

2020 Vermont Angler Survey Report



Conducted for the
Vermont Fish and Wildlife Department

By Responsive Management

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2020 VERMONT ANGLER SURVEY REPORT

2020

Responsive Management National Office

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EXECUTIVE SUMMARY

Vermont periodically contracts surveys of its anglers to obtain information about their participation, species sought, days fished, equipment used, and opinions on various fishing issues so as to better manage its fisheries and fishing seasons. This survey in 2020 about fishing activity in 2019 was administered by Responsive Management.

This scientific, probability-based survey had several objectives:

- Estimate angler effort in various waters for various species.
 - Examine angler preferences for various species.
 - Look at angler satisfaction.
 - Obtain anglers' input on various regulations.
 - Compare the information gathered in this survey with the data from past surveys.
- Additionally, the information in this survey is compared among the regions and by open-water anglers only versus anglers who engage in ice fishing.

The survey followed the methodology of past surveys by using postal mail as the primary survey method, supplemented with an online survey for those anglers who wanted to complete the questionnaire online rather than on paper. The survey entailed multiple forms of contact (mailed letter and telephone). This approach to use mail as the primary survey method with the option of online surveying ensured that anglers could participate in the survey in the way that was most convenient to them.

The questionnaire was designed as a paper survey as the primary mode to match the methodology of previous surveys. The questionnaire was developed by Responsive Management and the Vermont Fish and Wildlife Department (hereinafter referred to as "the Department") based on previous surveys, as most of the questions in this year's survey matched the questions in previous surveys.

The sampling plan of licensed anglers was designed to achieve a representative sample statewide in its entirety and at the regional level for each of the Department's five regions. The sample was stratified into the five regions and then included a sixth stratum of nonresident license holders, with a pre-determined goal of completed surveys in each stratum. The sample of anglers was provided by the Department from its license database, consisting of any anglers who had a valid fishing license in 2019.

The initial contact with anglers was by letter, mailed on January 22, 2020. Several follow-up contacts were made to encourage participation. Please see the body of the report for the full contact methods.

The survey data were weighted by demographic factors as well as region of residence (because the sample was stratified by region, with a set sample in each region, rather than sampled proportionally in the regions). Based on a nonresponse bias survey, the data were also weighted on fishing participation in 2018 and 2017. The survey data were analyzed using IBM SPSS Statistics as well as Responsive Management's proprietary software.

The rate of fishing participation in 2019 was 84.7% among *resident* license buyers and 96.5% among *nonresident* license buyers. In total, nearly 72,000 resident anglers are estimated to have fished for almost 1.8 million days in 2019, and nearly 37,000 nonresident anglers fished for approximately 369,000 days.

Open-water fishing is nearly ubiquitous: 95.0% of resident anglers and 94.2% of nonresident anglers fished open water in the past 3 years. Ice fishing participation is robust among resident anglers (39.1% did so in the past 3 years), but not as much for nonresident anglers (12.1%).

The most popular species in Vermont in the past 3 years were smallmouth bass, brook trout, yellow perch, largemouth bass, and rainbow trout—each with a majority of resident anglers having fished for it. In the trends analysis, each species had a lower percentage of anglers having fished for it in 2019 compared to 2009.

The majority of anglers—both resident (69.8%) and nonresident (80.0%)—gave a rating of the quality of fishing in Vermont in the positive half of the scale (*excellent* or *good*), while only 30.2% of resident anglers and 20.0% of nonresident anglers gave a rating in the negative half of the scale (*fair* or *poor*). In 2019, ratings were better, compared to ratings in 2009.

In combining three types of trout in streams and rivers, 66.3% of resident and 38.5% of nonresident anglers fished for brook, brown, or rainbow trout in streams or rivers in the past 3 years in Vermont. Quality ratings for trout fishing in streams and rivers are mixed among resident anglers, with 50.7% of them giving a rating of *excellent* or *good*, but 46.8% giving a rating of *fair* or *poor*. Ratings are somewhat better among nonresident anglers: 59.1% rating the quality of trout fishing in streams and rivers as *excellent* or *good*, compared to 34.5% giving a rating of *fair* or *poor*.

Overall, 47.9% of resident anglers and 33.8% of nonresident anglers fished for trout or salmon in ponds or lakes in Vermont. The best ratings are for brook/brown/rainbow trout in ponds and lakes, better ratings than for lake trout and landlocked salmon in ponds and lakes.

Regarding warmwater gamefish and panfish, 71.9% of resident anglers and 52.1% of nonresident anglers fished for them in the past 3 years. In the ratings, yellow perch and both bass on the list (smallmouth and largemouth) are at the top; walleye is at the bottom.

In the past 3 years, 48.4% of resident anglers and 43.3% of nonresident anglers had fished in Lake Champlain. Of the species fished in open waters on Lake Champlain by residents, the most popular based on the percentage of resident anglers who had fished for them in 2019 are largemouth and smallmouth bass, northern pike, yellow perch, and lake trout.

See the body of the report for more details on fishing participation, as well as attitudes toward various regulations, creel limits, size limits, and number of lines allowed, as well as information on anglers' use of various sources of information and various types of baitfish. Additionally, the body of the report includes information on anglers' priorities for programs and access facilities.

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INTRODUCTION AND METHODOLOGY

Vermont periodically contracts surveys of its anglers to obtain information about their participation, species sought, days fished, equipment used, and opinions on various fishing issues so as to better manage its fisheries and fishing seasons. Previous surveys were administered by the Vermont Fish and Wildlife Department (hereinafter referred to as “the Department”) in 1991, the University of Vermont in 2000, and Cornell University’s Human Dimensions Research Unit within the Department of Natural Resources in 2010.¹ This survey in 2020 about fishing activity in 2019 was administered by Responsive Management.

This scientific, probability-based survey had several objectives:

- Estimate angler effort in various waters for various species.
 - Examine angler preferences for various species.
 - Look at angler satisfaction.
 - Obtain anglers’ input on various regulations.
 - Compare the information gathered in this survey with the data from past surveys.
- Additionally, the information in this survey is compared among the regions and by open-water anglers only versus anglers who engage in ice fishing.

The methodology is detailed below.

USE OF A MAIL SURVEY

The survey followed the methodology of past surveys by using postal mail as the primary survey method, supplemented with an online survey for those anglers who wanted to complete the questionnaire online rather than on paper. The survey entailed multiple forms of contact (mailed letter and telephone). This approach to use mail as the primary survey method with the option of online surveying ensured that anglers could participate in the survey in the way that was most convenient to them.

QUESTIONNAIRE DESIGN

The questionnaire was designed as a paper survey as the primary mode to match the methodology of previous surveys. The questionnaire was developed by Responsive Management and the Department based on previous surveys, as most of the questions in this year’s survey matched the questions in previous surveys. There were a few added questions in this year’s survey.

The questionnaire was primarily designed as a mail survey to be mailed to anglers, and it formed the basis of the online survey that anglers could complete on their home computer or mobile device. Note that the online survey was closed, meaning it was available only to respondents who were specifically selected for the survey and subsequently provided with the direct Uniform

¹ Vermont Department of Fish and Wildlife. 1992. *Statewide Fisheries Management Planning Process, Job Performance Report, Job I-3, Project F-12-R-25 (1991 Vermont Angler Survey)*. Montpelier, VT. School of Natural Resources, University of Vermont. 2000. *2000 Vermont Angler Survey*. Provided for publication to the Vermont Fish and Wildlife Department, Montpelier, VT. Connelly, N.; and B. Knuth, Human Dimensions Research Unit, Department of Natural Resources, Cornell University. 2010. *2010 Vermont Angler Survey Report*. Provided for publication to the Vermont Fish and Wildlife Department, Montpelier, VT.

Resource Locator (URL) address (or web address) for the survey and a unique access code required to enter the survey. Respondents could complete the survey only once. The survey could not be accessed through a general internet search. Responsive Management conducted internal pre-tests of the survey questionnaire in both modes to ensure proper wording, flow, and logic in the surveys.

The paper survey was then pre-tested on a small random selection of anglers. Ten anglers who were contacted agreed to take the paper survey and later provide their comments on it. Responsive Management mailed the survey to them. Subsequently, after several days had passed to give them sufficient time to complete the survey, Responsive Management called them back and asked questions about the flow of the survey and their understanding of the questions. Based on their comments, the paper survey was finalized for wide distribution.

The paper survey had clearly marked sections to make instructions for skipping inapplicable questions easy to understand and follow for respondents. A copy of the paper survey is included as Appendix A in this report. The online survey instrument was patterned after the paper survey and was programmed to automatically skip questions that did not apply for the logic and flow of the questionnaire. (The online survey is not shown because the “piping” code and error handlers that are shown in a PDF of the online survey make reading the questions difficult—because the survey questions are identical between the paper and online versions, it is sufficient to include only the paper survey in Appendix A.)

SURVEY SAMPLE

The sampling plan of licensed anglers was designed to achieve a representative sample statewide in its entirety and at the regional level for each of the Department’s five regions (Figure 1). The sample was stratified into the five regions and then included a sixth stratum of nonresident license holders, with a pre-determined goal of completed surveys in each stratum. Stratification was employed to achieve an acceptable sample size in each stratum.

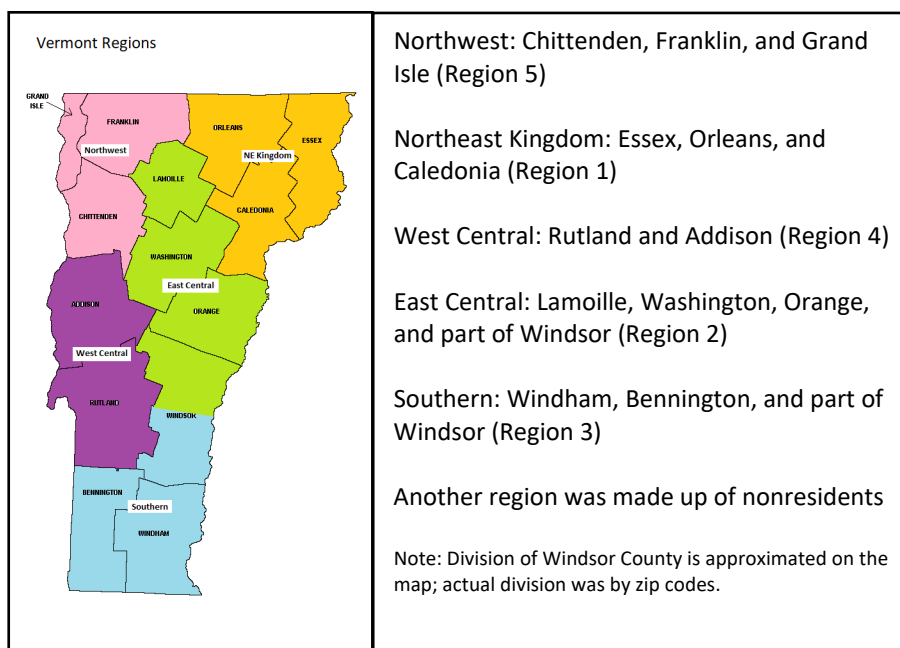


Figure 1. Vermont Regions for Angler Survey

The sample of anglers was provided by the Department from its license database, consisting of any anglers who had a valid fishing license in 2019. The sample was pulled with a goal of 1,600 completed surveys overall (320 in each region) of anglers who are residents of Vermont and 300 completed surveys of anglers from out of state. For overall results, the data were weighted so that the strata were in their proper proportions for each population, which were determined by their actual proportions in the database.

CONTACT PROCEDURES

Prior to the first contact with anglers, the Department posted an announcement of the survey on its website, which remained on its website for the duration of the survey. The announcement indicated that the survey was contracted to Responsive Management, and it described the purpose of the study and encouraged participation. It also provided a contact within the Department for any questions or concerns.

The initial contact with anglers was by letter, mailed on January 22, 2020. The envelope's return address was to Responsive Management's office, but it referenced the Department to assure potential respondents that the survey was legitimate. Inside, the letter itself was on Department letterhead, and it explained the purpose of the survey, indicated what the data would be used for, and included a contact at the Department for any questions or concerns about the survey. The letter was co-signed by the executive director of Responsive Management and by Louis Porter, commissioner of the Vermont Fish and Wildlife Department.

The letter in this first mailing included a paper copy of the survey for respondents to complete, as well as a postage paid envelope for anglers to return the survey to Responsive Management. Additionally, the letter included a web address and a unique access code for the angler to complete the survey in that mode—whichever was the most convenient to the angler.

After this initial contact on January 22, those who had not yet returned the survey to Responsive Management or who had not completed the survey online were contacted again by telephone to encourage them to complete the survey. This telephone calling effort, to both landline and cell phones (depending on the number the angler had provided to the Department when purchasing the license), started on February 3 and continued through February 10, 2020. During this telephone call, anglers were encouraged to complete the survey, and those who needed another paper survey were mailed a replacement. Additionally, messages were left on answering machines/voicemails encouraging participation in the survey.

Several weeks after this telephone calling effort, those who had not yet responded to the survey were sent a reminder letter. This letter was mailed on March 17, 2020, and reminded them of the paper survey that had been sent to them and also provided the website and access code for them to complete the survey online, if this was more convenient to them. Finally, on March 31, 2020, another letter was sent for a fourth attempted contact with those who had not yet responded to the survey.

The time of the contacts was altered slightly from the initial proposed timeline due to mail response times. As proposed, the second mailing was to be 2 weeks after the initial mailing; however, returned surveys were just beginning to arrive by mail at the 2-week mark, so the

research team decided to delay the second mailing to give time for as many returned surveys to be received as possible. This later mailing also was better in that it did not raise concerns from anglers who had responded but then who would have received a letter indicating that their survey had not been received by Responsive Management. This also allowed the removal of more anglers from the re-contact list so that those who had already completed the survey were not being contacted with reminders.

SURVEY DATA ENTRY AND QUALITY CONTROL

Upon completion of the paper questionnaires, anglers returned them in the envelope provided to Responsive Management for entry into its database. (Note that the online survey platform produced data that could be exported directly into Responsive Management's data analyses programs.) A central data collection and survey site at the Responsive Management office allowed for rigorous quality control over the data entry. Responsive Management maintains its own in-house surveying and data management facilities, staffed by data management personnel with experience administering surveys on fishing, as well as outdoor recreation and natural resources in general.

The data entry was audited to ensure the integrity of the data from the paper surveys. After both the online and paper surveys were obtained, the survey center managers and/or statisticians checked each completed survey to ensure clarity and completeness.

MAIL SURVEY RESPONSE

Responsive Management sent out 9,600 questionnaires in the initial mailing. Of those, 2,475 completed questionnaires were returned, while 1,628 were undeliverable (Table 1). This results in a response rate of 31.1%.

Region of Residence	Sample Size	Number of Undeliverable / Unreachable*	Number Responded	Adjusted Response Rate
Northeast Kingdom (Region 1)	1,600	299	412	31.7%
East Central Vermont (Region 2)	1,600	275	438	33.1%
Southern Vermont (Region 3)	1,600	289	412	31.4%
West Central Vermont (Region 4)	1,600	253	439	32.6%
Northwest Vermont (Region 5)	1,600	244	396	29.2%
Out-of-State	1,600	268	378	28.4%
Total	9,600	1,628	2,475	31.1%

*Includes mail pieces returned by the U.S. Postal Service as undeliverable, as well as those confirmed unreachable. Unreachable cases include residents at the address who confirmed via mail or telephone that the licensed angler addressee (i.e., the selected respondent for the study) is deceased, does not reside at the address, or is unknown to the current resident(s) at that address.

ANALYSIS OF SURVEY DATA

The survey data were analyzed using IBM SPSS Statistics as well as Responsive Management's proprietary software. In addition to the analyses of the survey data, the research team analyzed the non-response bias test data as well, which is described in the next section of the report.

Four surveys are compared in the trends: 1990, 1999, 2009, and 2019. In the analysis of trends, note that the surveys asked about the previous year's fishing. For example, this year's survey in 2020 asked about activity in 2019. Likewise, the 2010 survey asked about 2009, and so forth. The trends graphs and tables show the year that the survey referenced, not the year in which the survey was administered.

Additionally, in looking at the comparison of trends graphs, it is important to note that the weighting procedures (or lack of weighting of the 1990 data) varied from year to year. The 1990 data were unweighted. The 1999 data were weighted by age and license type. The 2009 data were weighted by age, license type, and region; furthermore, the days fished open and ice in 2009 were adjusted by the non-response bias survey that was administered in that survey effort (but none of the other 2009 data were weighted or adjusted by the non-response bias results). Finally, the 2019 data were weighted by age, gender, license type, and region, as well as by fishing participation in the 2 years previous to the survey year. For this reason, it is advisable to use caution in making broad statements about the trends.

NON-RESPONSE BIAS TESTING AND WEIGHTING

One phase of this overall project entailed a non-response bias survey of anglers who did not respond to the overall survey. For this non-response bias survey, telephones were chosen as the preferred sampling medium.

A central survey site at the Responsive Management office allowed for rigorous quality control over the interviews and data collection for the non-response bias survey. 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 non-response 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 non-response bias survey.

The questionnaire for the non-response bias survey was a modified version of the full survey—only some of the questions were asked—with wording adjusted to be conducted by telephone using a Computer-Assisted Telephone Interviewing (CATI) system. Note that the computer only skips through to the correct questions, based on the responses, and presents them on screen; a live interviewer actually conducts the surveys in a CATI system.

For the non-response survey, 193 telephone surveys were obtained from non-responders to the overall survey. The overall results were compared to the non-respondents, and the statistically

significant differences were determined (they are marked on the graphs). These results were used to develop weighting parameters for the survey, as needed (in addition to the weighting by age, gender, license type, and region that was already necessary).

A second non-response bias test was also conducted, consisting of a comparison of survey responses according to the date of completion of the survey. Those anglers who completed the survey very soon after it was sent out were compared to those who completed the survey much later in the surveying period. Note that the non-response bias survey results were deemed to be more important in weighting considerations than the comparison of survey completions by date.

All of the weighting was done using iterative proportional fitting, more commonly referred to as raking. With raking, a researcher chooses a set of variables where the population distribution is known, and the program fits the data to the parameters set for each variable. An iterative procedure is used to compensate for the effect that the weight of each individual variable has on the other variables being weighted.

Raking is popular because it only requires knowing the marginal proportions for each variable used in weighting. That is, it is possible to weight on age, gender, license type, and geographic region separately without having to first know the population proportion for every combination of characteristics.

RESULTS OF THE NON-RESPONSE BIAS SURVEY

The results of the non-response bias survey are presented in Appendices B and C. The graphs in Appendix B show the differences between the overall unweighted results and the non-response bias survey results. In total, 18 questions from the overall survey were asked in the non-response bias survey, exactly matching the non-response bias survey administered by Cornell University in 2010 (with the exception of a 19th question that was asked in 2010 but was not asked this year). The variables produced were:

- Fished in 2019
- Fished in 2018
- Fished in 2017
- Ratings of the quality of fishing
- Fished for brook, brown, or rainbow trout in streams and rivers in Vermont in any of the past 3 years
- Fished for trout or salmon in ponds or lakes in Vermont in any of the past 3 years
- Fished for walleye, bass, pike, yellow perch, sunfish, crappie, bullhead, or smelt in Vermont in any of the past 3 years
- Fished on Lake Champlain during either the open water or ice fishing seasons in any of the past 3 years
- Ratings of importance of managing strictly for wild trout in some streams and rivers
- Ratings of importance of managing strictly for wild trout in some ponds or lakes
- Ratings of importance of stocking brook, brown, and rainbow trout to be caught within the same season in some streams and rivers

- Ratings of importance of stocking brook, brown, and rainbow trout to be caught within the same season in some ponds and lakes
- Ratings of how problematic the ability to understand Vermont fishing regulations is to anglers
- Ratings of how problematic access to fishing areas is to anglers
- Participated in open-water fishing in 2019
- Participated in ice fishing in 2019
- Days open-water fished in 2019
- Days ice fished in 2019

The statistical significance tests showed the following to be statistically significant. A discussion of those differences, and how those differences affect the weighting plan, then follows. The variables with statistically significant differences are:

- Fished in 2018
- Fished in 2017
- Fished for brook, brown, or rainbow trout in streams and rivers in Vermont in any of the past 3 years
- Fished for trout or salmon in ponds or lakes in Vermont in any of the past 3 years
- Fished on Lake Champlain during either the open water or ice fishing seasons in any of the past 3 years
- Ratings of importance of managing strictly for wild trout in some streams and rivers
- Ratings of importance of managing strictly for wild trout in some ponds and lakes
- Ratings of importance of stocking brook, brown, and rainbow trout to be caught within the same season in some streams and rivers
- Ratings of importance of stocking brook, brown, and rainbow trout to be caught within the same season in some ponds and lakes
- Ratings of how problematic the ability to understand Vermont fishing regulations is to anglers
- Ratings of how problematic access to fishing areas is to anglers

Of those differences, opinions on management, stocking, access, and understanding regulations all have large differences in the “no opinion” responses, so there are no real meaningful differences on those questions for weighting. Additionally, although the opinions on access as a problem show statistically significant differences, this question was deemed to be of less importance for use in weighting than the remaining variables that were found to be statistically significant; note that it also had a substantial difference in the “no opinion” responses.

There were statistically significant differences in fishing for brook, brown, or rainbow trout in streams and rivers and fishing on Lake Champlain, and there were slight statistically significant differences regarding having fished for trout or salmon in ponds or lakes. There were also statistically significant differences in fishing in 2018 and fishing in 2017 (the two years prior to the main survey year of 2019). All of these were then considered for use in weighting.

Weighting for non-response works best if only a small number of variables is used because using more variables (for example, if all five of the above variables were used) can cause some of the individual weights to become unreasonably high. When weights on some respondents become much higher than on other respondents, there is an increased chance that atypical respondents (i.e., anglers who are vastly different than the typical angler) unduly influence the overall data.

Of note is that fished open water in 2019, went ice fishing in 2019, and days open-water and ice fishing in 2019 do *not* have statistically significant differences.

The questions that were deemed to have meaningful differences for use in weighting are as follows:

- Fished in 2018
- Fished in 2017

The results suggest that non-respondents tend to be less avid as measured by having fished in 2017 and 2018—in other words, they are less likely to have fished in 2017 or 2018, compared to overall respondents. To address this bias, weighting was applied based on these two variables.

An important consideration in comparing the overall survey results with the non-response survey results is that the reality lies in between those two surveys. The reality does not match exactly the non-response bias survey results, so weighting should not be designed to make the overall survey results match the non-response bias survey results. Rather, weighting should be applied to pull the overall survey results toward, but not all the way to, the non-response bias survey results.

Another question is how much the non-respondents should represent. If they are thought to be equal to respondents, then the weighting would produce results exactly in the middle of the two survey results (i.e., 1/2 of the difference between the survey results). However, giving the 193 non-respondents the same weight as 2,321 overall respondents is not statistically merited. For this reason, the weighting applied to the overall results was deemed to be less than 1/2 of the difference between the two survey results.

In the final weighting plan, a weight of 1/3 of the difference on these two questions was chosen. In that way, the non-respondents pull the overall results toward them, but not overly so. The fact that differences in open water and ice fishing rates, as well as days, are not statistically significant means that the pre-weighted data are fairly accurate already.

Note that the weights discussed here are in addition to the weights for demographic variables of age, gender, and region—because the sampling was stratified by region—that were applied (known from the fishing license database). Additionally, weighting was applied by license type according to proportions provided by the Department as guidance for this report.

In the weighting for non-response, the researchers weighted all the data to those two questions, not just the data for those particular questions. That way, the data on all questions were affected with the lowering of the importance of avid anglers fishing in previous years (2018 and 2017).

This weighting was applied to all of the respondents on all of the questions rather than just on some questions, as theoretically, it makes more sense to weight all the data in this particular situation. If certain anglers are under- or over-represented in the survey, then they are under- or over-represented on all the data, not just some of the data. This diverges from the weighting that was applied because of the non-response bias test in the 2010 survey. In that previous survey and analysis, only the days fished were weighted based on the non-response testing; no other data were weighted based on the non-response survey.

An additional non-response bias test was run that compared the results by the date of the survey to see if early responders and later responders were different from one another and whether they were different from respondents to the non-response bias survey. No clear pattern emerged from this comparison that was felt to supersede the results of the comparison (and weighting) that was discussed above. These results are shown in Appendix C.

INFORMATION ABOUT THE PRESENTATION OF RESULTS

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

- 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 tables and 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.

Only the first questions in the survey included those who had not fished in the past 3 years—these questions established the rate of fishing among 2019 license holders. After those initial questions, only license holders who had fished in the past 3 years continued on in the survey. After Tables 2 and 3, any reference in the report to “anglers” refers specifically to those who had a fishing license valid in 2019 and who had fished in Vermont in the previous 3 years, as “anglers” seems like a less unwieldy term than “2019 license holders who fished in Vermont in the past 3 years.”

DEMOGRAPHIC / PARTICIPATORY / OPINION ANALYSIS GRAPHS

In addition to tables and graphs depicting the results of the individual survey questions, the report includes special graphs that show how various demographic, participatory, and opinion groups respond to certain questions, hereinafter simply referred to as demographic analyses graphs. Not all the questions were analyzed in this way; questions chosen for these analyses are those deemed to be of the most utility. Also note that this type of analyses can only be done on questions given to the entire sample (i.e., excluding follow-up questions asked only of part of the sample). An example is provided as Figure 2 at the end of this section. The example shows the percentages of the various groups who think that crowding at fishing areas is a serious or moderate problem. These graphs are run of all anglers, both residents and nonresidents combined and weighted to be in their proper proportions.

Figure 2 shows that the overall rate of thinking crowding is a problem among all anglers is 30%, as indicated by the patterned bar. Those groups shown above the overall bar have a higher

percentage who think that crowding is a serious or moderate problem, compared to residents overall. Meanwhile, those groups shown below the overall bar have a lower rate of thinking that crowding is a serious or moderate problem, compared to residents overall.

When one group is above the overall bar (for instance, in this example, female anglers), its counterpart, if it has a dichotomous counterpart, (in this instance, male anglers) will be below the overall bar. The distance from the overall bar matters, as well. Those groups far from the overall bar have a marked difference from residents overall (in this example, all groups at 35% or higher or at 25% or lower). Those groups near the overall bar do not have a marked difference (in this example, all groups at 26% to 34%).

Additionally, the amount shown (for instance, that 30% of anglers overall think crowding is a serious or moderate problem) means that the converse (70%, which is the converse of 30%) did *not* think that crowding is a serious or moderate problem. As an additional example, 38% of females think crowding is a serious or moderate problem, meaning that 62% of females do *not* think that crowding is a serious or moderate problem.

The demographic variables examined are as follows:

- Gender (male, female).
- Age (18 to 34 years old, 35 to 54 years old, 55 years old and older).
- State of residence (resident angler, nonresident angler)
- Region (Northwest Region, Northeast Kingdom, West Central Region, East Central Region, Southern Region).

Not all of the variables in these graphs are demographic, as some of them are based on participation, license type, species types fished for, and opinions. These non-demographic variables are as follows:

- Fished open water the median days or more in 2019.
- Ice fished the median days or more in 2019.
- Fished on Lake Champlain in past 3 years.
- License type (Resident Fish, Resident Combination, Nonresident Annual, Nonresident Short-Term)
- Fished for largemouth or smallmouth bass in Vermont in the past 3 years.
- Fished for brook, brown, or rainbow trout in Vermont in the past 3 years.
- Fished for lake trout or landlocked salmon in Vermont in the past 3 years.
- Fished for walleye, sauger, northern pike, or muskellunge in Vermont in the past 3 years.
- Fished for channel catfish or bullhead (hornpout) in Vermont in the past 3 years.
- Rates quality of fishing in Vermont as excellent.
- Does not rate quality of fishing in Vermont as excellent (this includes all responses other than “excellent”).

Note that the characteristics are not meant to describe a single person or a person that has all the traits. Rather, the analysis looks at groups defined by the individual characteristics, which sometimes are mutually exclusive.

The text box in Figure 2 explains how to interpret these demographic analyses graphs.

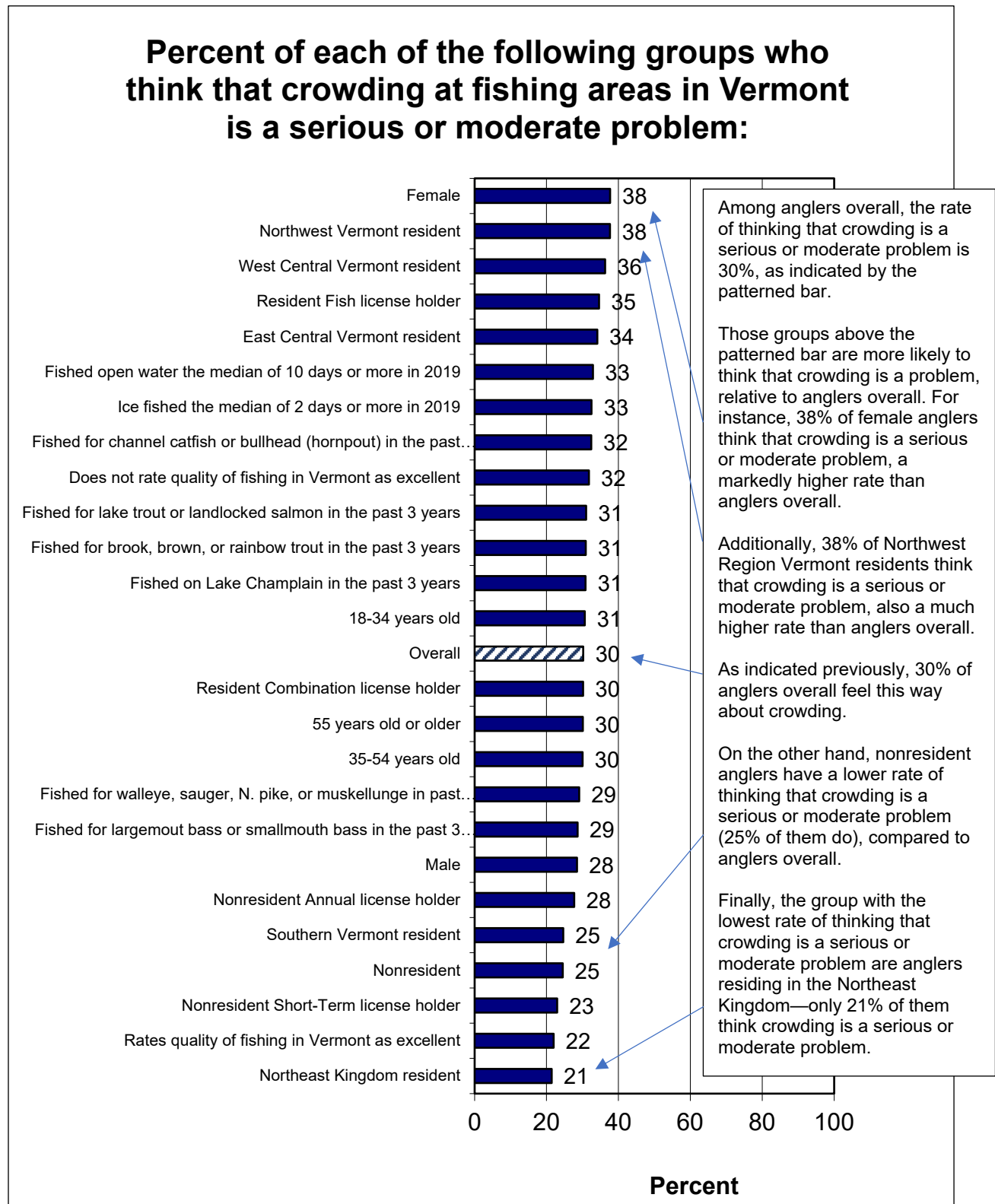


Figure 2. Example of a Demographic / Participatory / Opinion Analysis Graph

SURVEY RESULTS

There are eleven subsections within the Survey Results section. They follow the layout of the 2010 report for ease of use by readers familiar with that previous report, with the addition this year of a section on baitfish. (Following the Survey Results section is a new report section, “Mail Survey Versus Web Survey.”) The Survey Results section is divided into these subsections:

- Socio-Demographic Characteristics And License Purchase
- Fishing In Vermont
- Fishing For Trout In Streams And Rivers
- Fishing For Trout And Salmon In Ponds And Lakes (Excluding Lake Champlain)
- Fishing For Warmwater Gamefish And Panfish (Excluding on Lake Champlain)
- Fishing On Lake Champlain
- Angler Opinions About Fishery Management Issues, Fishing Access, And Sources Of Information
- Baitfish
- Comparisons By Vermont Region Of Residence
- Comparing Vermont Residents Who Fished Open Water Only In 2019 With Those Who Went Ice Fishing
- Trends (1990, 1999, 2009, 2019) In Fishing Participation And Opinions About Fishing Regulations And Management Issues

SOCIO-DEMOGRAPHIC CHARACTERISTICS AND LICENSE PURCHASE

An analysis was run of the characteristics of licensed anglers in Vermont in the license database and among survey respondents; this latter includes those who did not fish in the past 3 years (Table 2). The gender, age, and license type breakdown of anglers is shown.

	License Buyer Sample (%)	Survey Respondents (%)
<i>Gender</i>		
Male	78.1	79.2
Female	21.9	20.8
<i>Age</i>		
18-34	27.4	11.2
35-54	34.5	26.6
55+	38.1	62.3
<i>License Types</i>		
Resident Fishing (Annual, 3-Day, Youth, Lifetime)	34.7	29.1
Resident Combo (Annual, Youth, Lifetime)	33.8	55.0
Nonresident Annual or Lifetime (Fishing, Youth, Combo, Lifetime)	12.1	7.4
Nonresident Short-Term (1-Day, 3-Day, 7-Day)	19.4	8.5

FISHING IN VERMONT

The rate of fishing participation in 2019 was 84.7% among *resident* license buyers and 96.5% among *nonresident* license buyers (Table 3). Overall, the table also shows that 63.3% of resident fishing license buyers (who purchased a license valid in 2019) were avid in that they had gone fishing all 3 of the past 3 years; this rate among nonresidents was 51.0%. Note that the full survey was administered only to those who had fished at least once in the previous 3 years.

	Vermont residents (%)	Nonresidents (%)
Fished in 2019	84.7	96.5
Fished in 2018	72.0	62.7
Fished in 2017	67.7	55.2
Did not fish in any of the past 3 years	11.4	2.5
Fished every year (2019, 2018, and 2017)	63.3	51.0
Fished intermittently (1 or 2 of the past 3 years)	25.3	46.5

As indicated previously, only the first questions in the survey included those who had not fished in the past 3 years, which is shown in Table 3 above. From this point on in the report, any reference to “anglers” refers specifically to those who had a fishing license valid in 2019 and *who had fished in Vermont in the previous 3 years*.

Open-water fishing is nearly ubiquitous: 95.0% of resident anglers and 94.2% of nonresident anglers fished open water in the past 3 years. Ice fishing participation is robust among resident anglers (39.1% did so in the past 3 years), but not as much for nonresident anglers (12.1%) (Table 4). The sum is greater than 100% because some anglers did both types of fishing.

Seasons fished in Vermont in past 3 years	Vermont residents (%)	Nonresidents (%)
Open water	95.0	94.2
Ice fishing	39.1	12.1

As shown in Figures 3 and 4, as well as in Table 5, the most popular species in Vermont in the past 3 years were smallmouth bass, brook trout, yellow perch, largemouth bass, and rainbow trout—each with a majority of resident anglers having fished for it. Note that this shows fishing overall—in other words, both open-water fishing and ice fishing. Only the two bass species listed above have a majority of nonresident anglers fishing for it. Resident anglers generally had a greater percentage fishing for nearly every species than did nonresident anglers, although three species have nearly the same percentages between resident and nonresident anglers (discounting all species with less than 5% participation): smallmouth bass (60.7% among resident anglers versus 60.1% among nonresident anglers), largemouth bass (57.2% versus 56.8%), and pickerel (24.5% versus 24.7%—one of the few species with a greater nonresident percentage).

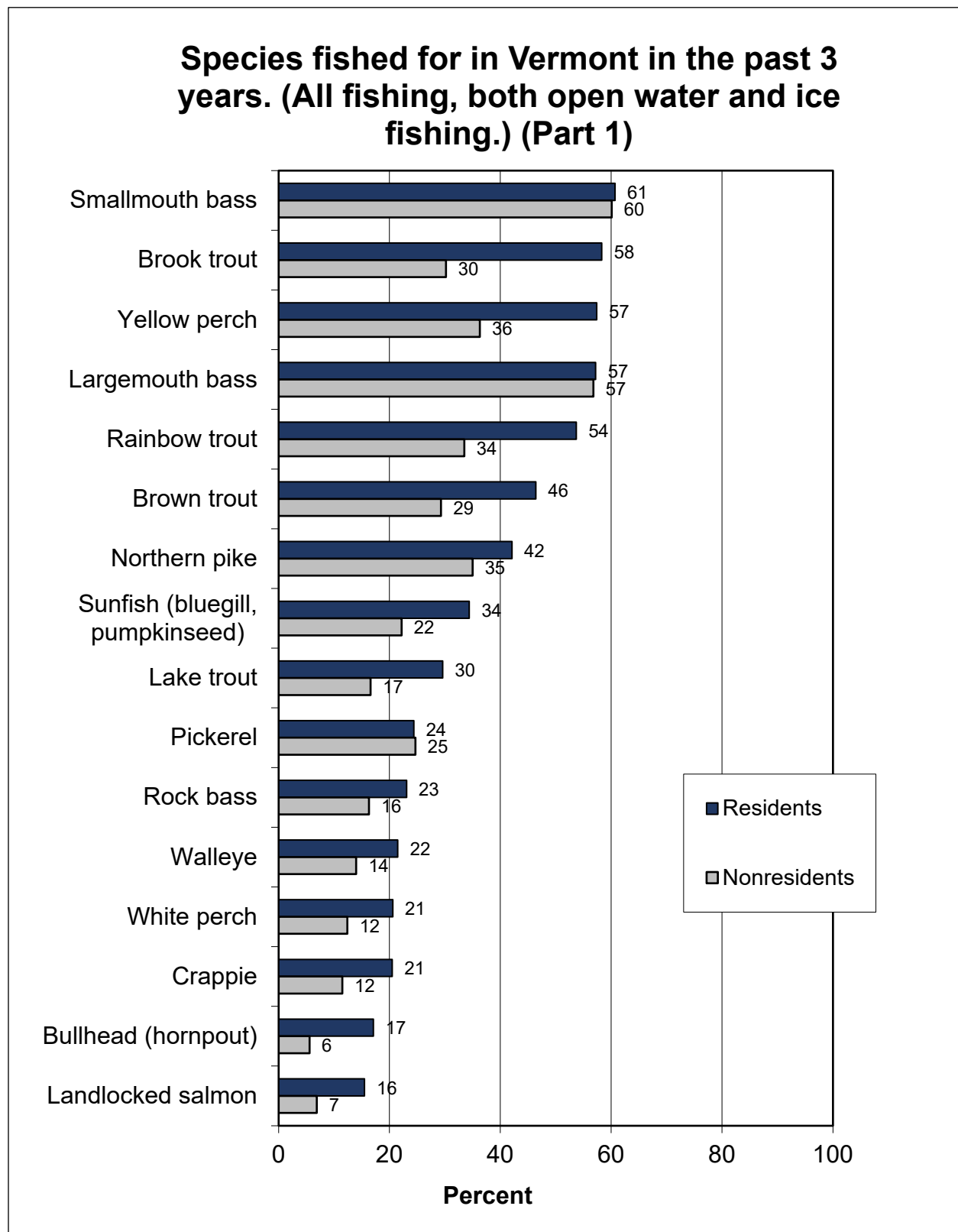


Figure 3. Species Fished for in Vermont in the Past 3 Years (Part 1) (All Fishing)

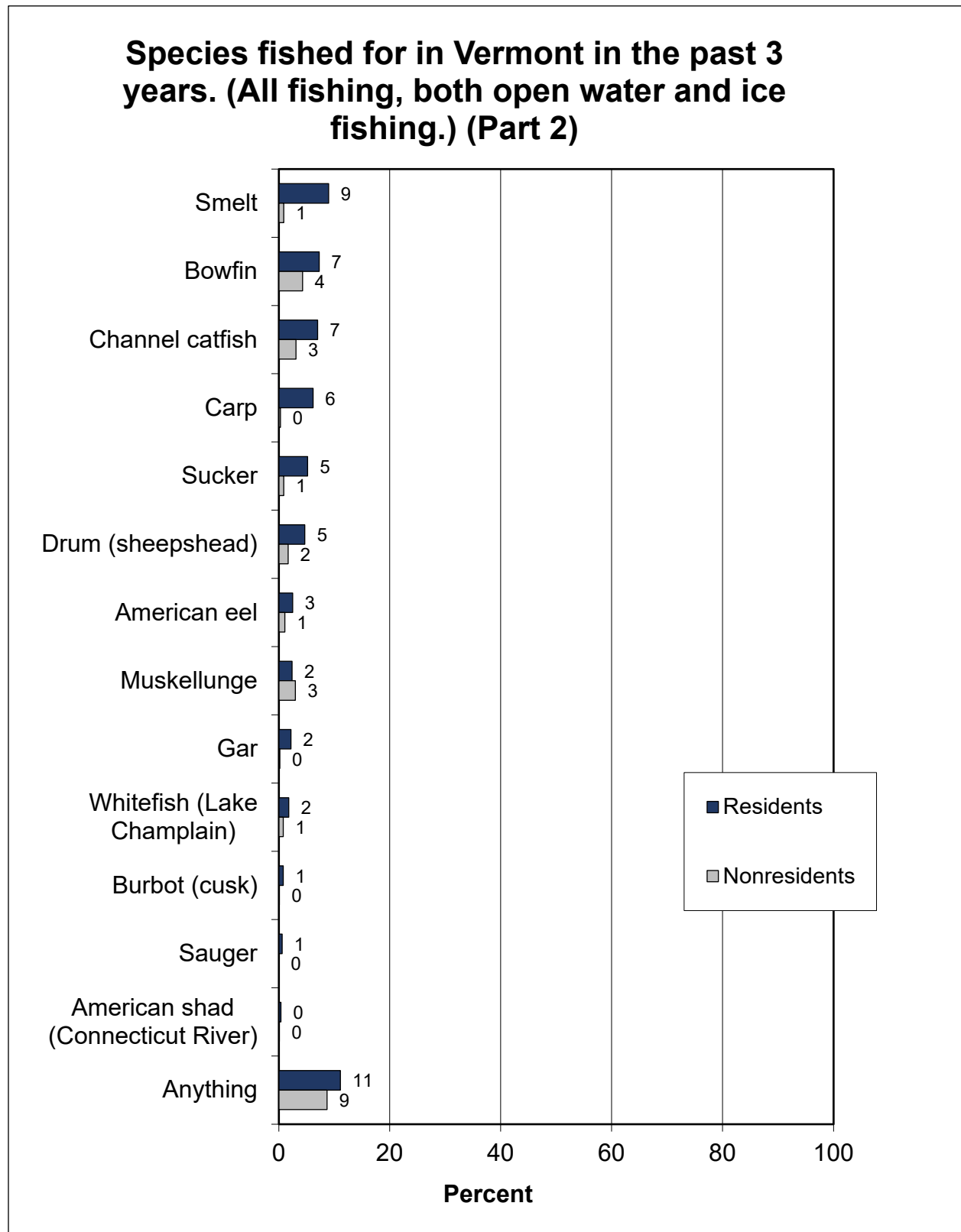


Figure 4. Species Fished for in Vermont in the Past 3 Years (Part 2) (All Fishing)

Table 5. Species fished for in Vermont in past 3 years, by Vermont residents and nonresidents. (Sorted by percent fishing.)

