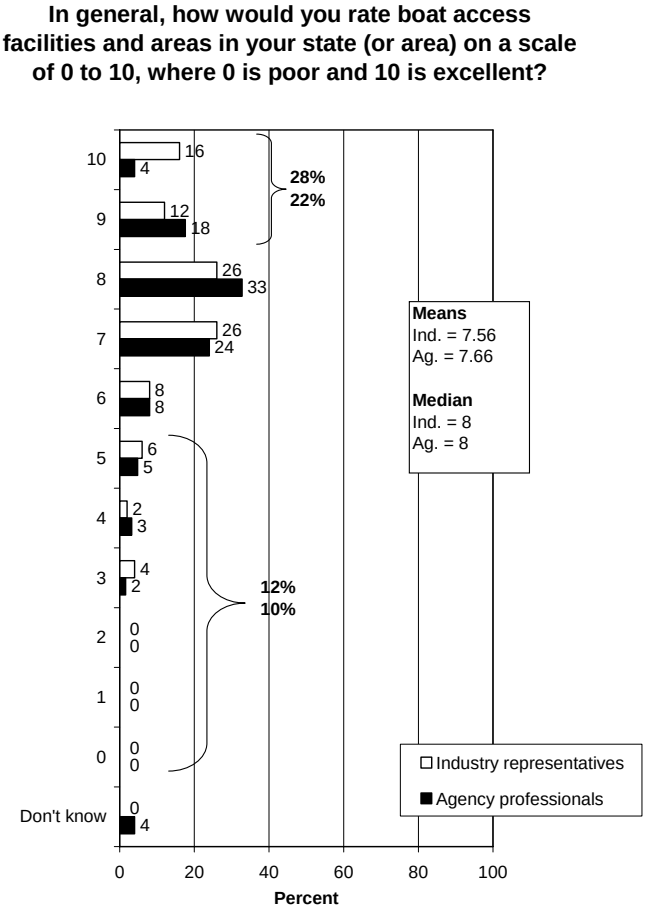
The project entailed a survey of boating industry representatives and agency professionals. The sample was developed from several sources: SOBA itself supplied the research team with a list of SOBA contacts in each state; Responsive Management supplied a list of National Association of State Boating Law Administrators or their surrogates in each state; and several private industry groups and trade associations agreed to send the survey link to their members.

The survey was similar to, but not exactly like, the survey given to boaters. In all, Responsive Management obtained 50 completed interviews with industry representatives and 125 completed interviews with boating agency professionals.

7.1. RATINGS OF BOATING ACCESS OVERALL AND GENERAL PROBLEMS WITH ACCESS

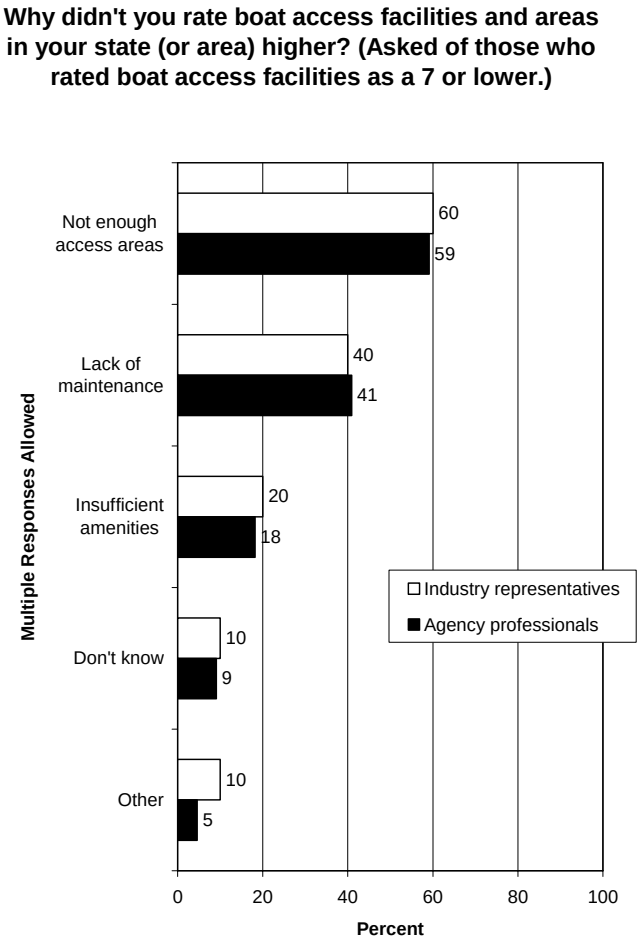
Boat access ratings are fairly positive, with most industry representatives and agency professionals giving a rating above the midpoint (rated on a 0 to 10 scale, with 0 being poor and 10 being excellent). Nonetheless, 12% of industry representatives and 10% of agency professionals gave a rating of the midpoint or lower (Figure 7.1.1). Industry and agency ratings are commensurate with boaters' ratings of access.

Figure 7.1.1. Overall Ratings of Boating Access Among Industry and Agencies



Respondents giving a rating of 7 or lower were asked in follow-up to give, in an open-ended question, their reasons for not rating access higher. Their most common reasons were that there are not enough areas, lack of maintenance, and/or insufficient amenities (Figure 7.1.2), reasons that were also given by boaters in their survey.

Figure 7.1.2. Reasons for Not Rating Access Higher Among Industry and Agencies



As was done in the boater survey, three questions were asked that explore priorities among three choices: *maintaining existing* boating access areas, *improving and expanding existing* boating access areas, and *building new* boating access areas. Among both groups, *maintaining existing* boating access areas is more highly rated than the other two options, with the lowest ratings being for *building new* boating access areas (Figures 7.1.3 through 7.1.5). This prioritization is the same as among boaters in general.

Figure 7.1.3. Importance of Maintaining Existing Boat Access Facilities/Areas, Among Industry/Agency

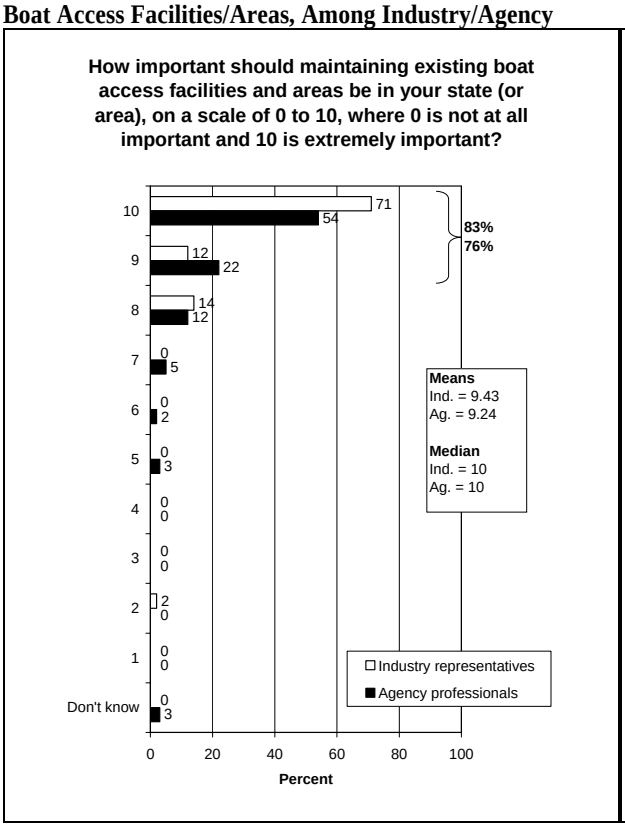


Figure 7.1.4. Importance of Improving and Expanding Boat Access Facilities/Areas, Among Industry/Agency

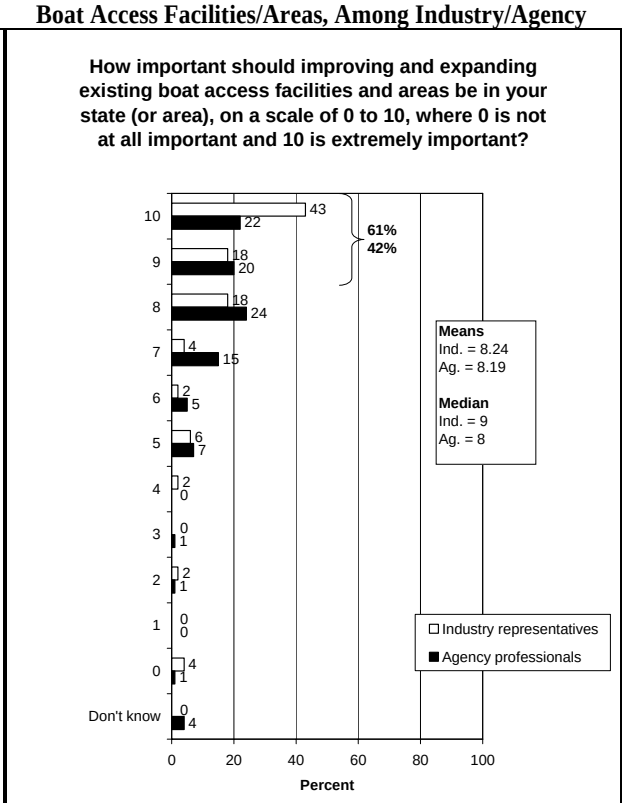
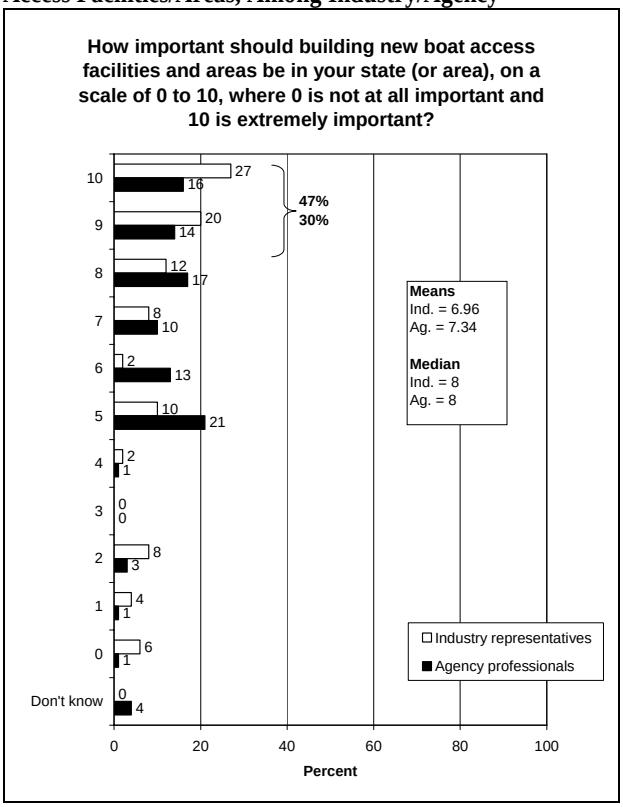


Figure 7.1.5. Importance of Building New Boat Access Facilities/Areas, Among Industry/Agency



The final data in this section come from a series of questions that asked about potential problems with 23 boating or fishing access issues. For each issue, industry representatives and agency professionals were asked how much of a problem they think the issue is for boaters in their state or area. Top issues include crowding at launch sites, not enough parking at boat access areas, lack of knowledge among boaters and anglers on put-in and take-out etiquette, and environmental concerns (Figures 7.1.6 and 7.1.7). Again, these groups are similar to boaters in what they regard as problems.

Figure 7.1.6. Major Problems With Boating and Fishing Access, Responses of Industry and Agencies