Percent fished in Vermont in past 3 years for: ^a	Vermont residents (%)	Nonresidents (%)
Smallmouth bass	60.7	60.1
Brook trout	58.3	30.2
Yellow perch	57.4	36.3
Largemouth bass	57.2	56.8
Rainbow trout	53.7	33.5
Brown trout	46.4	29.3
Northern pike	42.1	35.0
Sunfish (bluegill, pumpkinseed)	34.4	22.2
Lake trout	29.6	16.6
Pickereel	24.4	24.7
Rock bass	23.1	16.3
Walleye	21.5	14.0
White perch	20.6	12.4
Crappie	20.5	11.5
Bullhead (hornpout)	17.1	5.6
Landlocked salmon	15.5	6.9
Smelt	9.0	0.9
Bowfin	7.3	4.3
Channel catfish	7.0	3.1
Carp	6.2	0.3
Sucker	5.2	0.9
Drum (sheepshead)	4.7	1.7
American eel	2.5	1.1
Muskellunge	2.4	3.0
Gar	2.2	0.2
Whitefish (Lake Champlain)	1.8	0.8
Burbot (cusk)	0.8	0.1
Sauger	0.6	0.0
American shad (Connecticut River)	0.4	0.1
Anything	11.1	8.7

^a Percentages sum to more than 100% because more than one species could be fished for.

Along with asking about species actually fished for, the survey also asked about fish species preferred. The most preferred species in open water are brook trout, largemouth bass, smallmouth bass, rainbow trout, and brown trout—all with at least a quarter of residents including the species in their top three preferred (Figures 5 and 6 and Table 6). Meanwhile the most preferred ice fishing species are yellow perch, northern pike, and lake trout (Figures 7 and 8 and Table 7).

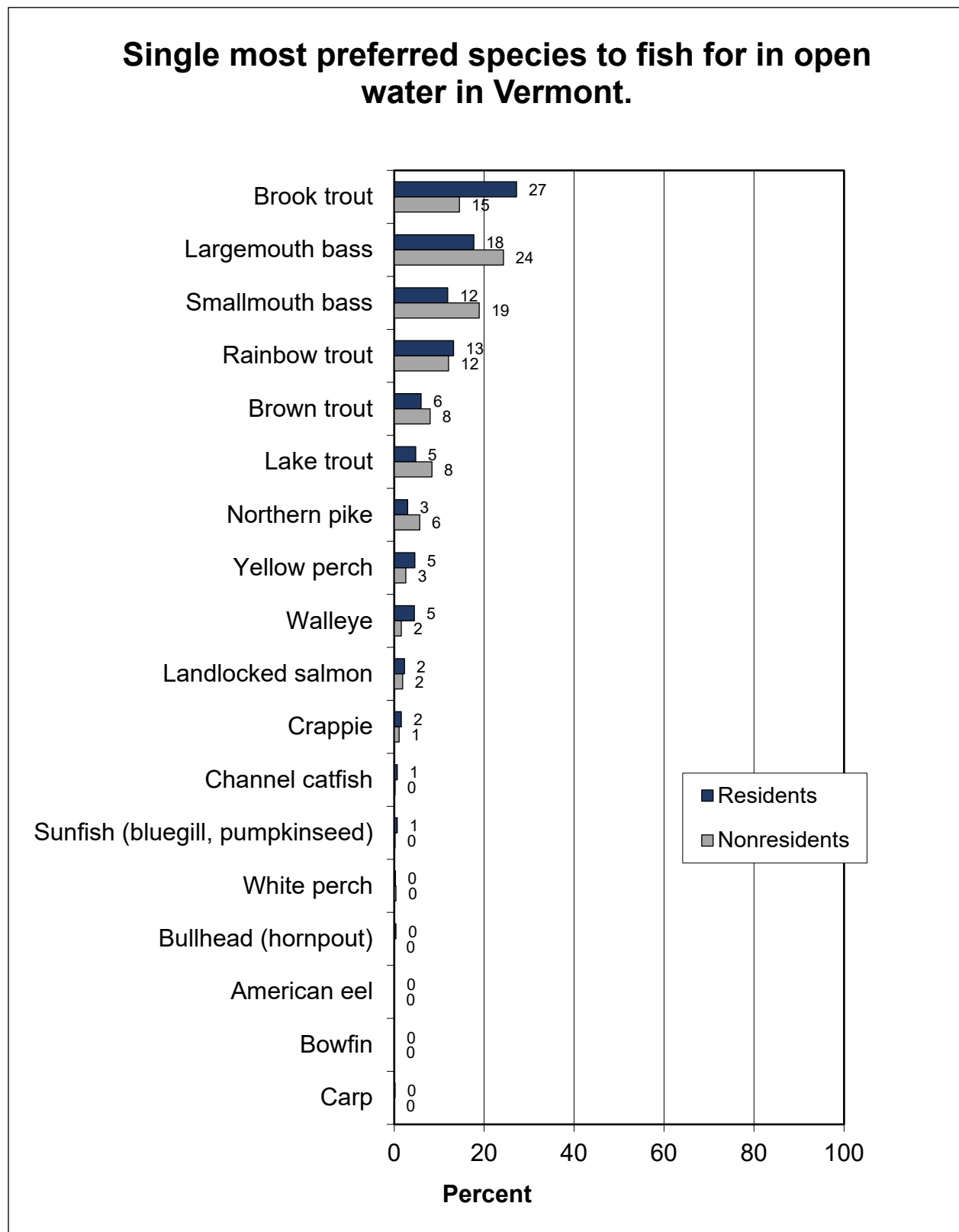


Figure 5. Single Preferred Species in Open Water in Vermont

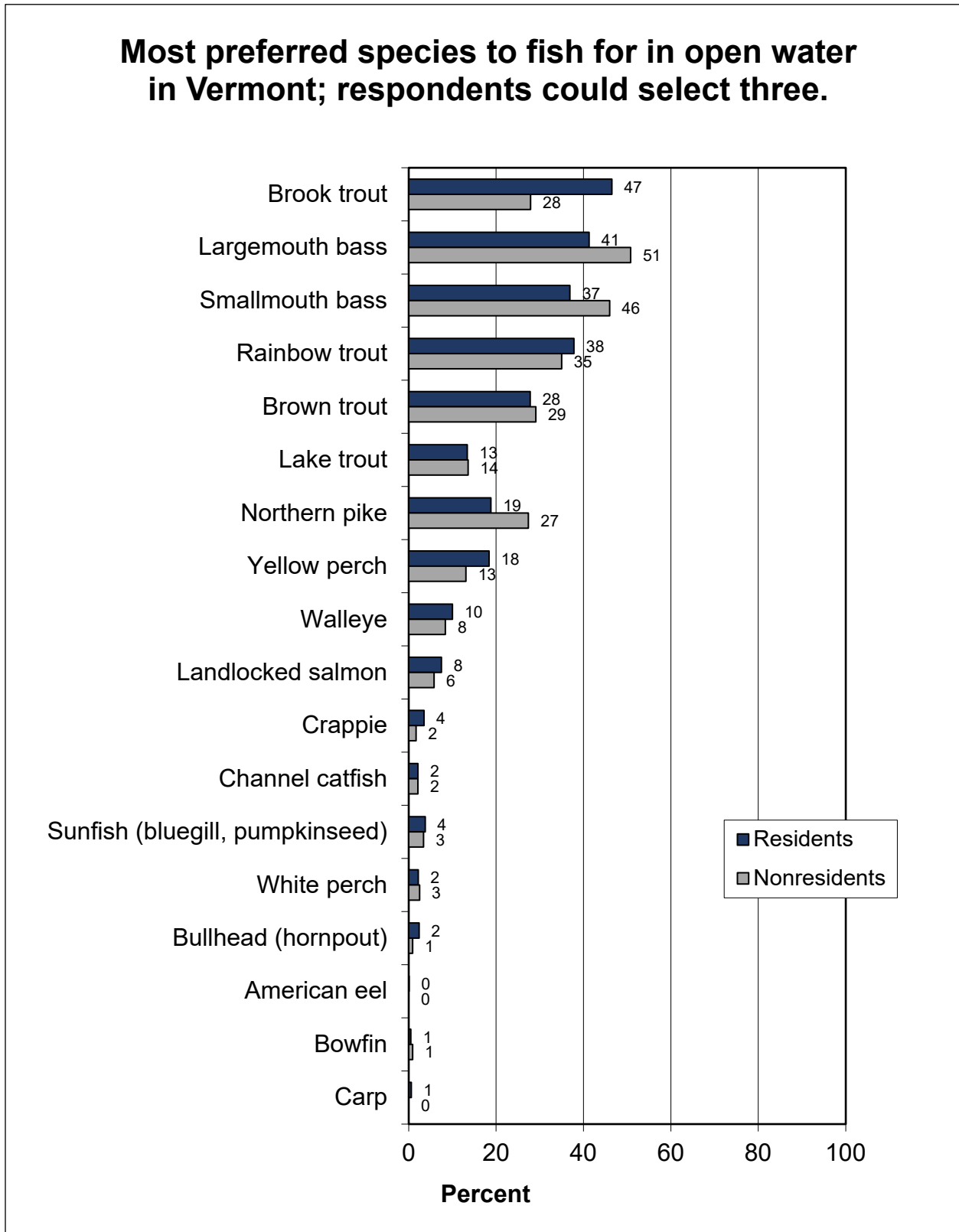


Figure 6. Top Three Preferred Species in Open Water in Vermont

Table 6. For those who fished open water in the past 3 years and had a species preference, the most preferred species and the ones among the top 3, by Vermont residents and nonresidents. (Sorted by most preferred among residents.)

Species	Open water preference			
	Vermont residents		Nonresidents	
	Most preferred (%)	Among top 3 (%)	Most preferred (%)	Among top 3 (%)
Brook trout	27.2	46.5	14.5	27.9
Largemouth bass	17.7	41.3	24.3	50.8
Rainbow trout	13.2	37.8	12.1	35.0
Smallmouth bass	11.9	36.9	18.9	46.0
Brown trout	6.0	27.8	8.0	29.1
Lake trout	4.8	13.4	8.4	13.6
Yellow perch	4.6	18.4	2.6	13.1
Walleye	4.5	10.0	1.6	8.4
Northern pike	3.0	18.8	5.7	27.4
Landlocked salmon	2.3	7.5	1.9	5.8
Crappie	1.6	3.5	1.1	1.7
Channel catfish	0.7	2.1	0.2	2.1
Sunfish (bluegill, pumpkinseed)	0.7	3.8	0.2	3.4
All other species combined	0.7	4.5	0.0	6.2
Bullhead (hornpout)	0.4	2.4	0.0	0.9
White perch	0.3	2.2	0.4	2.5
Carp	0.2	0.6	0.0	0.0
American eel	0.1	0.1	0.0	0.0
Bowfin	0.1	0.5	0.0	0.9

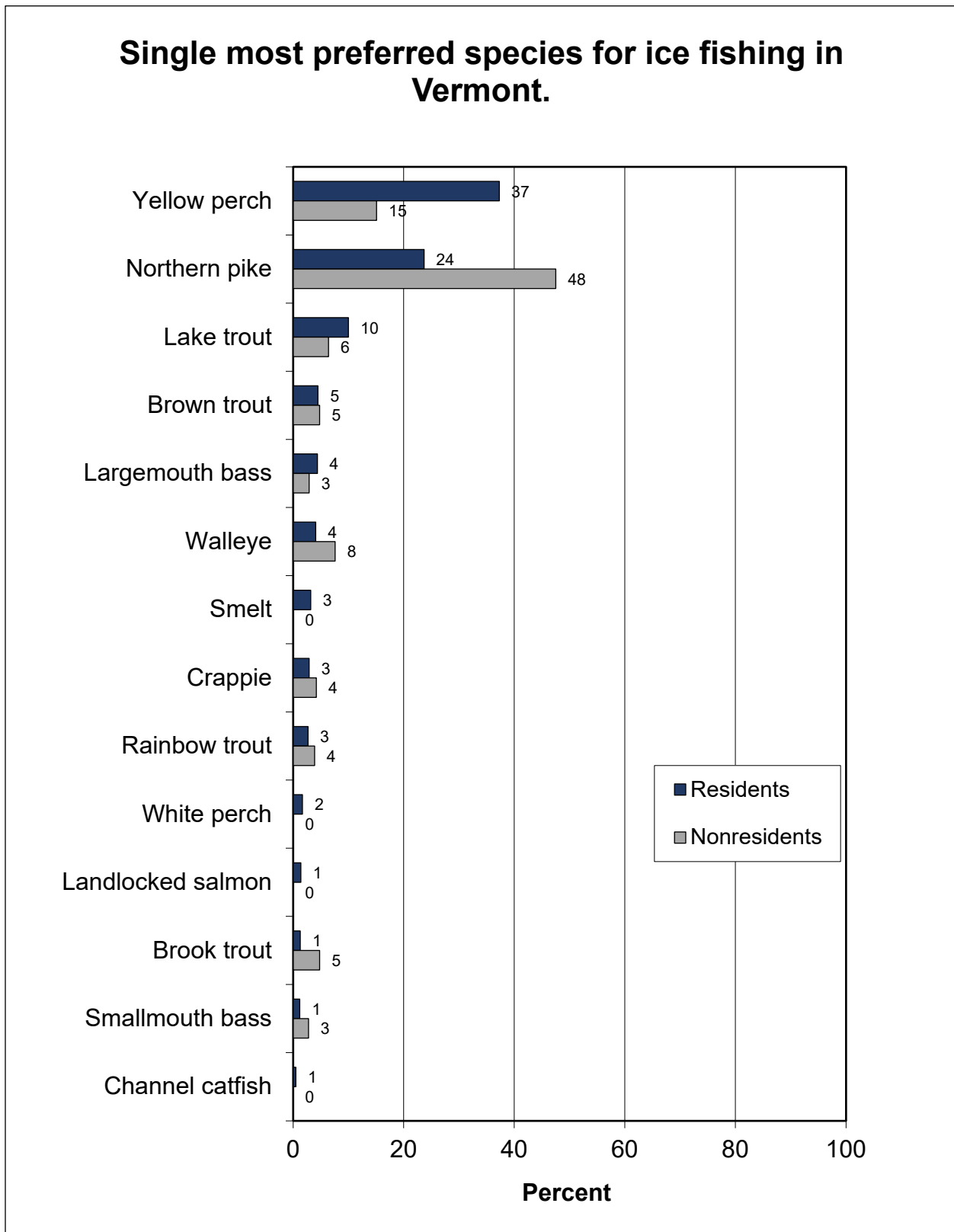


Figure 7. Single Preferred Ice Fishing Species in Vermont

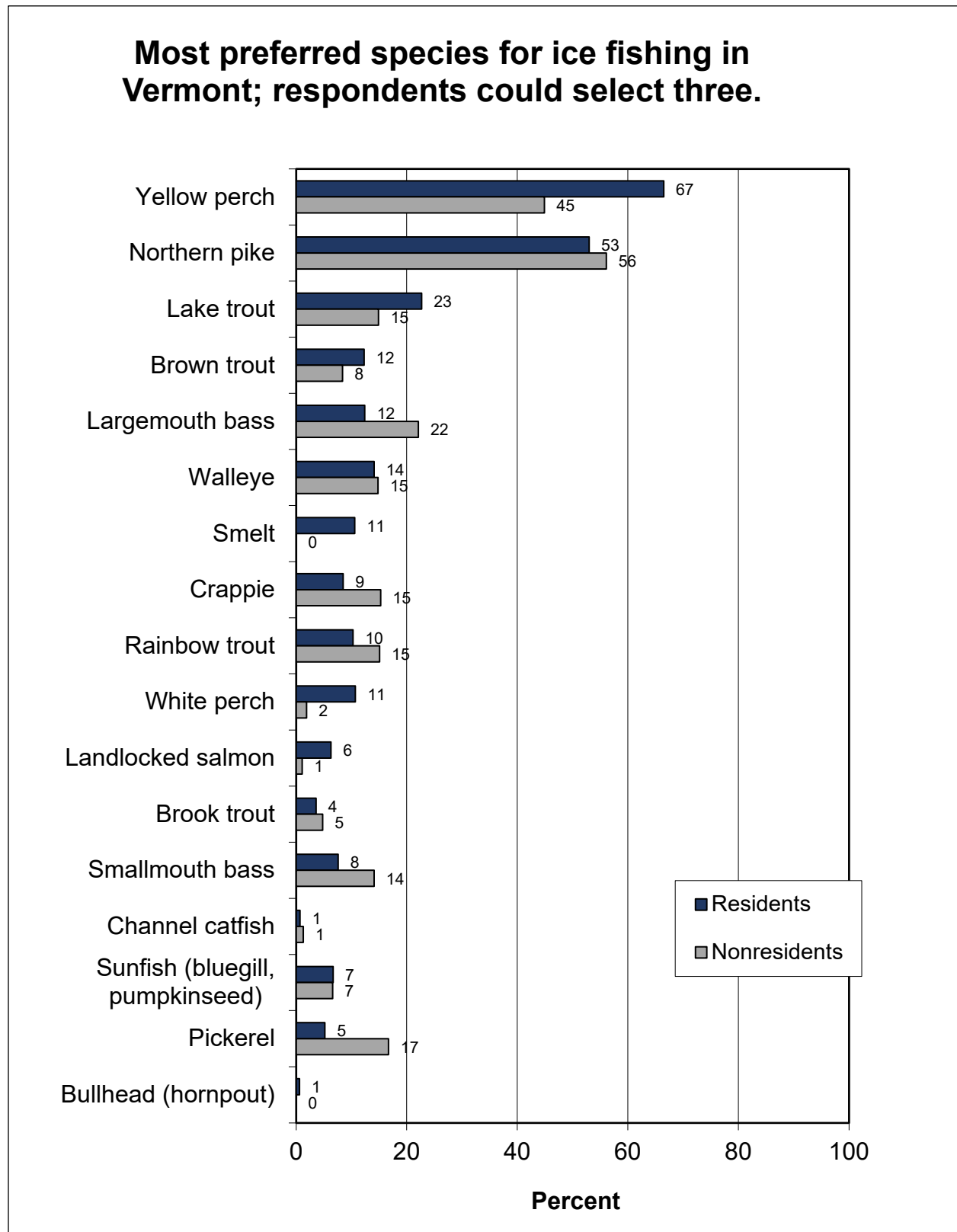


Figure 8. Top Three Preferred Ice Fishing Species in Vermont

Table 7. For those who went ice fishing in the past 3 years and had a species preference, the most preferred species and the ones among the top 3, by Vermont residents and nonresidents. (Sorted by most preferred among residents.)

Species	Ice fishing preference			
	Vermont residents		Nonresidents	
	Most preferred (%)	Among top 3 (%)	Most preferred (%)	Among top 3 (%)
Yellow perch	37.3	66.5	15.1	44.9
Northern pike	23.7	53.0	47.5	56.1
Lake trout	10.0	22.7	6.4	14.9
Brown trout	4.5	12.3	4.8	8.4
Largemouth bass	4.4	12.4	2.9	22.1
Walleye	4.1	14.1	7.6	14.8
Smelt	3.2	10.6	0.0	0.0
Crappie	2.9	8.5	4.2	15.3
Rainbow trout	2.7	10.3	3.9	15.1
White perch	1.7	10.7	0.0	1.9
Landlocked salmon	1.4	6.3	0.0	1.1
Brook trout	1.3	3.6	4.8	4.8
Smallmouth bass	1.2	7.6	2.8	14.1
Channel catfish	0.5	0.7	0.0	1.3
Sunfish (bluegill, pumpkinseed)	0.4	6.7	0.0	6.6
Pickering	0.3	5.2	0.0	16.7
Bullhead (hornpout)	0.2	0.6	0.0	0.0
American shad (Connecticut River)	0.2	0.2	0.0	0.0

As indicated in Table 8, the majority of anglers—both resident (69.8%) and nonresident (80.0%)—gave a rating of the quality of fishing in Vermont in the positive half of the scale (*excellent* or *good*), while only 30.2% of resident anglers and 20.0% of nonresident anglers gave a rating in the negative half of the scale (*fair* or *poor*).

Table 8. Evaluation of the overall quality of fishing in Vermont during the past 3 years, by Vermont residents and nonresidents.

Quality of fishing in Vermont during the past 3 years	Vermont residents (%)	Nonresidents (%)
Poor	5.5	2.7
Fair	24.7	17.3
Good	58.8	51.9
Excellent	11.0	28.1
Mean score ^a	2.8	3.1

^a Scale ranged from 1 = poor to 4 = excellent.

Table 9 shows the estimated number of anglers and angler days fished in Vermont in 2019. In total, nearly 72,000 resident anglers are estimated to have fished for almost 1.8 million days in 2019, and nearly 37,000 nonresident anglers fished for approximately 369,000 days. The open-ice breakdown shows that more than 68,000 resident anglers fished open water in 2019 for nearly 1.5 million days of open-water fishing. Nonresident anglers in open water numbered

nearly 35,000 and fished almost 353,000 open water days. Ice fishing is much less popular; nonetheless, nearly 29,000 resident anglers went ice fishing for approximately 290,000 days, and more than 4,000 nonresident anglers fished for approximately 17,000 days.

	Vermont residents		Nonresidents	
	% or mean	Number	% or mean	Number
License buyers	100.0%	84,809	100.0%	38,291
Fished in 2019	84.7%	71,808	96.5%	36,927
<i>Of those who fished in 2019:</i>				
Open-water fishing	95.3%	68,414	94.1%	34,756
Days open water	21.7 (mean)	1,481,363	10.1 (mean)	352,571
Confidence interval		103,521		40,070
Ice fishing	40.0%	28,718	12.2%	4,497
Days ice fishing	10.1 (mean)	289,967	3.7 (mean)	16,749
Confidence interval		42,575		8,948
Total days fished		1,771,330		369,320

An analysis of the number of anglers and days fished for various species are shown in Tables 10 through 13. Table 10 shows resident anglers in open water, Table 11 shows resident anglers who ice fished, and Tables 12 and 13 show open water and ice fishing, respectively, among nonresidents. Figures 9 and 10 show mean days of open-water/ice fishing, respectively, for the various species by residents, and Figures 11 and 12 show the same by nonresidents. In general, the highest mean days are for panfish.

Table 10. Among Vermont residents who fished open water in 2019: the percent, estimated number of anglers, mean days fished, estimated total days fished, and 95% confidence interval by species.

(Sorted by percent fished.)

(Note: Anglers could fish for more than 1 species per day, so the sum of days from this table is not reflective of total days fished.)

Vermont residents (open water)	Percent fished	Number of anglers	Mean days fished	Total days fished	95% confidence interval
Largemouth or smallmouth bass	58.8	42,228	14.6	616,803	63,324
Brook, brown, or rainbow trout in small brooks or beaver ponds	51.7	37,138	9.9	369,081	40,131
Brook, brown, or rainbow trout in large streams or rivers	45.1	32,389	11.0	356,681	56,121
Brook, brown, or rainbow trout in ponds or lakes	40.1	28,779	10.3	297,211	41,376
Yellow perch	38.8	27,858	14.7	409,469	77,221
Northern pike or pickerel	35.0	25,156	14.8	372,387	54,654
Lake trout	23.3	16,750	9.4	157,864	26,896
Panfish (sunfish, crappie, etc.)	22.4	16,102	16.6	266,531	57,640
Walleye	17.4	12,510	8.8	109,943	22,426
Landlocked salmon	13.7	9,865	9.0	88,829	21,799
Bullhead	13.2	9,486	11.0	104,014	26,511
Channel catfish	7.0	5,047	11.1	55,946	18,771
Other (bowfin, gar, American eel, etc.)	6.8	4,858	11.9	57,791	21,765
Muskellunge	2.7	1,913	16.0	30,614	17,385
Smelt	2.0	1,441	9.1	13,111	6,712
American shad in the Connecticut River	0.5	381	a	a	a

^a Sample size was too small to estimate.

Table 11. Among Vermont residents who went ice fishing in 2019: the percent, estimated number of anglers, mean days fished, estimated total days fished, and 95% confidence interval by species. (Sorted by percent fished.)

(Note: Anglers could fish for more than 1 species per day, so the sum of days from this table is not reflective of total days fished.)

Vermont residents (ice fishing)	Percent fished	Number of anglers	Mean days fished	Total days fished	95% confidence interval
Yellow perch	63.4	18,203	10.1	184,563	28,545
Northern pike or pickerel	47.9	13,757	7.8	106,888	16,485
Panfish (sunfish, crappie, etc.)	17.8	5,119	14.0	71,747	20,653
Brook, brown, or rainbow trout in ponds or lakes	23.5	6,753	8.8	59,384	13,417
Largemouth or smallmouth bass	23.4	6,726	8.1	54,493	13,326
Lake trout	25.1	7,211	7.0	50,405	11,611
Smelt	17.2	4,941	7.7	37,809	10,204
Landlocked salmon	11.6	3,331	7.1	23,746	7,938
Walleye	14.5	4,162	4.5	18,770	5,524
Muskellunge	1.3	387	a	a	a
Bullhead	1.8	526	a	a	a
Channel catfish	0.8	240	a	a	a
Other (bowfin, gar, American eel, etc.)	1.2	348	a	a	a

^a Sample size was too small to estimate.

Table 12. Among nonresidents who fished open water in 2019: the percent, estimated number of anglers, mean days fished, estimated total days fished, and 95% confidence interval by species. (Sorted by percent fished.)

(Note: Anglers could fish for more than 1 species per day, so the sum of days from this table is not reflective of total days fished.)

Nonresidents (open water)	Percent fished	Number of anglers	Mean days fished	Total days fished	95% confidence interval
Largemouth or smallmouth bass	64.3	23,735	9.6	227,265	33,883
Northern pike or pickerel	38.3	14,142	9.4	133,611	28,362
Yellow perch	31.4	11,587	10.5	122,092	30,418
Brook, brown, or rainbow trout in large streams or rivers	28.6	10,555	5.5	57,652	11,738
Brook, brown, or rainbow trout in small brooks or beaver ponds	24.1	8,916	4.7	41,761	8,946
Brook, brown, or rainbow trout in ponds or lakes	24.1	8,893	7.7	68,308	21,929
Panfish (sunfish, crappie, etc.)	16.4	6,065	10.6	64,182	22,173
Lake trout	14.8	5,478	6.0	32,616	8,760
Walleye	13.8	5,101	6.4	32,712	12,850
Landlocked salmon	6.7	2,470	8.1	19,937	7,833
Other (bowfin, gar, American eel, etc.)	4.8	1,782	8.5	15,163	6,329
Bullhead	4.5	1,675	9.0	15,156	8,275
Muskellunge	2.7	1,014	a	a	a
Channel catfish	2.7	991	a	a	a
Smelt	1.0	358	a	a	a
American shad in the Connecticut River	0.1	48	a	a	a

^a Sample size was too small to estimate.

Table 13. Among nonresidents who went ice fishing in 2019: the percent, estimated number of anglers, mean days fished, estimated total days fished, and 95% confidence interval by species. (Sorted by percent fished.)

(Note: Anglers could fish for more than 1 species per day, so the sum of days from this table is not reflective of total days fished.)

Nonresidents (ice fishing)	Percent fished	Number of anglers	Mean days fished	Total days fished	95% confidence interval
Northern pike or pickerel	55.1	2,479	4.9	12,252	3,846
Yellow perch	47.2	2,124	4.9	10,349	3,686
Largemouth or smallmouth bass	32.7	1,470	5.0	7,404	3,194
Lake trout	27.4	1,231	a	a	a
Panfish (sunfish, crappie, etc.)	20.1	906	a	a	a
Brook, brown, or rainbow trout in ponds or lakes	20.0	900	a	a	a
Walleye	11.0	495	a	a	a
Muskellunge	10.4	469	a	a	a
Landlocked salmon	8.3	372	a	a	a
Bullhead	4.0	179	a	a	a
Smelt	2.0	91	a	a	a
Other (bowfin, gar, American eel, etc.)	1.8	82	a	a	a
Channel catfish	1.6	73	a	a	a

^a Sample size was too small to estimate.

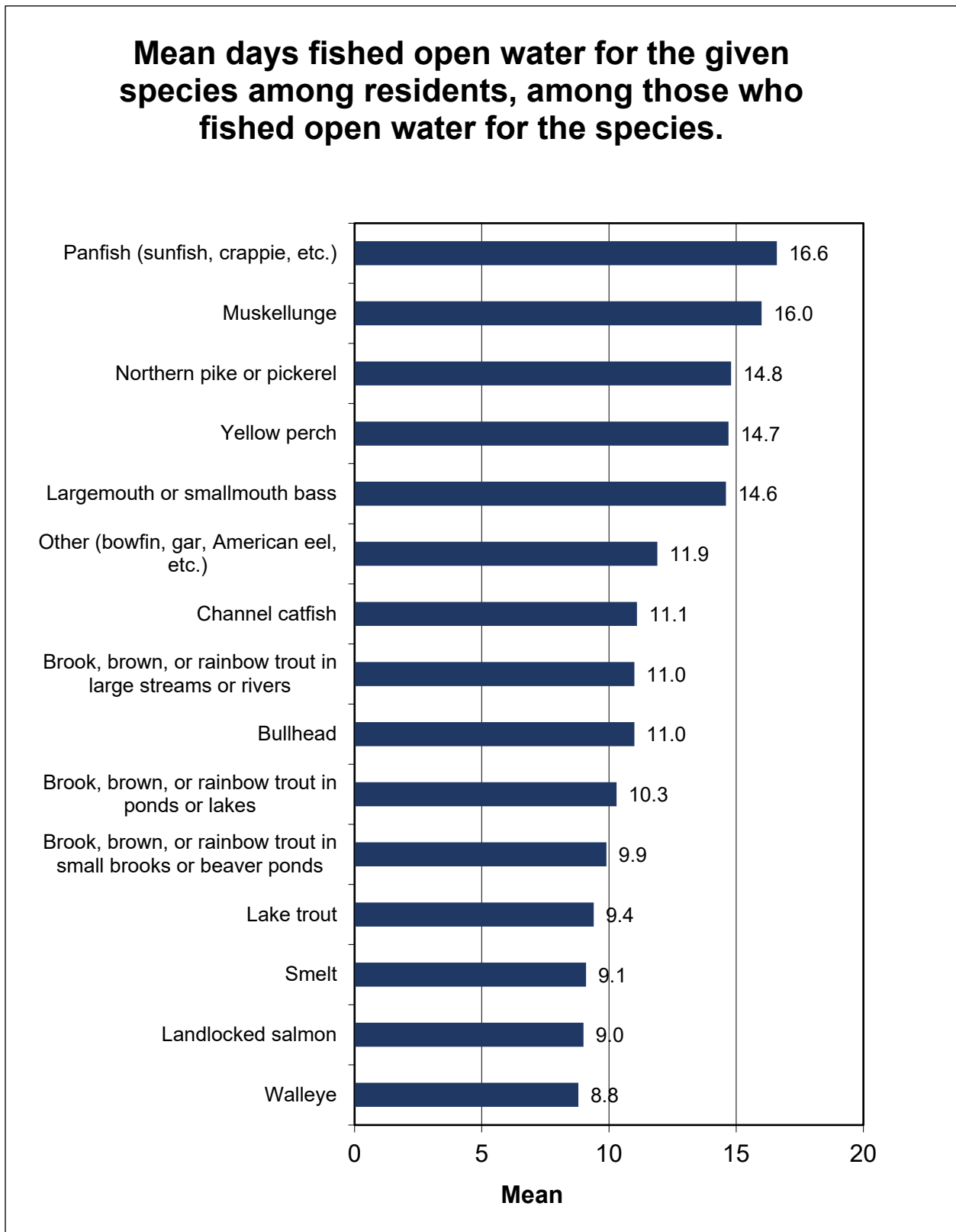


Figure 9. Mean Days Fishing Open Water for the Given Species, Among Residents

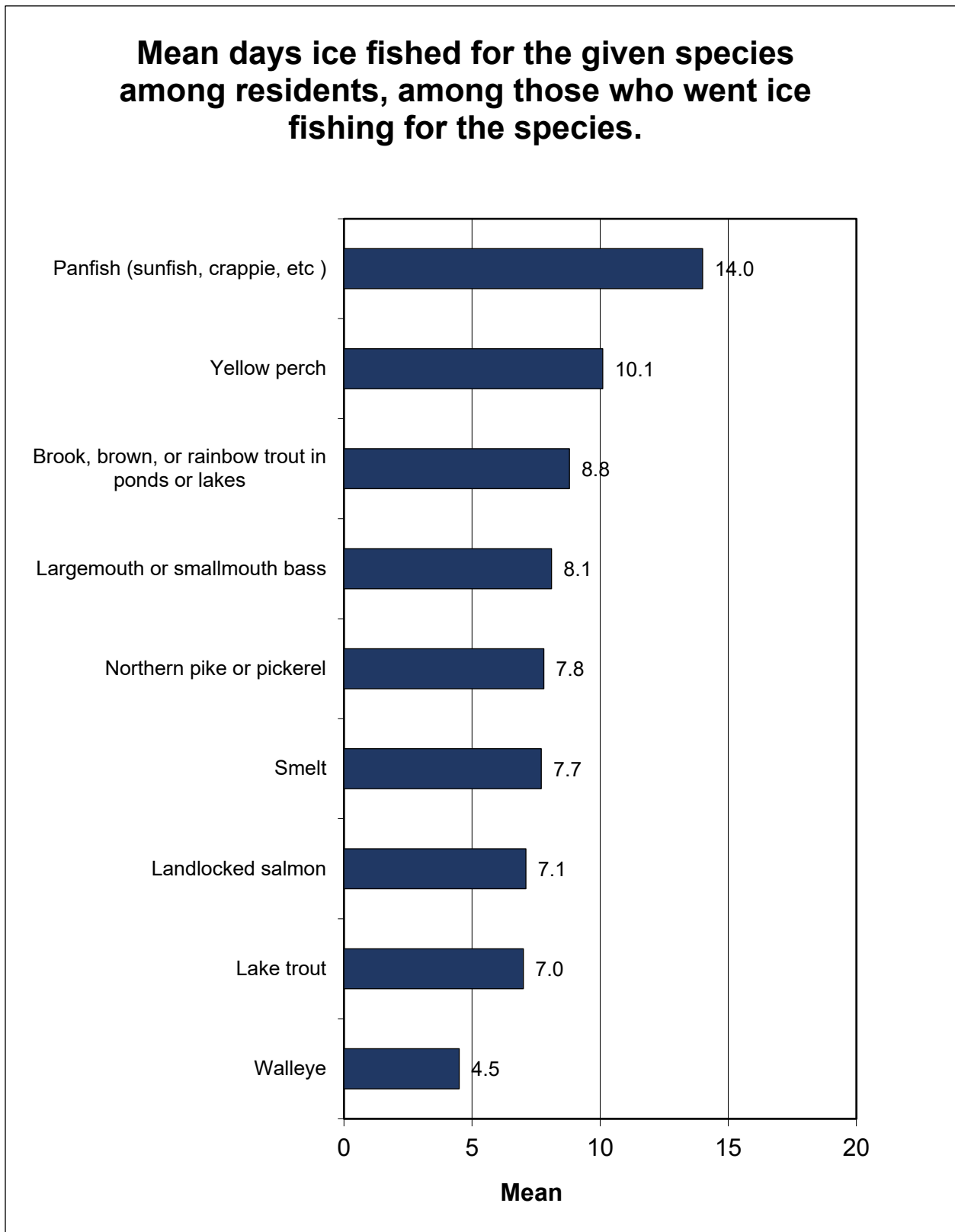


Figure 10. Mean Days Ice Fishing for the Given Species, Among Residents

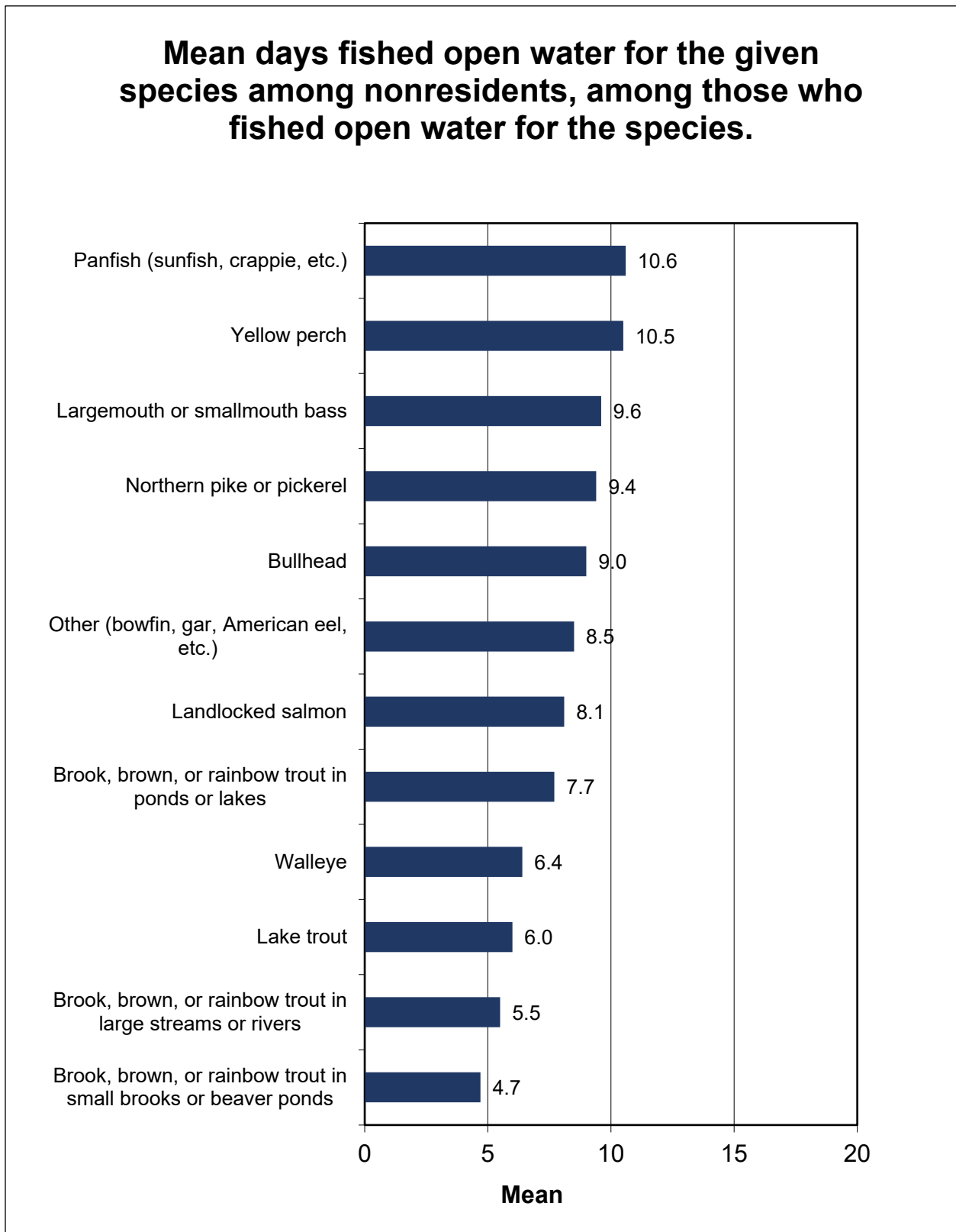


Figure 11. Mean Days Fishing Open Water for the Given Species, Among Nonresidents

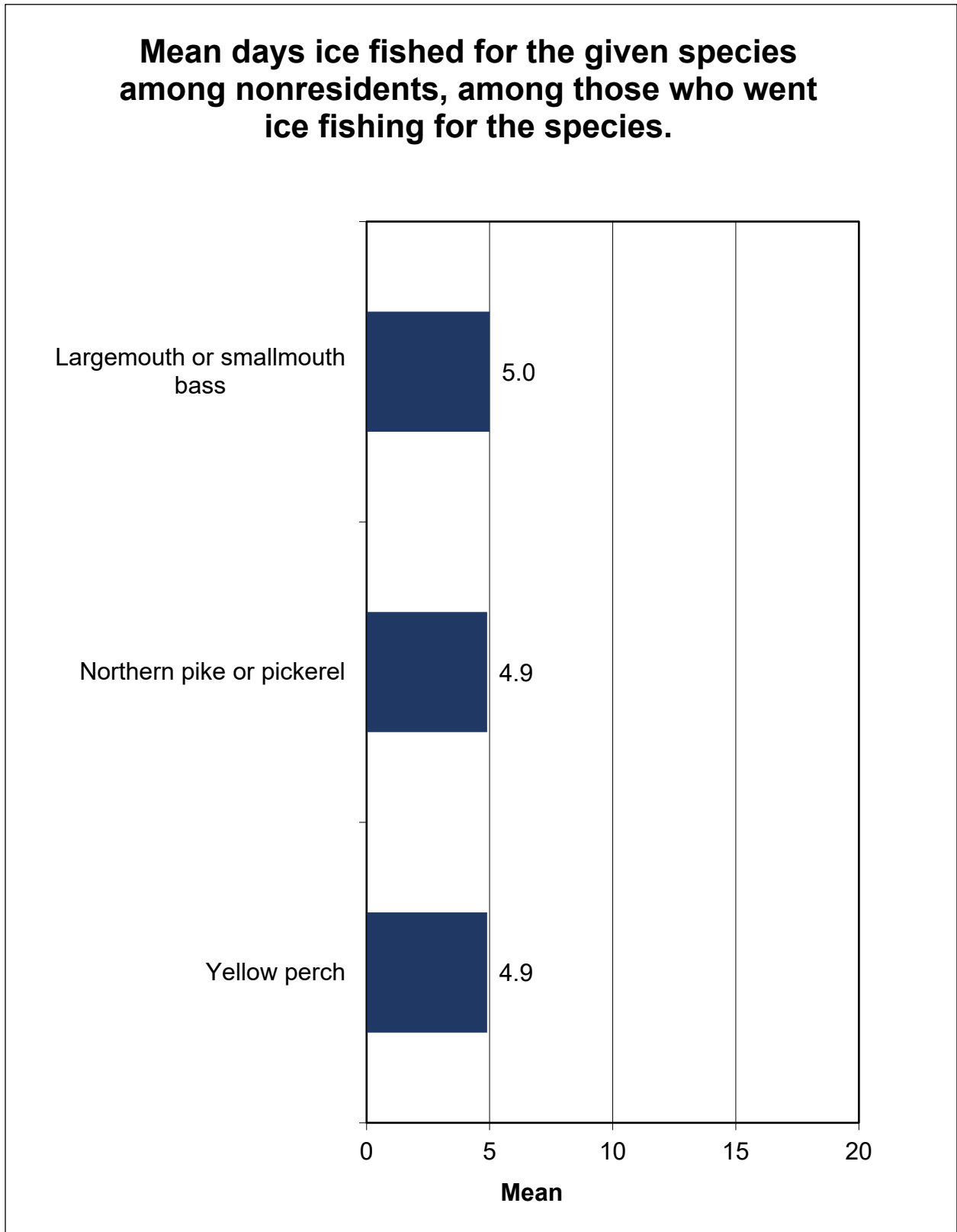


Figure 12. Mean Days Ice Fishing for the Given Species, Among Nonresidents

FISHING FOR TROUT IN STREAMS AND RIVERS

In combining three types of trout in streams and rivers, 66.3% of resident and 38.5% of nonresident anglers fished for brook, brown, or rainbow trout in the past 3 years in Vermont in streams and rivers (Table 14). They are referred to as “trout anglers” in this discussion. The most common tackle is bait among resident trout anglers (used by 47.7% of them) and flies among nonresident anglers (50.6% using them). Quality ratings for trout fishing in streams and rivers are mixed among resident anglers, with 50.7% of them giving a rating of *excellent* or *good*, but 46.8% giving a rating of *fair* or *poor*. Ratings are somewhat better among nonresident anglers: 59.1% rating the quality of trout fishing in streams and rivers as *excellent* or *good*, compared to 34.5% giving a rating of *fair* or *poor*.