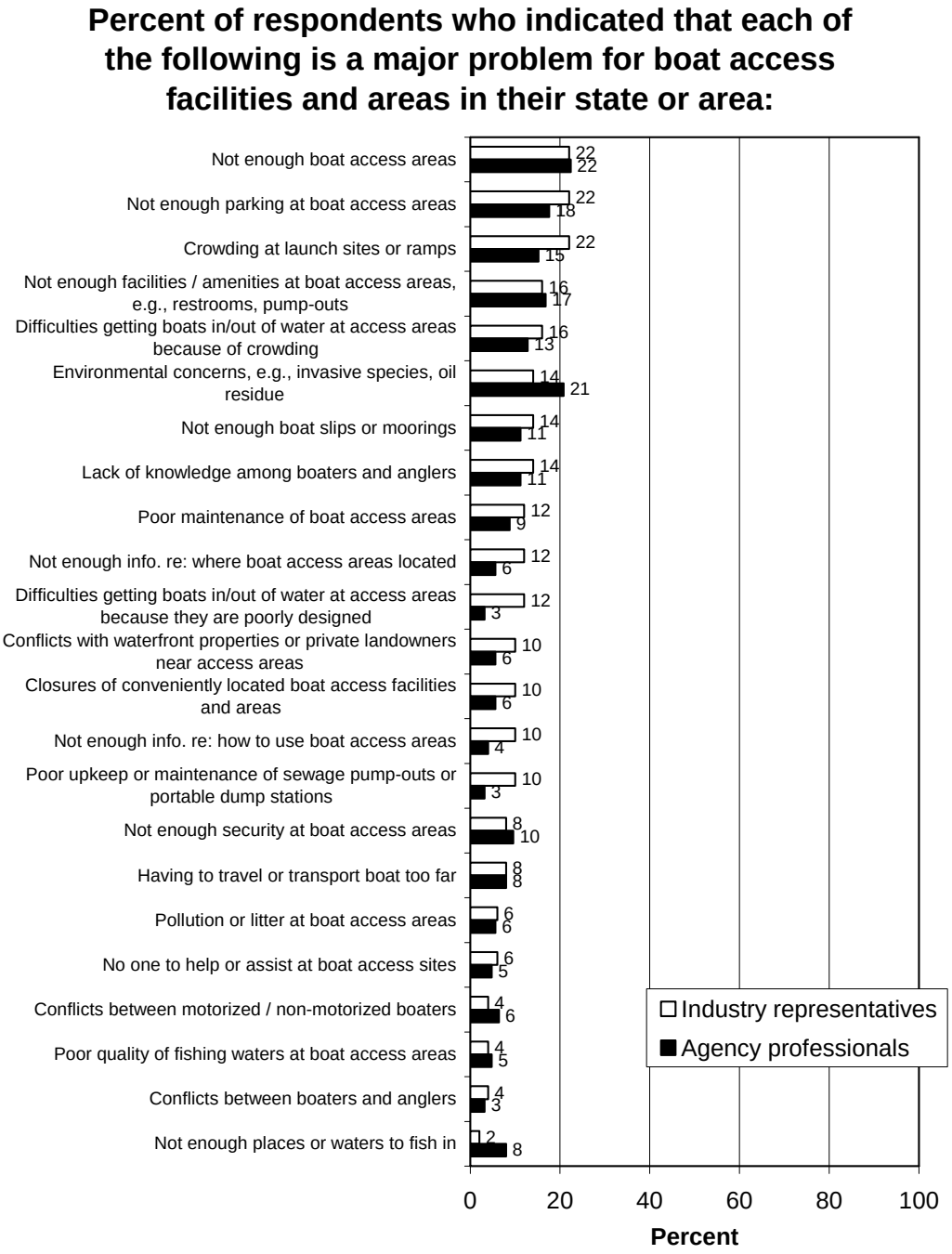
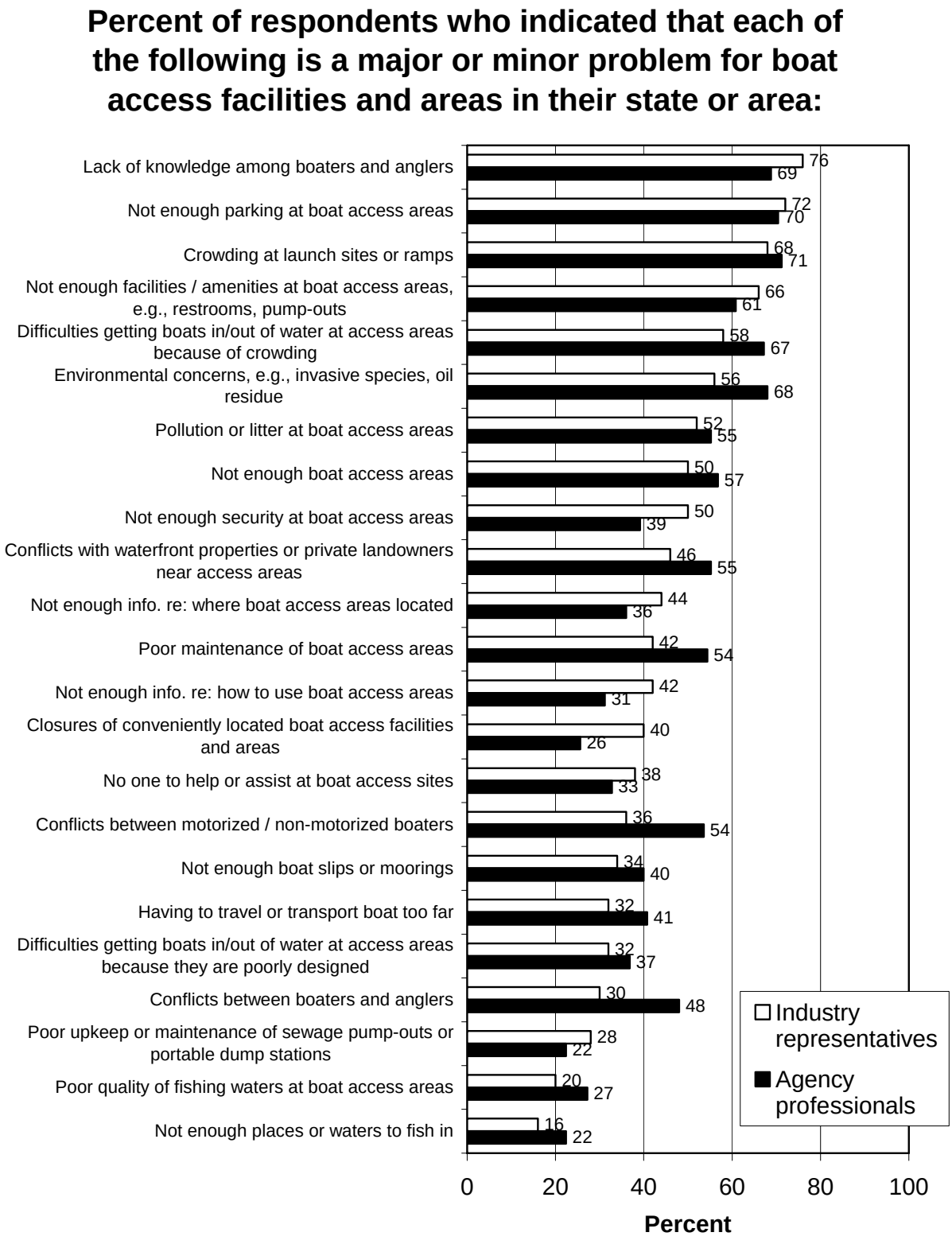


Figure 7.1.7. Major or Minor Problems With Boating and Fishing Access, Responses of Industry and Agencies



7.2. DESIRED FEATURES AND AMENITIES AT ACCESS AREAS

Industry representatives and agency professionals were asked to rate the importance of 25 features or amenities that boaters consider when choosing an access site. Figure 7.2.1 shows that the top four items are the same among industry representatives and among agency professionals: launch ramps, restrooms, access for motorized boats, and parking for vehicles with boat trailers.

Figure 7.2.1. Industry Representatives' and Agency Professionals' Mean Ratings of Importance of Features and Amenities at Access Sites

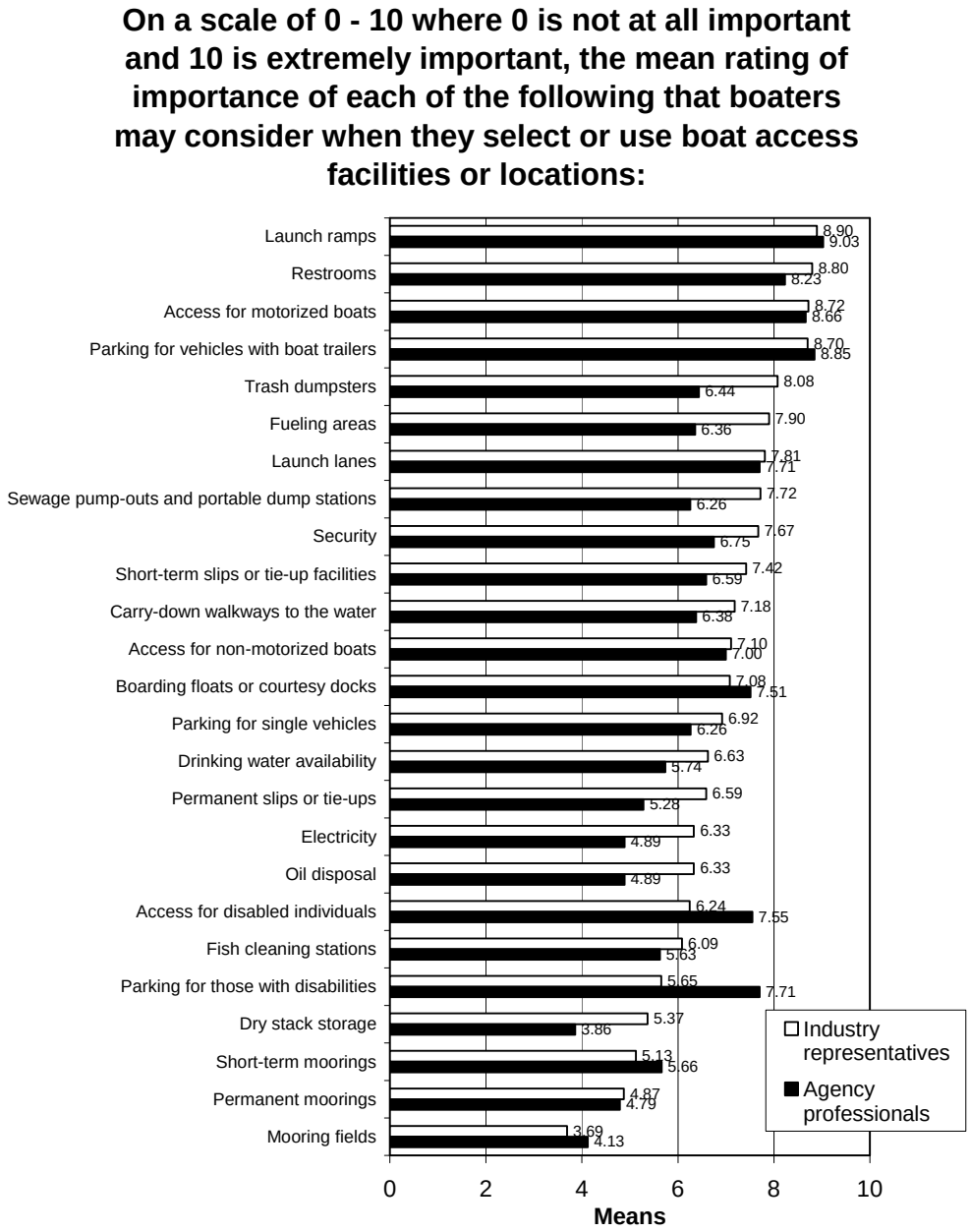


Table 7.2.1 takes a closer look at differences among industry representatives and agency professionals on this series of questions—after the first four items, some substantial differences emerge. These differences in relative importance are on the five items that are indicated by

shading in Table 7.2.1, all with a difference in their rank of more than 5 places: trash dumpsters, ranked 5th among industry representatives but 12th among agency professionals, a difference of 7 places; fueling areas (difference of 8 places); sewage pump-outs/portable dump stations (difference of 8 places); access for disabled individuals (difference of 12 places); and parking for those with disabilities (difference of 15 places).

Table 7.2.1. Comparison of Mean Ratings of Importance of the Features/Amenities Between Industry Representatives, Agency Professionals, and Boaters

Feature/Amenity	Industry reps' means	Industry reps' rank	Agency pros' mean	Agency pros' rank*	Boaters' mean	Boaters' rank**
Launch ramps	8.90	1	9.03	1	7.06	2
Restrooms	8.80	2	8.23	4	6.56	5
Access for motorized boats	8.72	3	8.66	3	7.29	1
Parking for vehicles with boat trailers	8.70	4	8.85	2	7.05	3
Trash dumpsters	8.08	5	6.44	12	6.69	4 (agency)
Fueling areas	7.90	6	6.36	14	4.91	14 (industry)
Launch lanes	7.81	7	7.71	5	6.03	6
Sewage pump-outs / portable dump stations	7.72	8	6.26	16	4.58	18 (industry)
Security	7.67	9	6.75	10	6.03	7
Short-term slips or tie-up facilities	7.42	10	6.59	11	5.75	10
Carry-down walkways to the water	7.18	11	6.38	13	5.63	13
Access for non-motorized boats	7.10	12	7.00	9	4.60	17 (agency)
Boarding floats or courtesy docks	7.08	13	7.51	8	5.67	12
Parking for single vehicles	6.92	14	6.26	15	5.80	9 (both)
Drinking water availability	6.63	15	5.74	17	4.52	19
Permanent slips / tie-ups	6.59	16	5.28	20	4.85	15
Electricity	6.33	17	4.89	22	3.63	22
Oil disposal	6.33	18	4.89	21	3.76	21
Access for disabled individuals	6.24	19	7.55	7	5.67	11 (industry)
Fish cleaning stations	6.09	20	5.63	19	3.54	23
Parking for those with disabilities	5.65	21	7.71	6	5.87	8 (industry)
Dry stack storage	5.37	22	3.86	25	2.75	24
Short-term moorings	5.13	23	5.66	18	4.62	16 (industry)
Permanent moorings	4.87	24	4.79	23	3.76	20
Mooring fields	3.69	25	4.13	24	2.72	25

*Indicates a difference in rank compared to industry representatives of more than 5 places.

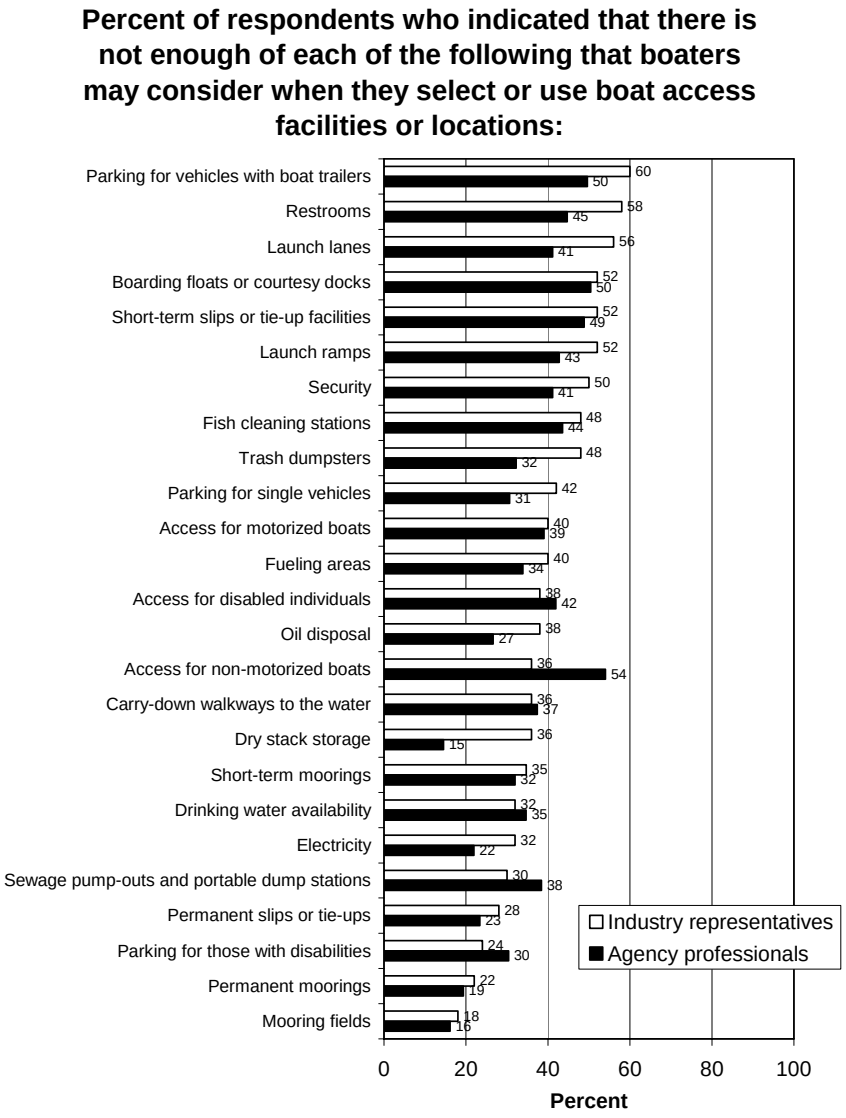
**Indicates a difference in rank compared to either industry representatives or agency professionals; the parentheses indicate to which group boaters differ.

Also included in Table 7.2.1 is a look at boaters' opinions on this series of questions. Shaded cells indicate where the difference in rank between boaters and either the industry representative group or the agency professional group is more than 5 places. For the most part, boaters more often differ with industry representatives than with agency professionals, although all groups are in fairly close agreement about the top four items.

The survey also asked industry representatives and agency professionals if they thought that there were enough of the same 25 features and amenities. There are fairly substantial differences between industry representatives and agency professionals. Among industry representatives, the

top features/amenities for which there are not enough are parking for vehicles with boat trailers (60% of industry representatives say that there is not enough of this), restrooms (58%), launch lanes (56%), boarding floats or courtesy docks (52%), short-term slips or tie-up facilities (52%), and launch ramps (also 52%)—all with a majority of industry representatives saying that there are not enough of them (Figure 7.2.2).

Figure 7.2.2. Features and Amenities of Which There Are Not Enough, Responses of Industry Representatives and Agency Professionals



Among agency professionals, the top features and amenities on the graph in Figure 7.2.2 are access for non-motorized boats (54% of agency professionals say that there is not enough of this) and boarding floats or courtesy docks (50.4%; it rounds to 50% on graph)—the only items with a majority of agency professionals saying that there are not enough of them. A close third is parking for vehicles with boat trailers (49.6%; it rounds to 50% on graph).

A comparison was also made between the industry representatives/agency professionals survey and the boater survey. The first notable difference is that industry representatives and agency professionals are more negative in that greater percentages of them compared to boaters think that there are not enough of most of the features and amenities. For instance, the feature/amenity

at the top of boaters' list of which there are not enough is "access for disabled individuals," with only 42% saying that there is not enough of this. Compare this to the top among industry representatives and agency professionals: industry representatives have nine items with greater than 42% thinking there are not enough of them, and agency professionals have seven such items. For almost every item, a smaller percentage of boaters, relative to industry representatives and agency professionals, think that there is not enough of the feature/amenity.

Another difference is revealed in the features and amenities at the top of the lists. Boaters' top items in the ranking by "not enough of them" are, generally, not the same features/amenities named by industry representatives and agency professionals. Items at the top of the boaters' list that are not at the top of the lists for industry representatives and agency professionals include access for disabled individuals, sewage pump-outs/portable dump stations, and trash dumpsters. Table 7.2.2 shows the differences between industry representatives and agency professionals, as well as between those groups and boaters.

Table 7.2.2. Comparison of Perceptions of Amount of Features/Amenities Available Between Industry Representatives, Agency Professionals, and Boaters

Feature/Amenity	Percent of industry reps saying that there is not enough	Industry reps' rank	Percent of agency pros saying that there is not enough	Agency pros' rank*	Percent of boaters saying that there is not enough	Boaters' rank**
Parking for vehicles with boat trailers	60	1	50	3	29	7 (industry)
Restrooms	58	2	45	5	33	2
Launch lanes	56	3	41	9	19	22 (both)
Boarding floats or courtesy docks	52	4	50	2	29	8 (agency)
Short-term slips or tie-up facilities	52	5	49	4	33	5
Launch ramps	52	6	43	7	24	15 (both)
Security	50	7	41	10	30	6
Fish cleaning stations	48	8	44	6	26	12 (agency)
Trash dumpsters	48	9	32	16	33	4 (agency)
Parking for single vehicles	42	10	31	18	19	21 (industry)
Access for motorized boats	40	11	39	11	20	20 (both)
Fueling areas	40	12	34	15	28	9 (agency)
Access for disabled individuals	38	13	42	8	42	1 (both)
Oil disposal	38	14	27	20	24	14 (agency)
Access for non-motorized boats	36	15	54	1	17	23 (both)
Carry-down walkways to the water	36	16	37	13	20	17
Dry stack storage	36	17	15	25	15	25 (industry)
Short-term moorings	35	18	32	17	26	11 (both)
Drinking water availability	32	19	35	14	27	10 (industry)
Electricity	32	20	22	22	20	19
Sewage pump-outs and portable dump stations	30	21	38	12	33	3 (both)
Permanent slips / tie-ups	28	22	23	21	22	16 (both)
Parking for those with disabilities	24	23	30	19	26	13 (both)
Permanent moorings	22	24	19	23	20	18 (both)
Mooring fields	18	25	16	24	17	24

*Indicates a difference in rank compared to industry representatives of more than 5 places.

**Indicates a difference in rank compared to either industry representatives or agency professionals; the parentheses indicate to which group boaters differ.

The survey of industry representatives and agency professionals asked about the quality of existing features and amenities in their state or area, from the same list of 25 items (Figure 7.2.3). The two groups have some similarities (for instance, both rate mooring facilities poorly), but there are differences with such features/amenities as oil disposal (mean rating of 5.60 among industry representatives and 3.67 among agency professionals), electricity (6.02 to 4.82), and drinking water availability (6.24 to 4.81), as shown in Table 7.2.3.

Figure 7.2.3. Industry Representatives' and Agency Professionals' Mean Ratings of Quality of Features and Amenities at Access Sites

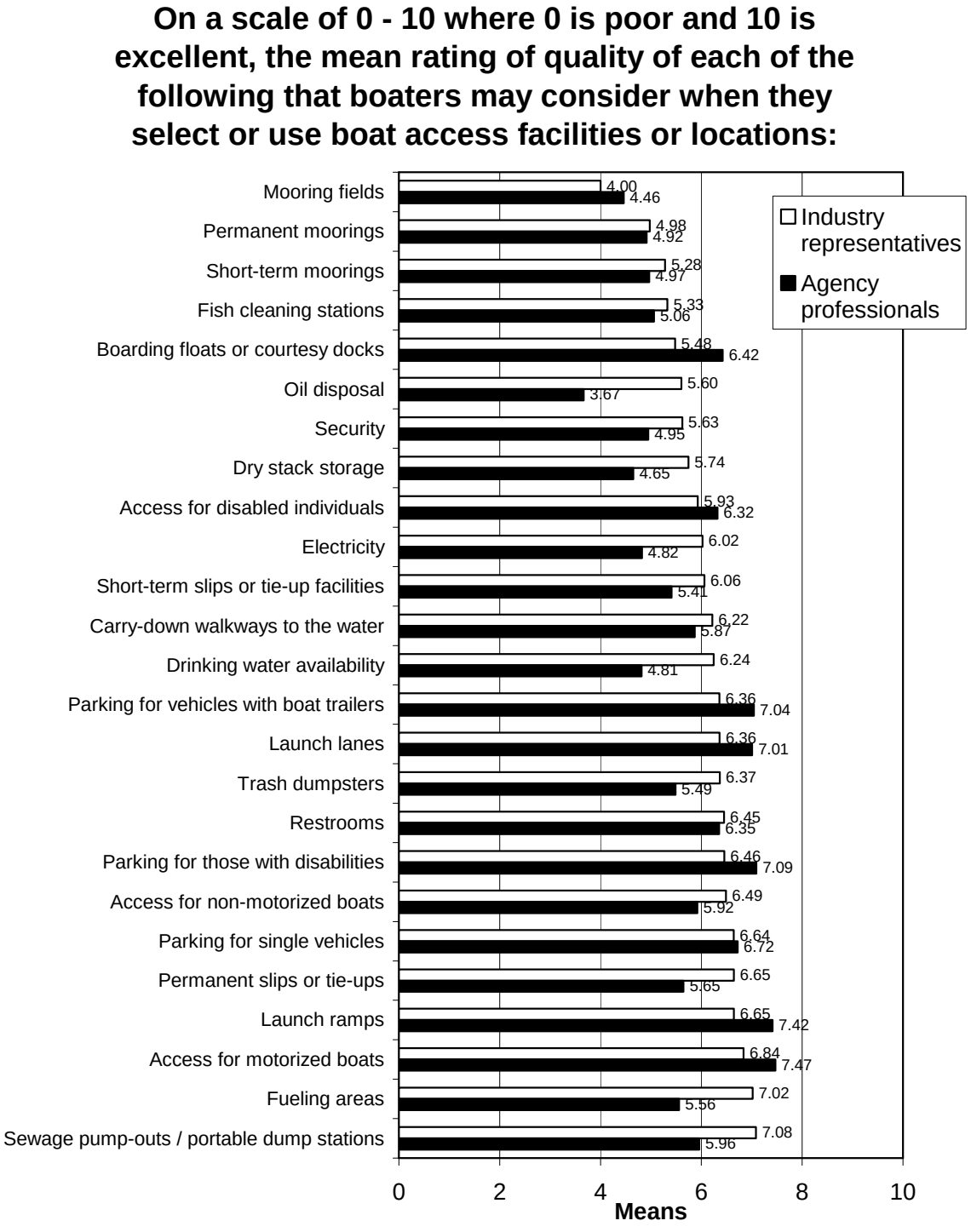


Table 7.2.3. Comparison of Mean Ratings of Quality of the Features/Amenities Between Industry Representatives, Agency Professionals, and Boaters

Feature/Amenity	Industry reps' means	Industry reps' rank (by worst quality rating)	Agency pros' mean	Agency pros' rank (by worst quality rating)*	Boaters' mean	Boaters' rank (by worst quality rating)**
Mooring fields	4.00	1	4.46	2	8.78	25 (both)
Permanent moorings	4.98	2	4.92	6	7.40	23 (both)
Short-term moorings	5.28	3	4.97	8	7.16	21 (both)
Fish cleaning stations	5.33	4	5.06	9	5.48	7
Boarding floats or courtesy docks	5.48	5	6.42	19	6.11	12 (both)
Oil disposal	5.60	6	3.67	1	5.41	6
Security	5.63	7	4.95	7	5.58	8
Dry stack storage	5.74	8	4.65	3	5.74	10 (agency)
Access for disabled individuals	5.93	9	6.32	17	5.14	3 (both)
Electricity	6.02	10	4.82	5	5.31	4 (industry)
Short-term slips or tie-up facilities	6.06	11	5.41	10	6.52	15
Carry-down walkways to the water	6.22	12	5.87	14	6.59	17
Drinking water availability	6.24	13	4.81	4	5.36	5 (industry)
Parking for vehicles with boat trailers	6.36	14	7.04	22	5.09	2 (both)
Launch lanes	6.36	15	7.01	21	6.92	20
Trash dumpsters	6.37	16	5.49	11	6.40	14
Restrooms	6.45	17	6.35	18	6.05	11 (both)
Parking for those with disabilities	6.46	18	7.09	23	6.55	16 (agency)
Access for non-motorized boats	6.49	19	5.92	15	6.78	19
Parking for single vehicles	6.64	20	6.72	20	4.81	1 (both)
Permanent slips or tie-ups	6.65	21	5.65	13	6.62	18
Launch ramps	6.65	22	7.42	24	7.18	22
Access for motorized boats	6.84	23	7.47	25	7.43	24
Fueling areas	7.02	24	5.56	12	6.34	13 (industry)
Sewage pump-outs / portable dump stations	7.08	25	5.96	16	5.63	9 (both)

*Shaded cells indicate a difference in rank compared to industry representatives of more than 5 places.

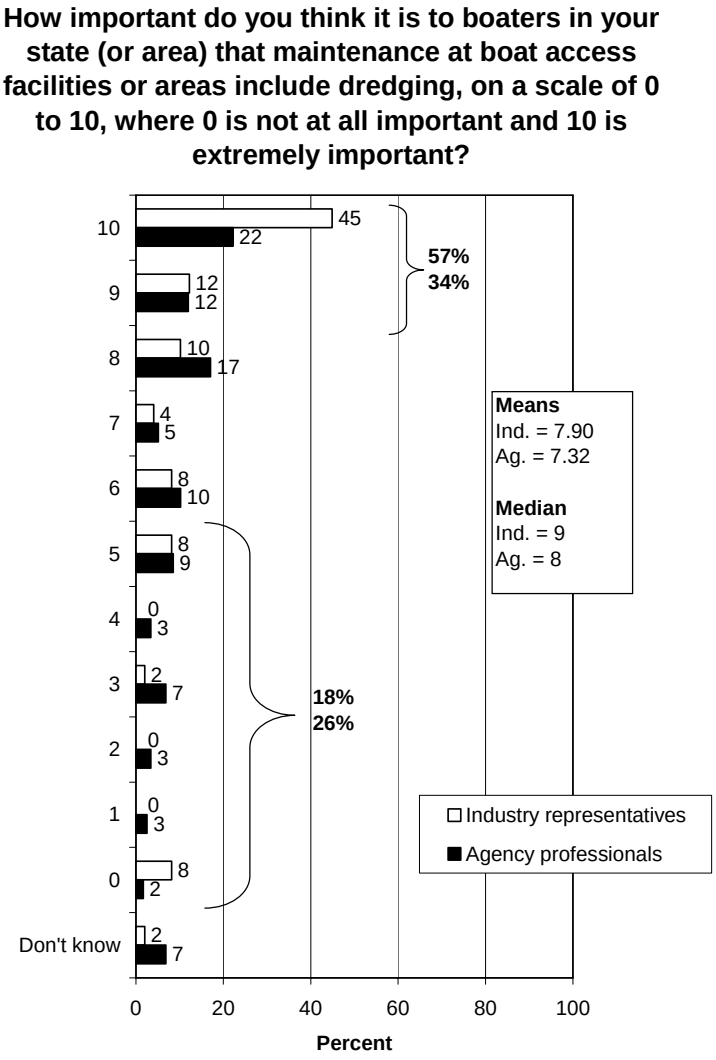
**Shaded cells indicate a difference in rank compared to either industry representatives or agency professionals of more than 5 places; the parentheses indicate to which group boaters differ.

Table 7.2.3 also shows that boaters' opinions differ markedly from both industry representatives and agency professionals. A remarkable difference is that the lowest rated feature/amenity among industry representatives (mooring fields), which is the second lowest among agency professionals, is the highest rated feature/amenity among boaters. In fact, mooring fields, permanent moorings, and short-term moorings—all rated low by both industry representatives and agency professionals are among the highest rated by boaters. On the other hand, parking for single vehicles is the lowest ranked item among boaters, but fairly highly ranked by industry representatives and agency professionals.

7.3. MAINTENANCE OF BOATING ACCESS AREAS

The survey asked about the importance that maintenance include dredging. While at least a third of both groups give a high rating of 9 or 10, dredging is a little more important to industry representatives (57% of industry representatives give a high rating, 34% of agency professionals do so) (Figure 7.3.1).