Table 14. Respondents who fished for brook, brown, or rainbow trout in streams or rivers in Vermont in any of the past 3 years, the tackle used most often, and their evaluation of the quality of fishing, by Vermont residents and nonresidents.		
Fished for brook, brown, or rainbow in streams or rivers in Vermont in any of the past 3 years	Vermont residents (%)	Nonresidents (%)
No	33.7	61.5
Yes	66.3	38.5
<i>If yes: Tackle used most often</i>		
Bait	47.7	28.5
Flies	21.7	50.6
Lures	20.0	17.7
Lures with bait	9.9	3.2
Not sure	0.8	0.0
<i>Quality of fishing for trout in streams and rivers during past 3 years</i>		
Poor	10.1	7.8
Fair	36.7	26.7
Good	44.2	42.0
Excellent	6.5	17.1
No opinion	2.5	6.4
Mean score ^a	2.5	2.9

^a Scale ranged from 1 = poor to 4 = excellent.

The survey asked about anglers’ opinions on trout management programs: management strictly for wild trout and management that includes stocking (Table 15). Note that this question was asked of *all* anglers, not just trout anglers, because the management efforts may affect more than just the trout, but results are shown of all anglers and among trout anglers. Managing for wild trout in some streams and rivers is *very* important to 40.5% of all resident anglers (47.1% of resident trout anglers). It is very important to 38.0% of all nonresident anglers but 60.5% of nonresident trout anglers. Meanwhile, put-and-take trout stocking in some streams and rivers is *very* important to 47.6% of all resident anglers, 53.8% of resident trout anglers, 40.5% of all nonresident anglers, and 57.1% of nonresident trout anglers.

Table 15. Importance of programs that manage strictly for wild trout, and programs for stocking trout in some streams and rivers, by Vermont residents and nonresidents and for those who fished for trout in streams or rivers in past 3 years.

How important is it that Vermont provides the following programs?	Vermont residents (%)		Nonresidents (%)	
	All (%)	Fished for trout in streams or rivers in past 3 years (%)	All (%)	Fished for trout in streams or rivers in past 3 years (%)
<i>Manage strictly for wild trout (no stocking) in some streams and rivers</i>				
Not important	9.5	9.5	9.9	6.6
Somewhat important	23.8	25.6	17.7	19.8
Very important	40.5	47.1	38.0	60.5
No opinion	26.2	17.8	34.3	13.0
<i>Stocking brook, brown, and rainbow trout to be caught within the same season (put-and-take) in some streams and rivers</i>				
Not important	7.0	7.5	8.7	11.7
Somewhat important	25.4	26.3	18.9	20.8
Very important	47.6	53.8	40.5	57.1
No opinion	20.0	12.4	31.8	10.3

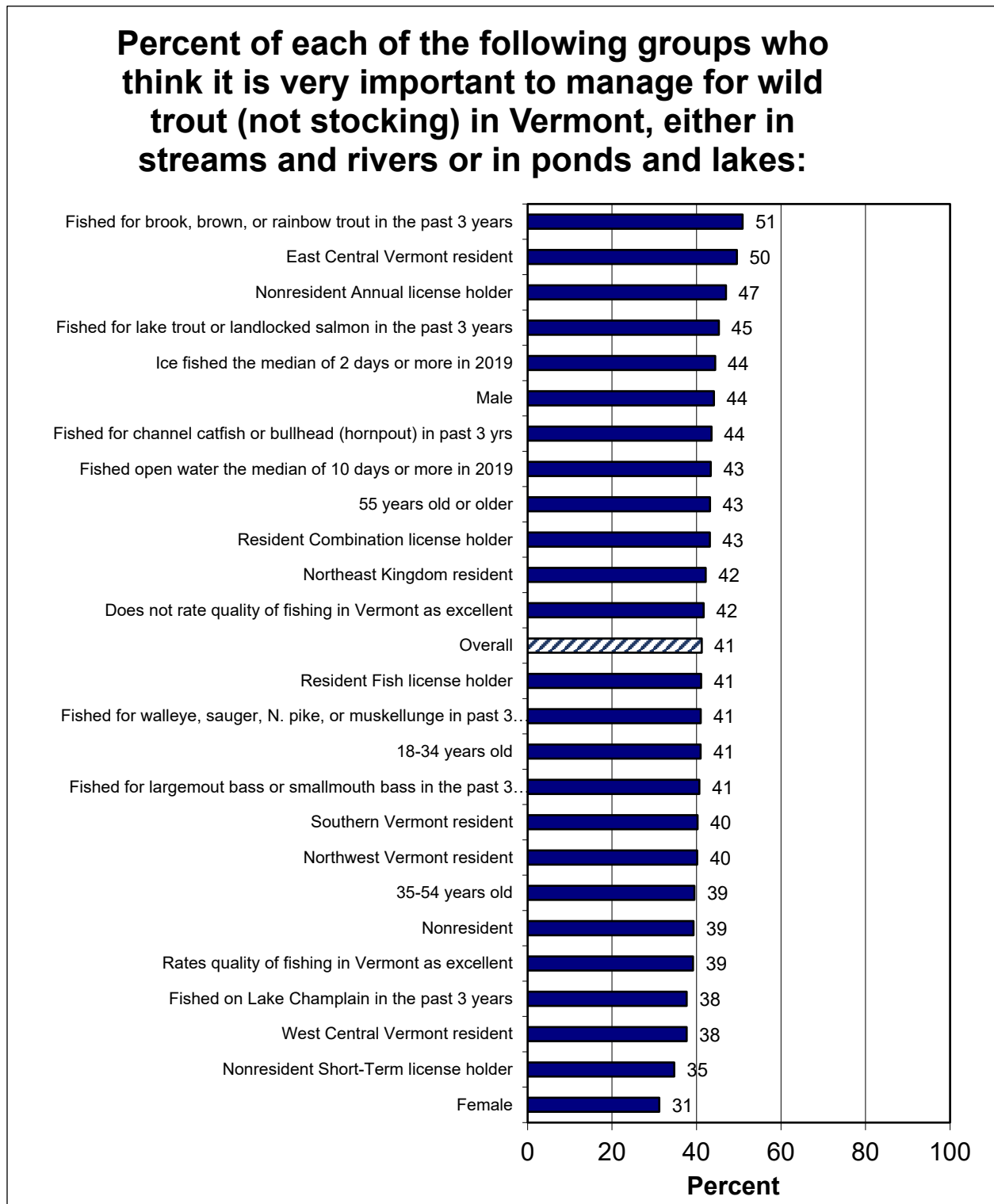
A demographic analyses graph is included that shows the percentage who think that it is very important to manage for wild trout (Figure 13). This demographic analyses graph includes those who think it is very important to manage for wild trout in either streams and rivers or ponds and lakes (asked in two separate questions). It suggests that East Central residents and Nonresident Annual license holders, in particular, are more likely to think that this is very important.

Trout anglers were asked about their support of four special regulations in some streams and rivers. Of the four listed, the most support was for special length limits, both among resident anglers (57.7%) and nonresident anglers (63.7%) (Table 16). While there was a marked drop-off in support among resident anglers for the other three regulations that were asked about, all the regulations have a majority of support among nonresident anglers.

Table 16. Support for special regulations for trout fishing in some streams or rivers, by Vermont residents and nonresidents.

Percent supporting special regulations for trout fishing in some streams or rivers ^a	Vermont residents (%)	Nonresidents (%)
Special length limits	57.7	63.7
Lower creel limits	43.8	62.9
Catch and release – all fish must be released	38.2	61.8
Artificial lures and flies only	31.9	55.5
I do not support the use of any special regulations	9.9	3.5
No opinion	16.0	7.9

^a Percentages can sum to more than 100% because more than one regulation could be chosen.



See pages 9 through 11 for an explanation of how to interpret these types of graphs.

Figure 13. Characteristics of Those Thinking It Is Very Important to Manage for Wild Trout

Tables 17 through 19 show trout anglers' opinions on the size of trout that they would consider a keeper as well as a quality trout. Tables 20 through 23 show trout anglers' opinions on creel limits for brook, brown, and rainbow trout, as well as the creel limit for the combination of those trout species.

Table 17. Smallest length brook trout you would keep or consider a quality size fish when fishing in streams or rivers, by Vermont residents and nonresidents.		
(Mean length is an average of the 6 to 14 inch categories.)		
Brook trout in streams or rivers	Vermont residents (%)	Nonresidents (%)
Smallest "keeper" size		
6 inches or less	23.0	8.6
8	32.2	18.2
10	13.3	8.9
12	4.6	9.5
14 or more	2.0	1.1
No opinion	4.3	2.4
Do not keep	20.7	51.5
Mean "keeper" size	8.1	9.0
Smallest "quality" size		
6 inches or less	10.7	9.3
8	37.3	30.2
10	28.5	27.9
12	11.4	17.6
14 or more	4.8	8.5
No opinion	7.2	6.5
Mean "quality" size	9.2	9.7

Table 18. Smallest length brown trout you would keep or consider a quality size fish when fishing in streams or rivers, by Vermont residents and nonresidents.		
(Mean length is an average of the 6 to 14 inch categories.)		
Brown trout in streams or rivers	Vermont residents (%)	Nonresidents (%)
Smallest "keeper" size		
6 inches or less	4.0	0.4
8	20.0	9.6
10	20.1	13.1
12	16.7	13.9
14 or more	10.2	8.0
No opinion	5.7	2.7
Do not keep	23.4	52.3
Mean "keeper" size	10.3	10.9
Smallest "quality" size		
6 inches or less	2.1	0.7
8	14.9	11.7
10	21.9	17.5
12	24.9	28.8
14 or more	27.5	33.2
No opinion	8.6	8.0
Mean "quality" size	11.3	11.8

Table 19. Smallest length rainbow trout you would keep or consider a quality size fish when fishing in streams or rivers, by Vermont residents and nonresidents. (Mean length is an average of the 6 to 14 inch categories.)		
Rainbow trout in streams or rivers	Vermont residents (%)	Nonresidents (%)
Smallest “keeper” size		
6 inches or less	4.2	1.4
8	20.3	6.3
10	18.5	14.2
12	19.0	14.6
14 or more	10.4	7.7
No opinion	6.2	2.9
Do not keep	21.5	52.9
Mean “keeper” size	10.3	10.9
Smallest “quality” size		
6 inches or less	2.3	0.7
8	14.6	11.7
10	21.5	19.4
12	27.9	34.8
14 or more	25.9	24.5
No opinion	7.8	9.0
Mean “quality” size	11.3	11.6

Table 20. Agreement with the current daily creel limit for brook trout, and if they disagreed their recommended limit, by Vermont residents and nonresidents.		
Agreement with current daily creel limit for brook trout of 12 fish in streams or rivers	Vermont residents (%)	Nonresidents (%)
Agree	55.4	34.7
Disagree	27.2	47.4
No opinion	17.5	17.9
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	5.0	2.5
<i>Lower</i>	95.0	97.5
<i>Mean recommended limit</i>	6.1	4.0

Table 21. Agreement with the current daily creel limit for brown trout, and if they disagreed their recommended limit, by Vermont residents and nonresidents.		
Agreement with current daily creel limit for brown trout of 6 fish in streams or rivers	Vermont residents (%)	Nonresidents (%)
Agree	60.3	36.8
Disagree	20.1	41.8
No opinion	19.5	21.4
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	14.6	4.4
<i>Lower</i>	85.4	95.6
<i>Mean recommended limit</i>	3.7	2.9

Table 22. Agreement with the current daily creel limit for rainbow trout, and if they disagreed their recommended limit, by Vermont residents and nonresidents.		
Agreement with current daily creel limit for rainbow trout of 6 fish in streams or rivers	Vermont residents (%)	Nonresidents (%)
Agree	60.7	37.2
Disagree	20.6	41.3
No opinion	18.7	21.5
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	15.8	8.8
<i>Lower</i>	84.2	91.2
<i>Mean recommended limit</i>	3.8	3.2

Table 23. Agreement with the current daily creel limit for a combination of brook, brown, and rainbow trout, and if they disagreed their recommended limit, by Vermont residents and nonresidents.		
Agreement with current daily creel limit for combination of brook, brown, and rainbow trout of 12 fish in streams or rivers	Vermont residents (%)	Nonresidents (%)
Agree	61.1	33.7
Disagree	19.2	39.4
No opinion	19.7	26.9
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	15.8	8.8
<i>Lower</i>	84.2	91.2
<i>Mean recommended limit</i>	7.6	6.4

FISHING FOR TROUT AND SALMON IN PONDS AND LAKES (EXCLUDING LAKE CHAMPLAIN)

This section examines fishing for trout and salmon on ponds and lakes excluding Lake Champlain, which is covered in its own section of the report. In this section, any reference to “ponds and lakes” excludes Lake Champlain, even when the term does not specifically say “ponds and lakes excluding Lake Champlain.”

Table 24 shows that 47.9% of resident anglers and 33.8% of nonresident anglers fished for trout or salmon in ponds or lakes in Vermont. The table also shows their ratings of fishing for brook/brown/rainbow, lake trout, and landlocked salmon in ponds and lakes. The best ratings are for brook/brown/rainbow trout in ponds and lakes over lake trout and landlocked salmon in ponds and lakes.

Table 24. Respondents who fished for trout or salmon in ponds or lakes (excluding Lake Champlain) in Vermont in any of the past 3 years, and their evaluation of the quality of fishing by species, for Vermont residents and nonresidents.				
Fish for trout or salmon in ponds or lakes in Vermont in any of the past 3 years	Vermont residents (%)		Nonresidents (%)	
No	52.1		66.2	
Yes	47.9		33.8	
<i>If yes:</i>				
	Overall	For those with an opinion	Overall	For those with an opinion
<i>Quality of fishing for brook, brown, and rainbow trout in ponds and lakes during past 3 years</i>				
Poor	10.4	11.6	6.6	8.0
Fair	39.7	44.4	33.5	40.5
Good	35.2	39.4	34.5	41.7
Excellent	4.1	4.5	8.1	9.8
No opinion	10.7	N/A	17.3	N/A
Mean score ^a	N/A	2.7	N/A	3.0
<i>Quality of fishing for lake trout in ponds and lakes during past 3 years</i>				
Poor	12.0	17.1	10.8	19.6
Fair	28.1	39.9	17.7	32.3
Good	26.5	37.7	17.8	32.5
Excellent	3.7	5.3	8.5	15.5
No opinion	29.6	N/A	45.1	N/A
Mean score ^a	N/A	3.1	N/A	3.6
<i>Quality of fishing for landlocked salmon in ponds and lakes during past 3 years</i>				
Poor	15.3	27.2	13.9	32.2
Fair	23.5	41.8	13.8	32.1
Good	15.5	27.4	10.7	24.8
Excellent	2.0	3.6	4.7	10.9
No opinion	43.6	N/A	57.0	N/A
Mean score ^a	N/A	3.4	N/A	3.8

^a Scale ranged from 1 = poor to 4 = excellent.

The survey asked all anglers about their opinions on trout management programs: management strictly for wild trout and management that includes stocking in ponds and lakes (Table 25). Keep in mind that this question was asked of *all* anglers, not just trout anglers, but results are shown among all anglers and trout anglers separately. Managing for wild trout in some ponds and lakes is very important to 36.8% of all resident anglers and 32.6% of nonresident anglers. Put-and-take trout stocking in some ponds and lakes is considered more important, with 46.9% of all resident anglers and 40.6% of all nonresident anglers saying it is *very* important.

Table 25. Importance of programs that manage strictly for wild trout, and programs for stocking trout in some ponds and lakes, by Vermont residents and nonresidents and for those who fished for trout or salmon in ponds or lakes in past 3 years.

How important is it that Vermont provides the following programs?	Vermont residents (%)		Nonresidents (%)	
	All (%)	Fished for trout or salmon in ponds or lakes in past 3 years (%)	All (%)	Fished for trout or salmon in ponds or lakes in past 3 years (%)
<i>Manage strictly for wild trout (no stocking) in some ponds and lakes</i>				
Not important	10.7	13.0	11.2	13.6
Somewhat important	25.3	24.4	20.3	27.7
Very important	36.8	42.4	32.6	41.9
No opinion	27.3	20.2	35.9	16.8
<i>Stocking brook, brown, and rainbow trout to be caught within the same season (put-and-take) in some ponds and lakes</i>				
Not important	7.8	6.3	9.7	7.7
Somewhat important	25.2	23.9	17.4	24.7
Very important	46.9	57.4	40.6	54.7
No opinion	20.1	12.4	32.2	12.8

Pond and lake trout/salmon anglers were asked about their support of four special regulations in some ponds and lakes. Of the four listed, the most support was for special length limits across all three species/species groups (Table 26). The other three regulations had considerably less support for each species/species group.

Tables 27 through 31 show pond and lake trout/salmon anglers' opinions on the size of trout and salmon that they would consider a keeper fish and the size to be considered a quality fish.

Tables 32 through 41 show these anglers' opinions on creel limits for trout and salmon in ponds and lakes.

Table 26. Support for special regulations for trout and salmon fishing in some ponds or lakes (excluding Lake Champlain), by Vermont residents and nonresidents.		
Percent supporting special regulations for fishing in some ponds or lakes ^a	Vermont residents (%)	Nonresidents (%)
<i>For brook, brown, rainbow trout</i>		
Special length limits	53.6	57.2
Lower creel limits	35.3	37.2
Artificial lures and flies only	28.3	35.4
Catch and release	26.1	30.5
I do not support the use of any special regulations	13.4	8.5
No opinion	21.6	21.7
<i>For lake trout</i>		
Special length limits	45.3	44.0
Lower creel limits	25.9	28.3
Catch and release	19.3	23.4
Artificial lures and flies only	18.3	22.4
I do not support the use of any special regulations	9.1	7.4
No opinion	22.5	25.7
<i>For landlocked salmon</i>		
Special length limits	42.4	47.9
Lower creel limits	26.1	30.5
Catch and release	22.5	30.6
Artificial lures and flies only	18.3	24.5
I do not support the use of any special regulations	8.2	6.9
No opinion	24.0	25.8

^a Percentages can sum to more than 100% because more than one regulation could be chosen.

Table 27. Smallest length brook trout you would keep or consider a quality size fish when fishing in ponds or lakes (excluding Lake Champlain), by Vermont residents and nonresidents. (Mean length is an average of the inch size categories.)		
Brook trout in ponds or lakes	Vermont residents (%)	Nonresidents (%)
Smallest “keeper” size		
6 inches or less	13.5	5.1
8	33.8	20.7
10	18.6	13.8
12	8.5	13.5
14 or more	4.0	4.8
No opinion	5.8	4.8
Do not keep	15.9	37.4
Mean “keeper” size	8.9	9.7
Smallest “quality” size		
8 inches or less	23.2	12.8
10	38.9	34.1
12	19.6	20.1
14	6.3	15.9
16 or more	1.8	5.1
No opinion	10.2	12.1
Mean “quality” size	10.3	11.2

Table 28. Smallest length brown trout you would keep or consider a quality size fish when fishing in ponds or lakes (excluding Lake Champlain), by Vermont residents and nonresidents. (Mean length is an average of the inch size categories.)

Brown trout in ponds or lakes	Vermont residents (%)	Nonresidents (%)
Smallest “keeper” size		
6 inches or less	2.2	1.2
8	16.7	9.6
10	23.2	6.9
12	17.1	22.0
14 or more	17.3	17.5
No opinion	6.4	4.9
Do not keep	17.1	37.9
Mean “keeper” size	10.8	11.6
Smallest “quality” size		
10 inches or less	12.7	10.4
12	33.6	28.4
14	19.9	17.2
16	14.1	14.1
18 or more	9.2	15.3
No opinion	10.5	14.7
Mean “quality” size	13.4	13.9

Table 29. Smallest length rainbow trout you would keep or consider a quality size fish when fishing in ponds or lakes (excluding Lake Champlain), by Vermont residents and nonresidents. (Mean length is an average of the inch size categories.)

Rainbow trout in ponds or lakes	Vermont residents (%)	Nonresidents (%)
Smallest “keeper” size		
6 inches or less	2.2	1.2
8	17.0	10.8
10	21.2	14.7
12	20.8	21.4
14 or more	16.0	12.7
No opinion	6.9	4.7
Do not keep	15.8	34.5
Mean “keeper” size	10.8	11.1
Smallest “quality” size		
10 inches or less	12.9	10.5
12	34.0	29.8
14	21.5	11.2
16	14.2	23.5
18 or more	7.4	11.2
No opinion	10.1	13.8
Mean “quality” size	13.3	13.9

Table 30. Smallest length lake trout you would keep or consider a quality size fish when fishing in ponds or lakes (excluding Lake Champlain), by Vermont residents and nonresidents. (Mean length is an average of the inch size categories.)

Lake trout in ponds or lakes	Vermont residents (%)	Nonresidents (%)
Smallest “keeper” size		
12 inches or less	7.4	1.9
15	21.1	20.6
18	26.2	12.4
21	9.6	11.4
24 or more	5.8	4.6
No opinion	11.0	6.8
Do not keep	19.1	42.2
Mean “keeper” size	17.4	17.8
Smallest “quality” size		
15 inches or less	14.0	14.6
18	35.0	18.0
21	14.8	20.7
24	14.0	17.2
27 or more	7.2	8.7
No opinion	15.0	20.9
Mean “quality” size	19.8	20.5

Table 31. Smallest length landlocked salmon you would keep or consider a quality size fish when fishing in ponds or lakes (excluding Lake Champlain), by Vermont residents and nonresidents. (Mean length is an average of the inch size categories.)

Landlocked salmon in ponds or lakes	Vermont residents (%)	Nonresidents (%)
Smallest “keeper” size		
9 inches or less	2.9	2.3
12	8.4	6.4
15	25.2	13.2
18	21.5	26.1
21 or more	10.5	5.9
No opinion	15.0	10.5
Do not keep	16.5	35.6
Mean “keeper” size	16.2	16.5
Smallest “quality” size		
12 inches or less	7.5	7.6
15	20.4	15.4
18	30.1	24.8
21	14.1	23.1
24 or more	6.4	5.6
No opinion	21.5	23.5
Mean “quality” size	17.7	18.1

Table 32. Agreement with the current daily creel limit for brook trout, and if they disagreed their recommended limit, by Vermont residents and nonresidents.

Agreement with current daily creel limit for brook trout of 6 fish in ponds or lakes (excluding Lake Champlain)	Vermont residents (%)	Nonresidents (%)
Agree	64.5	54.7
Disagree	17.2	27.7
No opinion	18.3	17.5
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	39.4	14.7
<i>Lower</i>	60.6	85.2
<i>Mean recommended limit</i>	6.1	3.9

Table 33. Agreement with the current daily creel limit for brown trout, and if they disagreed their recommended limit, by Vermont residents and nonresidents.

Agreement with current daily creel limit for brown trout of 6 fish in ponds or lakes (excluding Lake Champlain)	Vermont residents (%)	Nonresidents (%)
Agree	64.2	56.7
Disagree	17.6	25.7
No opinion	18.1	17.6
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	11.5	1.9
<i>Lower</i>	88.6	98.1
<i>Mean recommended limit</i>	3.7	2.8

Table 34. Agreement with the current daily creel limit for rainbow trout, and if they disagreed their recommended limit, by Vermont residents and nonresidents.

Agreement with current daily creel limit for rainbow trout of 6 fish in ponds or lakes (excluding Lake Champlain)	Vermont residents (%)	Nonresidents (%)
Agree	64.2	56.9
Disagree	18.5	25.4
No opinion	17.3	17.7
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	13.4	1.9
<i>Lower</i>	86.6	98.1
<i>Mean recommended limit</i>	3.8	2.9

Table 35. Agreement with the current daily creel limit for combined trout, and if they disagreed their recommended limit, by Vermont residents and nonresidents.		
Agreement with current daily creel limit for combined trout of 6 fish in ponds or lakes (excluding Lake Champlain)	Vermont residents (%)	Nonresidents (%)
Agree	65.8	58.2
Disagree	14.2	23.1
No opinion	20.0	18.8
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	58.6	35.2
<i>Lower</i>	41.4	64.8
<i>Mean recommended limit</i>	7.7	5.7

Table 36. Agreement with the current daily creel limit for lake trout, and if they disagreed their recommended limit, by Vermont residents and nonresidents.		
Agreement with current daily creel limit for lake trout of 2 fish in lakes (excluding Lake Champlain) that offer lake trout fishing	Vermont residents (%)	Nonresidents (%)
Agree	65.2	72.8
Disagree	10.6	7.6
No opinion	24.2	19.6
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	84.9	65.1
<i>Lower</i>	15.1	34.9
<i>Mean recommended limit</i>	3.9	2.8

Table 37. Agreement with the current daily creel limit for landlocked salmon, and if they disagreed their recommended limit, by Vermont residents and nonresidents.		
Agreement with current daily creel limit for landlocked salmon of 2 fish in lakes (excluding Lake Champlain) that offer lake trout fishing	Vermont residents (%)	Nonresidents (%)
Agree	64.5	70.7
Disagree	8.2	9.4
No opinion	27.3	19.9
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	67.0	49.7
<i>Lower</i>	33.0	50.3
<i>Mean recommended limit</i>	3.1	2.0

Table 38. Agreement with the current daily creel limit for brook trout caught in lakes that offer lake trout fishing, and if they disagreed their recommended limit, by Vermont residents and nonresidents.

Agreement with current daily creel limit for brook trout of 2 fish in lakes (excluding Lake Champlain) that offer lake trout fishing	Vermont residents (%)	Nonresidents (%)
Agree	59.0	68.2
Disagree	17.3	16.6
No opinion	23.7	15.2
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	91.1	79.2
<i>Lower</i>	8.9	20.8
<i>Mean recommended limit</i>	5.7	4.2

Table 39. Agreement with the current daily creel limit for brown trout caught in lakes that offer lake trout fishing, and if they disagreed their recommended limit, by Vermont residents and nonresidents.

Agreement with current daily creel limit for brown trout of 2 fish in lakes (excluding Lake Champlain) that offer lake trout fishing	Vermont residents (%)	Nonresidents (%)
Agree	62.8	70.3
Disagree	14.5	15.0
No opinion	22.7	14.7
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	89.4	74.6
<i>Lower</i>	10.6	25.4
<i>Mean recommended limit</i>	4.7	3.3

Table 40. Agreement with the current daily creel limit for rainbow trout caught in lakes that offer lake trout fishing, and if they disagreed their recommended limit, by Vermont residents and nonresidents.

Agreement with current daily creel limit for rainbow trout of 2 fish in lakes (excluding Lake Champlain) that offer lake trout fishing	Vermont residents (%)	Nonresidents (%)
Agree	61.9	69.8
Disagree	16.6	15.3
No opinion	21.6	14.9
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	89.5	86.9
<i>Lower</i>	10.5	13.1
<i>Mean recommended limit</i>	4.8	4.6

Table 41. Agreement with the current daily creel limit for combination of trout and salmon caught in lakes that offer lake trout fishing, and if they disagreed their recommended limit, by Vermont residents and nonresidents.

Agreement with current daily creel limit for combination of trout and salmon of 2 fish in lakes (excluding Lake Champlain) that offer lake trout fishing	Vermont residents (%)	Nonresidents (%)
Agree	56.1	66.8
Disagree	19.8	16.5
No opinion	24.0	16.7
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	92.8	89.3
<i>Lower</i>	7.2	10.7
<i>Mean recommended limit</i>	5.3	4.2

FISHING FOR WARMWATER GAMEFISH AND PANFISH (EXCLUDING ON LAKE CHAMPLAIN)

Like the last section, this section excludes Lake Champlain, which is detailed in its own section of the report. This section looks at fishing for warmwater gamefish and panfish. In this section, anglers who fished for warmwater gamefish or panfish in ponds and lakes excluding Lake Champlain will be referred to using the shortcut, “warmwater gamefish anglers,” rather than a more unwieldy term that fully describes them.

Table 42 shows the percentage of all Vermont anglers who fished for these types of fish in Vermont in the past 3 years: 71.9% of resident anglers and 52.1% of nonresident anglers did so. The table also shows their ratings of the quality of fishing for each of these various species among those who fished them. Because there is a high proportion of “no opinion” responses, the results are also shown among those with an opinion. The table is shown on the following page so as to not break across pages. The ratings are graphically illustrated in Figure 14, ranked with the best ratings at the top, based on the sum of *excellent* and *good* ratings. Yellow perch and both bass on the list (smallmouth and largemouth) are at the top; walleye is at the bottom.

These warmwater gamefish anglers were asked about their support for or opposition to allowing ice fishing for largemouth and smallmouth bass on selected ponds and lakes (note: it is currently allowed). Support is much greater than opposition. Among resident anglers, 45.7% support it compared to 15.0% who oppose it (the remainder have no opinion), and among nonresident anglers, 40.3% support it, while 18.2% oppose it (Table 43).

Table 44 shows warmwater gamefish anglers’ opinions on special regulations for some warmwater species on some waters. Of the four special regulations asked about, the most support is for special length limits, followed by lower creel limits. The least support is for artificial lures and flies only.

Tables 45 through 50 show warmwater gamefish anglers’ opinions on the size of the various species that they would consider a keeper fish and the size to be considered a quality fish. Tables 51 through 59 show these anglers’ opinions on creel limits for the various warmwater gamefish and panfish species.

Table 42. Respondents who fished for warmwater gamefish and panfish in Vermont in any of the past 3 years (excluding Lake Champlain), and their evaluation of the quality of fishing by species, for Vermont residents and nonresidents.

	Vermont residents (%)		Nonresidents (%)	
<i>Fished for walleye, bass, pike, yellow perch, sunfish, crappie, bullhead, or smelt in Vermont in any of the past 3 years</i>				
No	28.1		47.9	
Yes	71.9		52.1	
<i>If yes:</i>	Overall	For those with an opinion	Overall	For those with an opinion
<i>Quality of fishing for walleye during past 3 years</i>				
Poor	13.2	26.2	3.2	8.9
Fair	20.0	39.7	16.2	45.1
Good	15.9	31.5	10.0	27.9
Excellent	1.3	2.6	6.5	18.1
No opinion	49.5	N/A	64.1	N/A
Mean score ^a	N/A	2.1	N/A	2.6
<i>Quality of fishing for largemouth bass during past 3 years</i>				
Poor	4.7	5.7	3.0	3.6
Fair	24.0	29.0	19.9	24.2
Good	45.5	55.0	38.8	47.3
Excellent	8.5	10.3	20.4	24.9
No opinion	17.3	N/A	18.0	N/A
Mean score ^a	N/A	2.7	N/A	2.9
<i>Quality of fishing for smallmouth bass during past 3 years</i>				
Poor	4.1	4.8	1.7	2.0
Fair	23.3	27.5	21.8	25.4
Good	47.7	56.3	39.6	46.1
Excellent	9.6	11.4	22.8	26.5
No opinion	15.4	N/A	14.2	N/A
Mean score ^a	N/A	2.7	N/A	3.0
<i>Quality of fishing for northern pike during past 3 years</i>				
Poor	4.6	6.6	2.1	4.0
Fair	20.5	29.5	19.2	35.9
Good	37.9	54.4	21.1	39.4
Excellent	6.6	9.5	11.1	20.7
No opinion	30.4	N/A	46.6	N/A
Mean score ^a	N/A	2.7	N/A	2.8
<i>Quality of fishing for yellow perch during past 3 years</i>				
Poor	4.4	5.4	3.1	4.5
Fair	19.9	24.3	16.8	24.2
Good	45.5	55.5	30.9	44.6
Excellent	12.2	14.8	18.5	26.7
No opinion	18.0	N/A	30.6	N/A
Mean score ^a	N/A	2.8	N/A	2.9
<i>Quality of fishing for crappie during past 3 years</i>				
Poor	5.7	11.1	3.4	7.8
Fair	18.0	35.4	18.8	43.6
Good	22.4	44.1	14.6	33.8
Excellent	4.8	9.4	6.4	14.8
No opinion	49.1	N/A	56.8	N/A
Mean score ^a	N/A	2.5	N/A	2.6

^a Scale ranged from 1 = poor to 4 = excellent.

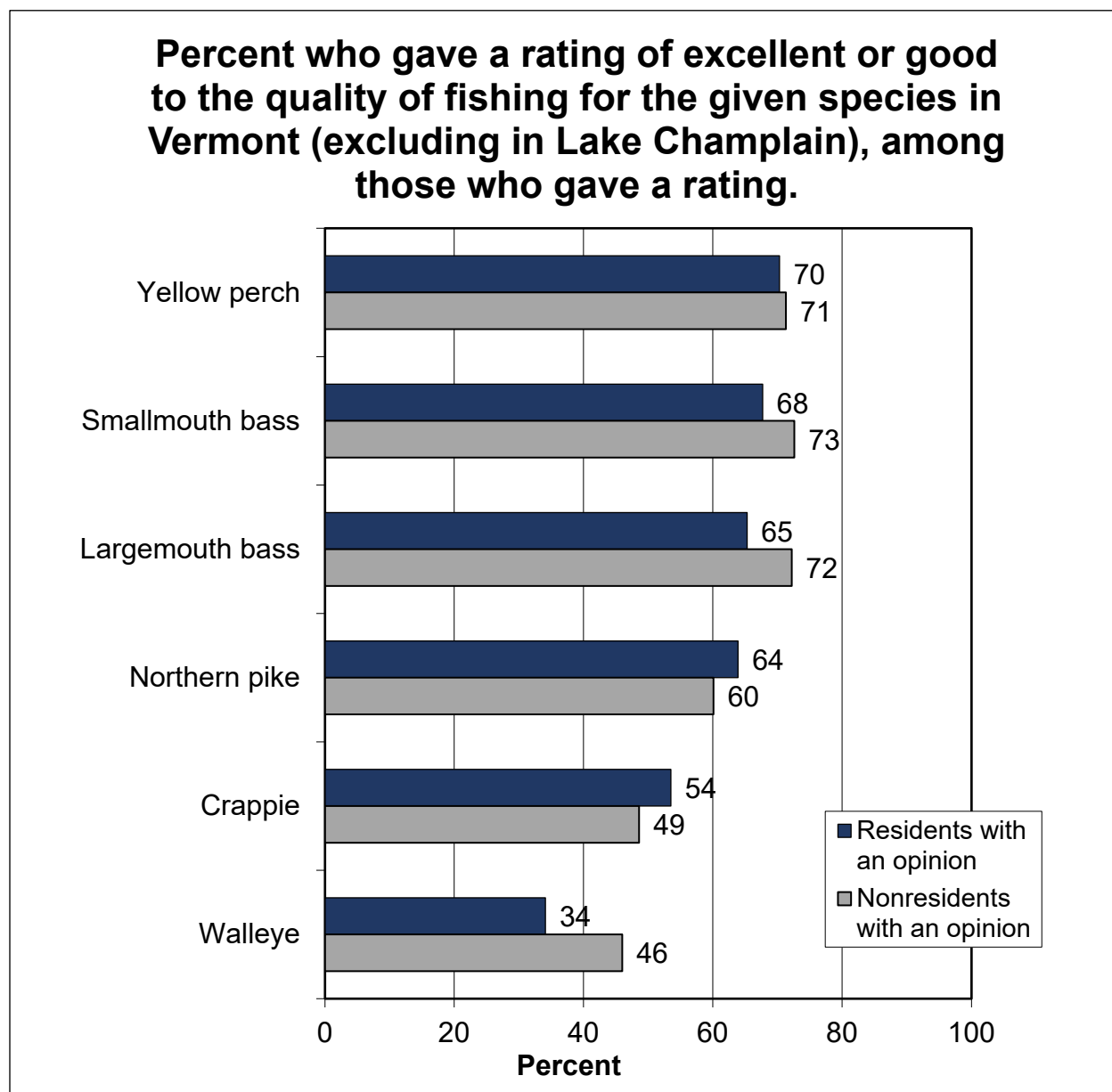


Figure 14. Ratings of Quality of Fishing for Warmwater Gamefish and Panfish

Table 43. Support for ice fishing for largemouth and smallmouth bass on selected ponds and lakes (as currently allowed), by Vermont residents and nonresidents.

Support for ice fishing for largemouth and smallmouth bass on selected ponds and lakes (as currently allowed)	Vermont residents (%)	Nonresidents (%)
Support	45.7	40.3
Oppose	15.0	18.2
No opinion	39.3	41.5

Table 44. Support for special regulations for some warmwater species on some waters, by Vermont residents and nonresidents.		
Percent supporting special regulations for fishing on some waters ^a	Vermont residents (%)	Nonresidents (%)
<i>For largemouth or smallmouth bass</i>		
Special length limits	45.3	49.0
Lower creel limits	30.8	35.3
Catch and release	26.2	32.2
Artificial lures and flies only	22.4	25.9
I do not support the use of any special regulations	13.6	10.6
No opinion	26.4	26.5
<i>For walleye</i>		
Special length limits	39.5	41.3
Lower creel limits	24.7	26.4
Catch and release	20.5	18.7
Artificial lures and flies only	15.0	17.4
I do not support the use of any special regulations	9.1	4.0
No opinion	31.3	30.7
<i>For northern pike</i>		
Special length limits	36.7	40.5
Lower creel limits	23.4	28.2
Catch and release	19.0	21.0
Artificial lures and flies only	14.9	14.9
I do not support the use of any special regulations	11.7	7.7
No opinion	29.7	29.8

^a Percentages can sum to more than 100% because more than one regulation could be chosen.

Table 45. Smallest length walleye you would keep or consider a quality size fish, by Vermont residents and nonresidents.		
(Mean length is an average of the inch size categories.)		
Walleye	Vermont residents (%)	Nonresidents (%)
Smallest “keeper” size		
9 inches or less	2.5	2.3
12	14.9	11.0
15	26.6	18.6
18	19.8	14.1
21 or more	4.1	3.5
No opinion	12.9	8.6
Do not keep	19.3	41.8
Mean “keeper” size	15.4	15.3
Smallest “quality” size		
12 inches or less	5.0	5.5
15	23.8	19.0
18	31.1	33.0
21	13.8	13.9
24 or more	8.1	5.2
No opinion	18.2	23.4
Mean “quality” size	17.9	17.8

Table 46. Smallest length largemouth bass you would keep or consider a quality size fish, by Vermont residents and nonresidents.		
(Mean length is an average of the inch size categories.)		
Largemouth bass	Vermont residents (%)	Nonresidents (%)
Smallest “keeper” size		
6 inches or less	1.1	1.6
8	5.6	1.8
10	19.4	8.4
12	20.3	17.5
14 or more	15.0	10.7
No opinion	8.0	4.5
Do not keep	30.6	55.5
Mean “keeper” size	11.4	11.7
Smallest “quality” size		
10 inches or less	7.9	5.3
12	25.5	18.2
14	22.1	24.1
16	18.2	22.9
18 or more	14.7	17.5
No opinion	11.7	12.0
Mean “quality” size	14.1	14.7

Table 47. Smallest length smallmouth bass you would keep or consider a quality size fish, by Vermont residents and nonresidents.		
(Mean length is an average of the inch size categories.)		
Smallmouth bass	Vermont residents (%)	Nonresidents (%)
Smallest “keeper” size		
6 inches or less	1.3	1.7
8	7.9	3.7
10	21.0	9.3
12	20.1	16.5
14 or more	10.2	8.0
No opinion	7.9	4.5
Do not keep	31.7	56.3
Mean “keeper” size	11.0	11.3
Smallest “quality” size		
10 inches or less	11.0	9.5
12	29.4	19.9
14	21.3	24.1
16	16.0	23.8
18 or more	10.7	10.5
No opinion	11.8	12.2
Mean “quality” size	13.7	14.1

Table 48. Smallest length northern pike you would keep or consider a quality size fish, by Vermont residents and nonresidents. (Mean length is an average of the inch size categories.)

Northern pike	Vermont residents (%)	Nonresidents (%)
Smallest “keeper” size		
16 inches or less	5.1	4.5
18	14.0	7.4
20	15.2	5.8
22	8.8	6.0
24 or more	17.9	18.3
No opinion	10.3	7.8
Do not keep	28.8	50.3
Mean “keeper” size	20.7	21.3
Smallest “quality” size		
18 inches or less	10.6	6.9
22	24.2	22.2
26	21.5	26.7
30	19.4	16.7
34 or more	8.7	11.3
No opinion	15.6	16.2
Mean “quality” size	25.6	26.2

Table 49. Smallest length yellow perch you would keep or consider a quality size fish, by Vermont residents and nonresidents. (Mean length is an average of the inch size categories.)

Yellow perch	Vermont residents (%)	Nonresidents (%)
Smallest “keeper” size		
6 inches or less	11.8	5.0
7	18.2	8.1
8	30.4	21.4
9	6.0	11.2
10 or more	9.6	17.6
No opinion	8.6	4.9
Do not keep	15.3	31.7
Mean “keeper” size	7.8	8.4
Smallest “quality” size		
8 inches or less	22.5	7.5
9	21.9	23.1
10	27.2	28.3
11	6.4	9.5
12 or more	8.3	15.3
No opinion	13.7	16.3
Mean “quality” size	9.5	10.0

Table 50. Smallest length crappie you would keep or consider a quality size fish, by Vermont residents and nonresidents. (Mean length is an average of the inch size categories.)		
Crappie	Vermont residents (%)	Nonresidents (%)
Smallest “keeper” size		
6 inches or less	7.9	7.5
7	11.3	6.1
8	23.8	17.6
9	4.7	10.3
10 or more	7.5	13.8
No opinion	17.2	7.9
Do not keep	27.6	36.9
Mean “keeper” size	7.9	8.3
Smallest “quality” size		
8 inches or less	22.2	11.7
9	17.2	16.0
10	21.3	26.2
11	5.1	7.0
12 or more	5.8	12.7
No opinion	28.5	26.5
Mean “quality” size	9.4	9.9

Table 51. Agreement with the current daily creel limit for walleye, and if they disagreed their recommended limit, by Vermont residents and nonresidents.		
Agreement with current daily creel limit for walleye of 3 fish	Vermont residents (%)	Nonresidents (%)
Agree	53.2	54.1
Disagree	8.0	9.8
No opinion	38.8	36.2
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	32.6	11.6
<i>Lower</i>	67.4	88.4
<i>Mean recommended limit</i>	2.9	2.1

Table 52. Agreement with the current daily creel limit for largemouth/smallmouth bass, and if they disagreed their recommended limit, by Vermont residents and nonresidents.		
Agreement with current daily creel limit for largemouth/smallmouth bass of 5 fish	Vermont residents (%)	Nonresidents (%)
Agree	59.3	51
Disagree	14.1	23.7
No opinion	26.7	25.3
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	9.6	7.7
<i>Lower</i>	90.4	92.3
<i>Mean recommended limit</i>	3.4	3.1

Table 53. Agreement with the current daily creel limit for northern pike, and if they disagreed their recommended limit, by Vermont residents and nonresidents.

Agreement with current daily creel limit for northern pike of 5 fish	Vermont residents (%)	Nonresidents (%)
Agree	51.9	47.0
Disagree	15.7	20.7
No opinion	32.4	32.3
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	13.7	3.4
<i>Lower</i>	86.3	96.6
<i>Mean recommended limit</i>	3.8	2.6

Table 54. Agreement with the current daily creel limit for yellow perch, and if they disagreed their recommended limit, by Vermont residents and nonresidents.