Figure 7.3.1. The Importance of Dredging as Part of Maintenance Among Industry Representatives and Agency Professionals

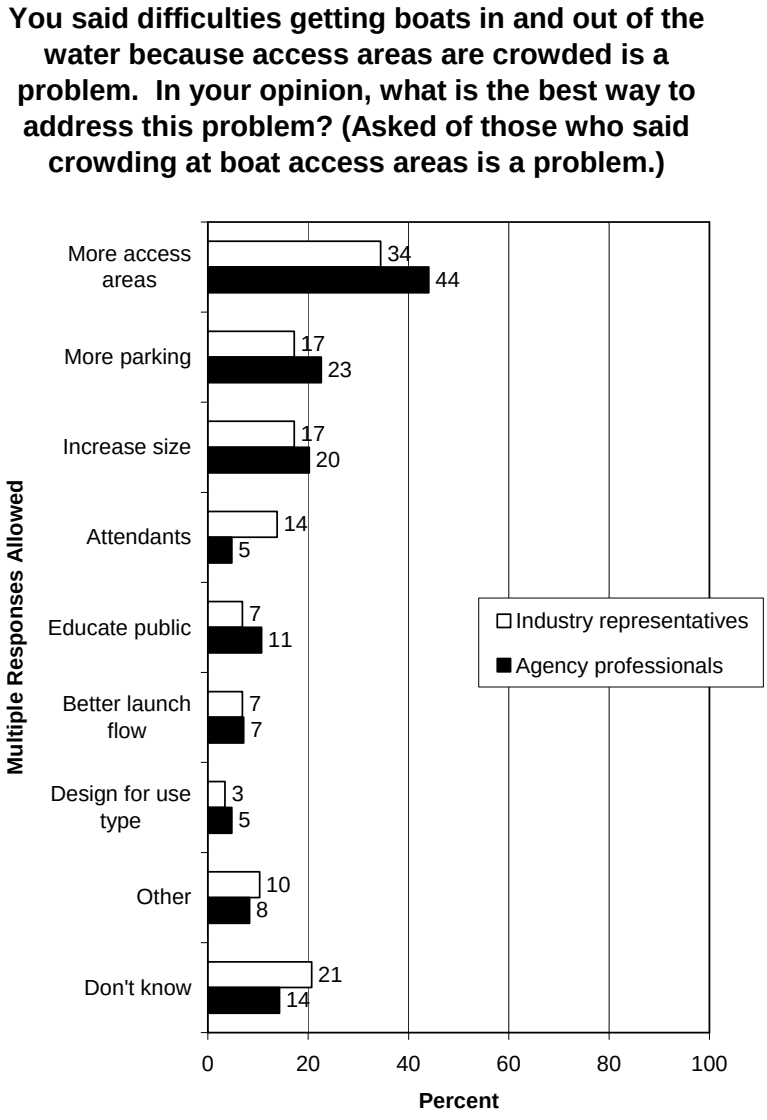


These ratings are not far off from those of boaters. As was shown in Figure 6.3.1 in the previous section of the report, 44% of boaters gave a rating of 9 or 10 (in the middle between industry representatives and agency professionals), while at the other end, 30% of boaters gave a rating of the midpoint or less (a greater percentage than either industry representatives and agency professionals).

7.4. PROBLEMS WITH CROWDING AT AND DESIGN FLAWS OF ACCESS SITES

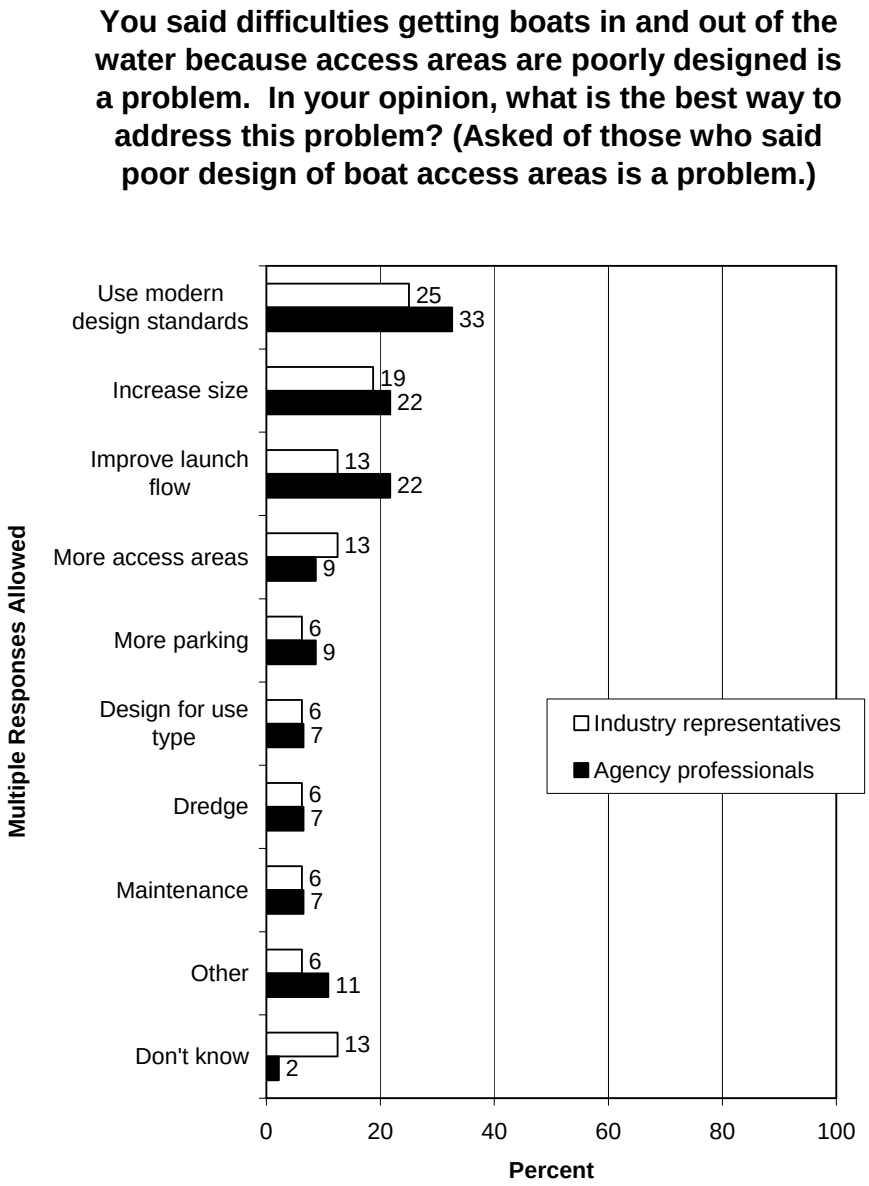
Those industry representatives and agency professionals who said that "difficulties getting boats in and out of the water because access areas are crowded" is a problem were asked in follow-up for their opinions on the best way to address the problem. The question was open-ended, allowing any response that came to mind. The top solutions are the same among both groups: add more access areas, add more parking, and increase the size of the areas—all solutions related to increased capacity (Figure 7.4.1). Among the responses not tied to direct capacity increase are those that pertain to having attendants, educating the public, and making a better launch flow—all ways perhaps to increase capacity by more efficient use. These results are similar to those among boaters, who had some advocates for having volunteer attendants and/or educating the public on how to efficiently put in and take out.

Figure 7.4.1. Ways to Address Crowding Problems at Access Areas, Responses of Industry Representatives and Agency Professionals



Similar to the question above, a follow-up question was also asked of those who reported poor design as being a problem, seeking suggestions for ways to address the problem. The categories of responses run the gamut, such as upgrading to modern design standards, more parking, and simple maintenance—but no response had a majority (Figure 7.4.2). The top response among both industry representatives and agency professionals is to use modern standards (25% of industry representatives, 33% of agency professionals). The responses on the industry/agency survey are commensurate with those in the boater survey.

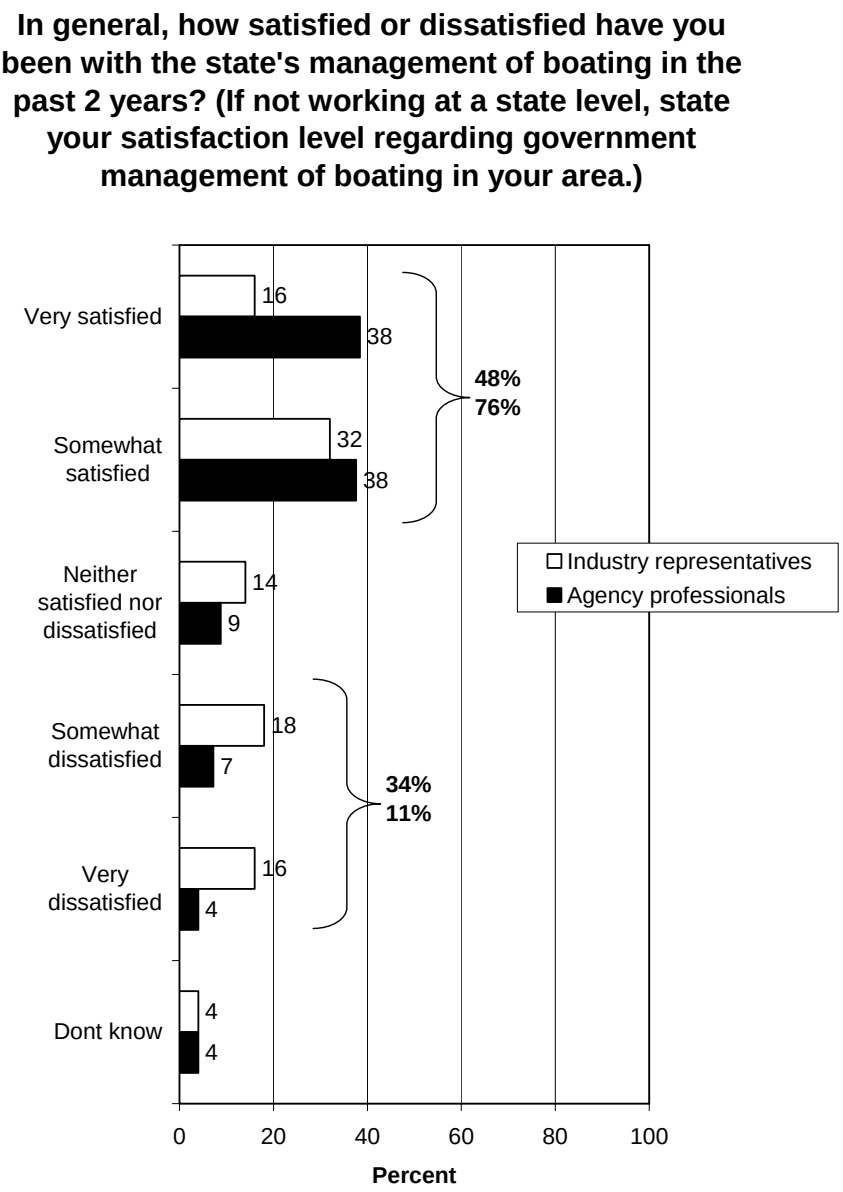
Figure 7.4.2. Ways to Address Crowding Problems at Access Areas, Responses of Industry Representatives and Agency Professionals



7.5. SATISFACTION AND DISSATISFACTIONS WITH BOATING PARTICIPATION

Satisfaction (48%) leads dissatisfaction (34%) among industry representatives, when they are asked about their level of satisfaction/dissatisfaction with their state's (or their area's) management of boating over the past 2 years (Figure 7.5.1). Dissatisfaction is about evenly divided between *somewhat* and *very* dissatisfied among industry representatives.

Figure 7.5.1. Satisfaction or Dissatisfaction With Boating Among Industry Representatives and Agency Professionals

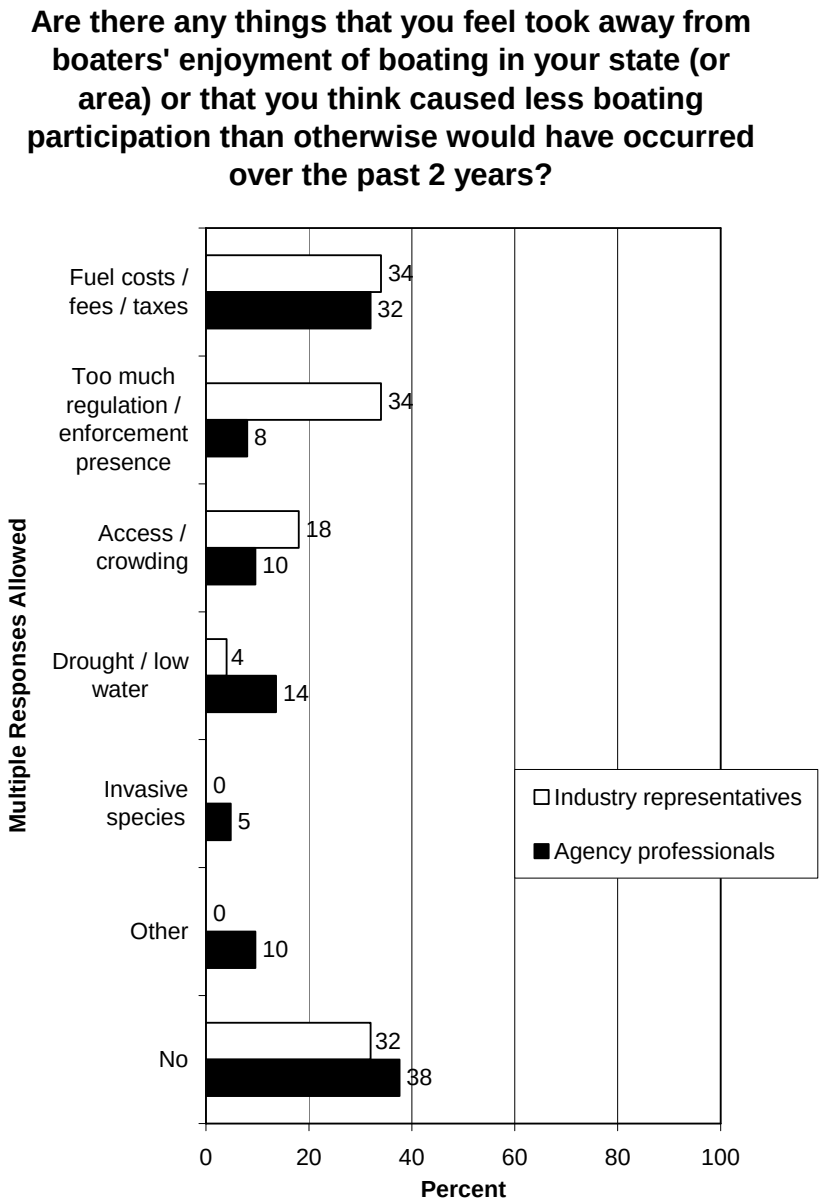


To compare to the boater survey, 94% of boaters were satisfied with their boating (75% *very* satisfied and 19% *somewhat* satisfied). In this respect, industry and government seem more critical than boaters about the general level of satisfaction with boating, although boaters were

asked about satisfaction with their boating experiences, while the industry/agency survey asked about satisfaction with boating management.