Agreement with current daily creel limit for yellow perch of 50 fish	Vermont residents (%)	Nonresidents (%)
Agree	55.9	46.5
Disagree	17.3	24.7
No opinion	26.8	28.8
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	9.0	0.0
<i>Lower</i>	91.0	100.0
<i>Mean recommended limit</i>	28.2	20.4

Table 55. Agreement with the current daily creel limit for crappie, and if they disagreed their recommended limit, by Vermont residents and nonresidents.

Agreement with current daily creel limit for crappie of 25 fish	Vermont residents (%)	Nonresidents (%)
Agree	50.5	45.1
Disagree	9.1	17.5
No opinion	40.5	37.3
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	12.5	14.4
<i>Lower</i>	87.5	85.6
<i>Mean recommended limit</i>	16.3	16.4

Table 56. Agreement with the current daily creel limit for sunfish, and if they disagreed their recommended limit, by Vermont residents and nonresidents.

Agreement with current daily creel limit for sunfish, which is no limit	Vermont residents (%)	Nonresidents (%)
Agree	57.6	54.1
Disagree	4.9	9.2
No opinion	37.5	36.7
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	0.0	0.0
<i>Lower</i>	100.0	100.0
<i>Mean recommended limit</i>	25.1	17.3

Table 57. Agreement with the current daily creel limit for smelt, and if they disagreed their recommended limit, by Vermont residents and nonresidents.		
Agreement with current daily creel limit for smelt, which is no limit	Vermont residents (%)	Nonresidents (%)
Agree	53.8	42.4
Disagree	6.8	8.7
No opinion	39.3	48.9
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	0.0	0.0
<i>Lower</i>	100.0	100.0
<i>Mean recommended limit</i>	38.3	25.0

Table 58. Agreement with the current daily creel limit for bullhead, and if they disagreed their recommended limit, by Vermont residents and nonresidents.		
Agreement with current daily creel limit for bullhead, which is no limit	Vermont residents (%)	Nonresidents (%)
Agree	55.2	47.4
Disagree	4.5	9.4
No opinion	40.4	43.2
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	0.0	0.0
<i>Lower</i>	100.0	100.0
<i>Mean recommended limit</i>	19.7	14.9

Table 59. Agreement with the current daily creel limit for white perch, and if they disagreed their recommended limit, by Vermont residents and nonresidents.		
Agreement with current daily creel limit for white perch, which is no limit	Vermont residents (%)	Nonresidents (%)
Agree	57.2	45.4
Disagree	5.8	11.6
No opinion	37.0	43.0
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	0.0	0.0
<i>Lower</i>	100.0	100.0
<i>Mean recommended limit</i>	24.5	25.6

FISHING ON LAKE CHAMPLAIN

This section is devoted solely to Lake Champlain, which was asked about separately in the survey. In the past 3 years, 48.4% of resident anglers and 43.3% of nonresident anglers had fished on Lake Champlain (Table 60). The percentage of anglers who fished Lake Champlain in open water season and who went ice fishing on the Lake in 2019 is also shown. Table 61 shows the mean days and total days of open water fishing and ice fishing on Lake Champlain.

	Vermont residents	Nonresidents
<i>Fished Lake Champlain in any of the past 3 years</i>		
No (% giving response)	51.6	56.7
Yes (% giving response)	48.4	43.3
<i>Of those who fished in Vermont in 2019:</i>		
Percent fishing Lake Champlain open water	41.0	37.6
Estimated number of anglers fishing Lake Champlain open water	28,026	13,887
Percent ice fishing on Lake Champlain	18.6	5.6
Estimated number of anglers ice fishing on Lake Champlain	12,710	2,070

	Vermont residents	Nonresidents
<i>Open water fishing on Lake Champlain</i>		
Mean days	33.9	21.0
Total days	1,052,852	302,225
95% confidence interval	183,074	84,017
<i>Ice fishing on Lake Champlain</i>		
Mean days	19.3	10.9
Total days	289,271	23,707
95% confidence interval	88,413	29,224

Of the species fished in open waters on Lake Champlain by residents, the most popular based on the percentage of resident anglers who had fished for them in 2019 are largemouth and smallmouth bass, northern pike, yellow perch, and lake trout (Table 62). These are the same species, along with sunfish as an addition, that account for the most days of open-water fishing on Lake Champlain by residents. For ice fishing on Lake Champlain, the most popular species are yellow perch and northern pike among residents (Table 63). The most days of ice fishing by residents are devoted to yellow perch at the top (almost 84,000 days and more than twice as many days as any other species), with a second tier consisting of northern pike, sunfish, and crappie—each with more than 30,000 days attributed to it.

Table 62. Among Vermont residents who fished Lake Champlain open water in 2019: the percent, estimated number of anglers, mean days fished, estimated total days fished, and 95% confidence interval by species. (Sorted by percent fishing.) (Note: Anglers could fish for more than 1 species per day, so the sum of days from this table is not reflective of total days fished.)

Vermont residents (open water)	Percent fishing	Number of anglers	Mean days fished	Total days fished	95% confidence interval
Largemouth / smallmouth bass	69.1	19,379	12.3	238,861	39,183
Northern pike	44.6	12,502	13.3	166,175	32,046
Yellow perch	43.8	12,277	12.3	150,661	32,628
Lake trout	33.7	9,452	8.4	79,427	21,483
Sunfish	22.4	6,274	15.4	96,720	28,823
Walleye	22.0	6,159	9.6	58,885	19,527
Landlocked salmon	21.6	6,047	7.7	46,413	13,148
White perch	18.2	5,092	15.0	76,292	24,711
Brown trout	16.3	4,578	10.5	48,297	19,154
Bullhead	15.4	4,329	12.6	54,677	19,735
Steelhead / rainbow trout	15.2	4,266	7.1	30,236	11,197
Crappie	15.2	4,246	15.5	65,930	24,139
Channel catfish	12.1	3,382	11.1	37,579	15,077
Other (bowfin, gar, American eel, etc.)	11.4	3,191	11.8	37,629	12,241
Muskellunge	4.5	1,268	a	a	a
Smelt	3.2	883	a	a	a

^a Sample size was too small to estimate.

Table 63. Among Vermont residents who went Lake Champlain ice fishing in 2019: the percent, estimated number of anglers, mean days fished, estimated total days fished, and 95% confidence interval by species. (Sorted by percent fishing.) (Note: Anglers could fish for more than 1 species per day, so the sum of days from this table is not reflective of total days fished.)

Vermont residents (ice fishing)	Percent fishing	Number of anglers	Mean days fished	Total days fished	95% confidence interval
Yellow perch	73.9	9,398	8.9	83,555	19,212
Northern pike	45.9	5,830	6.6	38,487	9,529
Sunfish	21.4	2,724	12.5	34,171	14,895
White perch	21.0	2,665	8.2	21,922	9,293
Crappie	20.4	2,597	12.6	32,808	13,584
Walleye	17.7	2,247	6.7	15,128	6,299
Lake trout	16.8	2,136	3.8	8,069	3,284
Landlocked salmon	7.4	942	a	a	a
Smelt	6.6	843	a	a	a
Brown trout	6.2	793	a	a	a
Steelhead / rainbow trout	4.2	538	a	a	a
Channel catfish	2.5	313	a	a	a
Bullhead	1.8	231	a	a	a
Other (bowfin, gar, American eel, etc.)	1.6	207	a	a	a
Muskellunge	1.1	140	a	a	a

^a Sample size was too small to estimate.

These same analyses were run among nonresidents. Of the species fished in open waters on Lake Champlain by nonresidents, the most popular in percentage of these nonresident anglers is

largemouth and smallmouth bass and northern pike (Table 64). These are the species, as well as yellow perch, that account for the most days of open-water fishing on Lake Champlain among nonresidents. For ice fishing among nonresidents on Lake Champlain, the most popular species are northern pike and yellow perch (Table 65).

Table 64. Among nonresidents who fished Lake Champlain open water in 2019: the percent, estimated number of anglers, mean days fished, estimated total days fished, and 95% confidence interval by species. (Sorted by percent fished.) (Note: Anglers could fish for more than 1 species per day, so the sum of days from this table is not reflective of total days fished.)

Nonresidents (open water)	Percent fishing	Number of anglers	Mean days fished	Total days fished	95% confidence interval
Largemouth / smallmouth bass	87.7	12,185	9.5	115,846	23,350
Northern pike	60.8	8,438	10.3	87,332	25,067
Yellow perch	40.0	5,549	9.3	51,524	16,588
Walleye	18.9	2,629	a	a	a
Sunfish	15.9	2,212	a	a	a
Lake trout	14.0	1,948	6.4	12,472	6,225
White perch	13.3	1,848	a	a	a
Other (bowfin, gar, American eel, etc.)	10.7	1,481	a	a	a
Crappie	10.4	1,448	a	a	a
Landlocked salmon	8.4	1,163	a	a	a
Muskellunge	6.5	897	a	a	a
Brown trout	6.4	892	a	a	a
Channel catfish	4.7	654	a	a	a
Steelhead / rainbow trout	3.5	492	a	a	a
Bullhead	2.9	402	a	a	a
Smelt	0.0	0	a	a	a

^a Sample size was too small to estimate.

Table 65. Among nonresidents who went Lake Champlain ice fishing in 2019: the percent, estimated number of anglers, mean days fished, estimated total days fished, and 95% confidence interval by species. (Sorted by percent fished.) (Note: Anglers could fish for more than 1 species per day, so the sum of days from this table is not reflective of total days fished.)

Nonresidents (ice fishing)	Percent fishing	Number of anglers	Mean days fished	Total days fished	95% confidence interval
Northern pike	79.6	1,648	5.2	8,503	3,559
Yellow perch	62.2	1,287	4.9	6,326	3,088
Crappie	30.0	620	a	a	a
Walleye	16.0	332	a	a	a
Sunfish	14.6	302	a	a	a
White perch	14.6	302	a	a	a
Muskellunge	10.5	218	a	a	a
Lake trout	9.5	196	a	a	a
Other (bowfin, gar, American eel, etc.)	4.0	82	a	a	a
Channel catfish	3.5	73	a	a	a
Brown trout	0.0	0	a	a	a
Steelhead / rainbow trout	0.0	0	a	a	a
Landlocked salmon	0.0	0	a	a	a
Smelt	0.0	0	a	a	a
Bullhead	0.0	0	a	a	a

^a Sample size was too small to estimate.

Lake Champlain anglers rated the quality of fishing for various species, as shown in Table 66, graphically illustrated in Figure 15. The best ratings are for sunfish, smallmouth and largemouth bass, yellow perch, and northern pike in Lake Champlain.

Table 66. Of respondents who fished Lake Champlain in any of the past 3 years, their evaluation of the quality of fishing by species in Lake Champlain, for Vermont residents and nonresidents.				
	Vermont residents (%)		Nonresidents (%)	
	Overall	Of those with an opinion	Overall	Of those with an opinion
<i>Quality of fishing for brown trout during past 3 years</i>				
Poor	10.1	26.4	1.4	9.4
Fair	16.7	43.6	7.6	49.1
Good	10.5	27.4	4.6	29.7
Excellent	1.0	2.6	1.8	11.9
No opinion	61.8	N/A	84.6	N/A
Mean score ^a	N/A	2.1	N/A	2.4
<i>Quality of fishing for steelhead/rainbow trout during past 3 years</i>				
Poor	8.7	23.4	1.3	9.3
Fair	17.4	46.7	5.5	38.2
Good	9.9	26.5	6.1	42.8
Excellent	1.2	3.4	1.4	9.6
No opinion	62.8	N/A	85.7	N/A
Mean score ^a	N/A	2.1	N/A	2.5
<i>Quality of fishing for lake trout during past 3 years</i>				
Poor	3.4	7.4	1.2	5.5
Fair	13.2	28.4	5.7	26.8
Good	22.2	47.7	11.6	54.1
Excellent	7.7	16.6	2.9	13.5
No opinion	53.5	N/A	78.6	N/A
Mean score ^a	N/A	2.7	N/A	2.8
<i>Quality of fishing for landlocked salmon during past 3 years</i>				
Poor	7.8	19.3	4.1	22.8
Fair	18.0	44.4	5.3	29.6
Good	13.5	33.2	7.3	40.9
Excellent	1.3	3.2	1.2	6.7
No opinion	59.4	N/A	82.1	N/A
Mean score ^a	N/A	2.2	N/A	2.3
<i>Quality of fishing for walleye during past 3 years</i>				
Poor	9.8	22.0	10.3	23.0
Fair	19.0	42.6	21.2	47.4
Good	14.3	32.0	12.3	27.6
Excellent	1.5	3.5	0.9	2.0
No opinion	55.4	N/A	55.3	N/A
Mean score ^a	N/A	2.2	N/A	2.1

^a Scale ranged from 1 = poor to 4 = excellent.

Table 66 (continued). Of respondents who fished Lake Champlain in any of the past 3 years, their evaluation of the quality of fishing by species in Lake Champlain, for Vermont residents and nonresidents.

	Vermont residents (%)		Nonresidents (%)	
	Overall	Of those with an opinion	Overall	Of those with an opinion
<i>Quality of fishing for largemouth bass during past 3 years</i>				
Poor	1.5	2.1	4.4	5.3
Fair	14.0	19.6	10.1	12.2
Good	39.1	54.5	40.8	49.4
Excellent	17.0	23.8	27.3	33.0
No opinion	28.4	N/A	17.4	N/A
Mean score ^a	N/A	3.0	N/A	3.1
<i>Quality of fishing for smallmouth bass during past 3 years</i>				
Poor	1.6	2.2	2.5	3.0
Fair	13.1	18.2	8.0	9.6
Good	38.9	54.0	39.6	47.3
Excellent	18.4	25.6	33.5	40.1
No opinion	28.0	N/A	16.5	N/A
Mean score ^a	N/A	3.0	N/A	3.3
<i>Quality of fishing for northern pike during past 3 years</i>				
Poor	2.4	3.7	1.3	1.8
Fair	14.9	22.8	10.0	14.0
Good	35.8	55	34.6	48.2
Excellent	12.0	18.5	25.8	36.0
No opinion	34.9	N/A	28.3	N/A
Mean score ^a	N/A	2.9	N/A	3.2
<i>Quality of fishing for crappie during past 3 years</i>				
Poor	3.7	9.2	3.4	11.6
Fair	13.0	32.1	5.9	20.2
Good	18.0	44.5	13.3	45.2
Excellent	5.8	14.2	6.8	23.0
No opinion	59.5	N/A	70.6	N/A
Mean score ^a	N/A	2.6	N/A	2.8
<i>Quality of fishing for yellow perch during past 3 years</i>				
Poor	2.7	4.1	3.1	4.9
Fair	14.1	21	8.0	12.9
Good	29.9	44.7	23.2	37.2
Excellent	20.2	30.2	28.1	45.0
No opinion	33.2	N/A	37.5	N/A
Mean score ^a	N/A	3.0	N/A	3.2

^a Scale ranged from 1 = poor to 4 = excellent.

Table 66 (continued). Of respondents who fished Lake Champlain in any of the past 3 years, their evaluation of the quality of fishing by species in Lake Champlain, for Vermont residents and nonresidents.

	Vermont residents (%)		Nonresidents (%)	
	Overall	Of those with an opinion	Overall	Of those with an opinion
<i>Quality of fishing for sunfish during past 3 years</i>				
Poor	1.3	2.8	0.0	0.0
Fair	8.2	17.3	6.7	17.6
Good	23.2	49.0	13.4	35.1
Excellent	14.6	31.0	18.1	47.3
No opinion	52.7	N/A	61.7	N/A
Mean score ^a	N/A	3.1	N/A	3.3
<i>Quality of fishing for smelt during past 3 years</i>				
Poor	9.4	35.2	2	20.8
Fair	8.3	31.1	3.4	35.2
Good	7.1	26.6	2.9	29.7
Excellent	1.9	7.0	1.4	14.4
No opinion	73.2	N/A	90.2	N/A
Mean score ^a	N/A	2.1	N/A	2.4
<i>Quality of fishing for bullhead during past 3 years</i>				
Poor	1.6	4.4	1.4	12.9
Fair	8.1	22.7	3.8	34
Good	18.8	52.5	4.0	36.1
Excellent	7.3	20.4	1.9	17
No opinion	64.2	N/A	88.8	N/A
Mean score ^a	N/A	2.9	N/A	2.6
<i>Quality of fishing for white perch during past 3 years</i>				
Poor	2.4	5.6	0.4	1.1
Fair	10.1	23	7.3	22.5
Good	20.1	45.7	9.8	29.9
Excellent	11.3	25.7	15.1	46.4
No opinion	56.1	N/A	67.4	N/A
Mean score ^a	N/A	2.9	N/A	3.2
<i>Quality of fishing for bowfin during past 3 years</i>				
Poor	2.5	8.8	3.5	13.9
Fair	8.7	30.7	6.3	24.9
Good	12.9	45.7	13.0	51.3
Excellent	4.2	14.8	2.5	9.9
No opinion	71.7	N/A	74.8	N/A
Mean score ^a	N/A	2.7	N/A	2.6

^a Scale ranged from 1 = poor to 4 = excellent.

Table 66 (continued). Of respondents who fished Lake Champlain in any of the past 3 years, their evaluation of the quality of fishing by species in Lake Champlain, for Vermont residents and nonresidents.

	Vermont residents (%)		Nonresidents (%)	
	Overall	Of those with an opinion	Overall	Of those with an opinion
<i>Quality of fishing for gar during past 3 years</i>				
Poor	4.6	22.5	3.4	25.7
Fair	7.3	35.7	6.5	49.3
Good	7.1	34.8	2.8	21.4
Excellent	1.4	7.1	0.5	3.6
No opinion	79.5	N/A	86.8	N/A
Mean score ^a	N/A	2.3	N/A	2.0
<i>Quality of fishing for redhorse (mullet) during past 3 years</i>				
Poor	4.3	29.8	0.0	0.0
Fair	4.5	31.0	3.3	54.8
Good	5.0	34.0	2.3	37.5
Excellent	0.8	5.2	0.5	7.7
No opinion	85.4	N/A	93.9	N/A
Mean score ^a	N/A	2.2	N/A	2.5

^a Scale ranged from 1 = poor to 4 = excellent.

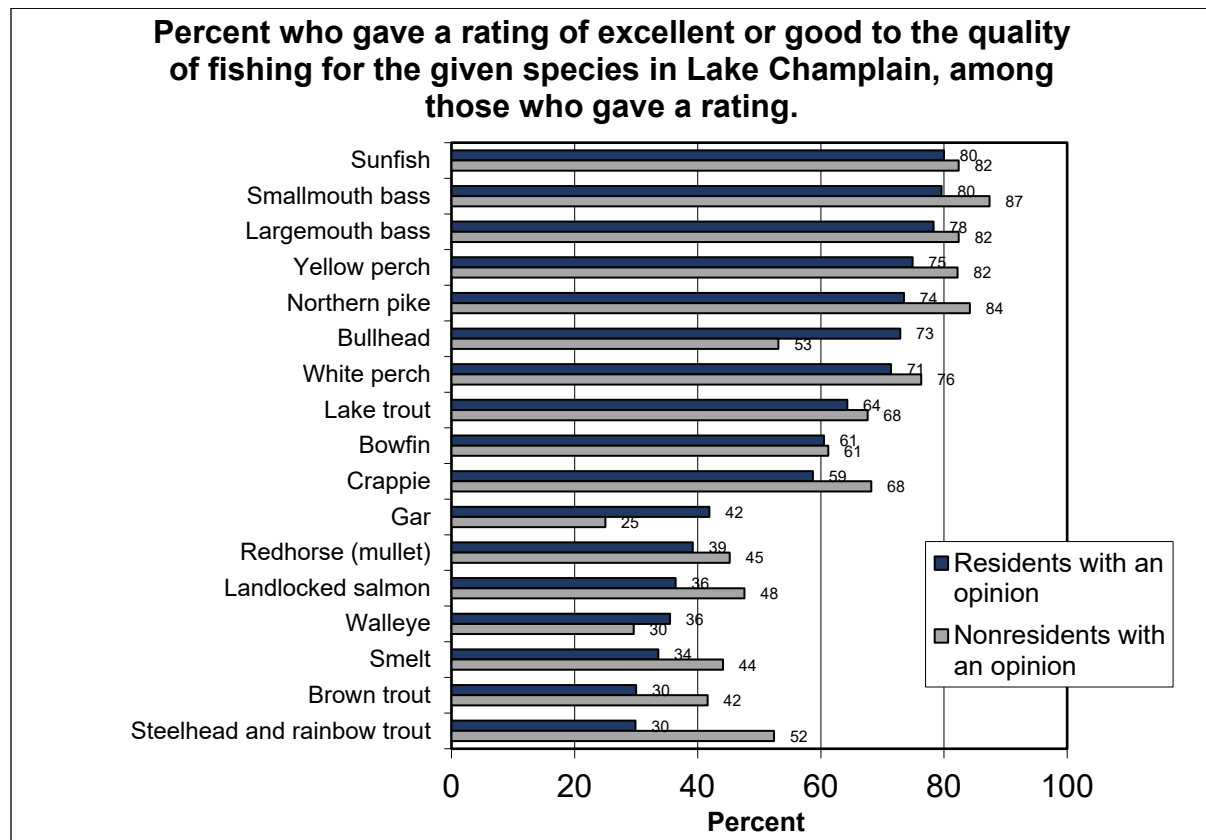


Figure 15. Ratings of Quality of Fishing for Various Species in Lake Champlain

Lake Champlain anglers were asked about their support for or opposition to allowing ice fishing for largemouth and smallmouth bass on Lake Champlain (note: it is currently not allowed). Opinion is split among both resident and nonresident Lake Champlain anglers. Among residents, 36.8% support it, while 26.6% oppose it; among nonresident Lake Champlain anglers, 29.6% support it and 29.9% oppose it (Table 67). For both groups, a large percentage do not have an opinion.

Support for ice fishing for largemouth and smallmouth bass on Lake Champlain (currently it is not allowed)	Vermont residents (%)	Nonresidents (%)
Oppose	26.6	29.9
Support	36.8	29.6
No opinion	36.6	40.5

The survey asked Lake Champlain anglers about their opinion on the start and end of the walleye season on Lake Champlain, as shown in Table 68. They were asked if the opening day (currently the first Saturday in May) should be earlier or later or if it was just right as it is, and they were asked the same about closing day (currently March 15). Most commonly (among those with an opinion), they say that opening and closing days are just right. (The majority of resident and nonresident anglers have no opinion about it.)

Opinion on length of Lake Champlain walleye season	Vermont residents (%)	Nonresidents (%)
	Percent supporting ^a	
Opening day is just right	34.4	26.7
Opening day should be earlier	5.0	3.0
Opening day should be later	3.4	4.1
No opinion on opening day	57.2	66.2
Closing day is just right	30.5	25.9
Closing day should be earlier	6.9	6.5
Closing day should be later	1.9	0.8
No opinion on closing day	60.7	66.8
Open year-round	4.0	5.8

^a Percentages can sum to more than 100% because more than one option could be checked.

Tables 69 through 76 show Lake Champlain anglers' opinions about the length limits for various fish in Lake Champlain, and Tables 77 through 91 show their opinions about creel limits for various species. Finally, opinions on the allowable number of lines for open-water fishing (Table 92) and for ice fishing (Table 93) are presented.

Table 69. Agreement with the Lake Champlain current minimum length for brown/rainbow trout, and if they disagreed their recommended limit, by Vermont residents and nonresidents.

Agreement with current minimum length limit for brown/rainbow trout of 12"	Vermont residents (%)	Nonresidents (%)
Agree	61.4	55.6
Disagree	6.3	2.4
No opinion	32.3	42.0
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	68.4	100.0
<i>Lower</i>	31.6	0.0
<i>Mean recommended limit</i>	13.8	14.8

Table 70. Agreement with the Lake Champlain current minimum length limit for lake trout, and if they disagreed their recommended limit, by Vermont residents and nonresidents.

Agreement with current minimum length limit for lake trout of 15"	Vermont residents (%)	Nonresidents (%)
Agree	56.6	53.4
Disagree	10.6	5.6
No opinion	32.8	41.0
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	86.8	100.0
<i>Lower</i>	13.2	0.0
<i>Mean recommended limit</i>	17.9	19.0

Table 71. Agreement with the Lake Champlain current minimum length limit for landlocked salmon, and if they disagreed their recommended limit, by Vermont residents and nonresidents.

Agreement with current minimum length limit for landlocked salmon of 15"	Vermont residents (%)	Nonresidents (%)
Agree	57.5	52.5
Disagree	7.9	6.1
No opinion	34.6	41.4
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	92.4	93.8
<i>Lower</i>	7.6	6.2
<i>Mean recommended limit</i>	17.8	18.3

Table 72. Agreement with the Lake Champlain current minimum length limit for walleye, and if they disagreed their recommended limit, by Vermont residents and nonresidents.

Agreement with current minimum length limit for walleye of 18"	Vermont residents (%)	Nonresidents (%)
Agree	61.1	68.0
Disagree	5.8	3.0
No opinion	33.1	29.1
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	63.1	100.0
<i>Lower</i>	36.9	0.0
<i>Mean recommended limit</i>	18.5	20.2

Table 73. Agreement with the Lake Champlain current minimum length limit for largemouth bass, and if they disagreed their recommended limit, by Vermont residents and nonresidents.		
Agreement with current minimum length limit for largemouth bass of 10"	Vermont residents (%)	Nonresidents (%)
Agree	57.7	46.0
Disagree	14.5	32.7
No opinion	27.9	21.3
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	94.3	96.9
<i>Lower</i>	5.7	3.1
<i>Mean recommended limit</i>	12.7	12.6

Table 74. Agreement with the Lake Champlain current minimum length limit for smallmouth bass, and if they disagreed their recommended limit, by Vermont residents and nonresidents.		
Agreement with current minimum length limit for smallmouth bass of 10"	Vermont residents (%)	Nonresidents (%)
Agree	59.2	49.1
Disagree	14.3	29.9
No opinion	26.5	20.9
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	91.9	100.0
<i>Lower</i>	8.1	0.0
<i>Mean recommended limit</i>	12.3	12.9

Table 75. Agreement with the Lake Champlain current minimum length limit for northern pike, and if they disagreed their recommended limit, by Vermont residents and nonresidents.		
Agreement with current minimum length limit for northern pike of 20"	Vermont residents (%)	Nonresidents (%)
Agree	57.3	66.3
Disagree	13.3	12.3
No opinion	29.4	21.4
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	68.7	89.1
<i>Lower</i>	31.3	10.9
<i>Mean recommended limit</i>	22.3	21.7

Table 76. Agreement with the Lake Champlain current minimum length limit for crappie, and if they disagreed their recommended limit, by Vermont residents and nonresidents.		
Agreement with current minimum length limit for crappie of 8"	Vermont residents (%)	Nonresidents (%)
Agree	59.5	53.8
Disagree	4.4	3.8
No opinion	36.1	42.5
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	73.2	91.3
<i>Lower</i>	26.8	8.7
<i>Mean recommended limit</i>	8.6	9.0

Table 77. Agreement with the Lake Champlain current daily creel limit for brown/rainbow trout, and if they disagreed their recommended limit, by Vermont residents and nonresidents.

Agreement with current daily creel limit for brown/rainbow trout of 3 fish	Vermont residents (%)	Nonresidents (%)
Agree	61.4	54.5
Disagree	6.5	5.5
No opinion	32.1	40.0
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	49.0	24.1
<i>Lower</i>	51.0	75.9
<i>Mean recommended limit</i>	3.5	2.3

Table 78. Agreement with the Lake Champlain current daily creel limit for lake trout, and if they disagreed their recommended limit, by Vermont residents and nonresidents.

Agreement with current daily creel limit for lake trout of 3 fish	Vermont residents (%)	Nonresidents (%)
Agree	60.3	54.6
Disagree	7.2	5.8
No opinion	32.5	39.6
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	31.0	0.0
<i>Lower</i>	69.0	100.0
<i>Mean recommended limit</i>	2.9	1.8

Table 79. Agreement with the Lake Champlain current daily creel limit for landlocked salmon, and if they disagreed their recommended limit, by Vermont residents and nonresidents.

Agreement with current daily creel limit for landlocked salmon of 2 fish	Vermont residents (%)	Nonresidents (%)
Agree	60.4	56.8
Disagree	6.3	3.8
No opinion	33.3	39.4
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	33.2	34.9
<i>Lower</i>	66.8	65.1
<i>Mean recommended limit</i>	1.6	1.3

Table 80. Agreement with the Lake Champlain current daily creel limit for walleye, and if they disagreed their recommended limit, by Vermont residents and nonresidents.		
Agreement with current daily creel limit for walleye of 3 fish	Vermont residents (%)	Nonresidents (%)
Agree	59.8	57.4
Disagree	7.9	11.5
No opinion	32.3	31.1
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	22.9	12.9
<i>Lower</i>	77.1	87.1
<i>Mean recommended limit</i>	2.4	1.8

Table 81. Agreement with the Lake Champlain current daily creel limit for largemouth/smallmouth bass, and if they disagreed their recommended limit, by Vermont residents and nonresidents.		
Agreement with current daily creel limit for largemouth/smallmouth bass of 5 fish	Vermont residents (%)	Nonresidents (%)
Agree	61.2	63.1
Disagree	10.5	13.4
No opinion	28.3	23.5
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	25.5	19.1
<i>Lower</i>	74.5	80.9
<i>Mean recommended limit</i>	3.7	2.5

Table 82. Agreement with the Lake Champlain current daily creel limit for northern pike, and if they disagreed their recommended limit, by Vermont residents and nonresidents.		
Agreement with current daily creel limit for northern pike of 5 fish	Vermont residents (%)	Nonresidents (%)
Agree	57.2	59.1
Disagree	13.6	17.4
No opinion	29.2	23.5
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	16.0	2.5
<i>Lower</i>	84.0	97.5
<i>Mean recommended limit</i>	3.3	2.4

Table 83. Agreement with the Lake Champlain current daily creel limit for crappie, and if they disagreed their recommended limit, by Vermont residents and nonresidents.		
Agreement with current daily creel limit for crappie of 25 fish	Vermont residents (%)	Nonresidents (%)
Agree	58.0	54.9
Disagree	6.3	6.3
No opinion	35.7	38.8
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	20.7	0.0
<i>Lower</i>	79.3	100.0
<i>Mean recommended limit</i>	18.2	16.2

Table 84. Agreement with the Lake Champlain current daily creel limit for yellow perch, and if they disagreed their recommended limit, by Vermont residents and nonresidents.		
Agreement with current daily creel limit for yellow perch, which is no limit	Vermont residents (%)	Nonresidents (%)
Agree	60.7	56.8
Disagree	11.5	13.3
No opinion	27.8	29.9
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	0.0	0.0
<i>Lower</i>	100.0	100.0
<i>Mean recommended limit</i>	47.6	21.9

Table 85. Agreement with the Lake Champlain current daily creel limit for sunfish, and if they disagreed their recommended limit, by Vermont residents and nonresidents.		
Agreement with current daily creel limit for sunfish, which is no limit	Vermont residents (%)	Nonresidents (%)
Agree	62.9	59.3
Disagree	4.8	6.6
No opinion	32.2	34.1
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	0.0	0.0
<i>Lower</i>	100.0	100.0
<i>Mean recommended limit</i>	44.3	23.1

Table 86. Agreement with the Lake Champlain current daily creel limit for smelt, and if they disagreed their recommended limit, by Vermont residents and nonresidents.		
Agreement with current daily creel limit for smelt, which is no limit	Vermont residents (%)	Nonresidents (%)
Agree	59.8	55.1
Disagree	5.7	5.2
No opinion	34.5	39.7
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	0.0	0.0
<i>Lower</i>	100.0	100.0
<i>Mean recommended limit</i>	48.2	21.5

Table 87. Agreement with the Lake Champlain current daily creel limit for bullhead, and if they disagreed their recommended limit, by Vermont residents and nonresidents.		
Agreement with current daily creel limit for bullhead, which is no limit	Vermont residents (%)	Nonresidents (%)
Agree	62.6	58.0
Disagree	2.1	6.6
No opinion	35.3	35.4
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	0.0	0.0
<i>Lower</i>	100.0	100.0
<i>Mean recommended limit</i>	27.6	15.9

Table 88. Agreement with the Lake Champlain current daily creel limit for white perch, and if they disagreed their recommended limit, by Vermont residents and nonresidents.		
Agreement with current daily creel limit for white perch, which is no limit	Vermont residents (%)	Nonresidents (%)
Agree	64.8	62.2
Disagree	2.9	5.8
No opinion	32.3	32
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	0.0	0.0
<i>Lower</i>	100.0	100.0
<i>Mean recommended limit</i>	25.4	22.1

Table 89. Agreement with the Lake Champlain current daily creel limit for bowfin, and if they disagreed their recommended limit, by Vermont residents and nonresidents.		
Agreement with current daily creel limit for bowfin of 5 fish	Vermont residents (%)	Nonresidents (%)
Agree	51.9	55.9
Disagree	6.5	8.6
No opinion	41.5	35.4
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	45.0	13.0
<i>Lower</i>	55.0	87.0
<i>Mean recommended limit</i>	5.4	3.1

Table 90. Agreement with the Lake Champlain current daily creel limit for gar, and if they disagreed their recommended limit, by Vermont residents and nonresidents.		
Agreement with current daily creel limit for gar of 5 fish	Vermont residents (%)	Nonresidents (%)
Agree	51.3	49.9
Disagree	6.5	11.3
No opinion	42.3	38.8
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	11.9	0.0
<i>Lower</i>	88.1	100.0
<i>Mean recommended limit</i>	3.1	1.9

Table 91. Agreement with the Lake Champlain current daily creel limit for redhorse (mullet), and if they disagreed their recommended limit, by Vermont residents and nonresidents.		
Agreement with current daily creel limit for redhorse (mullet) of 5 fish	Vermont residents (%)	Nonresidents (%)
Agree	53.5	51.8
Disagree	1.6	2.4
No opinion	44.9	45.8
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	16.5	0.0
<i>Lower</i>	83.5	100.0
<i>Mean recommended limit</i>	4.1	2.8

Table 92. Agreement with the current regulations on Lake Champlain that allow the use of 2 lines when fishing during the open water season, and if they disagreed their recommended number, by Vermont residents and nonresidents.

Agreement with current regulations allowing for use of 2 lines on Lake Champlain during open water season	Vermont residents (%)	Nonresidents (%)
Agree	74.9	67.6
Disagree	13.4	11.1
No opinion	11.7	21.3
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	92.7	66.3
<i>Lower</i>	7.3	33.7
<i>Mean recommended limit</i>	3.3	2.6

Table 93. Agreement with the current regulations on Lake Champlain that allow the use of 15 lines when ice fishing, and if they disagreed their recommended number, by Vermont residents and nonresidents.

Agreement with current regulations allowing for use of 15 lines when ice fishing on Lake Champlain	Vermont residents (%)	Nonresidents (%)
Agree	67.4	47.1
Disagree	20.3	27.7
No opinion	12.2	25.2
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	5.5	0.0
<i>Lower</i>	94.5	100.0
<i>Mean recommended limit</i>	9.4	7.2

ANGLER OPINIONS ABOUT FISHERY MANAGEMENT ISSUES, FISHING ACCESS, AND SOURCES OF INFORMATION

This section discusses opinions on the number of allowable lines for open-water fishing and ice fishing (excluding Lake Champlain, which was asked about above). It also examines opinions on issues that might or might not be problematic to the anglers as well as access amenities.

Tables 94 and 95 show opinion on the number of allowable lines in the general regulations (2 lines in open-water season, and 8 lines for ice fishing). Most resident anglers agreed with both regulations, and nonresident anglers had a majority agreeing with the 2-line limit for open-water season on ponds and lakes and just under a majority agreeing with the 8-line limit when ice fishing.

Agreement with current regulations allowing for use of 2 lines when fishing ponds or lakes during open water season	Vermont residents (%)	Nonresidents (%)
Agree	74.5	67.6
Disagree	10.2	9.5
No opinion	15.3	23.0
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	66.1	43.9
<i>Lower</i>	33.9	56.1
<i>Mean recommended limit</i>	2.7	2.1

Agreement with current regulations allowing for use of 8 lines when ice fishing on ponds or lakes	Vermont residents (%)	Nonresidents (%)
Agree	62.5	49.1
Disagree	11.5	11.3
No opinion	26.0	39.6
<i>Recommended limit for those who disagreed</i>		
<i>Higher</i>	41.1	12.8
<i>Lower</i>	58.9	87.2
<i>Mean recommended limit</i>	7.4	4.9

The survey asked respondents about their opinions on eleven issues, as shown in Table 96. Anglers rated each as being a serious problem, a moderate problem, a minor problem, or not a problem. The item seen as the top problem, based on the percentage rating it as a serious or moderate problem, is contaminant levels in fish (Figure 16 shows the results graphically).

Figures 17 through 24 are the demographic analyses graphs for each item showing the percentages of various groups that said the given item was a serious or moderate problem. (Only shooting and spearing of northern pike was omitted because of the very large percentages who had no opinion on this.)

Table 96. Opinions about issues in Vermont, by Vermont residents and nonresidents.						
Issues in Vermont	Serious problem (%)	Moderate problem (%)	Minor problem (%)	Not a problem (%)	No opinion (%)	Mean score ^a
<i>Contaminant levels in fish</i>						
Vermont residents	17.6	27.0	21.1	16.6	17.8	2.6
Nonresidents	9.7	16.5	17.0	24.5	32.2	2.2
<i>Crowding at fishing areas</i>						
Vermont residents	7.3	21.5	31.6	27.6	12.1	2.1
Nonresidents	5.4	13.9	20.5	38.8	21.4	1.8
<i>Commercial sale of angler-caught perch</i>						
Vermont residents	7.7	9.2	8.8	36.2	38.1	1.8
Nonresidents	9.8	11.9	5.9	19.4	53.1	2.3
<i>Commercial sale of angler-caught crappie</i>						
Vermont residents	7.6	7.2	8.5	33.5	43.1	1.8
Nonresidents	8.9	11.0	7.0	19.3	53.8	2.2
<i>Commercial sale of angler-caught sunfish</i>						
Vermont residents	6.6	6.4	7.4	36.4	43.2	1.7
Nonresidents	7.8	10.1	7.5	20.1	54.5	2.1
<i>Shooting and spearing of northern pike in Lake Champlain as currently permitted</i>						
Vermont residents	4.8	5.4	6.8	37.5	45.5	1.6
Nonresidents	9.9	7.8	7.3	18.3	56.5	2.2
<i>Conflict between fishing and other recreational uses (e.g., skiing, boating)</i>						
Vermont residents	6.0	22.4	26.6	26.6	18.4	2.1
Nonresidents	4.8	17.8	23.9	22.8	30.6	2.1
<i>Access to fishing areas</i>						
Vermont residents	5.4	13.9	21.6	50.1	9.0	1.7
Nonresidents	1.5	12.7	18.2	54.8	12.8	1.6
<i>Fishing derbies/tournaments (other than “kids” derbies)</i>						
Vermont residents	4.0	6.8	10.0	60.9	18.3	1.4
Nonresidents	5.3	10.0	10.3	42.9	31.4	1.7
<i>Your ability to understand Vermont fishing regulations</i>						
Vermont residents	2.8	5.4	15.4	66.8	9.6	1.4
Nonresidents	0.9	3.6	10.8	72.8	11.9	1.2
<i>Conflict between open-water and ice-fishing</i>						
Vermont residents	1.3	4.4	7.2	54.2	32.9	1.3
Nonresidents	0.2	4.2	5.5	35.2	55	1.3

^a Scale ranged from 1 = not a problem to 4 = serious problem. Respondents who had “no opinion” were not included in the calculation of the mean.

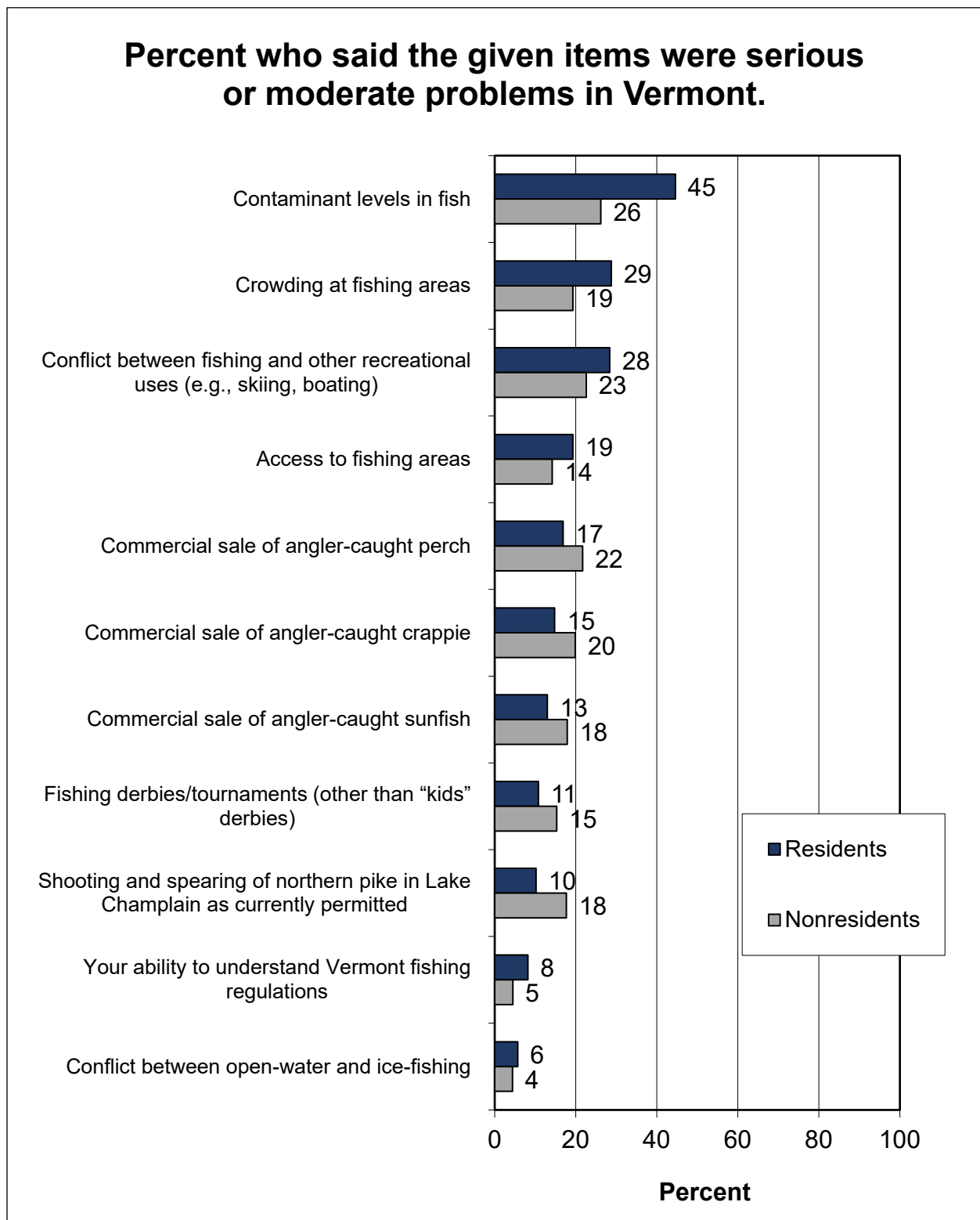
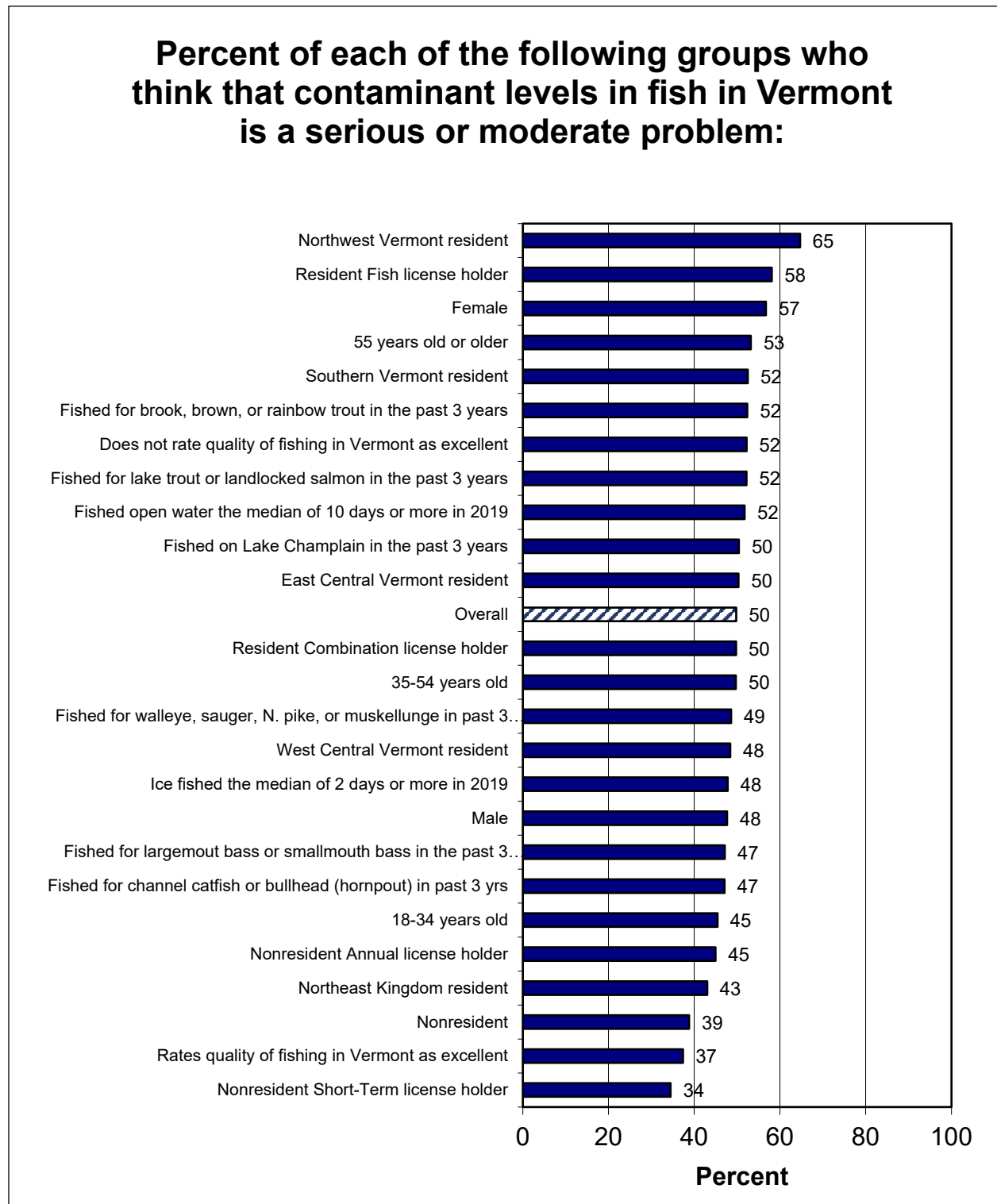


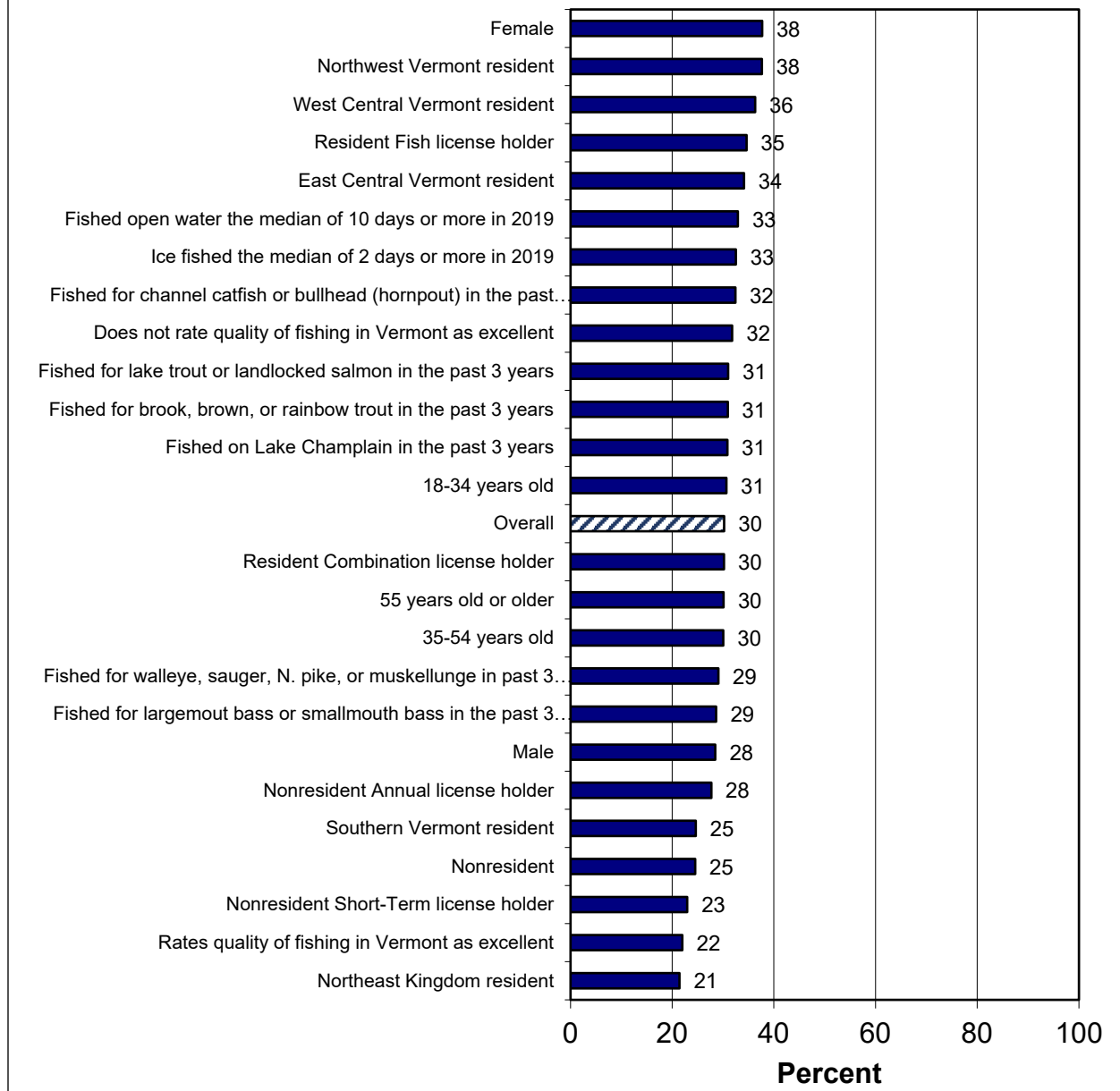
Figure 16. Ranking of Problems in Vermont



See pages 9 through 11 for an explanation of how to interpret these types of graphs.

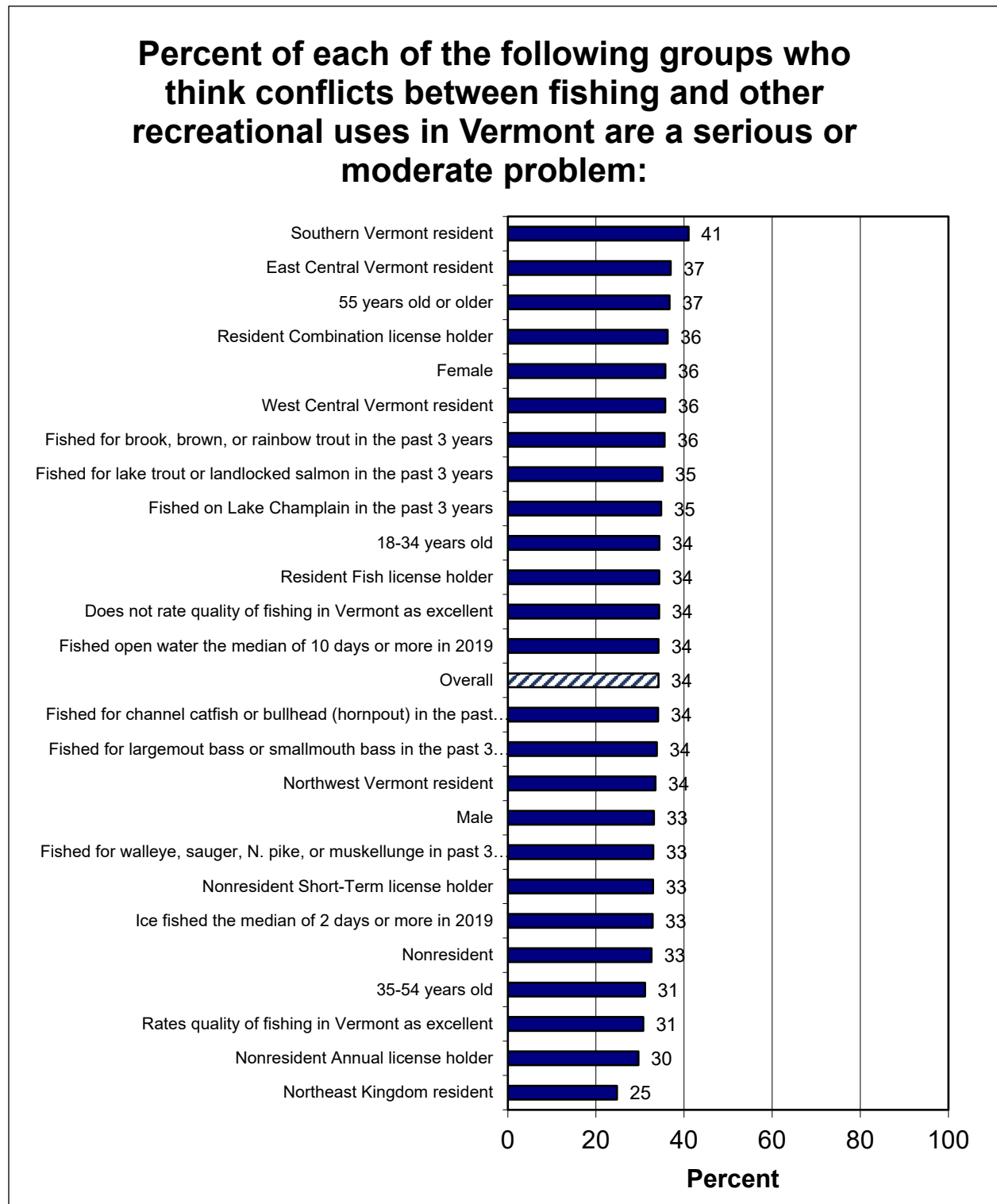
Figure 17. Characteristics of Those Thinking This Is a Serious or Moderate Problem: Contaminant Levels in Fish

Percent of each of the following groups who think that crowding at fishing areas in Vermont is a serious or moderate problem:



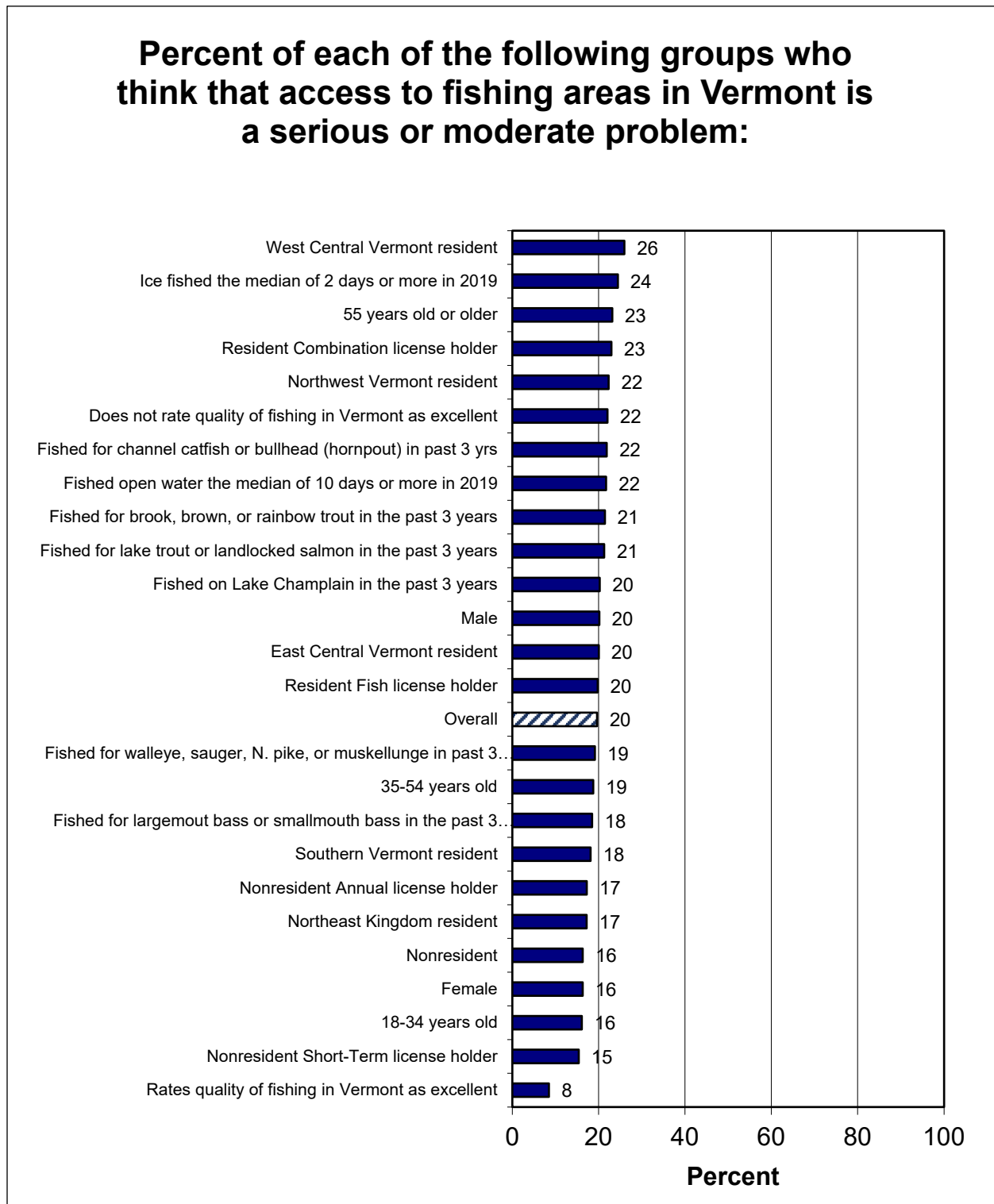
See pages 9 through 11 for an explanation of how to interpret these types of graphs. This graph was used as the example in the explanation but is presented here again for the reader's convenience.

Figure 18. Characteristics of Those Thinking This Is a Serious or Moderate Problem: Crowding at Fishing Areas



See pages 9 through 11 for an explanation of how to interpret these types of graphs.

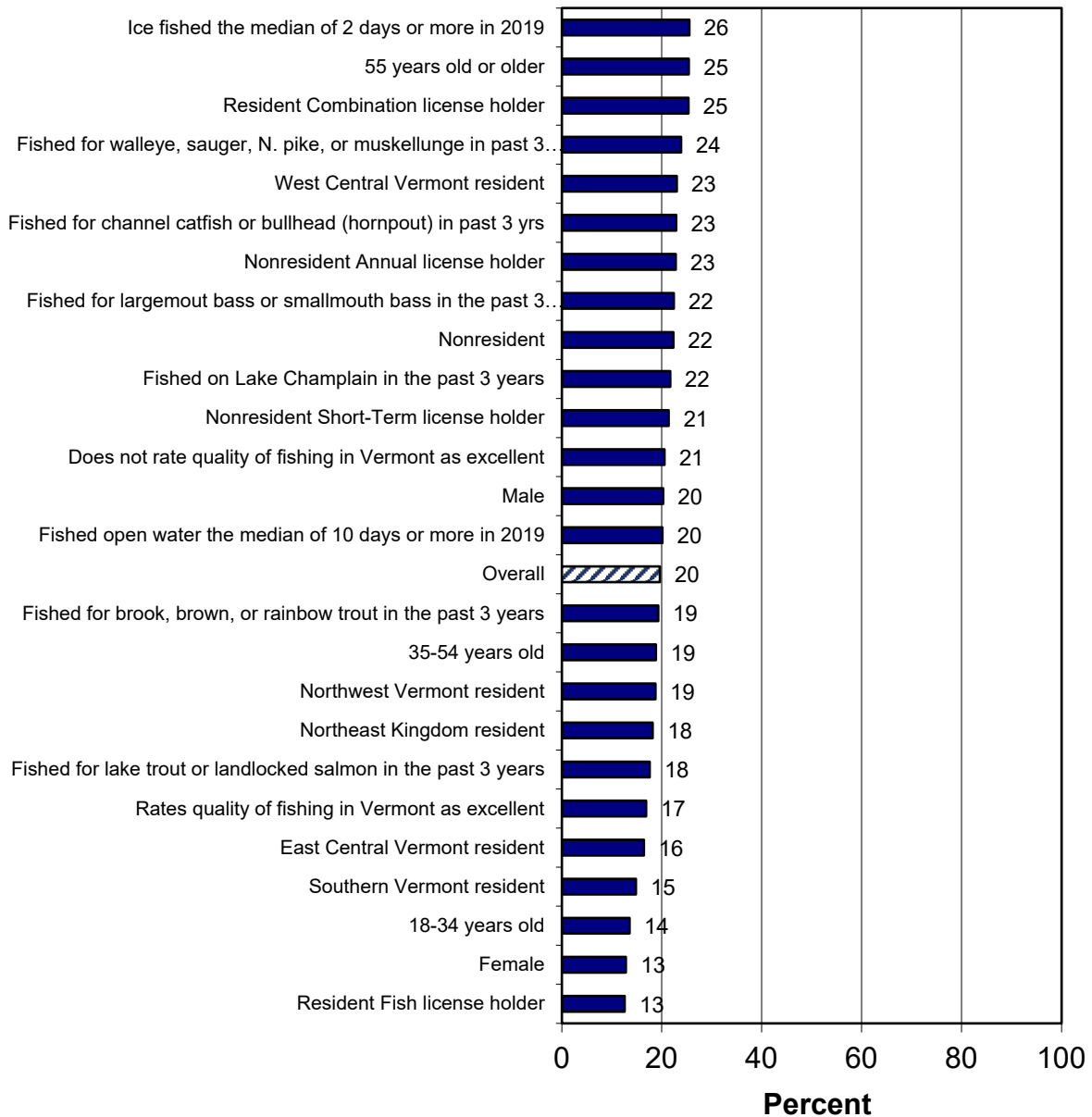
Figure 19. Characteristics of Those Thinking This Is a Serious or Moderate Problem: Conflicts Between Fishing and Other Recreation



See pages 9 through 11 for an explanation of how to interpret these types of graphs.

Figure 20. Characteristics of Those Thinking This Is a Serious or Moderate Problem: Access to Fishing Areas

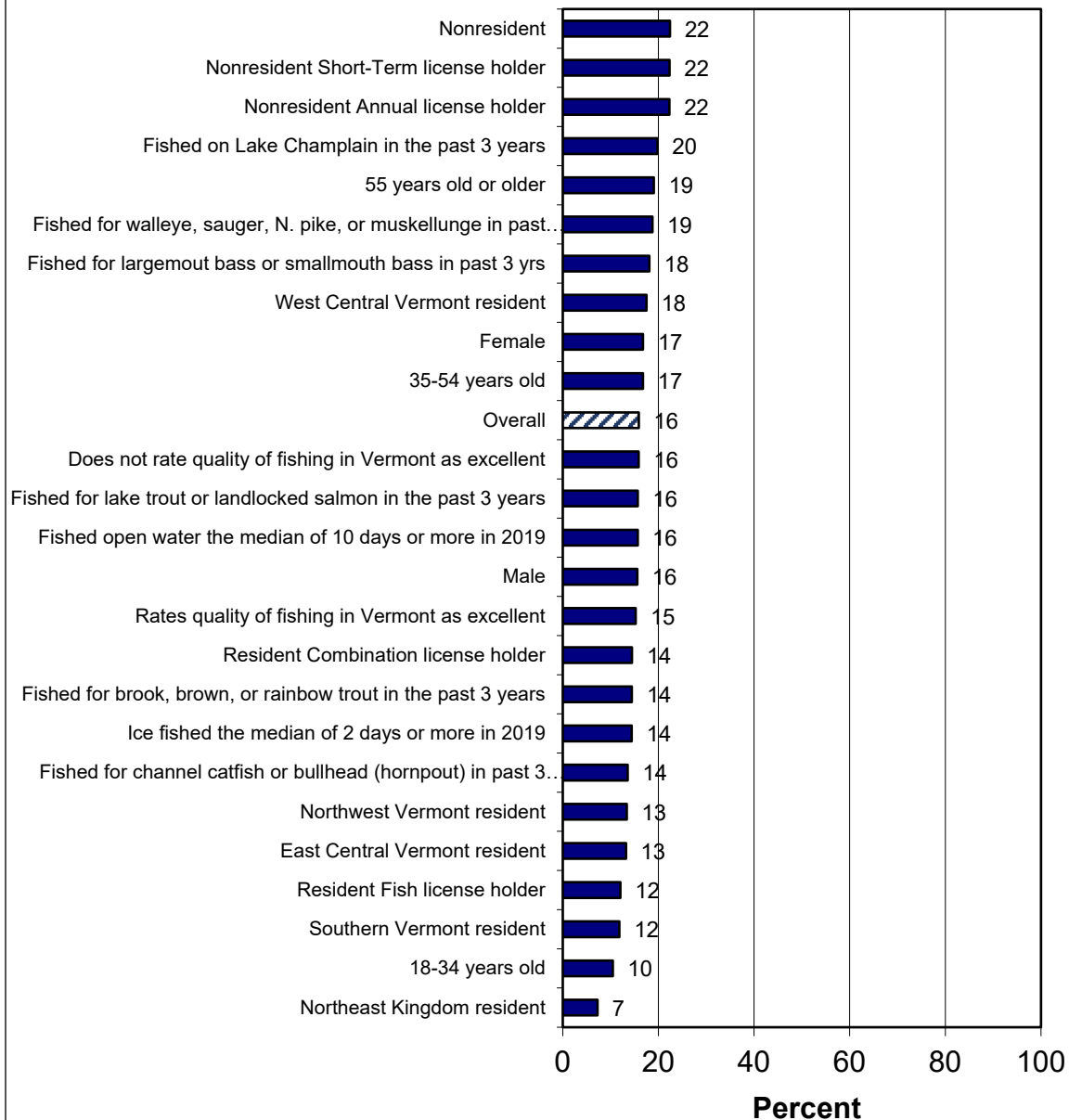
Percent of each of the following groups who think the commercial sale of angler-caught perch, crappie, or sunfish in Vermont is a serious or moderate problem:



See pages 9 through 11 for an explanation of how to interpret these types of graphs.

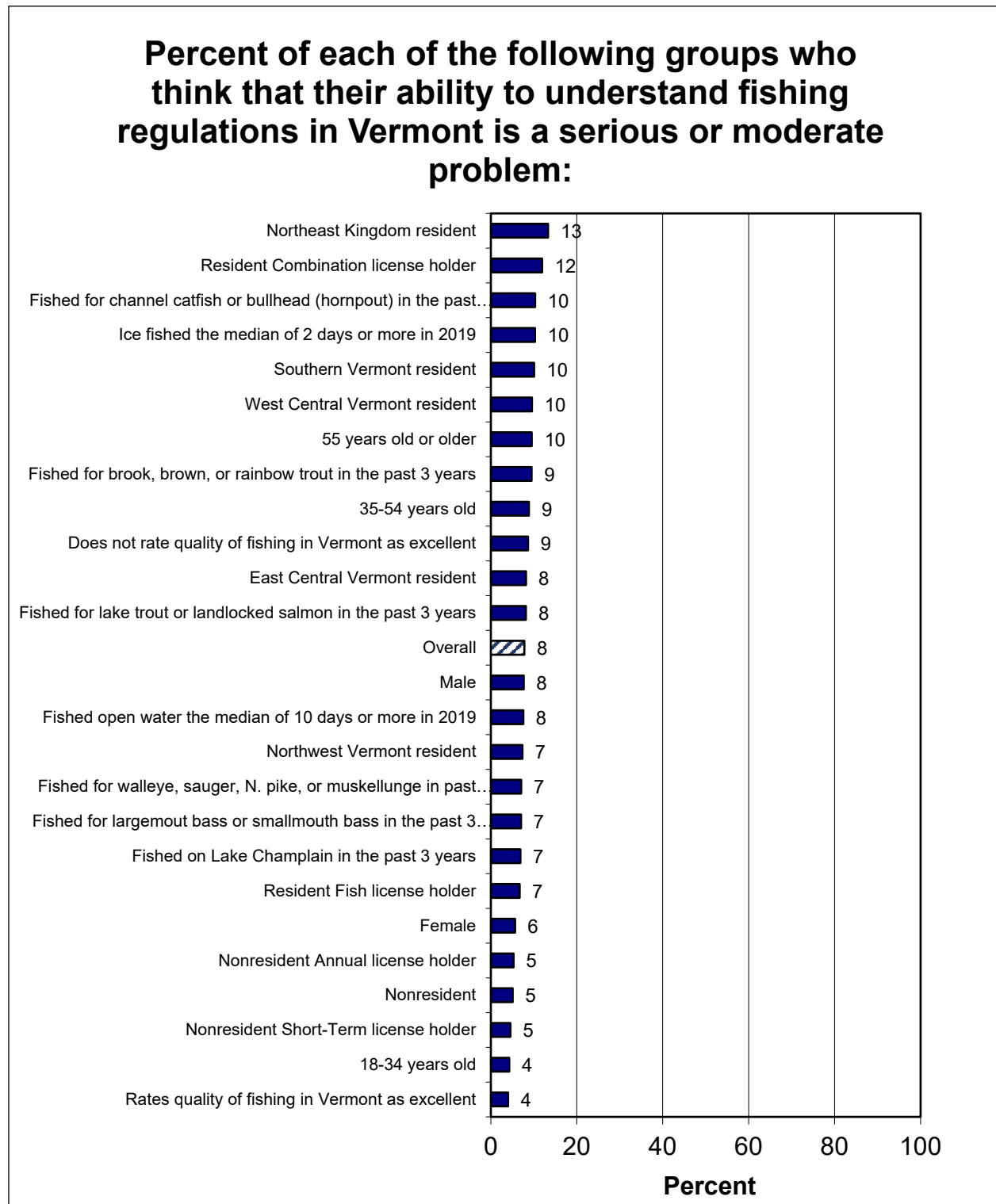
Figure 21. Characteristics of Those Thinking This Is a Serious or Moderate Problem: Commercial Sale of Angler-Caught Perch, Crappie, or Sunfish

Percent of each of the following groups who think that fishing derbies or tournaments (other than "kids" derbies) in Vermont are a serious or moderate problem:



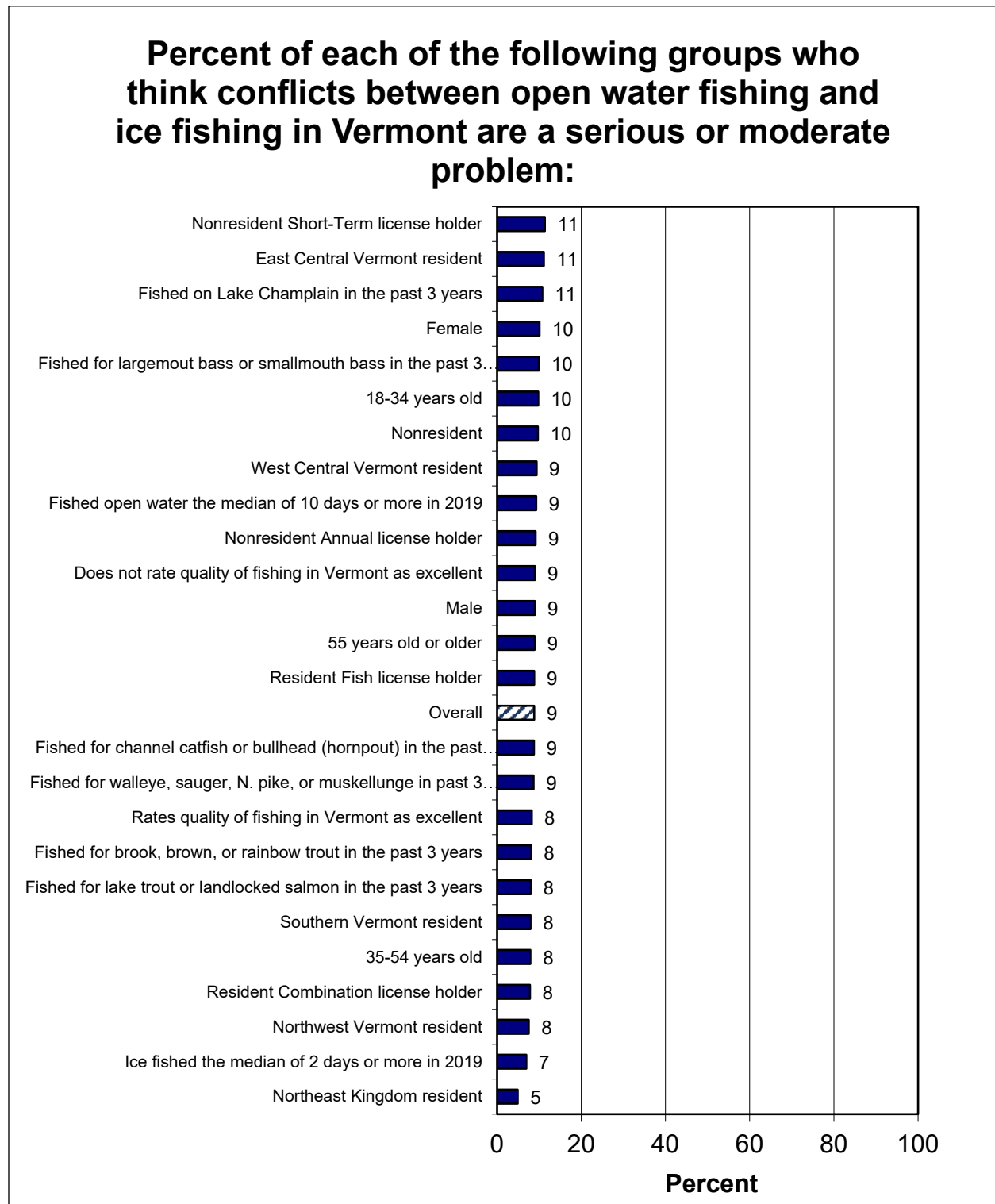
See pages 9 through 11 for an explanation of how to interpret these types of graphs.

Figure 22. Characteristics of Those Thinking This Is a Serious or Moderate Problem: Fishing Derbies or Tournaments



See pages 9 through 11 for an explanation of how to interpret these types of graphs.

Figure 23. Characteristics of Those Thinking This Is a Serious or Moderate Problem: Ability to Understand Fishing Regulations



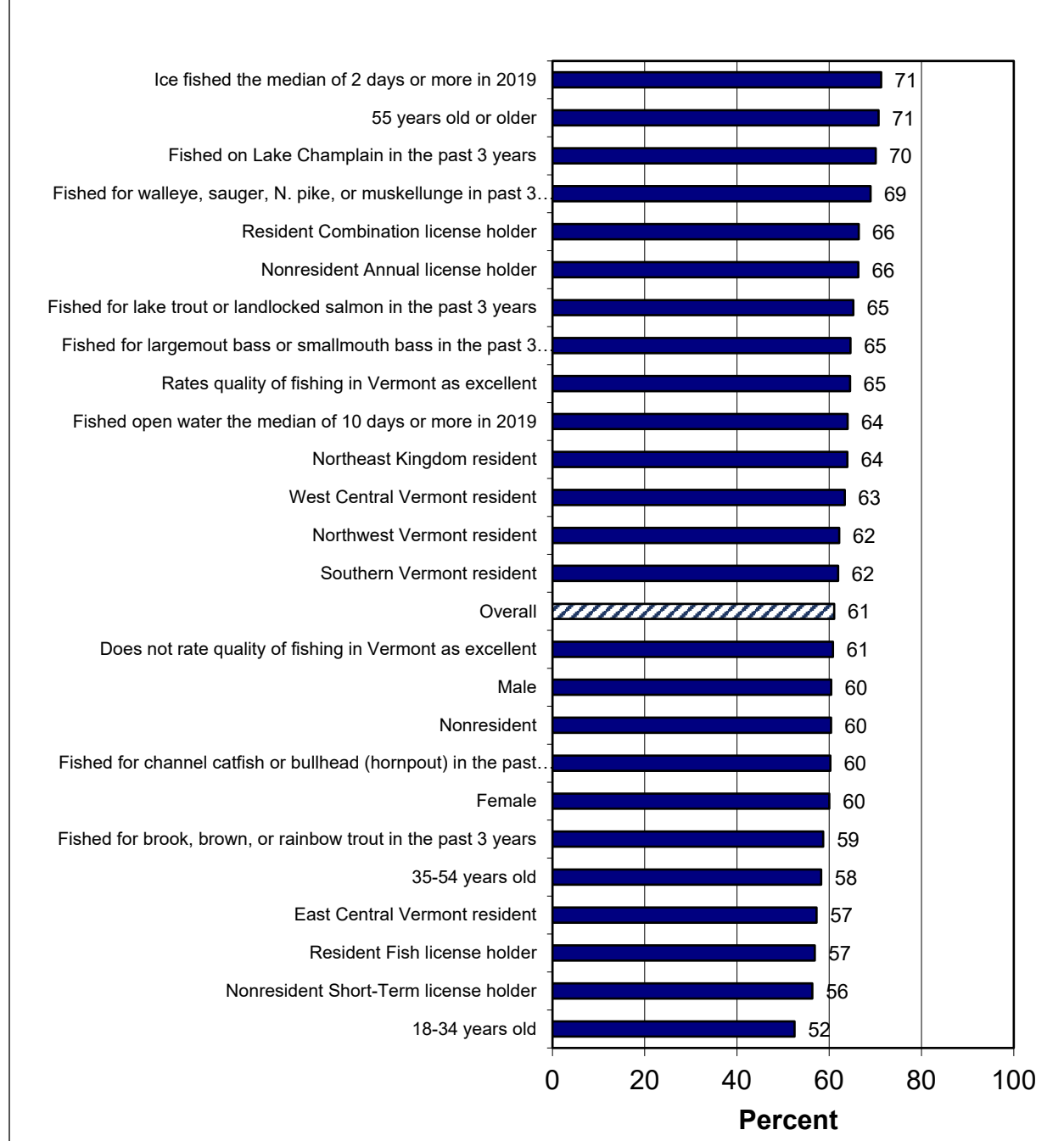
See pages 9 through 11 for an explanation of how to interpret these types of graphs.

Figure 24. Characteristics of Those Thinking This Is a Serious or Moderate Problem: Conflicts Between Open Water and Ice Fishing

The survey asked about five access amenities: boat ramps, docks, fishing piers/other shore fishing opportunities, portable toilets, and bulletin boards with information. Table 97 shows that the amenities considered most important are bulletin boards with information, boat ramps, and portable toilets. Figure 25 is a demographic analyses graph that shows the percentages of various groups who consider boat ramps at fishing access sites to be very important.

Table 97. Importance of various boat launch and fishing access site amenities, by Vermont residents and nonresidents.					
Boat launch and fishing access site amenities	Not important (%)	Somewhat important (%)	Very important (%)	No opinion (%)	Mean score^a
<i>Boat ramps</i>					
Vermont residents	11.0	23.8	55.4	9.8	2.5
Nonresidents	13.7	19.0	49.9	17.3	2.4
<i>Docks</i>					
Vermont residents	19.7	33.6	37.0	9.7	2.2
Nonresidents	19.3	31.5	31.7	17.5	2.2
<i>Fishing piers or other shore fishing opportunities</i>					
Vermont residents	18.2	32.8	39.5	9.5	2.2
Nonresidents	23.7	29.6	27.2	19.5	2.0
<i>Portable toilets</i>					
Vermont residents	15.8	30.4	46.6	7.2	2.3
Nonresidents	14.8	30.6	39.6	15.0	2.3
<i>Bulletin boards with information</i>					
Vermont residents	8.5	30.5	54.0	6.9	2.5
Nonresidents	11.0	30.0	47.0	12.0	2.4
^a Scale ranged from 1 = not important to 3 = very important. Respondents who had “no opinion” were not included in the calculation of the mean.					

Percent of each of the following groups who think that boat ramps are very important at boat launches or fishing access sites in Vermont:



See pages 9 through 11 for an explanation of how to interpret these types of graphs.

Figure 25. Characteristics of Those Who Think Boat Ramps Are Very Important

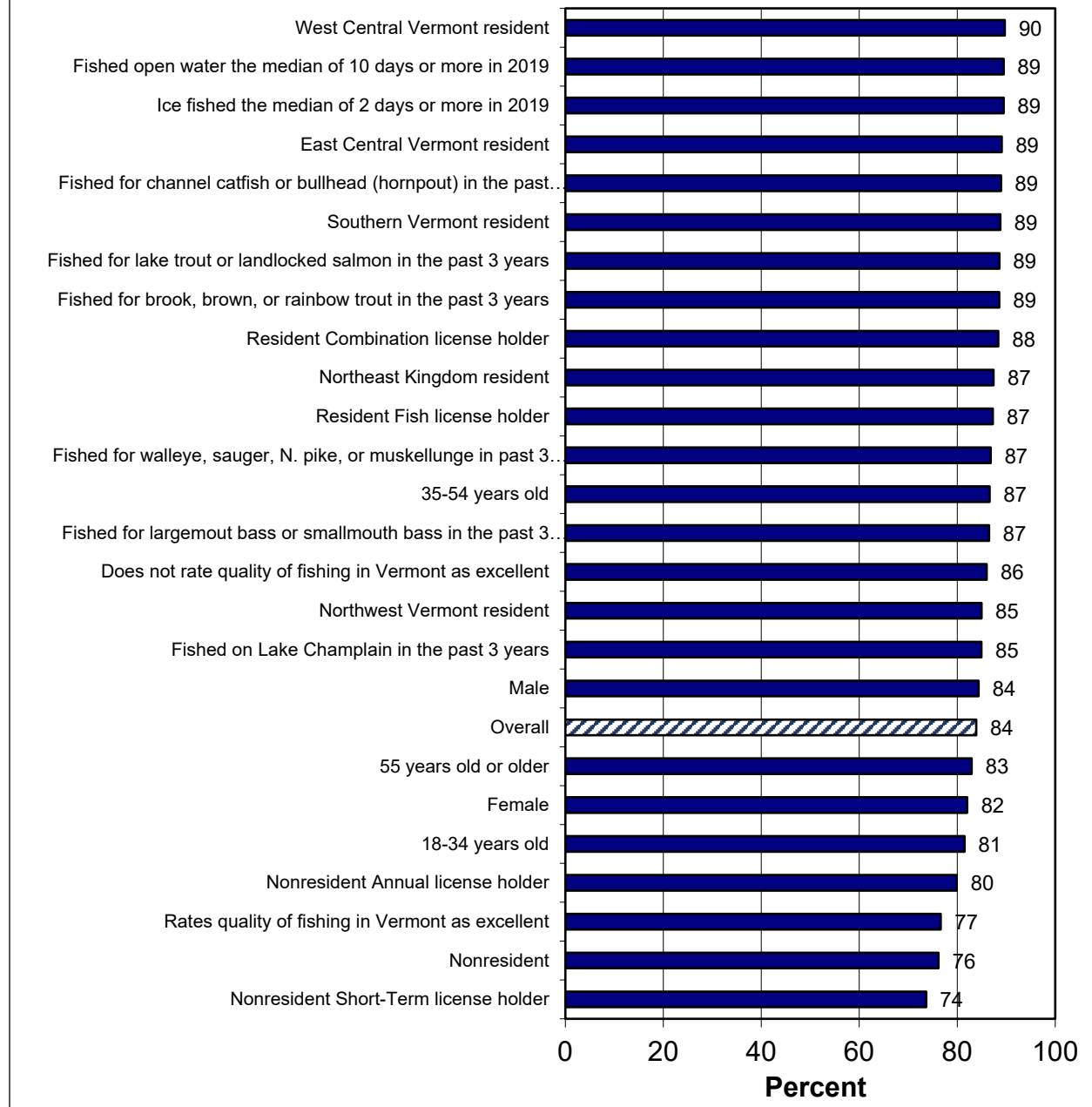
The survey asked anglers about 13 possible sources of information; respondents chose all the ones that they had used in 2019 and then selected the one source that they would be most likely to use in 2020. The most used sources in 2019 were the Fishing Regulations Guide and the Department website, and these sources are the most likely to be used in 2020 (Table 98). A demographic analyses graph shows the percentages of various groups who obtained information about fishing in Vermont from the Department (Figure 26).

Table 98. Sources of fishing information used by anglers in 2019, and the most likely source to be used in 2020, by Vermont residents and nonresidents.

Sources of information	Vermont residents		Nonresidents	
	Used in 2019 (%) ^a	Most likely to use in 2020 (%)	Used in 2019 (%) ^a	Most likely to use in 2020 (%)
Fishing Regulations Guide from the Vermont Department of Fish & Wildlife	78.4	62.2	61.9	42.6
Website of the Vermont Department of Fish and Wildlife	54.7	19.8	56.5	29.2
Friends / word-of-mouth	44.1	12.1	41.5	14.3
Bait and tackle shops	22.1	1.8	22.9	3.1
Other pamphlets or documents from the Vermont Department of Fish & Wildlife	16.3	0.5	14.3	1.3
Social media, such as Facebook, Twitter, Instagram, etc.	12.3	1.6	8.0	1.0
Direct contact with Vermont Department of Fish and Wildlife personnel	10.8	0.8	3.9	0.4
Other websites	9.5	0.4	14.3	5.0
Other online posts, discussions, forums, or chatrooms	6.6	0.2	8.3	0.7
Magazine	4.3	0.0	4.8	0.3
Newsletters from fishing clubs / sportsmen's organizations	4.0	0.2	3.2	0.2
Guides or charter boat operators	3.6	0.1	8.3	1.5
TV or radio	3.3	0.3	3.6	0.3

^a Percentages can sum to more than 100% because more than one source of information could have been used in 2009.

Percent of each of the following groups who got information about fishing in Vermont in 2019 directly from the Vermont Fish and Wildlife Department:



See pages 9 through 11 for an explanation of how to interpret these types of graphs.

Figure 26. Characteristics of Those Who Obtained Information From the Department

BAITFISH

Anglers were asked where they get their baitfish, if they use it, as shown in Table 99. They most commonly say that they do not use baitfish, but among those who do, their most common method of getting their baitfish is *always* purchasing it at a bait shop. The most commonly used types of baitfish are golden shiner, fathead minnow, and eastern silvery minnow (Table 100).

Table 99. Where anglers get their baitfish, by Vermont residents and nonresidents.