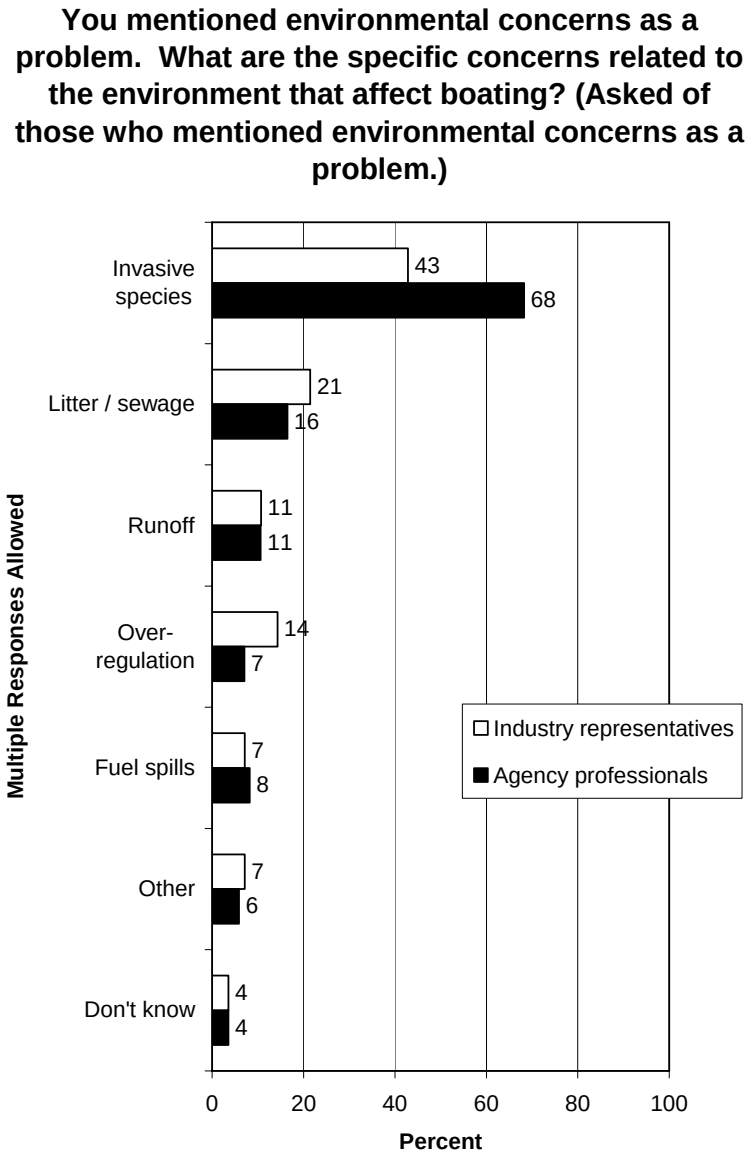
The industry/agency survey asked an open-ended question about possible things that might have taken away from boaters' enjoyment of boating or caused them to boat less often. Costs in general are cited by a third on industry representatives and agency professionals; a third of industry representatives cite too much regulation as a problem (Figure 7.5.2). Responses related to access and crowding of access sites are given by 18% of industry representatives and 10% of agency professionals.

Figure 7.5.2. Dissatisfactions With and Constraints to Boating Participation, as Perceived by Industry Representatives and Agency Professionals



The final question in this section was in follow-up to those who rated environment concerns as a major or minor problem, in the series that asked respondents to rate potential problems. The most prominent specific environmental problem is invasive species, followed by various pollution-related responses (Figure 7.5.3).

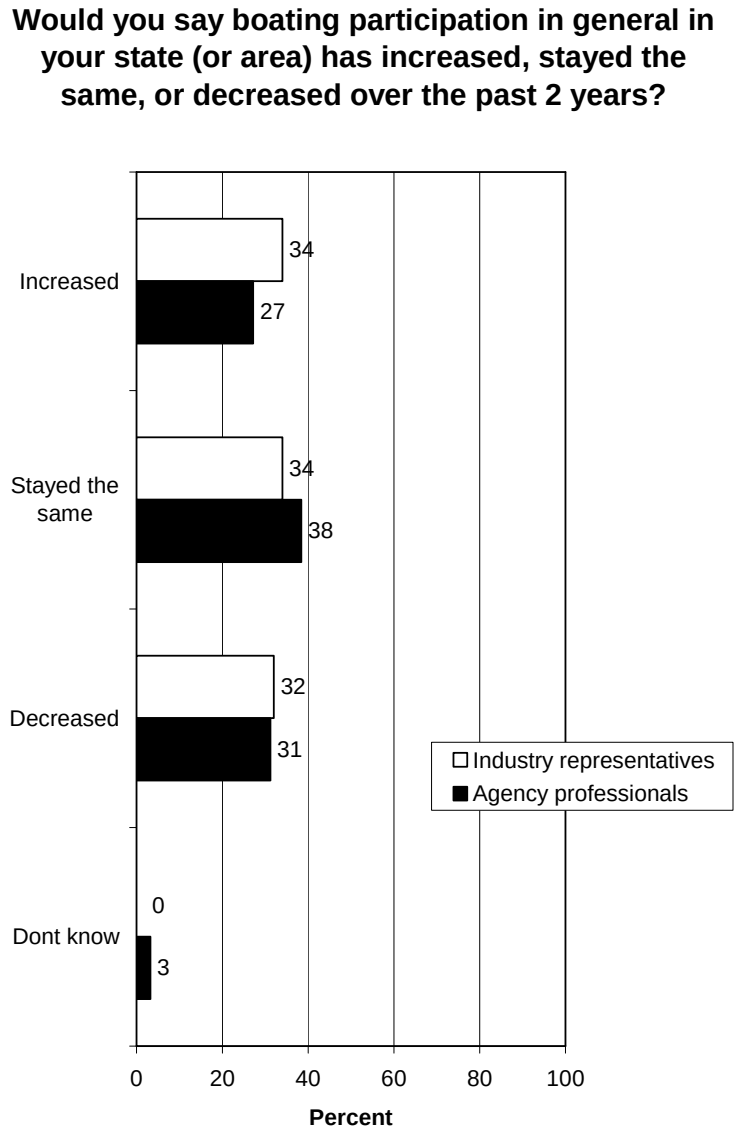
Figure 7.5.3. Environmental Concerns Among Industry Representatives and Agency Professionals



7.6. TRENDS IN AMOUNT OF PARTICIPATION

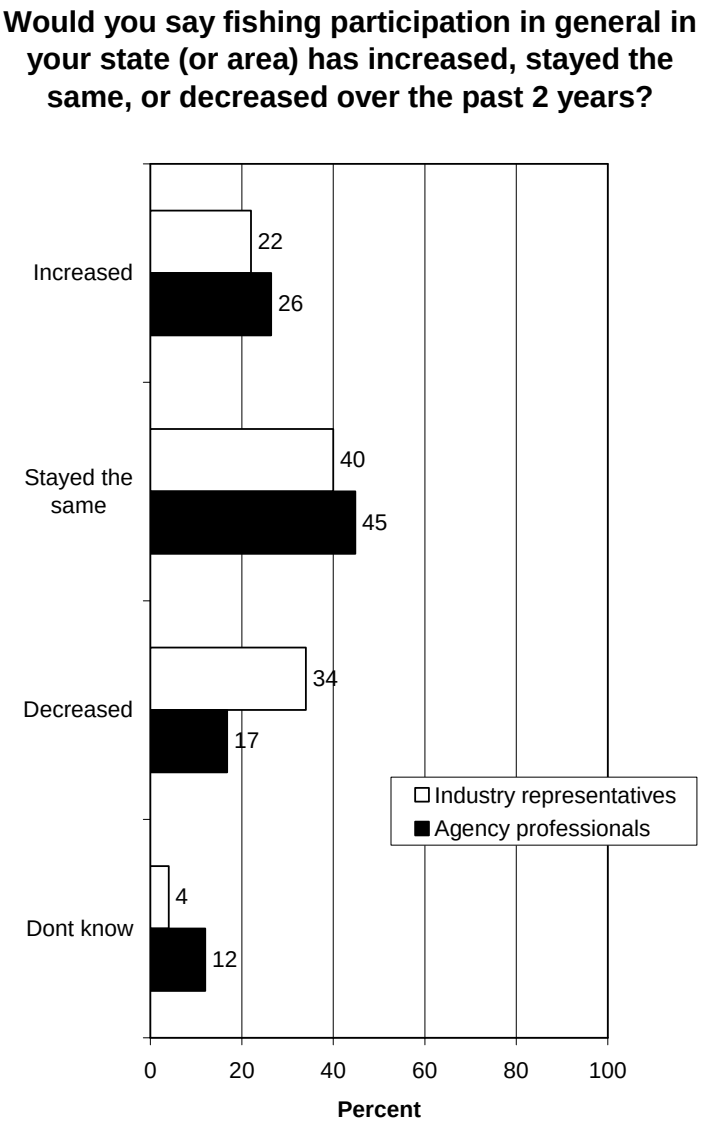
Industry representatives and agency professionals were asked if they thought boating and fishing participation in their state (or area) had, over the previous 2 years, increased, stayed the same, or decreased. Regarding boating participation, industry representatives fall into almost exact thirds: 34% think it has increased, 34% think it has stayed the same, and 32% think it has decreased over the past 2 years (Figure 7.6.1). Agency professionals fall into less evenly distributed groups. (In the boater survey, 18% of boaters said increased, 43% said stayed the same, and 39% said decreased.)

Figure 7.6.1. Trend in Boating Participation Over the Past 2 Years, Responses of Industry Representatives and Agency Professionals



The same question was asked about fishing participation over the past 2 years. For both groups, the most common response is that fishing participation has stayed the same: 40% of industry representatives and 45% of agency professionals (Figure 7.6.2). Otherwise, the two groups flip-flop, with industry representatives more often saying it has *decreased* rather than *increased*, but agency professionals saying the opposite. (In the boater survey, 19% of boaters said increased, 43% said stayed the same, and 38% said decreased.)

Figure 7.6.2. Trend in Fishing Participation Over the Past 2 Years, Responses of Industry Representatives and Agency Professionals



8. METHODOLOGY

8.1. METHODOLOGY FOR THE REVIEW OF PREVIOUS RESEARCH

For the review of previous research, the researchers used a variety of national publications, regional publications, and state sources. In addition, publications and resources produced by project partners were examined, such as SOBA's 2005 boating inventory and other databases and agency/organization publications.

In addition, Responsive Management, through the auspices of SOBA, contacted boating professionals in each state agency requesting research the state may have conducted related to boating access. Responsive Management researchers received a number of federal and regional documents, as well as research from Arizona, Connecticut, Florida, Maine, Massachusetts, Minnesota, North Carolina, South Carolina, Texas, and Virginia.

Boating access research dated earlier than 1998 was not included, as researchers found that information more than 15 years old is either considered in more recent boating access studies through trends or is outdated.

8.2. FOCUS GROUP METHODOLOGY

8.2.A. FOCUS GROUP OVERVIEW

Focus groups entail in-depth, structured discussions with small groups of individuals. The use of focus groups is an accepted research technique for qualitative exploration of attitudes, opinions, perceptions, motivations, constraints, participation, and behaviors. Focus groups provide researchers with insights, new hypotheses, and understanding through the process of interaction.

Focus groups allow for extensive open-ended responses to questions, probing, follow-up questions, group discussions, and observation of emotional responses to topics—aspects that cannot be measured in a quantitative survey. Qualitative research sacrifices reliability for increased validity. This means that, although focus group findings cannot be replicated statistically as can a survey (high reliability), they provide researchers with a more valid understanding of the topics or issues of concern in the study (high validity).

A moderator leads the focus groups. The moderator maintains a neutral position, encourages all participants to speak, and keeps the discussion on track, but does so without exerting a strong influence on the discussion content or the opinions expressed. The moderator conducts the focus groups using a discussion guide. The guide is designed to encourage participants to discuss their attitudes toward the topic in question (for these focus groups, boating and fishing access and participation). The discussion guide keeps the focus group discussion within design parameters and ensures that all topics of interest are covered.

Focus group discussions are recorded. Part of the analysis of focus groups occurs at the time of the focus group, but a more important part of the analysis comes from reviewing the focus group recordings, when analysts have time to take note of the discussion and the focus group participants' reactions and emotions. At the end of the focus groups, any questions that participants have regarding the study are answered.

For this project, five focus groups were conducted by Responsive Management: four among recreational boaters and the fifth among professionals from the boating industry. The topics for these focus groups included participants' attitudes toward the state of recreational boating in general, including obstacles, access-related challenges, and crossover issues concerning recreational fishing participation.

8.2.B. LOCATIONS OF FOCUS GROUPS

The recreational boater focus groups were held in April 2013 in Richmond, Virginia; Kenosha, Wisconsin; Houston, Texas; and Portland, Oregon. Host facilities were coordinated by Responsive Management. Each recreational boater focus group was held in a professional focus group facility. Responsive Management ensured that each focus group room was set up appropriately, including seating, recording equipment, and food arrangements (participants were given refreshments). Each group lasted approximately 2 hours.

The focus group of industry representatives was held in Washington, D.C., at the May 2013 American Boating Congress, a major boating industry political and legislative event. The industry focus group was held with representatives from boat and engine manufacturers, boat dealers, marina operators, industry service providers, and marine trade association groups. This meeting was conducted in a meeting room at the hotel conference center.

8.2.C. RECRUITING

Responsive Management recruited participants for the recreational boater focus groups using boater registration records as well as advertisements in local papers in the cities of interest. Potential participants were contacted by telephone and email. Those interested in participating were given a brief summary of the focus group topic, screened using a screener questionnaire, and, if qualified, confirmed for attendance. The screener ensured that the focus group participants met the recruitment criteria of active boating and fishing participation, as well as a minimum age requirement. Confirmed participants were e-mailed or mailed the date, time, and location of the focus group and a map and directions to the focus group facility.

Each participant received a reminder call the day before the group and received a telephone number for directions or last minute questions. To encourage participation, a monetary incentive was given to participants. During the recruiting process, the recruiting manager maintained participant names, contact information, and essential participant characteristics. The target size for each focus group was approximately 10-12 people. The recruiting manager ensured that all confirmation e-mails or letters were sent promptly to participants and that reminder telephone calls were made the day before each group. Reminder calls and interaction with potential participants prior to the groups helped ensure sufficient attendance and quality participation.

8.2.D. DISCUSSION GUIDES

Each focus group was conducted using a discussion guide that allowed for consistency in the data collection. While the discussion guide presents the questions in a specific order, in general, the moderator can skip over parts of the discussion guide, letting the discussion flow as it will, and return to those parts that were skipped. In this way, the guide does not completely dictate the discussion flow, but it ensures that all topics are discussed.

8.2.E. ANALYSIS OF FOCUS GROUPS

Responsive Management conducted qualitative analyses of the focus groups through direct observation of the discussions by the moderators. However, a more important part of the analysis is composed of the subsequent reviews of the recordings by other researchers.

8.3. SURVEY METHODOLOGY

Two surveys were conducted for this project: a survey of recreational boaters across the United States and a nationwide survey of boating industry representatives and agency professionals. The surveys used different methodologies because the groups being interviewed were so different.

8.3.A. USE OF TELEPHONES FOR THE SURVEYS

For the surveys, telephones were selected as the preferred sampling medium because of the almost universal ownership of telephones among boaters and boating professionals (both landlines and cell phones were called). Additionally, telephone surveys, relative to mail or Internet surveys, allow for more scientific sampling and data collection, provide higher quality data, obtain higher response rates, are more timely, and are more cost-effective. Telephone surveys also have fewer negative effects on the environment than do mail surveys because of reduced use of paper and reduced energy consumption for delivering and returning the questionnaires.