Response	Vermont residents (%)	Nonresidents (%)
Always purchase at bait shop	30.2	25.4
Usually purchase at bait shop	10.4	7.5
Purchase and harvest bait equally	5.0	2.6
Usually harvest my own bait	4.5	2.1
Always harvest my own bait	1.3	0.9
Do not use baitfish	44.9	59.4
Not sure	3.7	2.0

Table 100. For those who used baitfish in the past 3 years, the species used and the ones among the top 3 preferred, by Vermont residents and nonresidents.

Baitfish species	Vermont residents		Nonresidents	
	Used in past 3 years (%)	Among top 3 (%)	Used in past 3 years (%)	Among top 3 (%)
Golden shiner	78.3	30.8	68.9	22.7
Fathead minnow	76.2	26.5	61.8	19.9
Eastern silvery minnow (hunts)	64.1	21.8	61.2	20.9
Rainbow smelt	47.7	17.6	13.9	4.5
White sucker	33.8	10.4	22.0	4.3
Other	35.1	6.2	35.9	9.3

COMPARISONS BY VERMONT REGION OF RESIDENCE

Tables 101 through 138 show regional results of the survey, based on the regions previously shown in Figure 1 and Table 1. All the questions in the survey were included in these regional analyses. These data are based on the region of residence, not the region of fishing, although many fished in their own region of residence.

Table 101. Gender, age, and type of license purchased, by region of residence.					
	Region 1 (%)	Region 2 (%)	Region 3 (%)	Region 4 (%)	Region 5 (%)
Gender *					
Male	79.9	74.2	69.1	72.2	76.5
Female	20.1	25.8	30.9	27.8	23.5
Age *					
18-34	43.7	40.3	44.6	38.0	29.5
35-54	29.6	36.9	29.4	32.9	35.1
55+	26.8	22.8	26.1	29.0	35.5
License Type *					
Resident Fishing (Annual, 3-day Youth, Lifetime)	33.0	46.3	52.3	51.1	60.0
Resident (Annual, Youth, Lifetime)	67.0	53.7	47.7	48.9	40.0

* Statistically significant differences ($p \leq 0.05$); see Figure 1 for map of regions.

Table 102. Fishing participation over the past 3 years, by region of residence.					
	Region 1 (%)	Region 2 (%)	Region 3 (%)	Region 4 (%)	Region 5 (%)
Fished in 2019 *	78.8	83.8	83.1	84.9	88.6
Fished in 2018	69.3	69.6	69.5	75.9	74.1
Fished in 2017	69.7	66.7	62.8	70.1	68.6
Did not fish in any of the past 3 years *	17.8	12.5	12.2	11.7	7.2
Fished every year (2019, 2018, and 2017)	65.4	63.1	58.1	66.3	63.5
Fished intermittently (1 or 2 of past 3 years)*	16.8	24.4	29.6	22.0	29.3

* Statistically significant differences ($p \leq 0.05$); see Figure 1 for map of regions.

Table 103. Seasons fished in Vermont in past 3 years, by region of residence.					
Seasons fished in Vermont in past 3 years	Region 1 (%)	Region 2 (%)	Region 3 (%)	Region 4 (%)	Region 5 (%)
Open water	94.9	96.1	96.6	93.0	94.7
Ice fishing *	48.0	36.3	24.6	36.1	46.7

* Statistically significant differences ($p \leq 0.05$); see Figure 1 for map of regions.

Percent fished in Vermont in past 3 years for:	Region 1 (%)	Region 2 (%)	Region 3 (%)	Region 4 (%)	Region 5 (%)
Brook trout *	69.2	66.1	64.5	51.7	49.0
Yellow perch *	62.5	57.4	42.9	60.1	61.0
Rainbow trout *	58.0	64.2	60.1	51.3	42.4
Smallmouth bass	55.8	57.9	58.8	65.8	62.4
Brown trout *	48.5	52.7	52.5	44.4	39.0
Largemouth bass *	48.0	55.2	55.9	66.2	57.7
Lake trout *	48.0	27.1	29.2	27.4	26.2
Northern pike *	35.8	37.9	35.6	47.6	47.5
Pickereel *	31.3	30.6	30.3	15.0	19.7
Landlocked salmon *	24.0	11.8	10.2	13.1	19.1
White perch *	22.4	15.1	12.4	17.3	29.9
Smelt *	21.9	8.2	7.5	12.0	3.9
Rock bass	20.7	18.9	24.4	24.0	26.1
Sunfish (bluegill, pumpkinseed) *	20.0	30.6	34.5	42.3	38.0
Walleye *	17.3	17.8	14.5	22.2	28.9
Bullhead (hornpout) *	17.1	11.3	13.9	28.9	16.2
Sucker	5.8	3.6	2.8	5.5	7.3
Crappie *	5.7	10.9	20.7	35.1	24.7
Carp *	2.5	4.1	1.9	10.1	9.2
Channel catfish *	2.3	3.1	7.0	18.6	4.9
Burbot (cusk)	1.8	0.7	0.0	0.9	0.9
Bowfin *	1.1	5.6	3.2	11.5	10.5
Whitefish (Lake Champlain) *	1.0	1.1	0.4	3.7	2.0
Muskellunge	0.4	1.3	2.0	3.8	3.5
American eel *	0.3	1.9	1.2	6.7	2.1
Sauger	0.2	0.2	0.2	1.0	1.1
American shad (Connecticut River)	0.2	0.2	0.5	0.0	0.8
Drum (sheepshead) *	0.0	2.4	1.7	10.3	6.4
Gar *	0.0	1.4	2.0	4.6	2.5
Anything *	11.0	6.6	13.0	11.1	13.6

* Statistically significant differences ($p \leq 0.05$)
^a Percentages sum to more than 100% because more than one species could be fished for.
 See Figure 1 for map of regions.

**Table 105. For those who fished open water in the past 3 years and had a species preference, the most preferred species by region of residence.
(open water preference)**

Species	Region 1 (%)	Region 2 (%)	Region 3 (%)	Region 4 (%)	Region 5 (%)
Brook trout	36.1	34.6	30.4	23	18.9
Rainbow trout	14.3	14.9	15.2	7	13.5
Smallmouth bass	10.9	14.2	6.8	7.5	15.3
Yellow perch	8.8	2.7	2.1	5.6	5.2
Lake trout	7.5	5.1	5.8	2.3	4.4
Largemouth bass	5.4	14.2	20.9	27.7	17.6
Brown trout	4.8	5.4	8.9	6.6	5.2
Northern pike	4.1	1.4	2.1	3.3	4.1
Walleye	2.7	3.1	2.1	3.3	8.3
Landlocked salmon	2.7	1.7	1	2.3	3.1
Crappie	0	0.3	0.5	7	0.5

**Table 106. For those who went ice fishing in the past 3 years and had a species preference, the most preferred species by region of residence.
(ice fishing preference)**

Species	Region 1 (%)	Region 2 (%)	Region 3 (%)	Region 4 (%)	Region 5 (%)
Yellow perch	30.8	38.8	14.5	34.3	45.9
Lake trout	29.5	15.7	3.6	5.7	3.2
Northern pike	11.5	23.1	34.5	18.1	28.4
Rainbow trout	9.0	4.5	3.6	1.0	0.0
Smelt	5.1	1.5	1.8	6.7	2.3
Walleye	3.8	0.7	3.6	3.8	6.4
White perch	2.6	0.7	0.0	1.9	2.8
Brook trout	2.6	0.7	1.8	0.0	1.8
Landlocked salmon	2.6	0.7	1.8	1.9	0.9
Brown trout	1.3	7.5	10.9	5.7	1.4
Smallmouth bass	1.3	1.5	3.6	2.9	0.0
Largemouth bass	0.0	3.7	12.7	10.5	1.4
Crappie	0.0	0.0	3.6	7.6	3.2

See Figure 1 for map of regions.

Table 107. Evaluation of the overall quality of fishing in Vermont during the past 3 years, by region of residence.

Quality of fishing in Vermont during the past 3 years	Region 1 (%)	Region 2 (%)	Region 3 (%)	Region 4 (%)	Region 5 (%)
Poor	7.3	5.4	6.9	4.8	4.1
Fair	28.2	24.9	22.5	27.1	21.3
Good	54.2	58.5	59.3	57.9	57.0
Excellent	7.9	9.0	10.4	8.8	14.4
Mean score ^a	2.6	2.7	2.7	2.7	2.8

^a Scale ranged from 1 = poor to 4 = excellent. See Figure 1 for map of regions.

Table 108. Estimated number of anglers and days fished in Vermont in 2019, by region of residence.

Of those who fished in 2019:	Region 1	Region 2	Region 3	Region 4	Region 5
Percent open-water fishing	95.3	95.9	96.4	92.8	95.5
Mean days fished	21.5	20.3	23.9	23.8	21.7
Total days open water	169,515	335,634	250,625	296,114	463,999
95% confidence interval	33,547	55,540	43,862	37,223	55,066
Percent ice fishing *	48.5	36.8	26.0	37.3	47.6
Mean days fished	13.1	9.4	12.4	11.3	10.4
Total days ice fishing	51,589	57,058	36,052	59,531	103,963
95% confidence interval	11,143	10,640	11,137	13,366	20,176

* Statistically significant differences ($p \leq 0.05$); see Figure 1 for map of regions.

Table 109. Respondents who fished for brook, brown, or rainbow trout in streams or rivers in Vermont in any of the past 3 years, the tackle used most often, and their evaluation of the quality of fishing, by region of residence.

Response	Region 1 (%)	Region 2 (%)	Region 3 (%)	Region 4 (%)	Region 5 (%)
<i>Fished for brook, brown, or rainbow in streams or rivers in Vermont in any of the past 3 years *</i>					
No	20.9	25.4	23.6	41.8	45.0
Yes	79.1	74.6	76.4	58.2	55.0
<i>If yes:</i>					
<i>Tackle used most often</i>					
Bait	60.2	49.2	45.5	50.7	39.5
Flies	11.3	26.0	17.6	19.7	26.6
Lures	19.5	14.3	23.3	19.7	23.8
Lures with bait	8.3	10.1	13.1	9.2	8.6
Not sure	0.8	0.4	0.6	0.7	1.6
<i>Quality of fishing for trout in streams and rivers during past 3 years</i>					
Poor	12.4	11.3	12.5	7.8	7.8
Fair	36.5	35.3	34.1	40.3	38.0
Good	45.3	45.5	44.9	46.8	40.3
Excellent	4.4	7.1	5.7	3.9	8.5
Mean score * ^a	2.4	2.5	2.5	2.5	2.5

* Statistically significant differences ($p \leq 0.05$)

^a Scale ranged from 1 = poor to 4 = excellent.

See Figure 1 for map of regions.

Table 110. Importance of programs that manage strictly for wild trout, and programs for stocking trout in some streams and rivers, by region of residence.

How important is it that Vermont provides the following programs?	Region 1 (%)	Region 2 (%)	Region 3 (%)	Region 4 (%)	Region 5 (%)
<i>Manage strictly for wild trout (no stocking) in some streams and rivers *</i>					
Not important	11.8	11.4	6.8	8.4	9.1
Somewhat important	26.6	20.5	28.8	25.2	22.3
Very important	39.1	48.7	39.3	36.3	37.7
No opinion	22.5	19.4	25.1	30.2	30.9
<i>Stocking brook, brown, and rainbow trout to be caught within the same season (put-and-take) in some streams and rivers *</i>					
Not important	6.5	11.6	4.1	6.8	5.3
Somewhat important	24.9	27.9	24.4	25.1	24.1
Very important	48.5	47.7	54.8	48.3	43.3
No opinion	20.1	12.8	16.7	19.8	27.4

* Statistically significant differences ($p \leq 0.05$); see Figure 1 for map of regions.

Table 111. Support for special regulations for trout fishing in some streams or rivers, by region of residence.

Percent supporting special regulations for trout fishing in some streams or rivers ^a	Region 1 (%)	Region 2 (%)	Region 3 (%)	Region 4 (%)	Region 5 (%)
Catch and release *	29.1	40.8	35.4	35.2	44.6
Artificial lures and flies only	24.1	36.2	29.8	31.1	33.6
Special length limits	55.3	56.6	53.9	58.4	62.3
Lower creel limits	37.1	47.6	44.4	42.2	44.0
I do not support the use of any special regulations	14.2	10.8	10.1	8.1	7.7
No opinion	14.3	15.7	18.0	15.5	16.2

* Statistically significant differences ($p \leq 0.05$)
^a Percentages can sum to more than 100% because more than one regulation could be chosen.
 See Figure 1 for map of regions.

Table 112. The average smallest length fish you would keep or consider a quality size fish when fishing in streams or rivers, by species and by region of residence.

	Region 1 (mean)	Region 2 (mean)	Region 3 (mean)	Region 4 (mean)	Region 5 (mean)
<i>Brook trout</i>					
Smallest “keeper” size	8.1	8.0	8.5	8.0	8.3
Smallest “quality” size	9.0	8.9	9.4	9.3	9.4
<i>Brown trout</i>					
Smallest “keeper” size	10.9	10.3	10.2	10.0	10.1
Smallest “quality” size	11.6	11.2	11.4	11.4	11.3
<i>Rainbow trout</i>					
Smallest “keeper” size	10.8	10.2	10.5	9.9	10.2
Smallest “quality” size	11.6	11.1	11.4	11.5	11.3

See Figure 1 for map of regions.

Table 113. Agreement with the current daily creel limit for species in streams or rivers, by region of residence.

Percent agreeing with current daily limit	Region 1 (%)	Region 2 (%)	Region 3 (%)	Region 4 (%)	Region 5 (%)
Brook trout (12) *	66.2	54.3	57.1	58.3	48.1
Brown trout (6) *	65.1	62.5	64.7	61.9	52.1
Rainbow trout (6) *	65.6	64.8	65.5	60.5	51.2
Combination of above (12) *	67.8	62.1	62.7	60.3	56.1

* Statistically significant differences ($p \leq 0.05$); see Figure 1 for map of regions.

Table 114. Respondents who fished for trout or salmon in ponds or lakes (excluding Lake Champlain) in Vermont in any of the past 3 years, and their evaluation of the quality of fishing by species for those with an opinion, by region of residence.

Response	Region 1 (%)	Region 2 (%)	Region 3 (%)	Region 4 (%)	Region 5 (%)
<i>Fished for trout or salmon in ponds or lakes in Vermont in any of the past 3 years *</i>					
No	29.8	50.9	34.9	49.4	70.9
Yes	70.2	49.1	65.1	50.6	29.1
<i>If yes:</i>					
<i>Quality of fishing for brook, brown, and rainbow trout in ponds and lakes during past 3 years</i>					
Poor	16.1	14.3	10.3	7.5	8.7
Fair	49.1	48.4	41.2	46.7	35.0
Good	32.1	33.5	42.6	40.0	52.4
Excellent	2.7	3.7	5.9	5.8	3.9
Mean score ^a	2.4	2.5	2.7	2.7	3.1
<i>Quality of fishing for lake trout in ponds and lakes during past 3 years</i>					
Poor	18.4	19.8	17.2	18.9	9.3
Fair	40.8	43	43.7	36.8	33.7
Good	36.7	30.6	34.5	37.9	52.3
Excellent	4.1	6.6	4.6	6.3	4.7
Mean score ^a	2.7	2.9	3.3	3.1	3.4
<i>Quality of fishing for landlocked salmon in ponds and lakes during past 3 years</i>					
Poor	27.3	33.3	32.3	23.5	18.8
Fair	45.5	40.6	38.5	41.2	42.5
Good	26.0	22.9	27.7	30.9	31.3
Excellent	1.3	3.1	1.5	4.4	7.5
Mean score ^a	3.0	3.2	3.6	3.5	3.4

* Statistically significant differences ($p \leq 0.05$)

^a Scale ranged from 1 = poor to 4 = excellent.

See Figure 1 for map of regions.

Table 115. Importance of programs that manage strictly for wild trout, and programs for stocking trout in some lakes and ponds, by region of residence.

How important is it that Vermont provides the following programs?	Region 1 (%)	Region 2 (%)	Region 3 (%)	Region 4 (%)	Region 5 (%)
<i>Manage strictly for wild trout (no stocking) in some lakes and ponds</i>					
Not important	12.7	11.9	9.6	10.8	9.6
Somewhat important	27.1	24.2	28.4	25.8	23.8
Very important	36.7	42.1	36.5	32.7	35.2
No opinion	23.5	21.8	25.5	30.8	31.4
<i>Stocking brook, brown, and rainbow trout to be caught within the same season (put-and-take) in some lakes and ponds *</i>					
Not important	6.0	12.9	5.1	5.3	7.4
Somewhat important	25.7	27.9	23.3	24.8	24.0
Very important	47.9	46.8	54.4	50.4	40.8
No opinion	20.4	12.4	17.2	19.5	27.8

* Statistically significant differences ($p \leq 0.05$); see Figure 1 for map of regions.

Table 116. Support for special regulations for trout and salmon fishing in some ponds or lakes (excluding Lake Champlain), by region of residence.

Percent supporting special regulations for fishing in some ponds or lakes ^a	Region 1 (%)	Region 2 (%)	Region 3 (%)	Region 4 (%)	Region 5 (%)
<i>For brook, brown, rainbow trout</i>					
Catch and release	19.4	25.5	25.6	25.3	34.0
Artificial lures and flies only *	20.9	27.8	27.3	26.6	38.4
Special length limits	54.8	49.2	48.2	57.8	59.9
Lower creel limits	32.0	32.8	34.7	34.6	42.7
I do not support the use of any special regulations	15.6	13.7	10.5	14.7	12.9
No opinion	17.0	22.1	24.0	21.8	22.2
<i>For lake trout</i>					
Catch and release	17.6	18.7	15.6	21.8	23.0
Artificial lures and flies only	17.2	19.1	15.2	20.3	19.9
Special length limits	50.7	43.3	40.5	46.0	47.5
Lower creel limits	26.3	25.8	26.0	24.5	27.1
I do not support the use of any special regulations	11.0	8.5	5.8	9.9	11.2
No opinion	21.2	19.3	27.7	22.2	22.1
<i>For landlocked salmon</i>					
Catch and release	21.7	24.8	16.1	25.4	24.0
Artificial lures and flies only	16.2	20.1	16.1	19.1	19.3
Special length limits	47.1	41.2	37.4	38.5	49.1
Lower creel limits	25.9	24.9	25.8	21.5	32.5
I do not support the use of any special regulations	10.5	9.3	5.2	7.9	8.2
No opinion	22.4	20.6	30.8	22.6	23.7

* Statistically significant differences ($p \leq 0.05$)

^a Percentages can sum to more than 100% because more than one regulation could be chosen.

See Figure 1 for map of regions.

Table 117. The average smallest length fish you would keep or consider a quality size fish when fishing in ponds or lakes (excluding Lake Champlain), by species and by region of residence.					
	Region 1	Region 2	Region 3	Region 4	Region 5
<i>Brook trout</i>					
Smallest “keeper” size	8.9	8.7	9.1	8.8	8.9
Smallest “quality” size	10.5	10.0	10.5	10.4	10.3
<i>Brown trout</i>					
Smallest “keeper” size	11.4	10.7	10.6	10.8	10.6
Smallest “quality” size	14.0	13.1	13.3	13.5	13.4
<i>Rainbow trout</i>					
Smallest “keeper” size	11.4	10.7	10.7	10.5	10.8
Smallest “quality” size	13.9	13.1	13.2	13.4	13.2
<i>Lake trout</i>					
Smallest “keeper” size	18.2	17.6	17.0	16.5	17.5
Smallest “quality” size	20.8	19.5	19.0	19.4	20.4
<i>Landlocked salmon</i>					
Smallest “keeper” size	16.7	16.6	15.9	15.6	16.3
Smallest “quality” size	17.9	17.7	17.5	17.3	17.9

See Figure 1 for map of regions.

Table 118. Agreement with the current daily creel limit for species in ponds or lakes (excluding Lake Champlain), or lakes that offer lake trout fishing, by region of residence.					
Percent agreeing with current daily limit	Region 1 (%)	Region 2 (%)	Region 3 (%)	Region 4 (%)	Region 5 (%)
<i>Ponds or lakes</i>					
Brook trout (6)	73.1	62.3	61.8	69.2	58.4
Brown trout (6)	64.4	61.8	62.9	70.8	62.5
Rainbow trout (6)	62.7	61	65.3	69.8	63.2
Combined limit (6)	67.6	63.4	63.3	69.9	65.6
<i>Lakes that offer lake trout fishing</i>					
Lake trout (2) *	69.0	72.0	62.9	61.1	61.0
Landlocked salmon (2) *	69.0	67.7	58.5	65.6	61.3
Brook trout (2) *	59.5	64.6	52.4	62.8	54.7
Brown trout (2) *	65.2	68.9	55.3	67.4	57.4
Rainbow trout (2) *	66.1	67.3	54.2	63.8	58.5
Combination of above (2) *	55.5	61.5	50.0	59.3	54.2

* Statistically significant differences ($p \leq 0.05$); see Figure 1 for map of regions.

Table 119. Respondents who fished for warmwater gamefish and panfish in Vermont in any of the past 3 years (excluding Lake Champlain), and their evaluation of the quality of fishing by species for those with an opinion, by region of residence.

Response	Region 1 (%)	Region 2 (%)	Region 3 (%)	Region 4 (%)	Region 5 (%)
<i>Fished for walleye, bass, pike, yellow perch, sunfish, crappie, bullhead, or smelt in VT in any of the past 3 years *</i>					
No	18.0	30.1	25.1	21.1	35.8
Yes	82.0	69.9	74.9	78.9	64.2
<i>If yes:</i>					
<i>Quality of fishing for walleye during the past 3 years</i>					
Poor	14.7	12.0	13.7	17.1	10.7
Fair	17.6	19.3	15.5	19.0	24.8
Good	15.4	15.9	12.5	16.1	17.6
Excellent	0.7	0.9	2.4	0.5	2.1
No opinion	51.5	51.9	56	47.3	44.8
Mean score ^a	2.1	2.1	2.1	2.0	2.2
<i>Quality of fishing for largemouth bass during past 3 years *</i>					
Poor	2.9	6.6	3.6	4.7	4.8
Fair	30.0	24.1	26.2	22.7	20.8
Good	35.7	46.1	48.2	51.2	43.9
Excellent	7.9	7.1	9.5	10.4	8.0
No opinion	23.6	16.2	12.5	10.9	22.5
Mean score ^a	2.7	2.6	2.7	2.8	2.7
<i>Quality of fishing for smallmouth bass during past 3 years</i>					
Poor	0.7	4.5	4.2	4.7	4.8
Fair	23.7	26.0	23.8	27.0	17.9
Good	41.7	49.6	48.2	46.9	49.0
Excellent	11.5	6.6	10.7	9.5	10.3
No opinion	22.3	13.2	13.1	11.8	17.9
Mean score ^a	2.8	2.7	2.8	2.7	2.8
<i>Quality of fishing for northern pike during past 3 years *</i>					
Poor	0.7	6.8	4.8	2.9	5.2
Fair	19.0	22.5	22.3	23.1	16.7
Good	36.5	35.2	32.5	38.0	43.8
Excellent	9.5	5.1	3.0	9.6	6.6
No opinion	34.3	30.5	37.3	26.4	27.8
Mean score ^a	2.8	2.6	2.5	2.7	2.7
<i>Quality of fishing for yellow perch during past 3 years *</i>					
Poor	1.4	3.3	3.0	6.7	5.5
Fair	22.5	23.8	17.3	17.2	18.8
Good	46.5	46.0	41.1	52.2	42.5
Excellent	16.9	10.5	14.9	6.7	13.7
No opinion	12.7	16.3	23.8	17.2	19.5
Mean score ^a	2.9	2.8	2.9	2.7	2.8
<i>Quality of fishing for crappie during past 3 years *</i>					
Poor	3.7	4.2	6.6	5.7	7.3
Fair	11.8	16.8	18	25.4	17.1
Good	15.4	19.3	24.6	27.8	23.1
Excellent	5.1	0.8	7.2	6.7	4.9
No opinion	64.0	58.8	43.7	34.4	47.6
Mean score ^a	2.6	2.4	2.6	2.5	2.5

* Statistically significant differences ($p \leq 0.05$) ^a Scale ranged from 1 = poor to 4 = excellent. See Figure 1 for map of regions.

Table 120. Support for ice fishing for largemouth and smallmouth bass on selected lakes and ponds (as currently allowed), by region of residence.

Support for ice fishing for largemouth and smallmouth bass on selected lakes and ponds (as currently allowed) *	Region 1 (%)	Region 2 (%)	Region 3 (%)	Region 4 (%)	Region 5 (%)
Oppose	11.7	14.5	8.0	14.8	21.3
Support	44.5	52.1	47.9	52.4	34.7
No opinion	43.8	33.3	44.2	32.9	44.0

* Statistically significant differences ($p \leq 0.05$); see Figure 1 for map of regions.

Table 121. Support for special regulations for some warmwater species on some waters, by region of residence.

Percent supporting special regulations for fishing on some waters ^a	Region 1 (%)	Region 2 (%)	Region 3 (%)	Region 4 (%)	Region 5 (%)
<i>For largemouth or smallmouth bass</i>					
Catch and release	22.3	28.9	25.9	26.4	25.9
Artificial lures and flies only	17.5	27.1	20.6	22.5	21.8
Special length limits	41.1	47.4	40.8	46.0	47.6
Lower creel limits	25.9	34.9	28.7	30.5	31.2
I do not support the use of any special regulations	14.3	14.0	12.4	15.6	12.2
No opinion	26.7	23.7	28.4	28.2	26.0
<i>For walleye</i>					
Catch and release	18.4	23.1	13.1	23.1	21.7
Artificial lures and flies only *	9.1	19.7	10.8	13.7	17.4
Special length limits	32.9	41.2	36.2	36.3	45.5
Lower creel limits	19.7	24.1	20.5	24.6	30.2
I do not support the use of any special regulations	10.5	9.5	9.1	10.4	7.3
No opinion	34.6	28.2	38.6	30.5	28.5
<i>For northern pike</i>					
Catch and release	13.7	20.6	16.7	18.8	21.9
Artificial lures and flies only *	7.6	17.1	8.9	16.4	18.9
Special length limits	29.4	37.8	33.9	35.1	41.9
Lower creel limits *	12.9	25.8	21.6	24.4	26.6
I do not support the use of any special regulations	13.7	12.0	9.5	14.7	9.7
No opinion	31.5	28.8	33.4	31.3	26.0

* Statistically significant differences ($p \leq 0.05$)

^a Percentages can sum to more than 100% because more than one regulation could be chosen.

See Figure 1 for map of regions.

Table 122. The average smallest length warmwater fish you would keep or consider a quality size fish, by species and by region of residence.

	Region 1 (mean)	Region 2 (mean)	Region 3 (mean)	Region 4 (mean)	Region 5 (mean)
<i>Walleye</i>					
Smallest “keeper” size	15.0	15.3	15.1	15.5	15.5
Smallest “quality” size	17.2	17.9	17.5	18.2	18.1
<i>Largemouth bass</i>					
Smallest “keeper” size	11.6	11.5	11.4	11.2	11.3
Smallest “quality” size	14.0	14.3	14.2	14.0	14.1
<i>Smallmouth bass</i>					
Smallest “keeper” size	11.3	11.2	11.0	10.7	10.9
Smallest “quality” size	13.5	13.9	13.7	13.4	13.7
<i>Northern pike</i>					
Smallest “keeper” size	21.1	20.6	21.0	20.6	20.5
Smallest “quality” size	25.8	25.4	26.4	25.4	25.4
<i>Yellow perch</i>					
Smallest “keeper” size	7.7	7.7	8.0	7.8	7.8
Smallest “quality” size	9.5	9.4	9.6	9.5	9.5
<i>Crappie</i>					
Smallest “keeper” size	7.6	7.8	7.9	7.9	7.9
Smallest “quality” size	9.2	9.4	9.5	9.4	9.3

See Figure 1 for map of regions.

Table 123. Agreement with the current daily creel limit for warmwater species, by region of residence.

Percent agreeing with current daily limit	Region 1 (%)	Region 2 (%)	Region 3 (%)	Region 4 (%)	Region 5 (%)
Species					
Walleye (3)	51.8	58.3	53.3	53.6	49.5
Largemouth/smallmouth bass (5)	59.9	60.8	59.8	64.2	53.8
Northern pike (5)	53.3	56.2	49.1	50.5	50.5
Yellow perch (50)	63.0	57.4	52.9	61.1	49.1
Crappie (25) *	44.9	49.1	52.1	60.4	46.2
Sunfish (no limit)	54.5	57.6	57.6	62.4	55.4
Smelt (no limit)	56.3	56.1	53.0	56.5	49.7
Bullhead (no limit)	55.6	53.3	55.2	61.7	51.6
White perch (no limit)	56.3	56.1	53.3	63.5	56.1

* Statistically significant differences ($p \leq 0.05$); see Figure 1 for map of regions.

Table 124. Fishing participation on Lake Champlain over the past 3 years, by region of residence.					
	Region 1	Region 2	Region 3	Region 4	Region 5
<i>Fished Lake Champlain in any of the past 3 years *</i>					
No (% giving response)	85.5	59	77.2	46.5	24.2
Yes (% giving response)	14.5	41	22.8	53.5	75.8
<i>Of those who fished in Vermont in 2019:</i>					
Percent fishing Lake Champlain open water	9.4	28.6	17.2	46.6	64.4
Estimated number of anglers fishing Lake Champlain open water	795	4,861	1,881	6,088	14,401
Percent ice fishing on Lake Champlain	3.4	11.9	4.7	16.0	34.9
Estimated number of anglers ice fishing on Lake Champlain	291	2,022	510	2,091	7,797
See Figure 1 for map of regions.					

Table 125. Days of open water and ice fishing on Lake Champlain over the past 3 years, among those who fished the lake by region of residence.					
	Region 1	Region 2	Region 3	Region 4	Region 5
<i>Open water fishing</i>					
Mean days	18.8	21.8	24.7	36.7	38.2
Total days	20,174	133,720	50,699	246,705	602,627
95% confidence interval	13,992	46,341	25,663	61,390	106,461
<i>Ice fishing</i>					
Mean days	8.5	13.7	14.3	20.5	20.9
Total days	27,053	123,376	42,000	247,261	540,613
95% confidence interval	4,622	14,001	6,656	23,421	45,184
See Figure 1 for map of regions.					

Table 126. Of respondents who fished Lake Champlain in any of the past 3 years, their evaluation of the quality of fishing by species in Lake Champlain for those with an opinion, by region of residence.					
Response	Region 1 (%)	Region 2 (%)	Region 3 (%)	Region 4 (%)	Region 5 (%)
<i>Quality of fishing for brown trout during past 3 years</i>					
Poor	a	17.1	13.6	27.5	30.9
Fair	a	41.5	54.5	43.5	41.8
Good	a	41.5	27.3	24.6	24.5
Excellent	a	0.0	4.5	4.3	2.7
Mean score ^b	a	2.2	2.2	2.0	2.0
<i>Quality of fishing for steelhead/rainbow trout during past 3 years</i>					
Poor	a	20.5	14.3	23.4	26.5
Fair	a	34.1	57.1	51.6	47.1
Good	a	36.4	23.8	25.0	23.5
Excellent	a	9.1	4.8	0.0	2.9
Mean score ^b	a	2.3	2.2	2.0	2.0
<i>Quality of fishing for lake trout during past 3 years</i>					
Poor	a	7.9	4.2	11.6	5.0
Fair	a	20.6	20.8	30.4	31.7
Good	a	49.2	58.3	42	48.9
Excellent	a	22.2	16.7	15.9	14.4
Mean score ^b	a	2.9	2.9	2.6	2.7
<i>Quality of fishing for landlocked salmon during past 3 years</i>					
Poor	a	18.8	22.2	28.6	14.4
Fair	a	35.4	44.4	38.1	52.8
Good	a	37.5	27.8	33.3	30.4
Excellent	a	8.3	5.6	0.0	2.4
Mean score ^b	a	2.4	2.2	2.1	2.2
<i>Quality of fishing for walleye during past 3 years</i>					
Poor	a	18.9	27.8	28.9	17.5
Fair	a	50.9	33.3	42.1	40.9
Good	a	26.4	38.9	26.3	36.5
Excellent	a	3.8	0.0	2.6	5.1
Mean score ^b	a	2.1	2.1	2.0	2.3
<i>Quality of fishing for largemouth bass during past 3 years</i>					
Poor	a	3.2	3.1	5.4	0.4
Fair	a	14.7	18.8	21.6	19.7
Good	a	61.1	62.5	53.2	51.3
Excellent	a	21.1	15.6	19.8	28.6
Mean score ^b	a	3.0	2.9	2.9	3.1
<i>Quality of fishing for smallmouth bass during past 3 years</i>					
Poor	a	3.2	3.3	5.5	0.8
Fair	a	13.7	16.7	24.8	16.7
Good	a	58.9	56.7	48.6	53.6
Excellent	a	24.2	23.3	21.1	28.9
Mean score ^b	a	3.0	3.0	2.9	3.1
See Figure 1 for map of regions.					

Table 126 (continued). Of respondents who fished Lake Champlain in any of the past 3 years, their evaluation of the quality of fishing by species in Lake Champlain for those with an opinion, by region of residence.					
Response	Region 1 (%)	Region 2 (%)	Region 3 (%)	Region 4 (%)	Region 5 (%)
<i>Quality of fishing for northern pike during past 3 years</i>					
Poor	a	4.7	0.0	6.1	2.4
Fair	a	29.1	18.5	26.5	20.1
Good	a	54.7	66.7	44.9	57.9
Excellent	a	11.6	14.8	22.4	19.6
Mean score ^b	a	2.8	2.9	2.8	2.9
<i>Quality of fishing for crappie during past 3 years</i>					
Poor	a	14.0	0.0	10.5	7.5
Fair	a	30.2	44.4	28.9	33.3
Good	a	48.8	33.3	44.7	44.2
Excellent	a	7.0	22.2	15.8	15.0
Mean score ^b	a	2.5	2.8	2.7	2.7
<i>Quality of fishing for yellow perch during past 3 years</i>					
Poor	a	1.3	4.0	6.6	3.9
Fair	a	22.5	20.0	24.5	19.6
Good	a	43.8	44.0	50.0	42.6
Excellent	a	32.5	32.0	18.9	33.9
Mean score ^b	a	3.1	3.0	2.8	3.1
<i>Quality of fishing for sunfish during past 3 years</i>					
Poor	a	4.7	0.0	6.8	1.2
Fair	a	18.6	30.0	17.8	15.8
Good	a	34.9	35.0	54.8	50.3
Excellent	a	41.9	35.0	20.5	32.7
Mean score ^b	a	3.1	3.1	2.9	3.2
<i>Quality of fishing for smelt during past 3 years *</i>					
Poor	a	12.9	10.0	48.3	38.2
Fair	a	38.7	50.0	24.1	32.4
Good	a	35.5	20.0	22.4	25.0
Excellent	a	12.9	20.0	5.2	4.4
Mean score ^b	a	2.5	2.5	1.8	2.0
<i>Quality of fishing for bullhead during past 3 years</i>					
Poor	a	0.0	0.0	8.2	3.8
Fair	a	32.4	16.7	26.0	17.3
Good	a	54.1	66.7	46.6	53.8
Excellent	a	13.5	16.7	19.2	25.0
Mean score ^b	a	2.8	3.0	2.8	3.0
<i>Quality of fishing for white perch during past 3 years *</i>					
Poor	a	0.0	12.5	11.0	3.5
Fair	a	34.1	31.3	21.9	19.0
Good	a	54.5	31.3	43.8	45.1
Excellent	a	11.4	25	23.3	32.4
Mean score ^b	a	2.8	2.7	2.8	3.1

See Figure 1 for map of regions.

Table 126 (continued). Of respondents who fished Lake Champlain in any of the past 3 years, their evaluation of the quality of fishing by species in Lake Champlain for those with an opinion, by region of residence.

Response	Region 1 (%)	Region 2 (%)	Region 3 (%)	Region 4 (%)	Region 5 (%)
<i>Quality of fishing for bowfin during past 3 years</i>					
Poor	^a	13.9	0.0	11.3	5.4
Fair	^a	27.8	50.0	30.2	29.7
Good	^a	44.4	41.7	45.3	48.6
Excellent	^a	13.9	8.3	13.2	16.2
Mean score ^b	^a	2.5	2.5	2.6	2.8
<i>Quality of fishing for gar during past 3 years</i>					
Poor	^a	26.1	18.2	14.6	28.8
Fair	^a	34.8	36.4	36.6	34.6
Good	^a	30.4	27.3	41.5	32.7
Excellent	^a	8.7	18.2	7.3	3.8
Mean score ^b	^a	2.3	2.5	2.4	2.1
<i>Quality of fishing for redhorse (mullet) during past 3 years</i>					
Poor	^a	18.8	25	22.2	37.5
Fair	^a	31.3	62.5	37.0	20.0
Good	^a	43.8	12.5	40.7	32.5
Excellent	^a	6.3	0.0	0.0	10.0
Mean score ^b	^a	2.3	1.8	2.2	2.1
* Statistically significant differences ($p \leq 0.05$)					
^a Sample size was too small to estimate.					
^b Scale ranged from 1 = poor to 4 = excellent.					
See Figure 1 for map of regions.					

Table 127. Support for ice fishing for largemouth and smallmouth bass on Lake Champlain (currently it is not allowed), by region of residence.

Support for ice fishing for largemouth and smallmouth bass on Lake Champlain (currently it is not allowed) *	Region 1 (%)	Region 2 (%)	Region 3 (%)	Region 4 (%)	Region 5 (%)
Oppose	28.0	25.5	12.5	25.9	29.4
Support	32.0	44.0	37.5	46.9	30.0
No opinion	40.0	30.5	50.0	27.3	40.6
* Statistically significant differences ($p \leq 0.05$); see Figure 1 for map of regions.					

Table 128. Respondents' opinions about the length of the walleye season on Lake Champlain, which currently runs from the 1st Saturday in May to the following March 15th, by region of residence.

Opinion on length of Lake Champlain walleye season	Region 1 (%)	Region 2 (%)	Region 3 (%)	Region 4 (%)	Region 5 (%)
Opening day is just right	30.8	39.1	30.8	40.0	31.0
Opening day should be earlier	0.0	0.7	5.8	4.3	7.2
Opening day should be later	3.8	3.6	1.9	2.9	3.9
No opinion on opening day	65.4	56.5	61.5	52.9	57.9
Closing day is just right	28.0	32.8	25.0	33.1	29.1
Closing day should be earlier	4.0	6.7	9.6	7.2	6.9
Closing day should be later	0.0	1.5	1.9	2.2	2.1
No opinion on closing day	68.0	59.0	63.5	57.6	61.9
Open year-round	3.1	5.4	0.0	6.0	3.1

^a Percentages can sum to more than 100% because more than one option could be checked.

See Figure 1 for map of regions.

Table 129. Agreement with the current minimum length limit for fish caught in Lake Champlain, by region of residence.

Percent agreeing with current minimum length	Region 1 (%)	Region 2 (%)	Region 3 (%)	Region 4 (%)	Region 5 (%)
Species					
Brown/rainbow trout (12") *	72.0	68.9	58.8	70.5	54.6
Lake trout (15") *	44.0	64.4	52.9	63.8	51.9
Landlocked salmon (15") *	56.0	65.2	54.9	61.4	53.6
Walleye (18") *	68.0	68.7	60.8	64.0	56.3
Largemouth bass (10") *	56.0	56.1	56.6	65.7	55.1
Smallmouth bass (10") *	56.0	57.8	58.8	65.0	58.0
Northern pike (20") *	56.5	61.5	52.9	64.7	53.2
Crappie (8") *	69.6	65.9	60	67.2	53.2

* Statistically significant differences ($p \leq 0.05$); see Figure 1 for map of regions.

Table 130. Agreement with the current daily creel limit for fish caught in Lake Champlain, by region of residence.					
Percent agreeing with current daily limit	Region 1 (%)	Region 2 (%)	Region 3 (%)	Region 4 (%)	Region 5 (%)
Species					
Brown/rainbow trout (3) *	79.2	64.2	60.8	61.9	59.1
Lake trout (3) *	79.2	59.6	57.7	62.9	58.5
Landlocked salmon (2)	72.7	64.9	54.9	61.5	58.3
Walleye (3)	69.6	66.7	58.8	61.0	56.0
Largemouth/smallmouth bass (5) *	73.9	69.6	58.5	65.9	55.0
Northern pike (5) *	68.2	70.1	51.9	62.8	50.0
Crappie (25) *	73.9	67.2	56.9	59.1	53.2
Yellow perch (no limit) *	68.2	72.1	49.0	62.3	56.8
Sunfish (no limit) *	69.6	73.9	56.0	67.4	57.4
Smelt (no limit) *	68.2	75.0	52.0	62.6	53.5
Bullhead (no limit) *	72.7	73.3	61.2	66.7	56.3
White perch (no limit) *	78.3	75.2	61.2	66.9	59.5

* Statistically significant differences ($p \leq 0.05$); see Figure 1 for map of regions.

Table 131. Agreement with the current regulations on Lake Champlain that allow the use of 2 lines during open water season and 15 lines during ice fishing season, by region of residence.					
Percent agreeing with current regulations	Region 1 (%)	Region 2 (%)	Region 3 (%)	Region 4 (%)	Region 5 (%)
Open water (2 lines)	58.3	78.4	70.4	77.9	74.3
Ice fishing (15 lines)	73.9	71.0	56.5	75.0	64.0

See Figure 1 for map of regions.

Table 132. Agreement with the current regulations for ponds or lakes that allow the use of 2 lines during open water season and 8 lines during ice fishing season, by region of residence.					
Percent agreeing with current regulations	Region 1 (%)	Region 2 (%)	Region 3 (%)	Region 4 (%)	Region 5 (%)
Open water (2 lines) *	83.5	75.4	77.7	74.5	68.9
Ice fishing (8 lines) *	64.1	66.5	60.9	65.1	58.0

* Statistically significant differences ($p \leq 0.05$); see Figure 1 for map of regions.

Table 133. Opinions about issues in Vermont, by region of residence.					
Issues in Vermont	Serious problem (%)	Moderate problem (%)	Minor problem (%)	Not a problem (%)	No opinion (%)
<i>Contaminant levels in fish *</i>					
Region 1	11.3	22.0	26.2	18.5	22.0
Region 2	15.7	26.2	21.2	20.1	16.9
Region 3	15.0	24.1	20.0	15.5	25.5
Region 4	16.0	24.4	22.5	20.6	16.4
Region 5	23.4	32.3	18.8	11.6	14.0
<i>Crowding at fishing areas *</i>					
Region 1	2.9	15.8	31.0	38.6	11.7
Region 2	6.4	24.6	33.9	25.4	9.6
Region 3	4.5	16.6	37.7	27.8	13.5
Region 4	12.2	20.9	30.0	28.1	8.7
Region 5	8.0	23.9	28.0	24.5	15.6
<i>Commercial sale of angler-caught perch *</i>					
Region 1	6.0	10.2	7.8	44.3	31.7
Region 2	6.7	9.6	9.3	36.2	38.3
Region 3	5.8	8.0	8.5	20.5	57.1
Region 4	13.2	8.3	10.2	32.8	35.5
Region 5	7.0	9.8	8.3	42.7	32.2
<i>Commercial sale of angler-caught crappie *</i>					
Region 1	5.0	5.0	5.6	39.8	44.7
Region 2	4.7	7.0	9.4	34.0	44.9
Region 3	5.9	8.1	7.7	21.3	57.0
Region 4	13.6	8.0	8.3	31.4	38.6
Region 5	8.1	7.0	9.5	38.1	37.2
<i>Commercial sale of angler-caught sunfish *</i>					
Region 1	3.7	4.3	4.9	41.7	45.4
Region 2	5.0	6.2	8.2	36.5	44.1
Region 3	5.4	6.8	7.2	22.1	58.6
Region 4	10.6	6.8	7.6	36.0	39.0
Region 5	7.0	6.8	7.5	41.9	36.8
<i>Shooting and spearing of northern pike in Lake Champlain as currently permitted *</i>					
Region 1	2.4	4.8	4.2	37.5	51.2
Region 2	4.3	3.5	9.8	40.5	41.9
Region 3	2.7	4.0	6.2	22.7	64.4
Region 4	6.0	6.0	6.4	39.2	42.3
Region 5	6.3	7.6	5.9	41.7	38.5
<i>Conflict between fishing and other recreational uses (e.g., skiing, boating)</i>					
Region 1	3.5	17.1	30.0	33.5	15.9
Region 2	6.9	24.0	23.4	29.2	16.5
Region 3	7.1	25.4	27.7	19.2	20.5
Region 4	7.5	22.6	26.4	27.5	15.8
Region 5	4.8	21.5	27.3	25.1	21.3
See Figure 1 for map of regions.					

Table 133 (continued). Opinions about issues in Vermont, by region of residence.					
Issues in Vermont	Serious problem (%)	Moderate problem (%)	Minor problem (%)	Not a problem (%)	No opinion (%)
<i>Access to fishing areas *</i>					
Region 1	3.6	12.4	17.2	58.6	8.3
Region 2	6.4	12.5	21.2	54.1	5.8
Region 3	3.5	12.8	25.2	49.1	9.3
Region 4	7.9	16.2	21.8	46.2	7.9
Region 5	4.8	14.8	21.2	46.7	12.4
<i>Fishing derbies/tournaments (other than “kids” derbies) *</i>					
Region 1	2.4	3.6	9.6	66.9	17.5
Region 2	3.8	7.8	10.4	64.9	13.0
Region 3	2.7	6.8	11.8	56.8	21.8
Region 4	5.3	9.8	9.8	61.0	14.0
Region 5	4.8	5.5	9.0	57.5	23.2
<i>Your ability to understand Vermont fishing regulations *</i>					
Region 1	3.6	8.3	18.9	60.4	8.9
Region 2	3.8	4.1	18.7	68.8	4.7
Region 3	3.1	5.8	14.7	66.7	9.8
Region 4	1.5	7.5	17.7	65.4	7.9
Region 5	2.2	3.9	10.9	68.6	14.4
<i>Conflict between open water and ice fishing *</i>					
Region 1	1.2	2.9	6.4	63.7	25.7
Region 2	2.9	5.2	9.6	54.2	28.1
Region 3	0.9	4.0	6.7	50.0	38.4
Region 4	0.0	6.4	8.3	53.6	31.7
Region 5	1.1	3.7	5.2	52.9	37.0

* Statistically significant differences ($p \leq 0.05$); see Figure 1 for map of regions.

Table 134. Importance of various boat launch and fishing access site amenities, by region of residence.					
Boat launch and fishing access site amenities	Not important (%)	Somewhat important (%)	Very important (%)	No opinion (%)	Mean score^a
<i>Boat ramps *</i>					
Region 1	11.6	21.4	59.0	8.1	2.5
Region 2	10.9	28.7	53.4	7.0	2.5
Region 3	7.9	26.4	55.9	9.7	2.5
Region 4	8.7	24.9	57.7	8.7	2.5
Region 5	13.8	19.2	54.1	12.9	2.5
<i>Docks *</i>					
Region 1	24.1	33.5	34.1	8.2	2.1
Region 2	24.0	40.1	28.2	7.7	2.1
Region 3	21.1	32.6	33.9	12.3	2.1
Region 4	15.4	32.7	44.7	7.1	2.3
Region 5	16.7	29.9	41.5	11.9	2.3
<i>Fishing piers or other shore fishing opportunities *</i>					
Region 1	22.2	31.0	36.3	10.5	2.2
Region 2	21.6	39.3	32.8	6.2	2.1
Region 3	15.0	34.4	35.2	15.4	2.2
Region 4	18.6	34.1	40.5	6.8	2.2
Region 5	15.8	26.9	47.3	10.1	2.4
<i>Portable toilets</i>					
Region 1	14.0	27.5	52.6	5.8	2.4
Region 2	15.6	32.4	46.5	5.6	2.3
Region 3	14.6	31.4	44.2	9.7	2.3
Region 4	15.7	29.5	50.0	4.9	2.4
Region 5	17.4	29.9	43.5	9.2	2.3
<i>Bulletin boards with information *</i>					
Region 1	2.9	33.1	58.7	5.2	2.6
Region 2	6.5	30.5	58.9	4.1	2.6
Region 3	5.3	26.3	58.8	9.6	2.6
Region 4	9.4	27.3	58.1	5.2	2.5
Region 5	13.5	33.3	43.9	9.3	2.3
* Statistically significant differences ($p \leq 0.05$)					
^a Scale ranged from 1 = not important to 3 = very important. Respondents who had “no opinion” were not included in the calculation of the mean.					
See Figure 1 for map of regions.					

Table 135. Sources of fishing information used by anglers in 2019, by region of residence.					
Percent checking source ^a	Region 1 (%)	Region 2 (%)	Region 3 (%)	Region 4 (%)	Region 5 (%)
Sources of information					
Fishing Regulations Guide from the Vermont Department of Fish and Wildlife *	79.1	80.2	78.5	83.2	73.9
Other pamphlets or documents from the Vermont Department of Fish and Wildlife	12.4	12.9	16.3	20.1	18.0
Website of the Vermont Department of Fish and Wildlife	53.7	54.9	58.2	54	53.7
Other websites *	8.5	7.8	6.0	10.3	12.5
Direct contact with Vermont Department of Fish and Wildlife personnel	10.7	10.4	14.7	9.9	9.6
Social media, such as Facebook, Twitter, Instagram, etc. *	9.6	7.3	11.6	14.6	16.1
Other online posts, discussions, forums, or chatrooms *	2.8	4.2	4.3	7.0	10.6
Newspaper	5.6	4.7	5.6	5.8	3.6
Magazine	4.5	3.4	5.2	5.1	4.2
TV or radio	2.8	2.5	3	5.1	3.4
Bait and tackle shops *	25.4	17.6	17.7	30.4	21.9
Guides or charter boat operators	2.3	4.5	2.6	4.0	3.6
Newsletters from fishing clubs / sportsmen's organizations	2.8	4.5	3.9	3.7	4.5
Friends / word-of-mouth *	43.5	34.7	46.8	44.9	49.5
* Statistically significant differences ($p \leq 0.05$)					
^a Percentages can sum to more than 100% because more than one source of information could have been used in 2019. See Figure 1 for map of regions.					

Table 136. The most likely source of information to be used in 2020, by region of residence.

Sources of information	Region 1 (%)	Region 2 (%)	Region 3 (%)	Region 4 (%)	Region 5 (%)
Fishing Regulations Guide from the Vermont Department of Fish & Wildlife	70.7	65.5	67.2	60.2	55.9
Other pamphlets or documents from the Vermont Department of Fish & Wildlife	0.0	0.7	1.0	0.4	0.2
Website of the Vermont Department of Fish & Wildlife	15.3	20.1	18.5	20.8	21.1
Other websites	1.3	0.0	0.5	0.0	0.7
Direct contact with Vermont Department of Fish & Wildlife personnel	0.6	0.7	1.0	0.4	0.9
Social media, such as Facebook, Twitter, Instagram, etc.	1.9	0.7	1.5	1.7	2.1
Other online posts, discussions, forums, or chatrooms	0.0	0.0	0.5	0.4	0.2
Magazine	0.0	0.0	0.0	0.4	0.0
TV or radio	0.0	0.3	0.0	0.0	0.5
Bait and tackle shops	0.6	2.0	2.1	3.0	1.2
Guides or charter boat operators	0.0	0.7	0.0	0.0	0.0
Newsletters from fishing clubs / sportsmen's organizations	0.0	0.0	0.0	0.9	0.2
Friends / word-of-mouth	9.6	9.5	7.7	11.7	16.8

See Figure 1 for map of regions.

Table 137. Where anglers get their baitfish, by region of residence.

Response	Region 1 (%)	Region 2 (%)	Region 3 (%)	Region 4 (%)	Region 5 (%)
Always purchase at bait shop	26.3	28.1	27.4	39.0	29.5
Usually purchase at bait shop	13.5	12.8	8.8	9.0	9.1
Purchase and harvest bait equally	10.5	4.5	4.4	4.5	3.9
Usually harvest my own bait	9.9	5.1	5.3	4.5	1.5
Always harvest my own bait	1.8	1.4	2.2	0.7	1.1
Do not use baitfish	35.1	45.7	48.2	39.7	49.1
Not sure	2.9	2.3	3.5	2.6	5.8

See Figure 1 for map of regions.

Table 138. Species of baitfish used among those who used baitfish in the past 3 years, by region of residence.

	Region 1 (%)	Region 2 (%)	Region 3 (%)	Region 4 (%)	Region 5 (%)
White sucker	35.9	32.8	28.6	32.8	36.2
Golden shiner	77.8	77.8	75.4	80.0	78.4
Rainbow smelt *	72.9	57.8	36.8	40.6	31.0
Eastern silvery minnow (hunts)	60.4	58.7	68.0	61.2	70.1
Fathead minnow *	66.1	80.6	63.8	77.7	80.4
Other	40.5	37.7	37.5	25.0	36.4

* Statistically significant differences ($p \leq 0.05$); see Figure 1 for map of regions.

COMPARING VERMONT RESIDENTS WHO FISHED OPEN WATER ONLY IN 2019 WITH THOSE WHO WENT ICE FISHING

Tables 139 through 162 compare survey results among those who fished only open water with those who went ice fishing (with or without also fishing open water). Recall, as shown in Table 4, that almost all anglers fished open water: 95.0% of resident anglers and 94.2% of nonresident anglers, while the ice fishing rates were 39.1% among resident anglers and 12.1% among nonresident anglers. A majority of resident anglers (58.8%) fished open water only.

Table 139. The estimated number and proportion of Vermont residents who fished open water only versus ice fishing in Vermont in 2019.

	Percent	Number
Open water only	58.8	41,006
Ice fishing	41.2	28,718

Does not include those who did not indicate open water or ice; this is why the rate of ice fishing in this table slightly exceeds the percentage shown in Table 4, as Table 4 includes those who did not indicate open water or ice.

Table 140. Comparison of Vermont resident open water only anglers with ice anglers, by gender, age, and type of license purchased.

	Open water only anglers (%)	Ice anglers (%)
Gender		
Male	73.2	76.7
Female	26.8	23.3
Age *		
18-34	28.6	33.9
35-54	33.7	38.2
55+	37.5	27.9
License Types *		
Resident Fishing (Annual, 3-day Youth, Lifetime)	61.6	42.6
Resident Combo (Annual, Youth, Lifetime)	38.4	57.4

* Statistically significant differences ($p \leq 0.05$)

Table 141. Species fished for in Vermont in past 3 years, by Vermont resident open water only anglers and ice anglers.

Percent fished in Vermont in past 3 years for:	Open water only anglers	Ice anglers
Brook trout	57.3	59.6
Smallmouth bass *	55.6	68.8
Rainbow trout *	51.4	58.0
Largemouth bass *	49.4	69.4
Brown trout *	44.6	49.7
Yellow perch *	43.5	78.3
Sunfish (bluegill, pumpkinseed) *	29.9	42.2
Northern pike *	26.4	65.9
Lake trout *	20.5	43.7
Rock bass *	19.3	29.9
Pickeral *	18.7	34.0
Crappie *	13.8	30.8
Bullhead (hornpout) *	13.4	22.7
White perch *	13.4	31.9
Walleye *	11.7	37.0
Landlocked salmon *	10.6	23.2
Channel catfish *	4.9	10.0
Bowfin *	4.9	11.0
Carp *	4.7	8.7
Sucker	4.4	6.7
Drum (sheepshead) *	2.2	8.6
Muskellunge *	1.6	3.5
American eel *	1.5	4.2
Smelt *	1.3	20.6
Gar *	1.1	3.7
Whitefish (Lake Champlain) *	0.9	2.9
Sauger *	0.2	1.4
American shad (Connecticut River) *	0.1	0.8
Burbot (cusk) *	0.0	2.1
Anything *	13.0	8.4

* Statistically significant differences ($p \leq 0.05$)^a Percentages sum to more than 100% because more than one species could be fished for.**Table 142. Evaluation of the overall quality of fishing in Vermont during the past 3 years, by Vermont resident open water only anglers and ice anglers. ***

Quality of fishing in Vermont during the past 3 years	Open water only anglers (%)	Ice anglers (%)
Poor	6.5	4.2
Fair	23.7	26.0
Good	58.4	58.9
Excellent	11.4	10.9
Mean score ^a	2.8	2.8

* Statistically significant differences ($p \leq 0.05$)^a Scale ranged from 1 = poor to 4 = excellent.

Table 143. Respondents who fished for trout or salmon in ponds or lakes in Vermont in any of the past 3 years, and their evaluation of the quality of fishing by species for those with an opinion, for Vermont resident open water only anglers and ice anglers.

Response	Open water only anglers (%)	Ice anglers (%)
<i>Fish for trout or salmon in ponds or lakes in Vermont in any of the past 3 years *</i>		
No	57.4	45.5
Yes	42.6	54.5
<i>If yes:</i>		
<i>Quality of fishing for brook, brown, and rainbow trout in ponds and lakes during past 3 years</i>		
Poor	12.1	11.3
Fair	41.3	48.2
Good	40.4	38.0
Excellent	6.2	2.5
Mean score ^a	2.7	2.6
<i>Quality of fishing for lake trout in ponds and lakes during past 3 years</i>		
Poor	16.1	17.6
Fair	39.5	41.0
Good	38.1	37.3
Excellent	6.3	4.1
Mean score ^a	3.3	2.9
<i>Quality of fishing for landlocked salmon in ponds and lakes during past 3 years</i>		
Poor	25.0	29.1
Fair	39.3	45.7
Good	32.1	21.6
Excellent	3.6	3.5
Mean score ^a	3.6	3.1
* Statistically significant differences ($p \leq 0.05$)		
^a Scale ranged from 1 = poor to 4 = excellent.		

Table 144. Importance of programs that manage strictly for wild trout, and programs for stocking trout in some lakes and ponds, by Vermont resident open water only anglers and ice anglers.

How important is it that Vermont provides the following program?	Open water only anglers (%)	Ice anglers (%)
<i>Manage strictly for wild trout (no stocking) in some lakes and ponds</i>		
Not important	9.8	12.3
Somewhat important	25.3	24.0
Very important	35.8	38.0
No opinion	29.0	25.7
<i>Stocking brook, brown, and rainbow trout to be caught within the same season (put-and-take) in some lakes and ponds</i>		
Not important	8.4	6.7
Somewhat important	23.6	27.5
Very important	47.1	46.3
No opinion	20.9	19.5

Table 145. Support for special regulations for trout and salmon fishing in some ponds or lakes, by Vermont resident open water only anglers and ice anglers.

Special regulations for fishing in some ponds or lakes	Open water only anglers	Ice anglers
	Percent supporting ^a	
<i>For brook, brown, rainbow trout</i>		
Catch and release	28.5	23.4
Artificial lures and flies only	31.6	25.1
Special length limits	53.1	55.3
Lower creel limits	36.4	34.8
I do not support the use of any special regulations	13.4	14.4
No opinion	22.4	20.2
<i>For lake trout</i>		
Catch and release	17.8	21.1
Artificial lures and flies only	17.7	20.0
Special length limits *	40.7	51.8
Lower creel limits	25.0	27.6
I do not support the use of any special regulations *	7.4	11.7
No opinion	22.2	21.8
<i>For landlocked salmon</i>		
Catch and release *	19.2	26.0
Artificial lures and flies only *	15.7	21.8
Special length limits *	36.9	49.1
Lower creel limits *	22.7	30.4
I do not support the use of any special regulations *	6.2	11.4
No opinion	23.6	23.8
* Statistically significant differences ($p \leq 0.05$)		
^a Percentages can sum to more than 100% because more than one regulation could be chosen.		

Table 146. The average smallest length fish you would keep or consider a quality size fish when fishing in ponds or lakes, by species and by Vermont resident open water only anglers and ice anglers.		
	Open water only anglers (mean)	Ice anglers (mean)
<i>Brook trout</i>		
Smallest “keeper” size	9.0	8.8
Smallest “quality” size	10.3	10.4
<i>Brown trout</i>		
Smallest “keeper” size *	10.3	11.4
Smallest “quality” size *	12.7	14.2
<i>Rainbow trout</i>		
Smallest “keeper” size *	10.2	11.5
Smallest “quality” size *	12.6	14.1
<i>Lake trout</i>		
Smallest “keeper” size *	16.6	18.2
Smallest “quality” size *	18.4	21.1
<i>Landlocked salmon</i>		
Smallest “keeper” size *	15.5	17.0
Smallest “quality” size *	16.9	18.3
* Statistically significant differences ($p \leq 0.05$)		

Table 147. Agreement with the current daily creel limit for species in ponds or lakes, or lakes that offer trout fishing, by Vermont resident open water only anglers and ice anglers.		
Percent agreeing with current daily limit	Open water only anglers	Ice anglers
<i>Ponds or lakes</i>		
Brook trout (6)	62.9	65.5
Brown trout (6) *	65.4	62.1
Rainbow trout (6)	64.3	62.9
Combination limit (6)	64.3	66.6
<i>Lakes that offer lake trout fishing</i>		
Lake trout (2) *	59.9	70.3
Landlocked salmon (2) *	57.7	70.9
Brook trout (2) *	54.4	64.0
Brown trout (2) *	56.7	69.1
Rainbow trout (2) *	57.0	67.3
Combination of above (2) *	50.3	62.0
* Statistically significant differences ($p \leq 0.05$)		

Table 148. Respondents who fished for warmwater gamefish and panfish in Vermont in any of the past 3 years (excluding Lake Champlain), and their evaluation of the quality of fishing by species for those with an opinion, for Vermont resident open water only anglers and ice anglers.

Response	Open water only anglers (%)	Ice anglers (%)
<i>Fished for walleye, bass, pike, yellow perch, sunfish, crappie, bullhead, or smelt in Vermont in any of the past 3 years *</i>		
No	35.5	16.6
Yes	64.5	83.4
<i>If yes: Quality of fishing for walleye during past 3 years</i>		
Poor	24.4	26.9
Fair	39.1	40.2
Good	34.2	29.7
Excellent	2.2	3.1
Mean score ^a	2.1	2.1
<i>Quality of fishing for largemouth bass during past 3 years *</i>		
Poor	6.8	4.5
Fair	29.3	28.8
Good	56.2	53.0
Excellent	7.7	13.8
Mean score ^a	2.7	2.8
<i>Quality of fishing for smallmouth bass during past 3 years *</i>		
Poor	6.4	3.0
Fair	29.5	24.9
Good	54.5	58.7
Excellent	9.6	13.4
Mean score ^a	2.7	2.8
<i>Quality of fishing for northern pike during past 3 years *</i>		
Poor	7.9	5.6
Fair	32.3	26.8
Good	54.0	54.9
Excellent	5.8	12.7
Mean score ^a	2.6	2.8
<i>Quality of fishing for yellow perch during past 3 years</i>		
Poor	5.3	5.2
Fair	24.2	24.7
Good	57.1	53.7
Excellent	13.4	16.4
Mean score ^a	2.8	2.8
<i>Quality of fishing for crappie during past 3 years</i>		
Poor	8.5	13.6
Fair	33.2	37.0
Good	49.0	39.6
Excellent	9.3	9.8
Mean score ^a	2.6	2.5

* Statistically significant differences ($p \leq 0.05$)

^a Scale ranged from 1 = poor to 4 = excellent.

Table 149. Support for ice fishing for largemouth and smallmouth bass on selected lakes and ponds (as currently allowed), by Vermont resident open water only anglers and ice anglers.		
Support for ice fishing for largemouth and smallmouth bass on selected lakes and ponds (as currently allowed) *	Open water only anglers (%)	Ice anglers (%)
Support	37.4	54.9
Oppose	14.8	14.6
No opinion	47.9	30.6

* Statistically significant differences ($p \leq 0.05$)

Table 150. Support for special regulations for some warmwater species on some waters, by Vermont resident open water only anglers and ice anglers.		
Percent supporting special regulations for fishing on some waters ^a	Open water only anglers	Ice anglers
<i>For largemouth or smallmouth bass</i>		
Catch and release	28.8	23.9
Artificial lures and flies only	24.6	20.4
Special length limits	46.8	43.8
Lower creel limits	33.1	28.3
I do not support the use of any special regulations	12.6	15.3
No opinion	27.6	24.8
<i>For walleye</i>		
Catch and release	19.8	21.2
Artificial lures and flies only	15.6	14.3
Special length limits *	35.6	44.1
Lower creel limits *	21.9	27.8
I do not support the use of any special regulations	8.0	10.7
No opinion *	34.2	28.2
<i>For northern pike</i>		
Catch and release	19.9	17.9
Artificial lures and flies only	16.6	12.9
Special length limits	35.0	38.7
Lower creel limits	23.6	23.4
I do not support the use of any special regulations *	9.7	14.3
No opinion	31.9	26.8

* Statistically significant differences ($p \leq 0.05$)

^a Percentages can sum to more than 100% because more than one regulation could be chosen.

Table 151. The average smallest length warmwater fish you would keep or consider a quality size fish, by species and by Vermont resident open water only anglers and ice anglers.

	Open water only anglers (mean)	Ice anglers (mean)
<i>Walleye</i>		
Smallest “keeper” size *	14.8	15.8
Smallest “quality” size *	17.3	18.4
<i>Largemouth bass</i>		
Smallest “keeper” size	11.3	11.5
Smallest “quality” size *	13.8	14.5
<i>Smallmouth bass</i>		
Smallest “keeper” size *	10.8	11.3
Smallest “quality” size *	13.4	14.0
<i>Northern pike</i>		
Smallest “keeper” size *	20.0	21.2
Smallest “quality” size *	24.9	26.2
<i>Yellow perch</i>		
Smallest “keeper” size	7.8	7.8
Smallest “quality” size *	9.3	9.7
<i>Crappie</i>		
Smallest “keeper” size	7.7	8.0
Smallest “quality” size *	9.2	9.6

* Statistically significant differences ($p \leq 0.05$)

Table 152. Agreement with the current daily creel limit for warmwater species, by Vermont resident open water only anglers and ice anglers.

Percent agreeing with current daily limit	Open water only anglers	Ice anglers
Walleye (3) *	51.5	54.4
Largemouth/smallmouth bass (5)	60.7	57.1
Northern pike (5) *	50.2	54.0
Yellow perch (50) *	51.9	60.3
Crappie (25) *	46.0	54.9
Sunfish (no limit) *	54.2	60.6
Smelt (no limit) *	49.9	57.6
Bullhead (no limit) *	51.2	59.2
White perch (no limit) *	52.7	61.8

* Statistically significant differences ($p \leq 0.05$)

Table 153. Respondents who fished Lake Champlain in any of the past 3 years, and their evaluation of the quality of fishing by species in Lake Champlain for those with an opinion, for Vermont resident open water only anglers and ice anglers.		
Response	Open water only anglers (%)	Ice anglers (%)
<i>Fished Lake Champlain in any of the past 3 years *</i>		
No	62.1	35.6
Yes	37.9	64.4
<i>If yes: Quality of fishing for brown trout during past 3 years</i>		
Poor	24.0	27.9
Fair	43.8	44.3
Good	30.6	24.6
Excellent	1.7	3.3
Mean score ^a	2.1	2.0
<i>Quality of fishing for steelhead/rainbow trout during past 3 years</i>		
Poor	26.4	20.6
Fair	45.3	48.1
Good	26.4	26.7
Excellent	1.9	4.6
Mean score ^a	2.0	2.2
<i>Quality of fishing for lake trout during past 3 years</i>		
Poor	9.0	6.6
Fair	30.8	25.3
Good	48.1	47.6
Excellent	12.0	20.5
Mean score ^a	2.6	2.8
<i>Quality of fishing for landlocked salmon during past 3 years</i>		
Poor	22.4	17.4
Fair	40.2	46.3
Good	36.4	31.5
Excellent	0.9	4.7
Mean score ^a	2.2	2.2
<i>Quality of fishing for walleye during past 3 years</i>		
Poor	16.5	25.0
Fair	47.7	40.1
Good	34.9	29.7
Excellent	0.9	5.2
Mean score ^a	2.2	2.2
<i>Quality of fishing for largemouth bass during past 3 years *</i>		
Poor	3.7	0.8
Fair	23.5	16.2
Good	51.6	56.5
Excellent	21.2	26.5
Mean score ^a	2.9	3.1

Table 153 (continued). Respondents who fished Lake Champlain in any of the past 3 years, and their evaluation of the quality of fishing by species in Lake Champlain for those with an opinion, for Vermont resident open water only anglers and ice anglers.

Response	Open water only anglers (%)	Ice anglers (%)
<i>Quality of fishing for smallmouth bass during past 3 years *</i>		
Poor	3.6	1.2
Fair	21.6	14.7
Good	54.1	53.8
Excellent	20.7	30.3
Mean score ^a	2.9	3.1
<i>Quality of fishing for northern pike during past 3 years *</i>		
Poor	5.7	2.4
Fair	26.4	19.8
Good	55.7	54.8
Excellent	12.1	23.0
Mean score ^a	2.7	3.0
<i>Quality of fishing for crappie during past 3 years</i>		
Poor	5.8	11.6
Fair	31.1	32.9
Good	42.7	45.2
Excellent	20.4	10.3
Mean score ^a	2.8	2.5
<i>Quality of fishing for yellow perch during past 3 years</i>		
Poor	3.2	4.6
Fair	18.8	21.2
Good	48.9	42.5
Excellent	29.0	31.7
Mean score ^a	3.0	3.0
<i>Quality of fishing for sunfish during past 3 years *</i>		
Poor	3.9	1.7
Fair	13.4	20.1
Good	43.3	53.4
Excellent	39.4	24.7
Mean score ^a	3.2	3.0
<i>Quality of fishing for smelt during past 3 years</i>		
Poor	24.1	40.5
Fair	37.9	27.9
Good	29.3	25.2
Excellent	8.6	6.3
Mean score ^a	2.2	2.0
<i>Quality of fishing for bullhead during past 3 years *</i>		
Poor	6.6	3.0
Fair	30.8	17.2
Good	49.5	54.5
Excellent	13.2	25.4
Mean score ^a	2.7	3.0

Table 153 (continued). Respondents who fished Lake Champlain in any of the past 3 years, and their evaluation of the quality of fishing by species in Lake Champlain for those with an opinion, for Vermont resident open water only anglers and ice anglers.

Response	Open water only anglers (%)	Ice anglers (%)
<i>Quality of fishing for white perch during past 3 years</i>		
Poor	5.8	5.3
Fair	27.9	20.5
Good	41.3	48.0
Excellent	25.0	26.3
Mean score ^a	2.9	3.0
<i>Quality of fishing for bowfin during past 3 years *</i>		
Poor	13.0	5.2
Fair	31.2	31.3
Good	48.1	42.7
Excellent	7.8	20.8
Mean score ^a	2.5	2.8
<i>Quality of fishing for gar during past 3 years</i>		
Poor	21.4	22.2
Fair	41.1	31.9
Good	33.9	36.1
Excellent	3.6	9.7
Mean score ^a	2.2	2.3
<i>Quality of fishing for redhorse (mullet) during past 3 years</i>		
Poor	26.2	33.3
Fair	38.1	25.0
Good	35.7	31.3
Excellent	0.0	10.4
Mean score ^a	2.1	2.2

* Statistically significant differences ($p \leq 0.05$)
^a Scale ranged from 1 = poor to 4 = excellent.

Table 154. Support for ice fishing for largemouth and smallmouth bass on Lake Champlain (currently it is not allowed), by Vermont resident open water only anglers and ice anglers.

Support for ice fishing for largemouth and smallmouth bass on Lake Champlain (currently it is not allowed) *	Open water only anglers (%)	Ice anglers (%)
Support	30.1	43.2
Oppose	24.2	27.7
No opinion	45.7	29.1

* Statistically significant differences ($p \leq 0.05$)

Table 155. Respondents' opinions about the length of the walleye season on Lake Champlain, which currently runs from the 1st Saturday in May to the following March 15th, by Vermont resident open water only anglers and ice anglers.

Percent supporting the given option regarding the length of Lake Champlain walleye season ^a	Open water only anglers	Ice anglers
Opening day is just right	33.5	34.4
Opening day should be earlier	3.8	6.4
Opening day should be later	2.9	3.9
No opinion on opening day	59.7	55.3
Closing day is just right	25.6	34.5
Closing day should be earlier	8.7	5.6
Closing day should be later	1.0	2.8
No opinion on closing day	64.7	57.1
Open year-round *	1.7	6.3

* Statistically significant differences ($p \leq 0.05$)

^a Percentages can sum to more than 100% because more than one option could be checked.

Table 156. Agreement with the current minimum length limit for fish caught in Lake Champlain, by Vermont resident open water only anglers and ice anglers.

Percent agreeing with current minimum length	Open water only anglers	Ice anglers
Brown/rainbow trout (12")	61.9	60.9
Lake trout (15")	59.6	54.0
Landlocked salmon (15")	58.6	56.5
Walleye (18")	60.1	61.7
Largemouth bass (10")	59.6	56.7
Smallmouth bass (10")	61.3	57.9
Northern pike (20") *	60.6	54.7
Crappie (8") *	57.4	61.6

* Statistically significant differences ($p \leq 0.05$)

Table 157. Agreement with the current daily creel limit for fish caught in Lake Champlain, by Vermont resident open water only anglers and ice anglers.

Percent agreeing with current daily limit	Open water only anglers	Ice anglers
Brown/rainbow trout (3) *	56.5	65.7
Lake trout (3) *	56.8	63.7
Landlocked salmon (2)	58.7	61.9
Walleye (3)	57.8	61.8
Largemouth/smallmouth bass (5)	61.3	60.6
Northern pike (5) *	55.3	59.2
Crappie (25) *	52.6	63.3
Yellow perch (no limit) *	60.2	61.2
Sunfish (no limit) *	60.8	65.2
Smelt (no limit) *	57.8	61.9
Bullhead (no limit) *	58.3	66.7
White perch (no limit) *	58.6	70.2

* Statistically significant differences ($p \leq 0.05$)

Table 158. Agreement with the current regulations on Lake Champlain that allow the use of 2 lines during open water season and 15 lines during ice fishing season, by Vermont resident open water only anglers and ice anglers.

Percent agreeing with current regulations	Open water only anglers	Ice anglers
Open water (2 lines)	74.0	75.3
Ice fishing (15 lines)	63.8	70.1

Table 159. Agreement with the current regulations for ponds or lakes that allow the use of 2 lines during open water season and 8 lines during ice fishing season, by Vermont resident open water only anglers and ice anglers.

Percent agreeing with current regulations	Open water only anglers	Ice anglers
Open water (2 lines) *	69.8	81.0
Ice fishing (8 lines) *	52.6	76.0

* Statistically significant differences ($p \leq 0.05$)

Table 160. Opinions about issues in Vermont, by Vermont resident open water only anglers and ice anglers.						
	Serious problem (%)	Moderate problem (%)	Minor problem (%)	Not a problem (%)	No opinion (%)	Mean score ^a
Issues in Vermont						
<i>Contaminant levels in fish *</i>						
Open water only anglers	18.8	26.7	18.8	16.4	19.4	2.6
Ice anglers	15.6	27.3	24.6	16.6	15.9	2.5
<i>Crowding at fishing areas *</i>						
Open water only anglers	5.9	22.7	30.0	27.3	14.0	2.1
Ice anglers	9.5	18.9	33.6	28.1	10.0	2.1
<i>Commercial sale of angler-caught perch *</i>						
Open water only anglers	5.7	8.1	10.0	28.8	47.4	1.8
Ice anglers	10.5	10.7	7.1	46.2	25.5	1.8
<i>Commercial sale of angler-caught crappie *</i>						
Open water only anglers	5.4	7.0	9.3	25.9	52.4	1.8
Ice anglers	11.0	7.1	8.0	43.7	30.3	1.8
<i>Commercial sale of angler-caught sunfish *</i>						
Open water only anglers	5.3	6.3	8.4	28.2	51.8	1.8
Ice anglers	8.4	6.4	6.4	47.0	31.7	1.7
<i>Shooting and spearing of northern pike in Lake Champlain as currently permitted *</i>						
Open water only anglers	5.0	5.5	7.1	30.8	51.7	1.7
Ice anglers	4.3	5.2	6.5	47.5	36.5	1.5
<i>Conflict between fishing and other recreational uses (e.g., skiing, boating) *</i>						
Open water only anglers	5.7	22.3	26.0	24.2	21.8	2.1
Ice anglers	6.6	22.6	27.0	29.6	14.3	2.1
<i>Access to fishing areas</i>						
Open water only anglers	5.5	11.3	21.4	51.0	10.9	1.7
Ice anglers	5.5	17.1	21.7	48.8	6.9	1.8
<i>Fishing derbies/tournaments (other than “kids” derbies) *</i>						
Open water only anglers	3.3	6.6	10.0	56.7	23.3	1.4
Ice anglers	4.9	6.9	10.2	66.0	12.0	1.4
<i>Your ability to understand Vermont fishing regulations *</i>						
Open water only anglers	2.9	4.6	14.5	66.2	11.8	1.4
Ice anglers	2.7	6.7	16.7	67.0	6.9	1.4
<i>Conflict between open-water and ice-fishing *</i>						
Open water only anglers	1.2	4.9	5.7	49.0	39.2	1.3
Ice anglers	1.4	3.9	8.9	61.4	24.4	1.3

* Statistically significant differences ($p \leq 0.05$)
^a Scale ranged from 1 = not a problem to 4 = serious problem. Respondents who had “no opinion” were not included in the calculation of the mean.

Table 161. Importance of various boat launch and fishing access site amenities, by Vermont resident open water only anglers and ice anglers.					
Boat launch and fishing access site amenities	Very important (%)	Somewhat important (%)	Not important (%)	No opinion (%)	Mean score ^a
<i>Boat ramps *</i>					
Open water only anglers	47.7	25.8	14.7	11.7	2.4
Ice anglers	66.0	21.1	6.0	6.9	2.6
<i>Bulletin boards with information</i>					
Open water only anglers	53.6	30.4	8.8	7.2	2.5
Ice anglers	54.1	30.8	8.4	6.7	2.5
<i>Portable toilets *</i>					
Open water only anglers	43.8	31.1	16.0	9.1	2.3
Ice anglers	50.0	29.1	16.0	4.8	2.4
<i>Fishing piers or other shore fishing opportunities</i>					
Open water only anglers	38.4	32.4	18.2	11.1	2.2
Ice anglers	41.1	33.3	18.7	6.9	2.2
<i>Docks *</i>					
Open water only anglers	34.1	31.4	22.8	11.8	2.1
Ice anglers	41.8	35.6	15.8	6.7	2.3
* Statistically significant differences ($p \leq 0.05$)					
^a Scale ranged from 1 = not important to 4 = very important. Respondents who had “no opinion” were not included in the calculation of the mean.					

Table 162. Sources of fishing information used by anglers in 2019, and the most likely source to be used in 2020, by Vermont resident open water only anglers and ice anglers.

Sources of information	Open water only anglers		Ice anglers	
	Used in 2019 (%) ^a	Most likely to use in 2020 (%)	Used in 2019 (%) ^a	Most likely to use in 2020 (%)
Fishing Regulations Guide from the Vermont Department of Fish and Wildlife	76.8	61.6	80.4	62.5
Other pamphlets or documents from the Vermont Department of Fish and Wildlife	16.1	0.5	15.9	0.6
Website of the Vermont Department of Fish and Wildlife	52.9	21.3	56.5	17.8
Other websites	9.6	0.7	9.8	0.2
Direct contact with Vermont Department of Fish and Wildlife personnel *	9.0	0.9	12.9	0.8
Social media, such as Facebook, Twitter, Instagram, etc. *	9.4	1.5	16.9	1.9
Other online posts, discussions, forums, or chatrooms	5.7	0.0	8.1	0.4
Newspaper	4.3	0.1	5.4	0.0
Magazine	4.0	0.3	4.9	0.4
TV or radio	3.2	1.6	3.7	2.1
Bait and tackle shops *	15.6	0.3	32.8	0.0
Guides or charter boat operators	3.4	0.3	3.7	0.2
Newsletters from fishing clubs / sportsmen's organizations	3.5	11.0	4.9	13.3
Friends / word-of-mouth *	41.0		49.7	

* Statistically significant differences ($p \leq 0.05$)^a Percentages can sum to more than 100% because more than one source of information could have been used in 2019.

TRENDS (1990, 1999, 2009, 2019) IN FISHING PARTICIPATION AND OPINIONS ABOUT FISHING REGULATIONS AND MANAGEMENT ISSUES

Trends are shown in this section of four surveys that have been conducted since 1991 in Vermont. The first survey was conducted in 1991 about calendar year 1990. Surveys were also conducted in 2000 (about calendar year 1999) and 2010 (about calendar year 2009). These surveys are compared to this year's survey about calendar year 2019. In Figures 27 through 140, the years of the data do not refer to the years that the surveys were administered but to the year referenced in the survey about which anglers responded.

In these graphs, the 1990 and 1999 data are unweighted. The 2009 and 2019 data are weighted; the weighting for the 2009 data is explained in the previously referenced 2010 Cornell report; the weighting for the 2019 data was previously explained in this report in the section that details the methods. The trends graphs are presented in question order in the survey; the survey questionnaire is shown in Appendix A.