8.3.B. RECREATIONAL BOATER QUESTIONNAIRE DESIGN

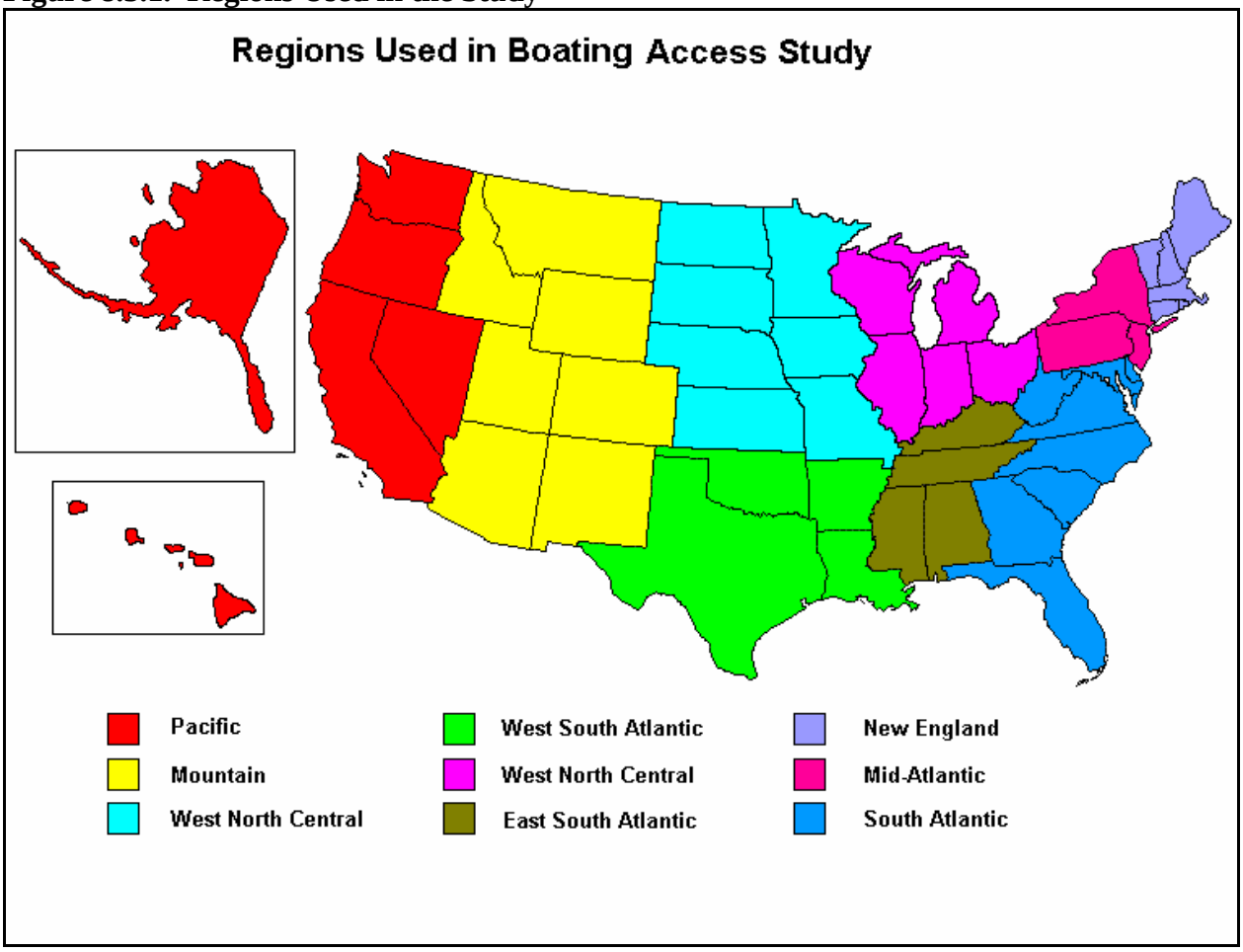
The telephone survey questionnaires were developed cooperatively by Responsive Management and the research partners, based on the research team's familiarity with boating and fishing. Responsive Management conducted pre-tests of the questionnaires to ensure proper wording, flow, and logic in the surveys.

8.3.C. SURVEY SAMPLE

The sample of recreational boaters was obtained from three sources: the states themselves, as well as from two firms that specialize in providing scientifically valid samples for surveys. The sample was combined to be representative of all United States recreational boaters. The sample was stratified into nine regions, and slightly more than 300 completed interviews were obtained from each region for a total of 3,002 completed interviews. For nationwide results, the data were weighted properly so that each region was properly proportioned into the whole of the United States. The regions are shown in Figure 8.3.1.

The sample of boating professionals was developed from several sources: SOBA itself supplied the research team with a list of SOBA contacts in each state (approximately 50 individuals encompassing federal, state, and private industry positions); Responsive Management supplied a list of National Association of State Boating Law Administrators or their surrogates in each state; and several private industry groups and trade associations, such as BoatUS, the Association of Marina Industries, and the National Marine Manufacturers Association, agreed to send the survey link to their members.

Figure 8.3.1. Regions Used in the Study



Original map in color; may not reproduce well in black and white. Regional breakdown based on the maps in the 2001, 2006, and 2011 *National Survey of Fishing, Hunting, and Wildlife-Associated Recreation*.

8.3.D. TELEPHONE INTERVIEWING FACILITIES

A central polling site at the Responsive Management office allowed for rigorous quality control over the interviews and data collection. Responsive Management maintains its own in-house telephone interviewing facilities. These facilities are staffed by interviewers with experience conducting computer-assisted telephone interviews on the subjects of outdoor recreation and natural resources.

To ensure the integrity of the telephone survey data, Responsive Management has interviewers who have been trained according to the standards established by the Council of American Survey Research Organizations. Methods of instruction included lecture and role-playing. The Survey Center Managers and other professional staff conducted a project briefing with the interviewers prior to the administration of this survey. Interviewers were instructed on type of study, study goals and objectives, handling of survey questions, interview length, termination points and qualifiers for participation, interviewer instructions within the survey questionnaire, reading of the survey questions, skip patterns, and probing and clarifying techniques necessary for specific questions on the survey questionnaire.

8.3.E. INTERVIEWING DATES AND TIMES

Telephone surveying times are Monday through Friday from 9:00 a.m. to 9:00 p.m., Saturday from noon to 5:00 p.m., and Sunday from 5:00 p.m. to 9:00 p.m., local time. A five-callback design was used to maintain the representativeness of the sample, to avoid bias toward people easy to reach by telephone, and to provide an equal opportunity for all to participate. When a respondent could not be reached on the first call, subsequent calls were placed on different days of the week and at different times of the day. The recreational boater survey was conducted in November and December 2013. The survey of boating professionals was conducted in December 2013 and January 2014.

8.3.F. TELEPHONE SURVEY DATA COLLECTION AND QUALITY CONTROL

The software used for data collection was Questionnaire Programming Language (QPL). The survey data were entered into the computer as each interview was being conducted, eliminating manual data entry after the completion of the survey and the concomitant data entry errors that may occur with manual data entry. The survey questionnaires were programmed so that QPL branched, coded, and substituted phrases in the surveys based on previous responses to ensure the integrity and consistency of the data collection.

The Survey Center Managers and statisticians monitored the data collection, including monitoring of the telephone interviews without the interviewers' knowledge, to evaluate the performance of each interviewer and ensure the integrity of the data. The survey questionnaires themselves contained error checkers and computation statements to ensure quality and consistent data. After the surveys were obtained by the interviewers, the Survey Center Managers and/or statisticians checked each completed survey to ensure clarity and completeness.

Responsive Management obtained 3,002 completed interviews among recreational boaters and 175 completed interviews among boating professionals. The total sample size on some questions may be less than the total number of completed interviews of the particular group because some questions were asked only of specific respondents in the surveys. In particular, this was done when a follow-up question did not apply to some respondents.

8.3.G. DATA ANALYSIS AND SAMPLING ERROR

The analysis of data was performed using Statistical Package for the Social Sciences as well as proprietary software developed by Responsive Management.

Subsequent to the sampling of recreational boaters for the survey, the researchers determined that the maps in the *National Survey* incorrectly show Nevada in the Pacific Region. This affects the regional results for the Pacific Region and the Mountain Region; however, because Nevada makes up such a small portion of boaters in the Pacific Region and would be such a small portion of boaters in the Mountain Region if it were put into that region, correcting this regional anomaly would make little difference in the results for either region. Therefore, the sampling for the boater survey and analyses keep Nevada in the Pacific Region.

On questions that asked respondents to provide a number (e.g., number of miles), the graph shows ranges of numbers rather than the precise numbers. Nonetheless, in the survey each respondent provided a precise number, and the dataset includes this precise number, even if the graph only shows ranges of numbers. Note that the calculation of means and medians used the precise numbers that the respondents provided.

Throughout this report, findings of the recreational boater survey are reported at a 95% confidence interval. For the entire sample of recreational boaters, the sampling error is at most plus or minus 1.79 percentage points. Sampling error was calculated using the formula described in Figure 8.3.2, with a sample size of 3,002 and an estimated population size of 82 million recreational boaters across the United States. Note that the boater population that would be eligible for the survey was a subset of all recreational boaters (i.e., a subset of 82 million), so the actual sampling error on the entire sample of eligible respondents would be better than 1.79 percentage points.

There was no sampling error calculated for the survey of boating professionals because the total population size of this group cannot be accurately determined.

Figure 8.3.2. Sampling Error Equation

$$B = \left(\sqrt{\frac{\frac{N_p(.25)}{N_s} - .25}{N_p - 1}} \right) (1.96)$$

Where: B = maximum sampling error (as decimal)
N_P = population size (i.e., total number who could be surveyed)
N_S = sample size (i.e., total number of respondents surveyed)

Derived from formula: p. 206 in Dillman, D. A. 2000. *Mail and Internet Surveys*. John Wiley and Sons, NY.

Note: This is a simplified version of the formula that calculates the maximum sampling error using a 50:50 split (the most conservative calculation because a 50:50 split would give maximum variation).

8.3.H. ADDITIONAL INFORMATION ABOUT THE PRESENTATION OF RESULTS IN THE REPORT

In examining the results of the telephone surveys, it is important to be aware that the questionnaire included several types of questions:

- Open-ended questions are those in which no answer set is read to the respondents; rather, they can respond with anything that comes to mind from the question.
- Closed-ended questions have an answer set from which to choose.
- Single or multiple response questions: Some questions allow only a single response, while other questions allow respondents to give more than one response or choose all that apply. Those that allow more than a single response are indicated on the graphs with the label, "Multiple Responses Allowed."
- Scaled questions: Many closed-ended questions (but not all) are in a scale, such as excellent-good-fair-poor.
- Series questions: Many questions are part of a series, and the results are primarily intended to be examined relative to the other questions in that series (although results of the questions individually can also be valuable). Typically, results of all questions in a series are shown together.

Some graphs show an average, either the mean or median (or both). The mean is simply the sum of all numbers divided by the number of respondents. Because outliers (extremely high or low numbers relative to most of the other responses) may skew the mean, the median may be shown. The median is the number at which half the sample is above and the other half is below. In other

words, a median of 150 miles means that half the sample gave an answer of more than 150 miles and the other half gave an answer of less than 150 miles.

Most graphs show results rounded to the nearest integer; however, all data are stored in decimal format, and all calculations are performed on unrounded numbers. For this reason, some results may not sum to exactly 100% because of this rounding on the graphs. Additionally, rounding may cause apparent discrepancies of 1 percentage point between the graphs and the reported results of combined responses (e.g., when “strongly agree” and “moderately agree” are summed to determine the total percentage who agree).

APPENDIX A: ASSESSMENT TOOLS

One aspect of this project entailed producing assessment tools in the form of short surveys that can be used to measure needs for boating access and boating-related amenities, including those amenities related to fishing and fishing access. This appendix contains three assessment tools: a general access survey, an access survey specifically for anglers, and an access survey that focuses on desired features and amenities.

The surveys are formatted to be given as paper questionnaires to be filled out by the respondent. To use them, enter your organization name at the top of each page where it says, "Survey conducted for _____." Then make copies from that master copy with your organization's name in the blank.

Additionally, the survey is intended to have a cover that tells a little about your organization, why the survey is being conducted, and the instructions regarding where to submit the completed questionnaires.

Although some questions do not apply to some respondents, an appropriate response is provided for those respondents to indicate that the question does not apply. Therefore, all respondents can answer all questions, and there is no need for the respondent to skip questions in the survey.

Recreational Boating and Fishing Survey (General Survey)

This survey will help us better manage boating access for all boaters. Please take a moment to complete the survey and submit your completed questionnaire as instructed in the directions on the cover page of this survey.

Q1. Do you currently own or have you owned in the past 2 years any type of motorized or non-motorized boat of at least 12 feet in length?

|__| 1. Currently own a boat of at least 12 feet
|__| 2. Do not currently own but have in the past 2 years owned a boat of at least 12 feet
|__| 3. Have not owned a boat of at least 12 feet in the past 2 years
|__| 4. Don't know

Q2. Have you personally been boating on a private boat of at least 12 feet, owned or rented by you or someone you know, in the past 2 years? If so, indicate the type of waters. (Please do not include charter boats or cruise ships.)

|__| 1. Have been boating in FRESHWATER only
|__| 2. Have been boating in SALTWATER only
|__| 3. Have been boating in BOTH freshwater and saltwater
|__| 4. Have not been boating in the past 2 years on a boat of at least 12 feet
|__| 5. Don't know

This survey is intended for those who either have owned a boat (of at least 12 feet) in the past 2 years or have boated (on a boat of at least 12 feet) in the past 2 years. If you have done neither, you do not need to take the survey. Otherwise, continue to the next question of the survey.

Q3. What types of boats that are at least 12 feet in length did you go boating on in the past 2 years? Please name all of at least 12 feet that you used, or indicate that you did not go boating in the past 2 years.

(CHECK ALL THAT APPLY)

|__| 1. Did not go boating in the past 2 years
|__| 2. Bass boat / jon boat
|__| 3. Cabin cruiser (gasoline)
|__| 4. Cabin cruiser (diesel)
|__| 5. Canoe / kayak
|__| 6. Houseboat / pontoon boat
|__| 7. Inflatable boat / raft
|__| 8. Jet drive boat
|__| 9. Rowboat (unpowered)
|__| 10. Sailboat
|__| 11. Open motor boat
|__| 12. Trawler
|__| 13. Other _____
|__| 14. Don't know

Q4. Have you participated in any of the following activities while boating (on a boat of at least 12 feet) in the past 2 years? (If you have not boated in the past 2 years, please check the first response.)

(CHECK ALL THAT APPLY)

|__| 1. Have not boated in the past 2 years
|__| 2. Pleasure cruising
|__| 3. Sightseeing
|__| 4. Cruising for the primary purpose of observing, feeding, or photographing fish or wildlife
|__| 5. Water skiing
|__| 6. Water tubing
|__| 7. Rafting
|__| 8. Sailing
|__| 9. Hunting
|__| 10. Recreational fishing (not commercial)
|__| 11. Swimming
|__| 12. Snorkeling or diving
|__| 13. Being with family or friends
|__| 14. Visiting other people who live on or near the water
|__| 15. None of these
|__| 16. Don't know

Q5. If you have been fishing from a boat (of at least 12 feet), please indicate if you have been freshwater fishing, saltwater fishing, or both from a boat in the past 2 years. (If you have not fished from a boat, please check the first response.)

|__| 1. Did not fish from a boat in the past 2 years
|__| 2. FRESHWATER only
|__| 3. SALTWATER only
|__| 4. BOTH freshwater and saltwater
|__| 5. Don't know

Q6. If you have been fishing from a boat (of at least 12 feet), please indicate the types of boats that you fished from in the past 2 years, and check all that apply. (If you have not fished from a boat, please check the first response.)

(CHECK ALL THAT APPLY)

|__| 1. Did not fish from a boat in the past 2 years
|__| 2. Bass boat / jon boat
|__| 3. Cabin cruiser (gasoline)
|__| 4. Cabin cruiser (diesel)
|__| 5. Canoe / kayak
|__| 6. Houseboat / pontoon boat
|__| 7. Inflatable boat / raft
|__| 8. Jet drive boat
|__| 9. Rowboat (unpowered)
|__| 10. Sailboat
|__| 11. Open motor boat
|__| 12. Trawler
|__| 13. Other _____
|__| 14. Don't know

Q7. Which of the boats that are at least 12 feet in length did you use most often? Please check only one response. (If you used only one boat, please check that type of boat.) (If you did not go boating in the past 2 years, please check the first response.)

(CHECK ONLY ONE RESPONSE)

|__| 1. Did not go boating in the past 2 years
|__| 2. Bass boat / jon boat
|__| 3. Cabin cruiser (gasoline)
|__| 4. Cabin cruiser (diesel)
|__| 5. Canoe / kayak
|__| 6. Houseboat / pontoon boat
|__| 7. Inflatable boat / raft
|__| 8. Jet drive boat
|__| 9. Rowboat (unpowered)
|__| 10. Sailboat
|__| 11. Open motor boat
|__| 12. Trawler
|__| 13. Other _____
|__| 14. Don't know

We have a few questions about the boat that you used most often (or the only boat you used).

Q8. Where is that boat kept when it is not in use?

|__| 1. Did not go boating in the past 2 years
|__| 2. Owner’s home on a trailer
|__| 3. Owner’s home, but not on a trailer
|__| 4. At a marina, in the water
|__| 5. At a marina in dry storage
|__| 6. Other storage area or yard
|__| 7. Waterfront property that the boat owner owns, rents, or leases
|__| 8. Other _____
|__| 9. Don’t know

Q9. How was that boat typically put into the water? (The boat that you used most often.)

|__| 1. Does not apply / did not go boating in the past 2 years
|__| 2. Does not apply / boat already in the water
|__| 3. Trailer
|__| 4. Boat lift
|__| 5. Carry it to the water
|__| 6. Other _____
|__| 7. Don’t know

Q10. Where did you access the water when you went boating in the past 2 years? Please indicate all of the ways that you accessed the water in the past 2 years to boat (on a boat of at least 12 feet). (If you have not boated in the past 2 years, please check the first response.)

(CHECK ALL THAT APPLY)

|__| 1. Did not go boating in the past 2 years
|__| 2. Property that I own, rent, or lease has direct access to the water
|__| 3. A public boating access site
|__| 4. A marina
|__| 5. A privately owned boating access site other than a marina
|__| 6. Other _____
|__| 7. Don't know

For the following questions about boat access, please consider boat access facilities and sites in general, including sites that you previously used, currently use, and would like to use.

Q11. In general, how would you rate boat access facilities and sites in the area where you typically boat on a scale of 0 to 10, where 0 is poor and 10 is excellent? (Please enter a question mark ? if you do not know.)

_____

Q12. Now we would like to know how much of a problem you think each of the following are for boat access facilities and sites where you typically boat or would like to boat. Please indicate if you think each one is a major problem, a minor problem, or not a problem at all.

	A major problem	**A minor problem**	**Not a problem at all**	**Don't know**
Q12a. Not enough boat access areas				
Q12b. Not enough parking at boat access areas				
Q12c. Not enough boat slips or moorings				
Q12d. Crowding at launch sites or ramps				
Q12e. Not enough security at boat access areas				
Q12f. Poor maintenance of boat access areas				
Q12g. Litter at boat access areas				
Q12h. Not enough information about where boat access areas are located				
Q12i. Not enough information about how to use boat access areas				
Q12j. No one to help or assist at boat access sites				
Q12k. Difficulties getting your boat in or out of the water at the access areas you typically use because they are poorly designed				
Q12m. Poor upkeep or maintenance of sewage pump-outs or portable dump stations				
Q12n. Conflicts between motorized and non-motorized boaters				
Q12o. Conflicts between boaters and anglers				
Q12p. Conflicts with waterfront properties or private landowners near the access areas				
Q12q. Closures of preferred or more conveniently located boat access facilities and areas				
Q12r. Environmental concerns, such as invasive and nuisance species or fuel and oil residue				
Q12s. Waters too shallow / dredging needed				

Q13. Next, please rate how important each of the following features and amenities are to you when you select boat access sites. Please tell me how important each one is to you on a scale of 0 to 10, where 0 is not at all important and 10 is extremely important. (Please enter a question mark ? if you do not know.)

Then please rate the amount and distribution of sites with the features or amenities that area available in your area, on a 0 to 10 scale, where 0 is extremely poor (almost no sites) and 10 is excellent (plenty of sites and well distributed). (Please enter a question mark ? if you do not know.)

Finally, rate the quality of those features and amenities at access sites in your area, on a 0 to 10 scale, where 0 is extremely poor and 10 is excellent. (Please enter a question mark ? if you do not know.) (Please enter "None" if they do not exist in your area.)

	Rating of importance to you (0 to 10, where 0 is not at all important and 10 is extremely important)	**Rating of amount and distribution (0 to 10, where 0 is extremely poor and 10 is excellent)**	**Rating of quality (0 to 10, where 0 is extremely poor and 10 is excellent)**
Q13a. Parking for vehicles with boat trailers			
Q13b. Parking for single vehicles			
Q13c. Parking for those with disabilities			
Q13d. Short-term slips or tie-up facilities			
Q13e. Permanent slips or tie-ups			
Q13f. Short-term moorings			
Q13g. Permanent moorings			
Q13h. Mooring fields			
Q13i. Boarding floats or courtesy docks			
Q13j. Sewage pump-outs and portable dump stations			
Q13k. Carry-down walkways to the water			
Q13m. Launch ramps			
Q13n. Launch lanes			
Q13o. Access for motorized boats			
Q13p. Access for non-motorized boats			
Q13q. Access for disabled individuals			
Q13r. Dry stack storage			
Q13s. Fueling areas			
Q13t. Oil disposal			
Q13u. Fish cleaning stations			
Q13v. Restrooms			
Q13w. Trash dumpsters			
Q13x. Drinking water availability			
Q13y. Electricity			
Q13z. Security			

Q14. Next, please indicate whether you agree or disagree with each of the following statements about issues related to boat access.

	Strongly agree	Moderately agree	Neither agree nor disagree	Moderately disagree	Strongly disagree	Don't know
Q14a. Issues related to boat access prevent you from going BOATING as much as you would like.						
Q14b. Issues related to boat access prevent you from going FISHING as much as you would like.						
Q14c. Issues related to boat access have caused you to STOP using access facilities or areas that you previously used.						
Q14d. Issues related to boat access have caused problems or frustration for you at access facilities or areas that you currently use.						
Q14e. Issues related to boat access prevent you from using access facilities or areas that you would like to use.						

Q15. What is your zip code? (Enter "NA" if you prefer not to answer.)

_____

Q16. Do you consider your place of residence to be a large city or urban area, a suburban area, a small city or town, a rural area on a farm or ranch, or a rural area NOT on a farm or ranch?

|__| 1. Large city / urban area
|__| 2. Suburban area
|__| 3. Small city or town
|__| 4. Rural area NOT on a farm or ranch
|__| 5. Rural area on a farm or ranch
|__| 6. Don't know

Q17. What is your age? (If unsure, please give approximate age.) (Enter "NA" if you prefer not to answer.)

____

Q18. What is your gender?

|__| 1. Male
|__| 2. Female
|__| 3. Prefer not to answer

Recreational Boating and Fishing Survey (Fishing Survey)

This survey will help us better manage boating access for anglers. Please take a moment to complete the survey and submit your completed questionnaire as instructed in the directions on the cover page of this survey.

Q1. Do you currently own or have you owned in the past 2 years any type of motorized or non-motorized boat of at least 12 feet in length?

|__| 1. Currently own a boat of at least 12 feet
|__| 2. Do not currently own but have in the past 2 years owned a boat of at least 12 feet
|__| 3. Have not owned a boat of at least 12 feet in the past 2 years
|__| 4. Don't know

Q2. Have you personally been boating on a private boat of at least 12 feet, owned or rented by you or someone you know, in the past 2 years? If so, indicate the type of waters. (Please do not include charter boats or cruise ships.)

|__| 1. Have been boating in FRESHWATER only
|__| 2. Have been boating in SALTWATER only
|__| 3. Have been boating in BOTH freshwater and saltwater
|__| 4. Have not been boating in the past 2 years on a boat of at least 12 feet
|__| 5. Don't know

Q3. Have you personally been FISHING from a private boat of at least 12 feet, owned or rented by you or someone you know, in the past 2 years? If so, indicate the type of waters. (Please do not include charter boats.)

|__| 1. Have been fishing from a boat in FRESHWATER only
|__| 2. Have been fishing from a boat in SALTWATER only
|__| 3. Have been fishing from a boat in BOTH freshwater and saltwater
|__| 4. Have not been fishing from a boat in the past 2 years
|__| 5. Don't know

This survey is intended for anglers who either have owned a boat (of at least 12 feet) in the past 2 years or have boated (on a boat of at least 12 feet) in the past 2 years AND have fished from a boat in the past 2 years. If you have not fished from a boat in the past 2 years, you do not need to take the survey. Otherwise, continue to the next question.

Q4. Please indicate the types of boats (of at least 12 feet) that you fished from in the past 2 years, and check all that apply.

(CHECK ALL THAT APPLY)

|__| 1. Bass boat / jon boat
|__| 2. Cabin cruiser (gasoline)
|__| 3. Cabin cruiser (diesel)
|__| 4. Canoe / kayak
|__| 5. Houseboat / pontoon boat
|__| 6. Inflatable boat / raft
|__| 7. Jet drive boat
|__| 8. Rowboat (unpowered)
|__| 9. Sailboat
|__| 10. Open motor boat
|__| 11. Trawler
|__| 12. Other _____
|__| 13. Don't know

Q5. Which boat that is at least 12 feet in length do you use most often for fishing? Please check only one response.

(CHECK ONLY ONE RESPONSE)

|__| 1. Bass boat / jon boat
|__| 2. Cabin cruiser (gasoline)
|__| 3. Cabin cruiser (diesel)
|__| 4. Canoe / kayak
|__| 5. Houseboat / pontoon boat
|__| 6. Inflatable boat / raft
|__| 7. Jet drive boat
|__| 8. Rowboat (unpowered)
|__| 9. Sailboat
|__| 10. Open motor boat
|__| 11. Trawler
|__| 12. Other _____
|__| 13. Don't know

Q6. We have a few questions about the boat that you use most often for fishing. Where is that boat kept when it is not in use?

|__| 1. Does not apply / I do have a boat I use most often
|__| 2. Home on a trailer
|__| 3. Home, but not on a trailer
|__| 4. At a marina, in the water
|__| 5. At a marina in dry storage
|__| 6. Other storage area or yard
|__| 7. Waterfront property that you own, rent, or lease
|__| 8. Other _____
|__| 9. Don't know

Q7. How do you typically put that boat in the water? (The boat you use most often for fishing.)

|__| 1. Does not apply / I do have a boat I use most often
|__| 2. Does not apply / boat already in the water
|__| 3. Trailer
|__| 4. Boat lift
|__| 5. Carry it to the water
|__| 6. Other _____
|__| 7. Don't know

Q8. Where did you access the water when you went fishing from a boat (of at least 12 feet) in the past 2 years? Please indicate all of the ways that you accessed the water.

(CHECK ALL THAT APPLY)

|__| 1. Property that I own, rent, or lease has direct access to the water
|__| 2. A public boating access site
|__| 3. A marina
|__| 4. A privately owned boating access site other than a marina
|__| 5. Other _____
|__| 6. Don't know

For the following questions about boat access, please consider boat access facilities and sites in general, including sites that you previously used, currently use, and would like to use.

Q9. In general, how would you rate boat access facilities and sites in the area where you typically boat on a scale of 0 to 10, where 0 is poor and 10 is excellent? (Please enter a question mark ? if you do not know.)

_____

Q10. Now we would like to know how much of a problem you think each of the following are for boat access facilities and sites that you use or would like to use to go fishing from a boat (of at least 12 feet). Please indicate if you think each one is a major problem, a minor problem, or not a problem at all.

	A major problem	**A minor problem**	**Not a problem at all**	**Don't know**
Q10a. Not enough boat access areas				
Q10b. Not enough parking at boat access areas				
Q10c. Conflicts between boaters and anglers				
Q10d. Crowding from other boaters				
Q10e. Crowding from other anglers				
Q10f. Poor health of fish / fish advisories / fish kills				
Q10g. Invasive fish species				
Q10h. Invasive and nuisance species (other than fish)				
Q10i. Litter at boat access areas				
Q10j. Poor water quality near access sites				
Q10k. Boat access sites too far from good fishing waters				
Q10m. Poor maintenance of boat access areas				
Q10n. Conflicts with waterfront properties or private landowners near the access areas				
Q10o. Lack of fish cleaning stations				
Q10p. Lack of enforcement of fishing regulations				
Q10q. Lack of enforcement of boating regulations				

Q11. Next, please rate how important each of the following features and amenities are to you when you select boat access sites for fishing. Please tell me how important each one is to you on a scale of 0 to 10, where 0 is not at all important and 10 is extremely important. (Please enter a question mark ? if you do not know.)

Then please rate the amount and distribution of sites with the features or amenities that area available in your area, on a 0 to 10 scale, where 0 is extremely poor (almost no sites) and 10 is excellent (plenty of sites and well distributed). (Please enter a question mark ? if you do not know.)

Finally, rate the quality of those features and amenities at access sites in your area, on a 0 to 10 scale, where 0 is extremely poor and 10 is excellent. (Please enter a question mark ? if you do not know.) (Please enter "None" if they do not exist in your area.)

	Rating of importance to you (0 to 10, where 0 is not at all important and 10 is extremely important)	**Rating of amount and distribution (0 to 10, where 0 is extremely poor and 10 is excellent)**	**Rating of quality (0 to 10, where 0 is extremely poor and 10 is excellent)**
Q11a. Parking at access sites			
Q11b. Carry-down walkways to the water			
Q11c. Launch ramps			
Q11d. Launch lanes			
Q11e. Fish cleaning stations			
Q11f. Restrooms			
Q11g. Trash dumpsters			
Q11h. Drinking water availability			
Q11i. Wildlife officer presence			

Q12. Next, please tell me if you agree or disagree with each of the following statements about issues related to boat access.

	Strongly agree	**Moderately agree**	**Neither agree nor disagree**	**Moderately disagree**	**Strongly disagree**	**Don't know**
Q12a. Issues related to boat access prevent you from going BOATING as much as you would like.						
Q12b. Issues related to boat access prevent you from going FISHING as much as you would like.						
Q12c. Issues related to boat access have caused you to STOP fishing in areas that you previously fished in.						
Q12d. Issues related to boat access have caused problems or frustration with fishing for you at areas that you currently fish in.						

Q13. What is your zip code? (Enter "NA" if you prefer not to answer.)

_____

Q14. Do you consider your place of residence to be a large city or urban area, a suburban area, a small city or town, a rural area on a farm or ranch, or a rural area NOT on a farm or ranch?

|__| 1. Large city / urban area
|__| 2. Suburban area
|__| 3. Small city or town
|__| 4. Rural area NOT on a farm or ranch
|__| 5. Rural area on a farm or ranch
|__| 6. Don't know

Q15. What is your age? (If unsure, please give approximate age.) (Enter "NA" if you prefer not to answer.)

____

Q16. What is your gender?

|__| 1. Male
|__| 2. Female
|__| 3. Prefer not to answer

Recreational Boating and Fishing Survey (Features and Amenities Survey)

This survey will help us better manage boating access for all boaters. Please take a moment to complete the survey and submit your completed questionnaire as instructed in the directions on the cover page of this survey.

Q1. Do you currently or have you owned in the past 2 years any type of motorized or non-motorized boat of at least 12 feet in length?

|__| 1. Currently own a boat of at least 12 feet
|__| 2. Do not currently own but have in the past 2 years owned a boat of at least 12 feet
|__| 3. Have not owned a boat of at least 12 feet in the past 2 years
|__| 4. Don't know

Q2. Have you personally been boating on a private boat of at least 12 feet, owned or rented by you or someone you know, in the past 2 years? If so, indicate the type of waters. (Please do not include charter boats or cruise ships.)

|__| 1. Have been boating in FRESHWATER only
|__| 2. Have been boating in SALTWATER only
|__| 3. Have been boating in BOTH freshwater and saltwater
|__| 4. Have not been boating in the past 2 years on a boat of at least 12 feet
|__| 5. Don't know

Q3. Have you personally used either a public or private boating access facility in the past 2 years to use a boat of at least 12 feet? An access facility can include a marina or something as simple as a developed parking area, any type of infrastructure that assists with accessing waters for boating.

|__| 1. Have not used a boating access facility in the past 2 years
|__| 2. Have used a facility(ies) for FRESHWATER boating
|__| 3. Have used a facility(ies) for SALTWATER boating
|__| 4. Have used facilities for BOTH freshwater and saltwater boating
|__| 5. Have used a facility, but don’t know if freshwater or saltwater
|__| 6. Don’t know if used a facility

This survey is intended for those who have used a boating access facility to go boating on a boat of at least 12 feet in the past 2 years. If you have not done so, you do not need to take the survey. Otherwise, continue to the next question of the survey.

Q4. What types of boats that are at least 12 feet in length were you accessing the water for? Please name all that apply.

(CHECK ALL THAT APPLY)

|__| 1. Bass boat / jon boat
|__| 2. Cabin cruiser (gasoline)
|__| 3. Cabin cruiser (diesel)
|__| 4. Canoe / kayak
|__| 5. Houseboat / pontoon boat
|__| 6. Inflatable boat / raft
|__| 7. Jet drive boat
|__| 8. Rowboat (unpowered)
|__| 9. Sailboat
|__| 10. Open motor boat
|__| 11. Trawler
|__| 12. Other _____
|__| 13. Don't know

Q5. When you used the access facility(ies), did you participate in any of the following activities?

(CHECK ALL THAT APPLY)

|__| 1. Pleasure cruising
|__| 2. Sightseeing
|__| 3. Cruising for the primary purpose of observing, feeding, or photographing fish or wildlife
|__| 4. Water skiing
|__| 5. Water tubing
|__| 6. Rafting
|__| 7. Sailing
|__| 8. Hunting
|__| 9. Recreational fishing (not commercial)
|__| 10. Swimming
|__| 11. Snorkeling or diving
|__| 12. Being with family or friends
|__| 13. Visiting other people who live on or near the water
|__| 14. None of these
|__| 15. Don't know

Q6. If you used the access facility(ies) to fish from a boat of at least 12 feet, please indicate if you fished in freshwater, saltwater, or both in the past 2 years. (If you have not fished from a boat, please check the first response.)

|__| 1. Did not fish from a boat in the past 2 years
|__| 2. FRESHWATER only
|__| 3. SALTWATER only
|__| 4. BOTH freshwater and saltwater
|__| 5. Don't know

For the rest of this survey, please consider the boat for which you most often need to use an access facility.

Q7. What single type of boat do you most often use an access facility for? (Please select only one response.)

(CHECK ONLY ONE RESPONSE)

|__| 1. Bass boat / jon boat
|__| 2. Cabin cruiser (gasoline)
|__| 3. Cabin cruiser (diesel)
|__| 4. Canoe / kayak
|__| 5. Houseboat / pontoon boat
|__| 6. Inflatable boat / raft
|__| 7. Jet drive boat
|__| 8. Rowboat (unpowered)
|__| 9. Sailboat
|__| 10. Open motor boat
|__| 11. Trawler
|__| 12. Other _____
|__| 13. Don't know

Q8. Where is that boat kept when it is not in use? (The boat for which you most often use an access facility.)

|__| 1. Owner's home on a trailer
|__| 2. Owner's home, but not on a trailer
|__| 3. At a marina, in the water
|__| 4. At a marina in dry storage
|__| 5. Other storage area or yard
|__| 6. Waterfront property that the boat owner owns, rents, or leases
|__| 7. Other _____
|__| 8. Don't know

Q9. How is that boat typically put into the water? (The boat for which you most often use an access facility.)

|__| 1. The boat is already in the water at the access facility (e.g., marina)
|__| 2. Trailer
|__| 3. Boat lift
|__| 4. Carry it to the water
|__| 5. Other _____
|__| 6. Don't know

For the following questions about boat access, please consider boat access facilities and sites in general, including sites that you previously used, currently use, and would like to use.

Q10. In general, how would you rate boat access facilities and sites in the area where you typically boat on a scale of 0 to 10, where 0 is poor and 10 is excellent? (Please enter a question mark ? if you do not know.)

_____

Q11. Next, for the following features and amenities, please consider the boating access site that you most often go to for boating. For each feature or amenity, please select only one of the following selections:

A. Please check the first column if you USED the feature or amenity at the access site and WERE SATISFIED with that feature or amenity.
B. Please check the second column if you USED the feature or amenity at the access site but were NOT SATISFIED with that feature or amenity.
C. Please check the third column if you WOULD HAVE USED the feature or amenity at the access site but it was UNACCEPTABLE for use.
D. Please check the fourth column if you WOULD HAVE USED such a feature or amenity but the access SITE DID NOT HAVE it.
E. Please check the fifth column if you DID NOT NEED NOR WOULD HAVE USED the feature or amenity, regardless of whether the access site had it.

	Used it and was satisfied with it	**Used it but was not satisfied with it**	**Would have used it, but it was not acceptable for use at the site**	**Would have used it, but the site did not have it**	**Did not need it**
Q11a. Parking for a vehicle with a boat trailer					
Q11b. Parking for a single vehicle					
Q11c. Parking for those with disabilities					
Q11d. Short-term slip or tie-up facility					
Q11e. Permanent slip or tie-up					
Q11f. Short-term mooring					
Q11g. Permanent mooring					
Q11h. Mooring field					
Q11i. Boarding float or courtesy dock					
Q11j. Sewage pump-out or portable dump station					
Q11k. Carry-down walkway to the water					
Q11m. Launch ramp					
Q11n. Launch lane					
Q11o. Access for a motorized boat					
Q11p. Access for a non-motorized boat					
Q11q. Access for disabled individuals					
Q11r. Dry stack storage					
Q11s. Fueling area					
Q11t. Oil disposal facility					
Q11u. Fish cleaning station					
Q11v. Restroom					
Q11w. Trash dumpster					
Q11x. Drinking water availability					
Q11y. Electricity					

Q12. Next, please tell me if you agree or disagree with each of the following statements about issues related to boat access.

	Strongly agree	Moderately agree	Neither agree nor disagree	Moderately disagree	Strongly disagree	Don't know
Q12a. Issues related to boat access prevent you from going BOATING as much as you would like.						
Q12b. Issues related to boat access prevent you from going FISHING as much as you would like.						
Q12c. Issues related to boat access have caused you to STOP using access facilities or areas that you previously used.						
Q12d. Issues related to boat access have caused problems or frustration for you at access facilities or areas that you currently use.						
Q12e. Issues related to boat access prevent you from using access facilities or areas that you would like to use.						
Q12f. You typically bypass some access sites to use more distant sites that have features or amenities that the closer site does not have.						
Q12g. You typically use an access site close by but wish it had features or amenities that more distant sites have.						

Q13. What is your zip code? (Enter "NA" if you prefer not to answer.)

_____

Q14. Do you consider your place of residence to be a large city or urban area, a suburban area, a small city or town, a rural area on a farm or ranch, or a rural area NOT on a farm or ranch?

|__| 1. Large city / urban area
|__| 2. Suburban area
|__| 3. Small city or town
|__| 4. Rural area NOT on a farm or ranch
|__| 5. Rural area on a farm or ranch
|__| 6. Don't know

Q15. What is your age? (If unsure, please give approximate age.) (Enter "NA" if you prefer not to answer.)

____

Q16. What is your gender?

|__| 1. Male
|__| 2. Female
|__| 3. Prefer not to answer

APPENDIX B: REGISTERED BOATS IN EACH STATE

The following shows the number of registered boats in each state. While the numbers do not match the number of *boaters* eligible for the survey in each state, the numbers can serve as a proxy to help determine the scale of problems when mention is made that a certain percentage of boaters experienced a problem. The mismatch in numbers is caused by two primary factors. First, the number of registered boats and the number of owners of registered boats is not a 1:1 correlation, as some boaters can own more than one registered boat and other boaters may not have a boat that is registered; and second, the survey was not restricted to only owners of registered boats.

State	Number of Registered Boats 2012	State	Number of Registered Boats 2012
NEW ENGLAND	NORTHEAST	EAST SOUTH CENTRAL	SOUTH
Connecticut	103,992	Alabama	268,374
Massachusetts	139,123	Kentucky	175,286
Maine	108,502	Mississippi	133,556
New Hampshire	92,976	Tennessee	259,632
Rhode Island	40,451	Total East South Atlantic Region	836,848
Vermont	28,987		
Total New England Region	514,031	WEST SOUTH CENTRAL	SOUTH
		Arkansas	199,546
MID-ATLANTIC	NORTHEAST	Louisiana	305,081
New Jersey	160,345	Oklahoma	201,069
New York	463,539	Texas	580,064
Pennsylvania	332,431	Total West South Atlantic Region	1,285,760
Total Mid-Atlantic Region	956,315		
		MOUNTAIN	WEST
EAST NORTH CENTRAL	MIDWEST	Arizona	129,221
Illinois	368,224	Colorado	87,225
Indiana	214,487	Idaho	85,749
Michigan	804,088	Montana	54,642
Ohio	441,732	New Mexico	36,846
Wisconsin	622563	Utah	70,144
Total East North Central Region	2,451,094	Wyoming	28,620
		Total Mountain Region	492,447
WEST NORTH CENTRAL	MIDWEST		
Iowa	235,095	PACIFIC	WEST
Kansas	85,840	Alaska	50,142
Minnesota	817,996	California	776,584
Missouri	300,714	Nevada*	50,499
North Dakota	62,799	Hawaii	14,098
Nebraska	86,248	Oregon	169,188
South Dakota	58,448	Washington	230,684
Total West North Central Region	1,647,140	Total Pacific Region	1,291,195
SOUTH ATLANTIC	SOUTH		
Delaware	58,541		
Georgia	323,116		
Maryland	185,626		
North Carolina	391,711		
South Carolina	460,564		
Virginia	239,878		
Florida	870,031		
West Virginia	57,085		
Total South Atlantic Region	2,586,552		
TOTAL REGISTERED BOATS		**22,831,569**	

*Subsequent to the sampling of recreational boaters for the survey, the researchers determined that the maps in the *National Survey* incorrectly show Nevada in the Pacific Region. This affects the regional results for the Pacific Region and the Mountain Region; however, because Nevada makes up such a small portion of boaters in the Pacific Region and would be such a small portion of boaters in the Mountain Region if it were put into that region, correcting this regional anomaly would make little difference in the results for either region. Therefore, the sampling for the boater survey and analyses keep Nevada in the Pacific Region.

ABOUT RESPONSIVE MANAGEMENT

Responsive Management is an internationally recognized public opinion and attitude survey research firm specializing in natural resource and outdoor recreation issues. Our mission is to help natural resource and outdoor recreation agencies and organizations better understand and work with their constituents, customers, and the public. Utilizing our in-house, full-service telephone, mail, and web-based survey center with 50 professional interviewers, we have conducted more than 1,000 telephone surveys, mail surveys, personal interviews, and focus groups, as well as numerous marketing and communication plans, needs assessments, and program evaluations.

Clients include the federal natural resource and land management agencies, most state fish and wildlife agencies, state departments of natural resources, environmental protection agencies, state park agencies, tourism boards, most of the major conservation and sportsmen's organizations, and numerous private businesses. Responsive Management also collects attitude and opinion data for many of the nation's top universities.

Specializing in research on public attitudes toward natural resource and outdoor recreation issues, Responsive Management has completed a wide range of projects during the past 22 years, including dozens of studies of hunters, anglers, wildlife viewers, boaters, park visitors, historic site visitors, hikers, birdwatchers, campers, and rock climbers. Responsive Management has conducted studies on endangered species; waterfowl and wetlands; and the reintroduction of large predators such as wolves, grizzly bears, and the Florida panther.

Responsive Management has assisted with research on numerous natural resource ballot initiatives and referenda and has helped agencies and organizations find alternative funding and increase their membership and donations. Additionally, Responsive Management has conducted major organizational and programmatic needs assessments to assist natural resource agencies and organizations in developing more effective programs based on a solid foundation of fact.

Responsive Management has conducted research on public attitudes toward natural resources and outdoor recreation in almost every state in the United States, as well as in Canada, Australia, the United Kingdom, France, Germany, and Japan. Responsive Management has also conducted focus groups and personal interviews with residents of the African countries of Algeria, Cameroon, Mauritius, Namibia, South Africa, Tanzania, Zambia, and Zimbabwe. Responsive Management routinely conducts surveys in Spanish and has conducted surveys in Chinese, Korean, Japanese and Vietnamese and has completed numerous studies with specific target audiences, including Hispanics; African-Americans; Asians; women; children; senior citizens; urban, suburban, and rural residents; large landowners; and farmers.

Responsive Management's research has been upheld in U.S. District Courts; used in peer-reviewed journals; and presented at major natural resource, fish and wildlife, and outdoor recreation conferences across the world. Company research has been featured in most of the nation's major media, including CNN, *The New York Times*, *The Wall Street Journal*, and on the front pages of *USA Today* and *The Washington Post*. Responsive Management's research has also been highlighted in *Newsweek* magazine.

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