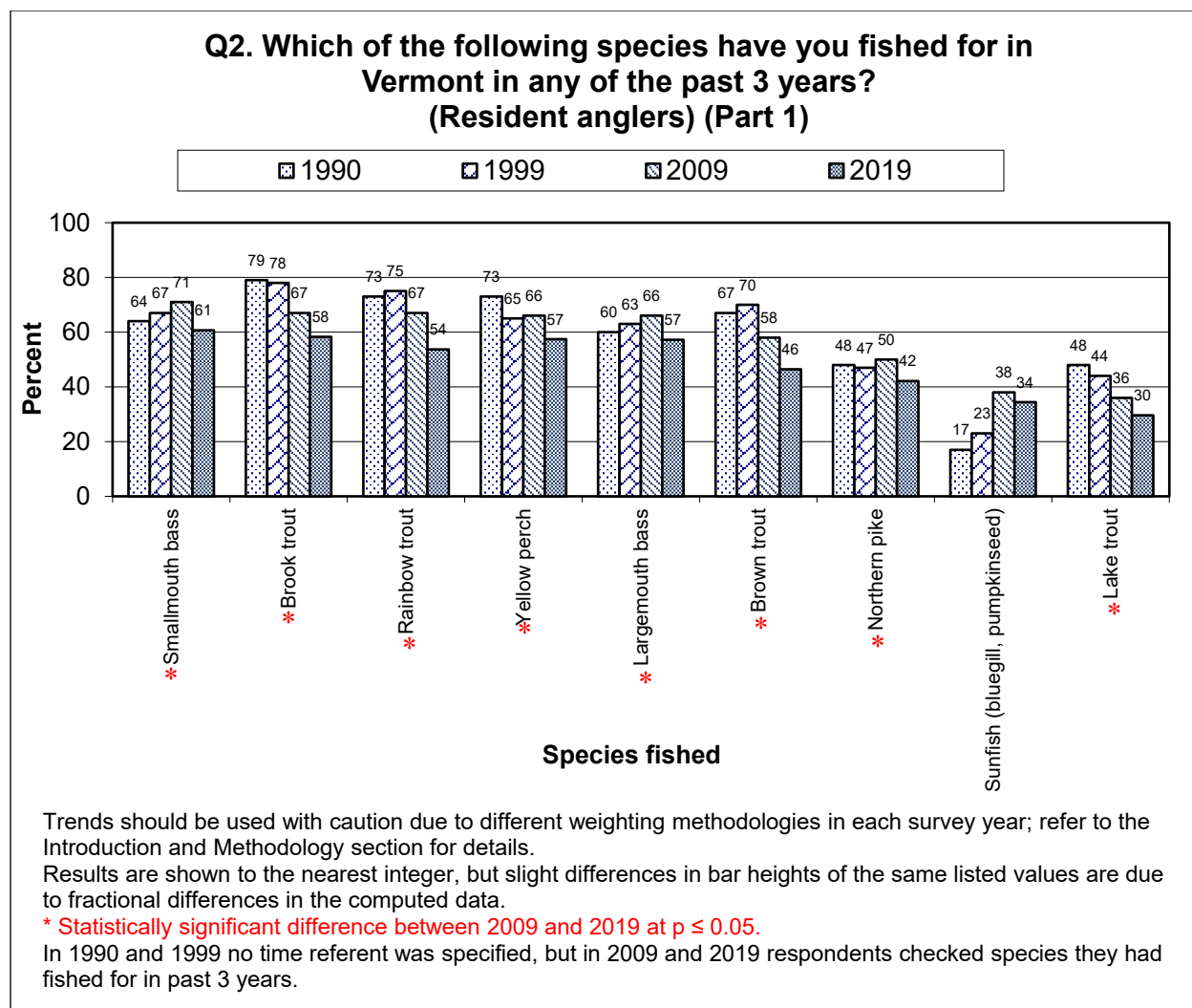


Figure 27. Trends in Species Fished, Residents, Part 1

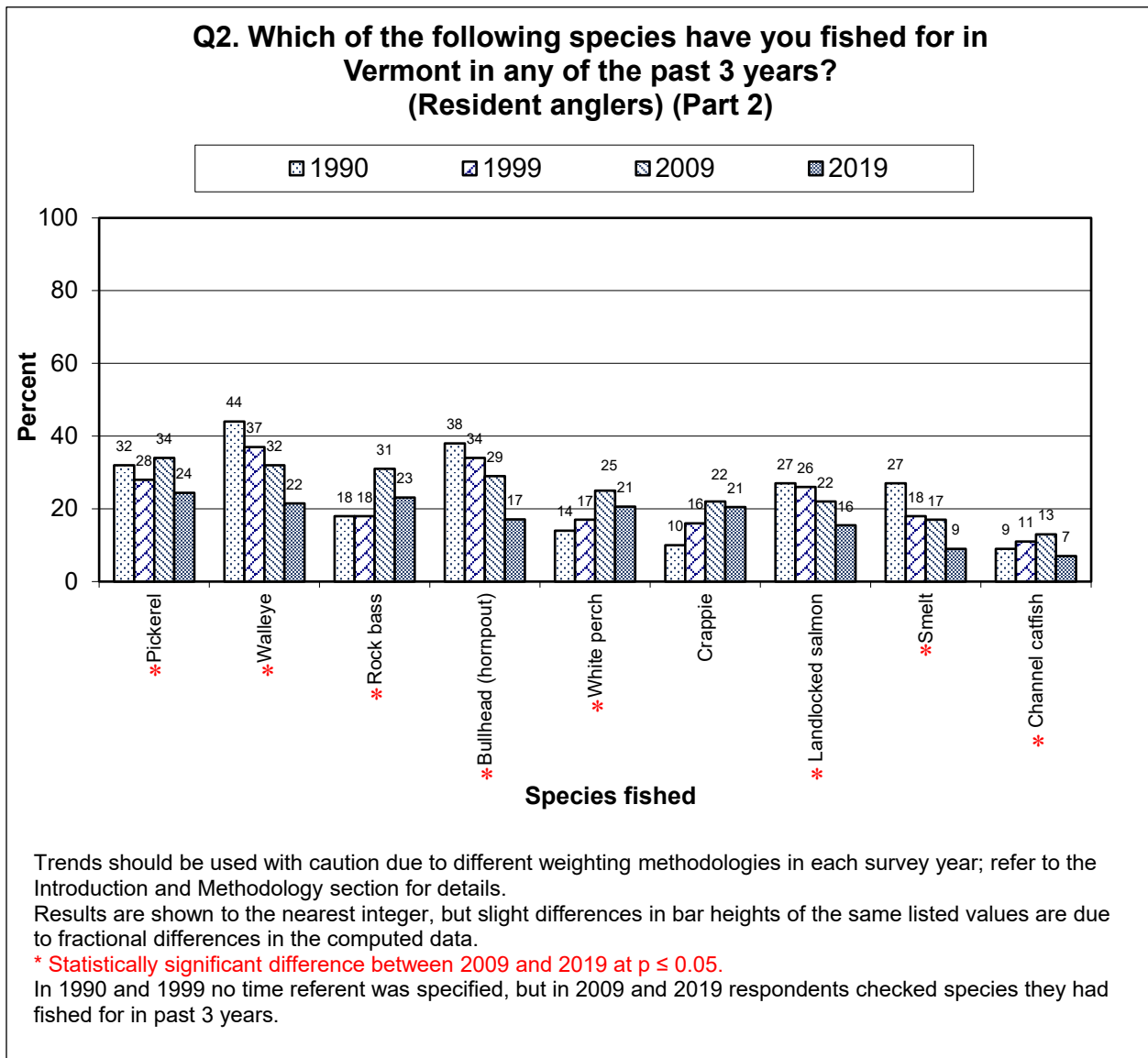


Figure 28. Trends in Species Fished, Residents, Part 2

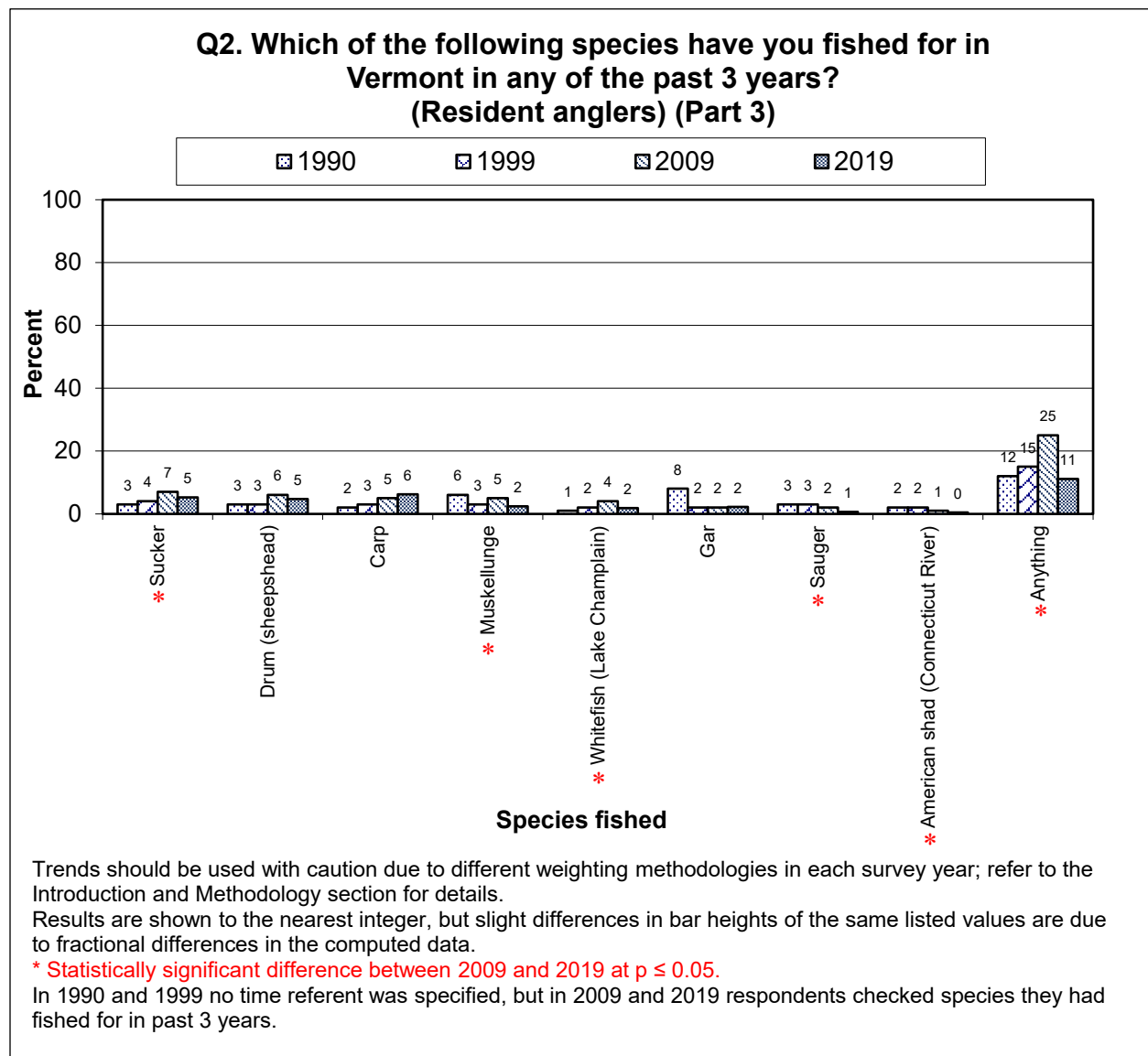


Figure 29. Trends in Species Fished, Residents, Part 3

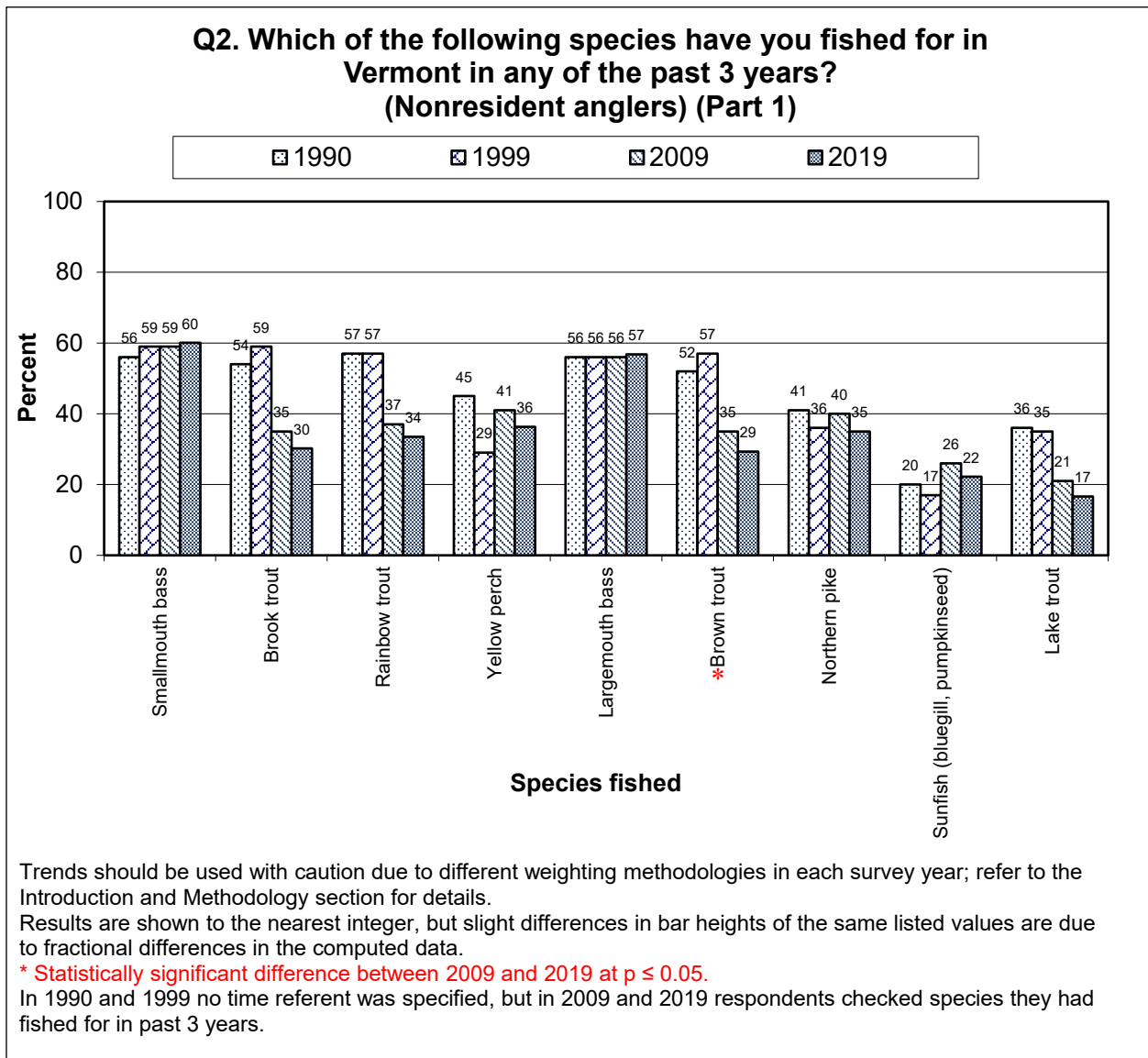


Figure 30. Trends in Species Fished, Nonresidents, Part 1

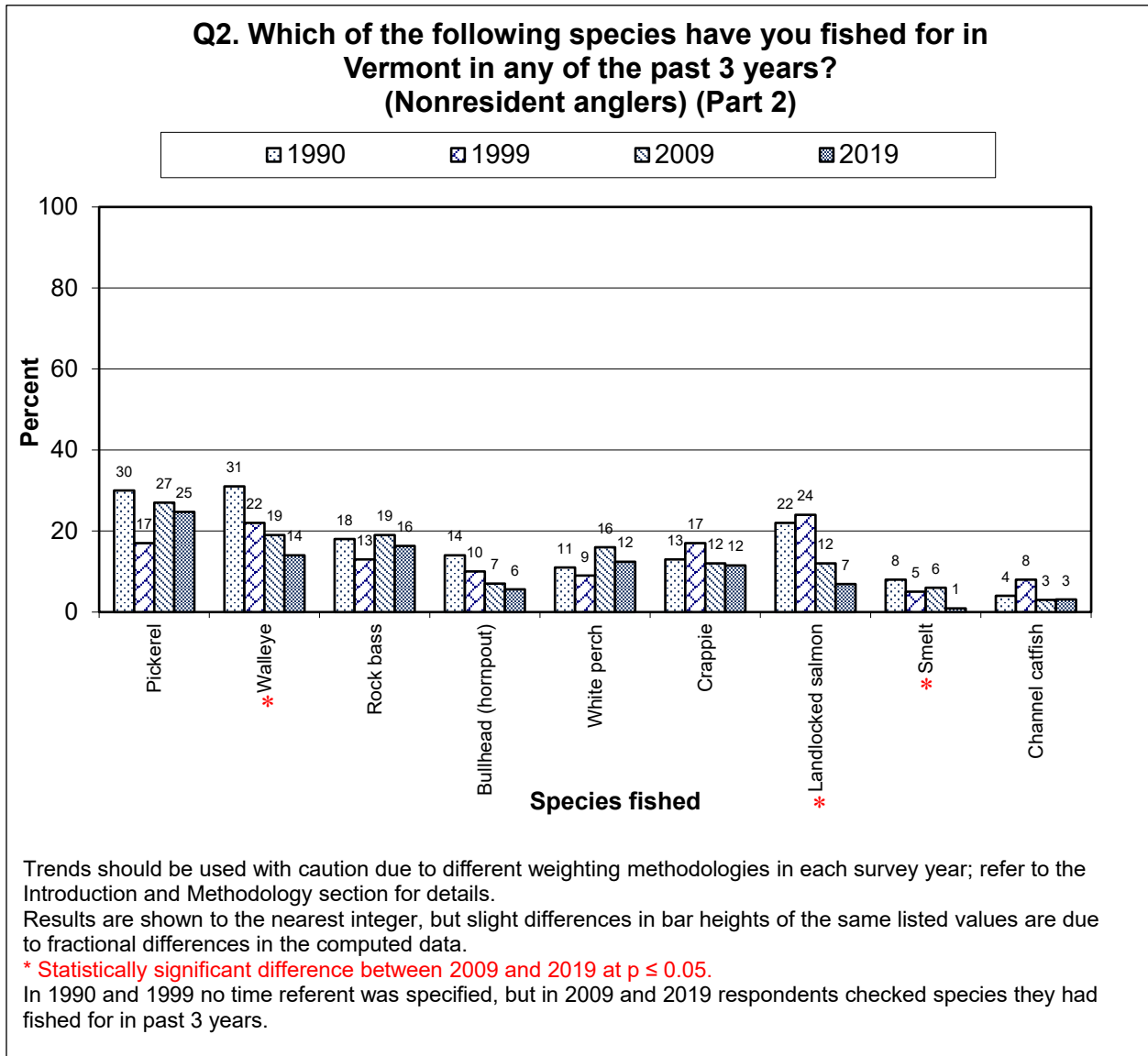


Figure 31. Trends in Species Fished, Nonresidents, Part 2

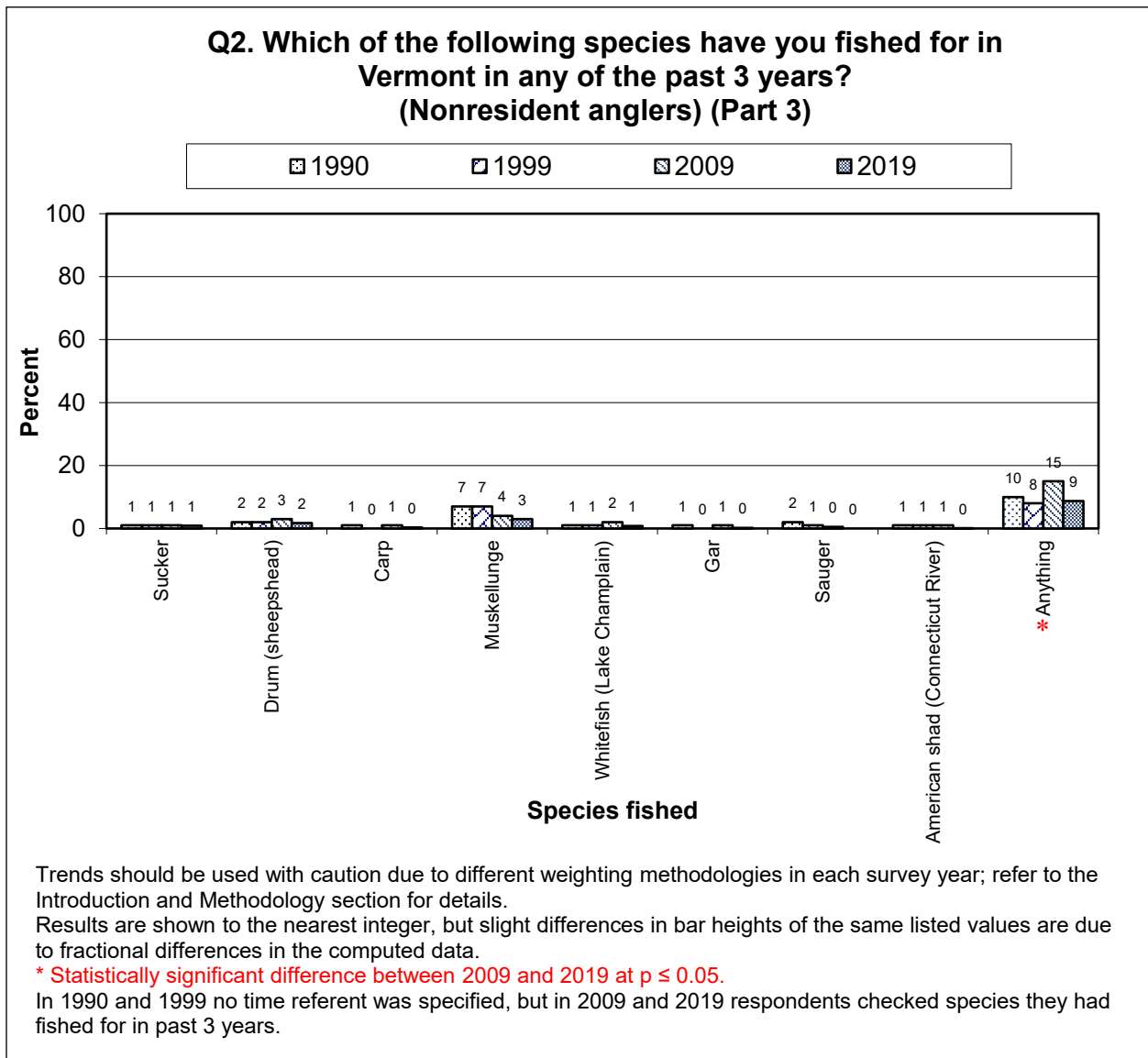


Figure 32. Trends in Species Fished, Nonresidents, Part 3

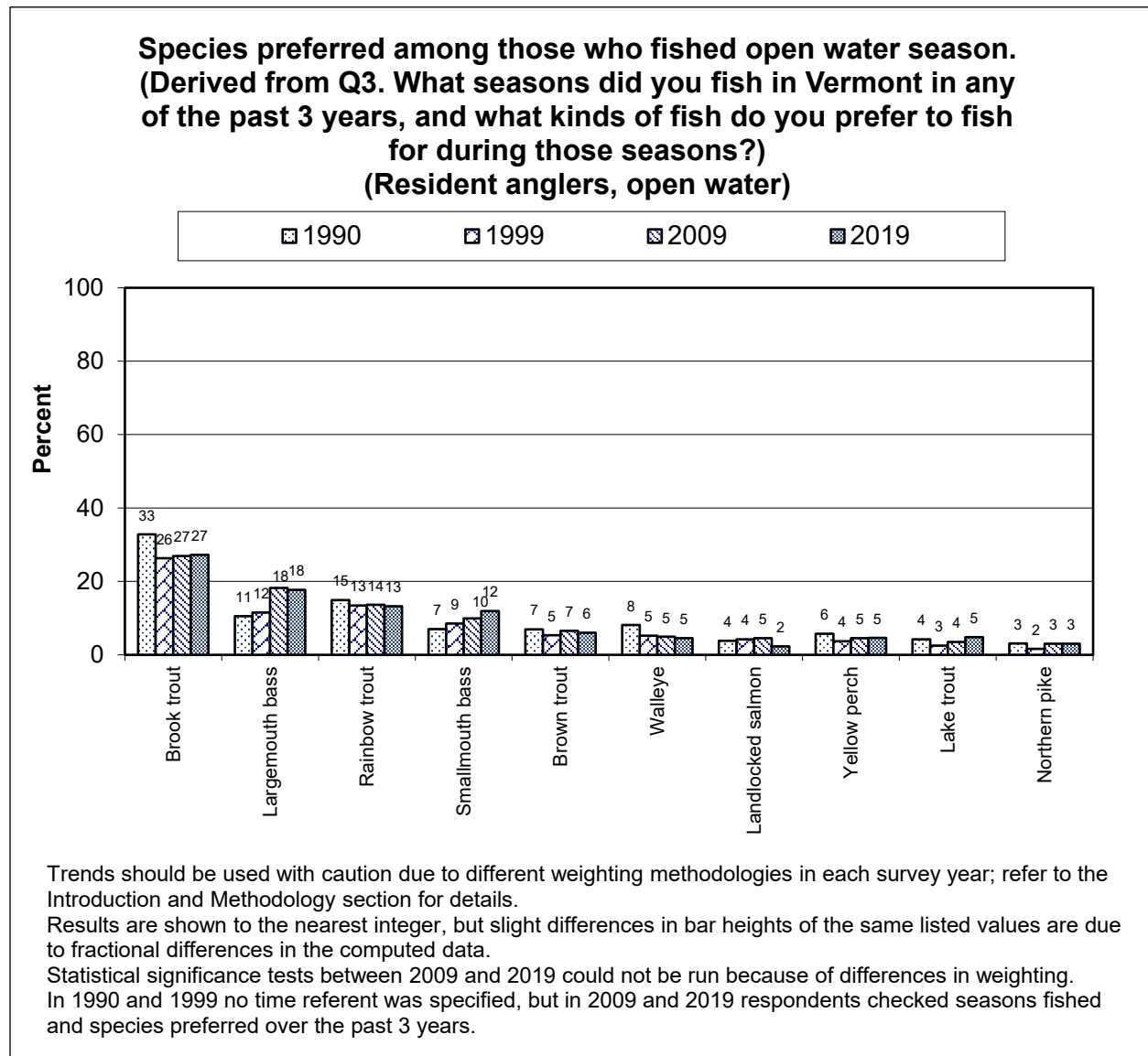


Figure 33. Trends in Species Preferred in Open Water Season, Residents

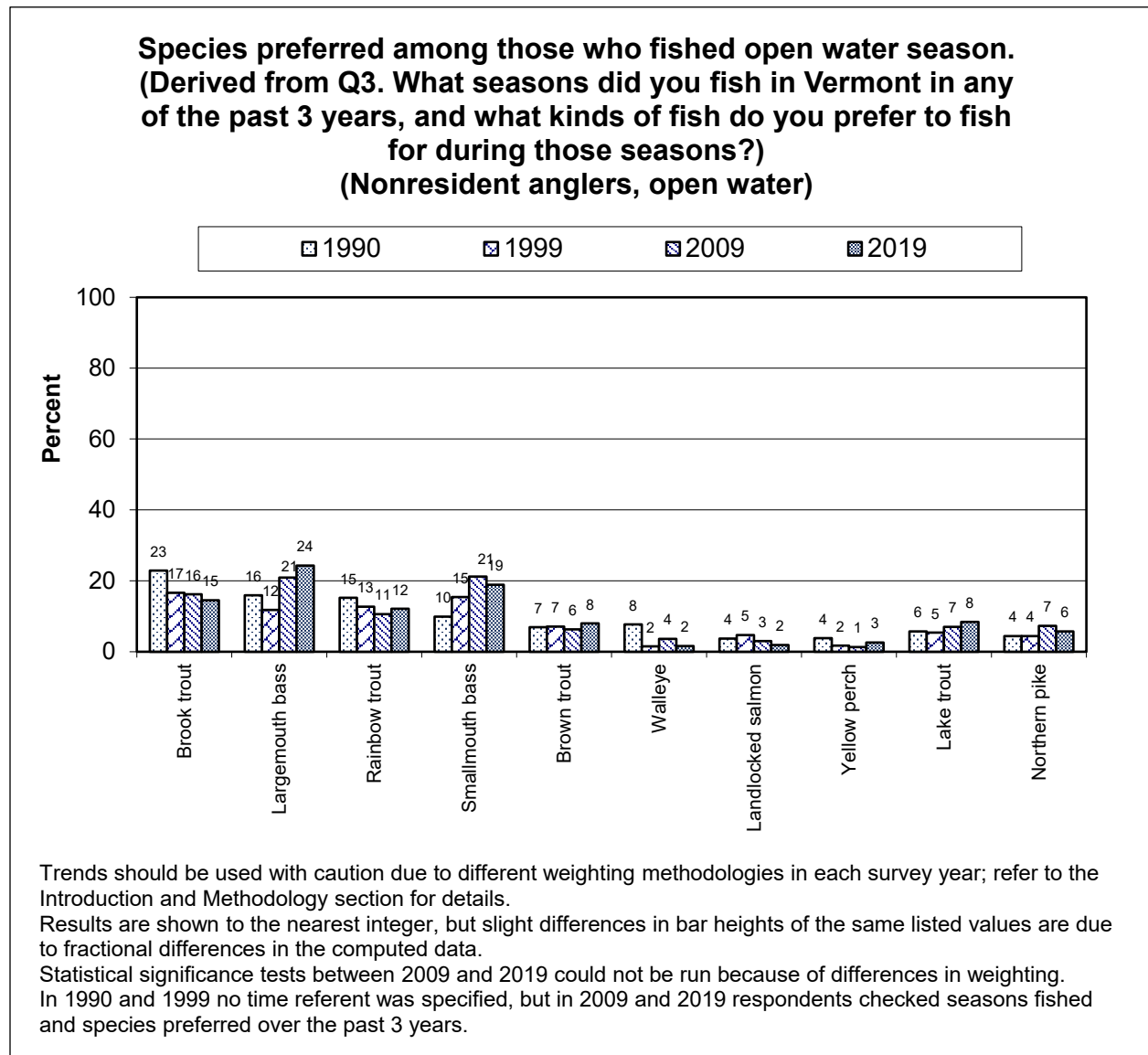


Figure 34. Trends in Species Preferred in Open Water Season, Nonresidents

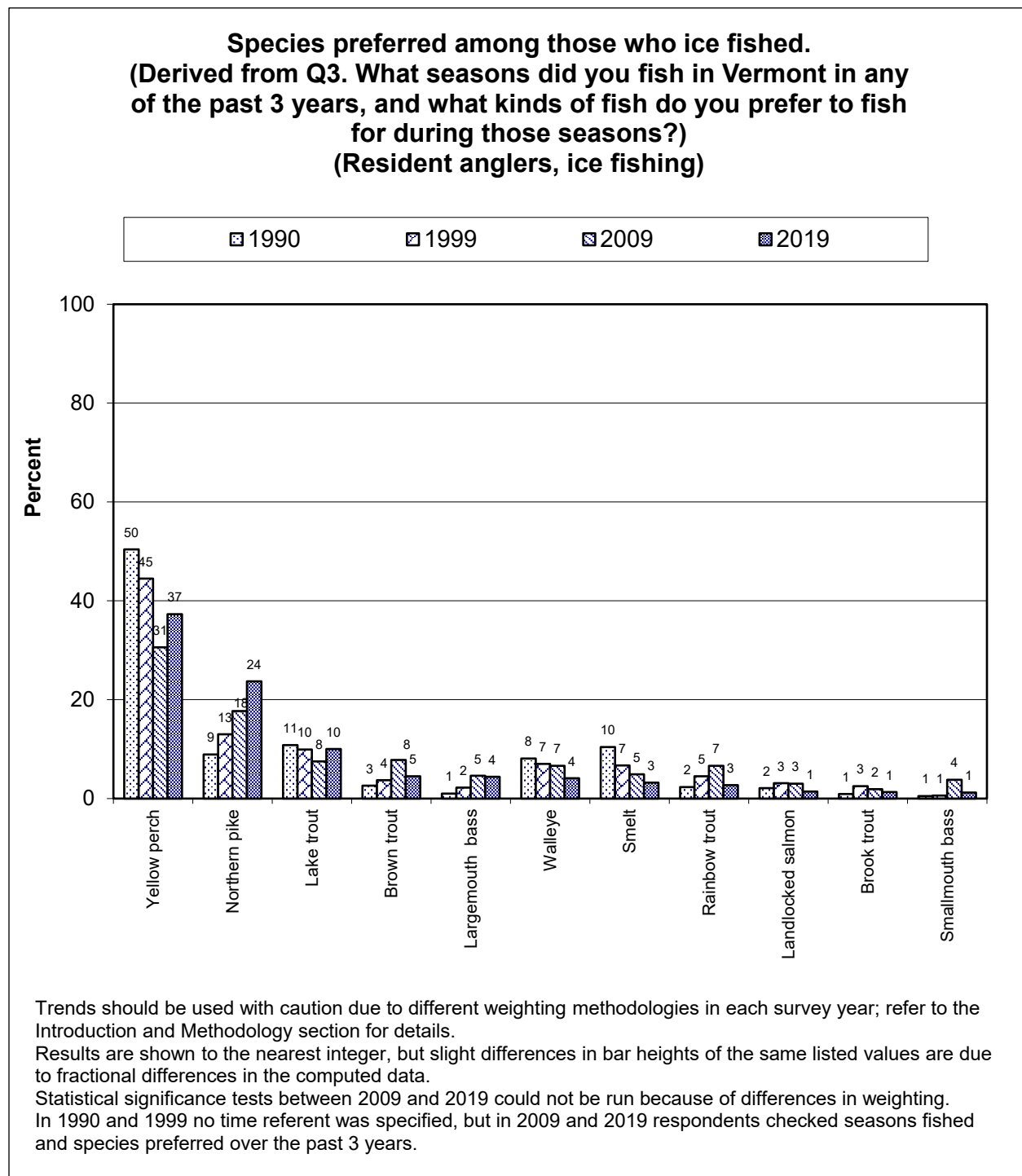


Figure 35. Trends in Species Preferred in Ice Fishing Season, Residents

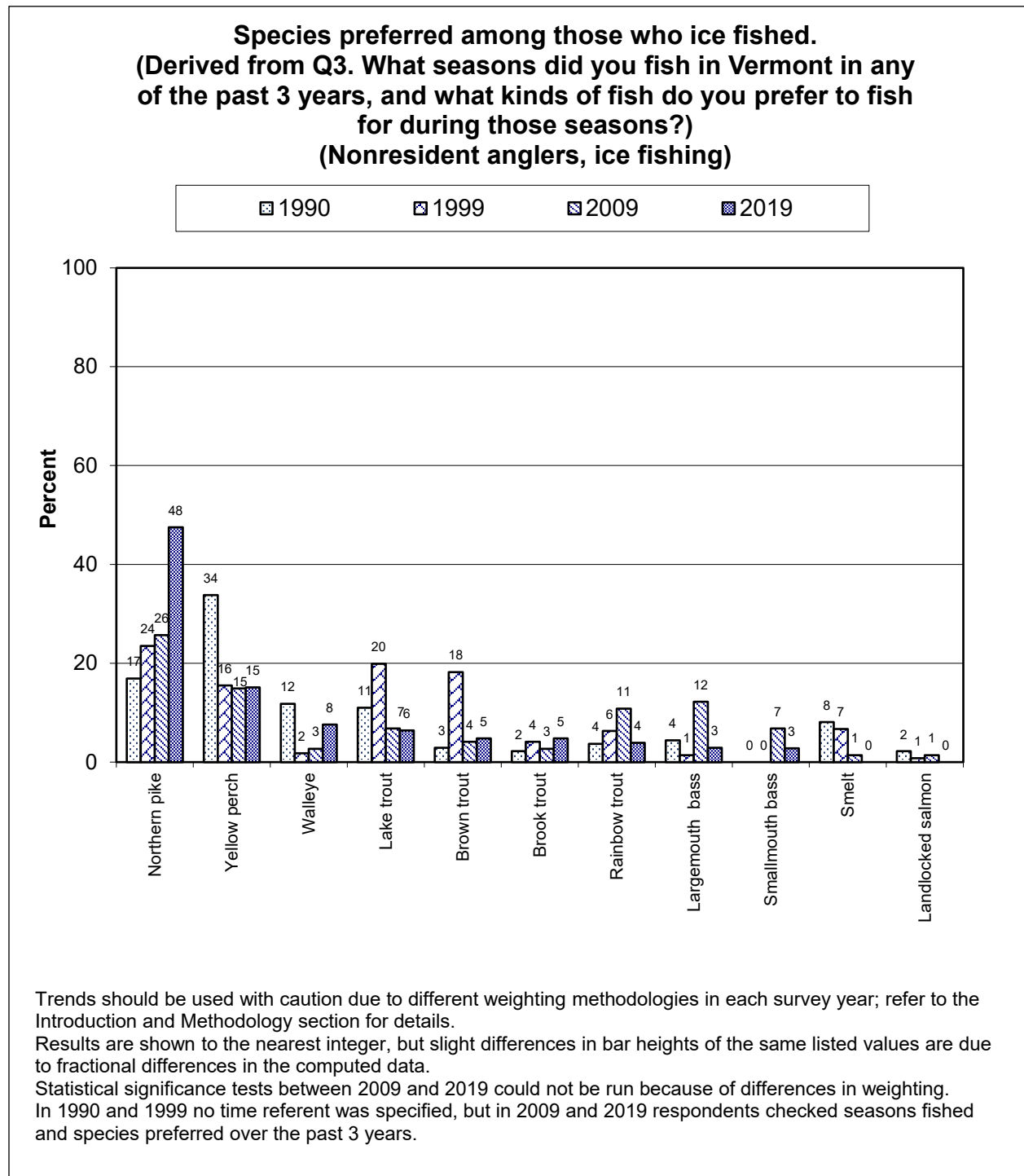


Figure 36. Trends in Species Preferred in Ice Fishing Season, Nonresidents

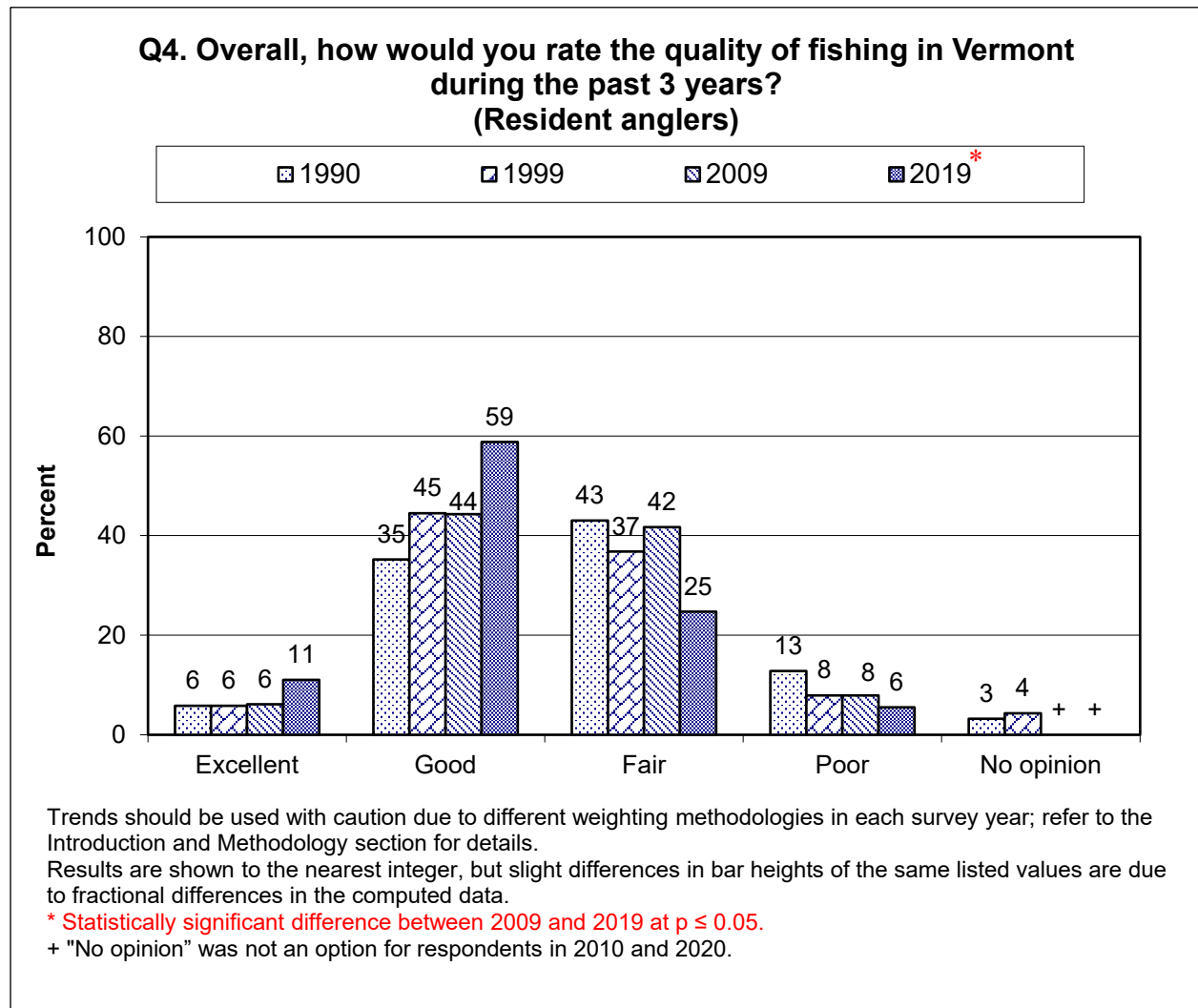


Figure 37. Trends in Ratings of Quality of Fishing Among Residents

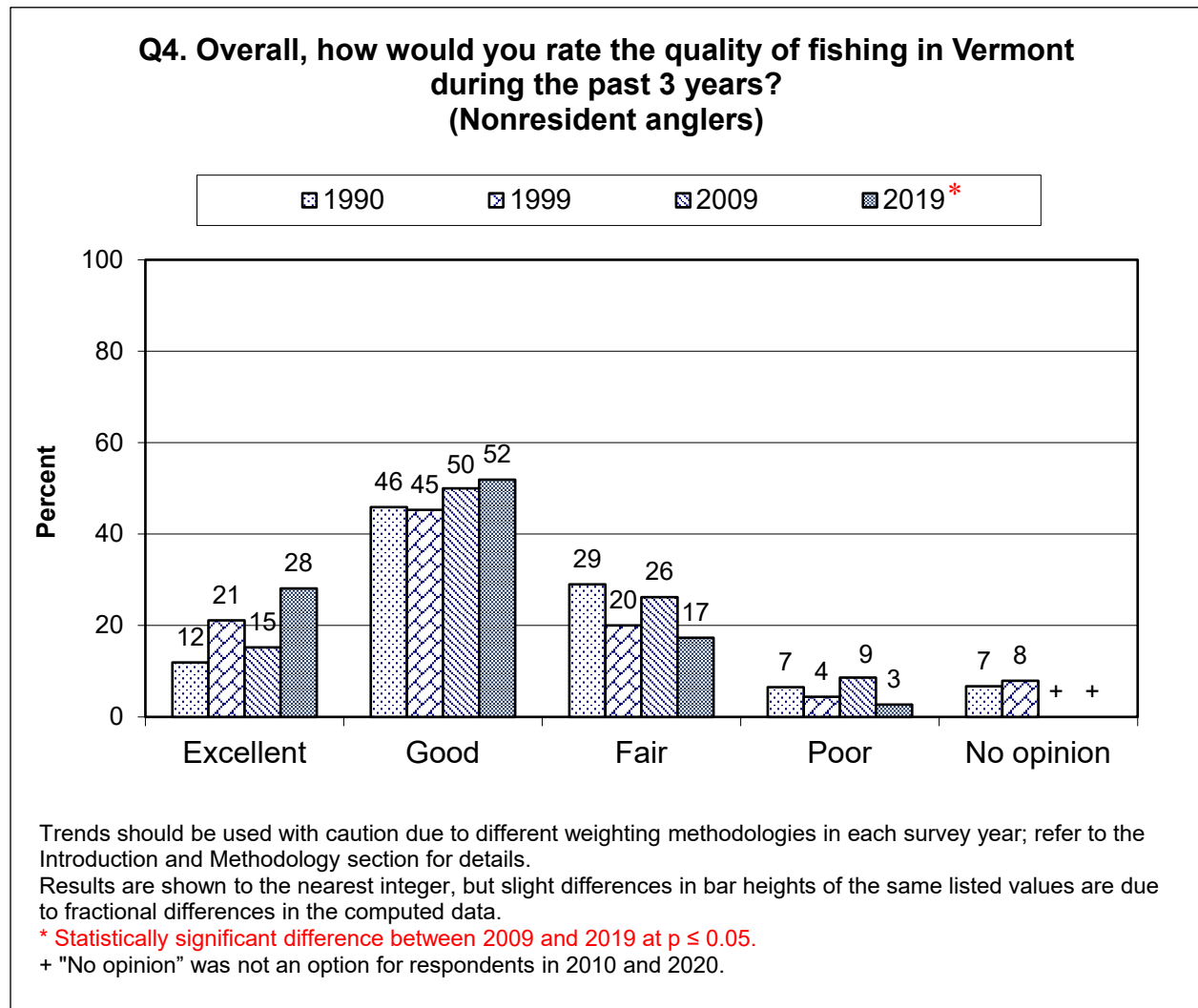


Figure 38. Trends in Ratings of Quality of Fishing Among Nonresidents

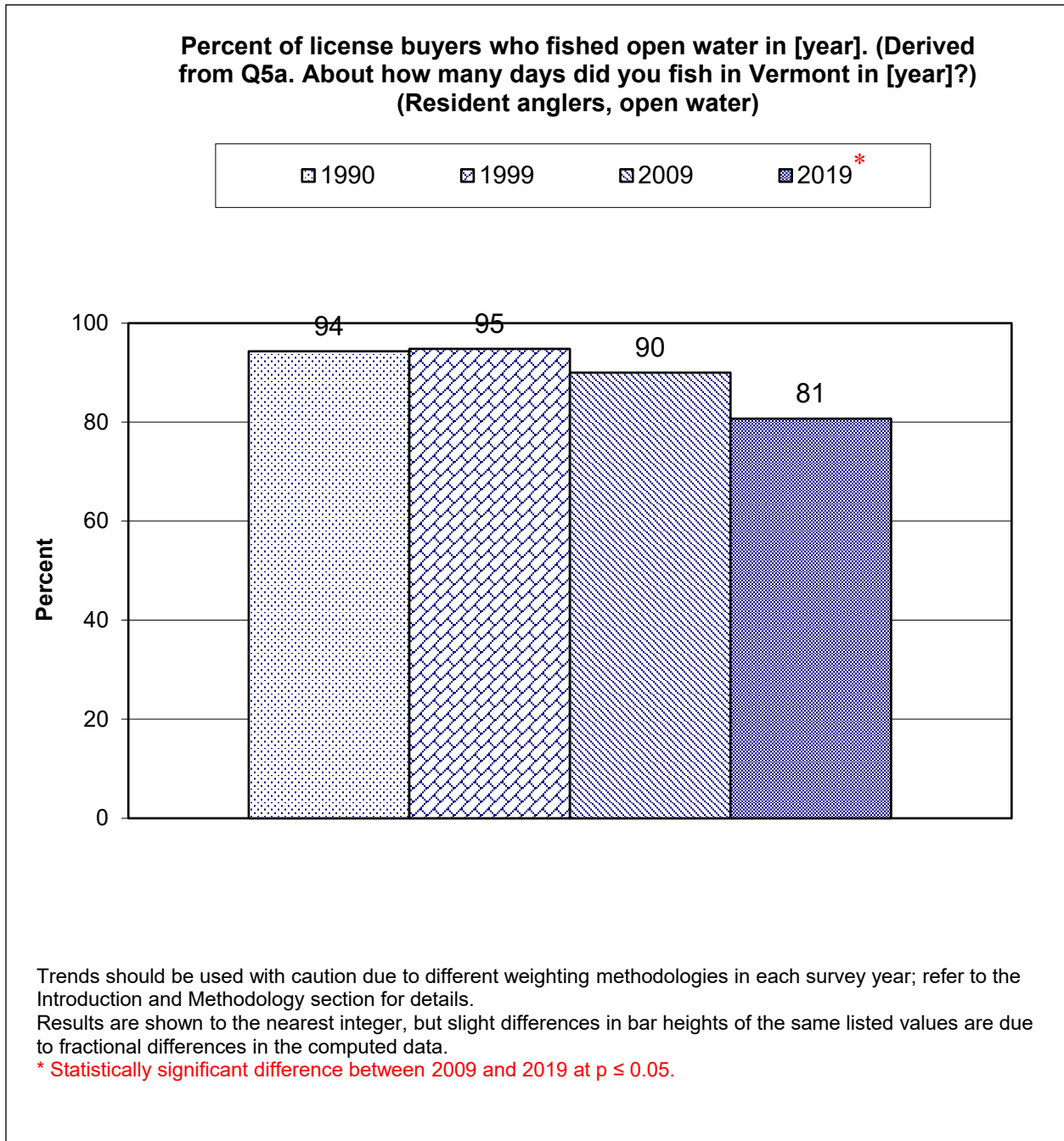


Figure 39. Trends in Percent Who Fished Open Water Among Residents

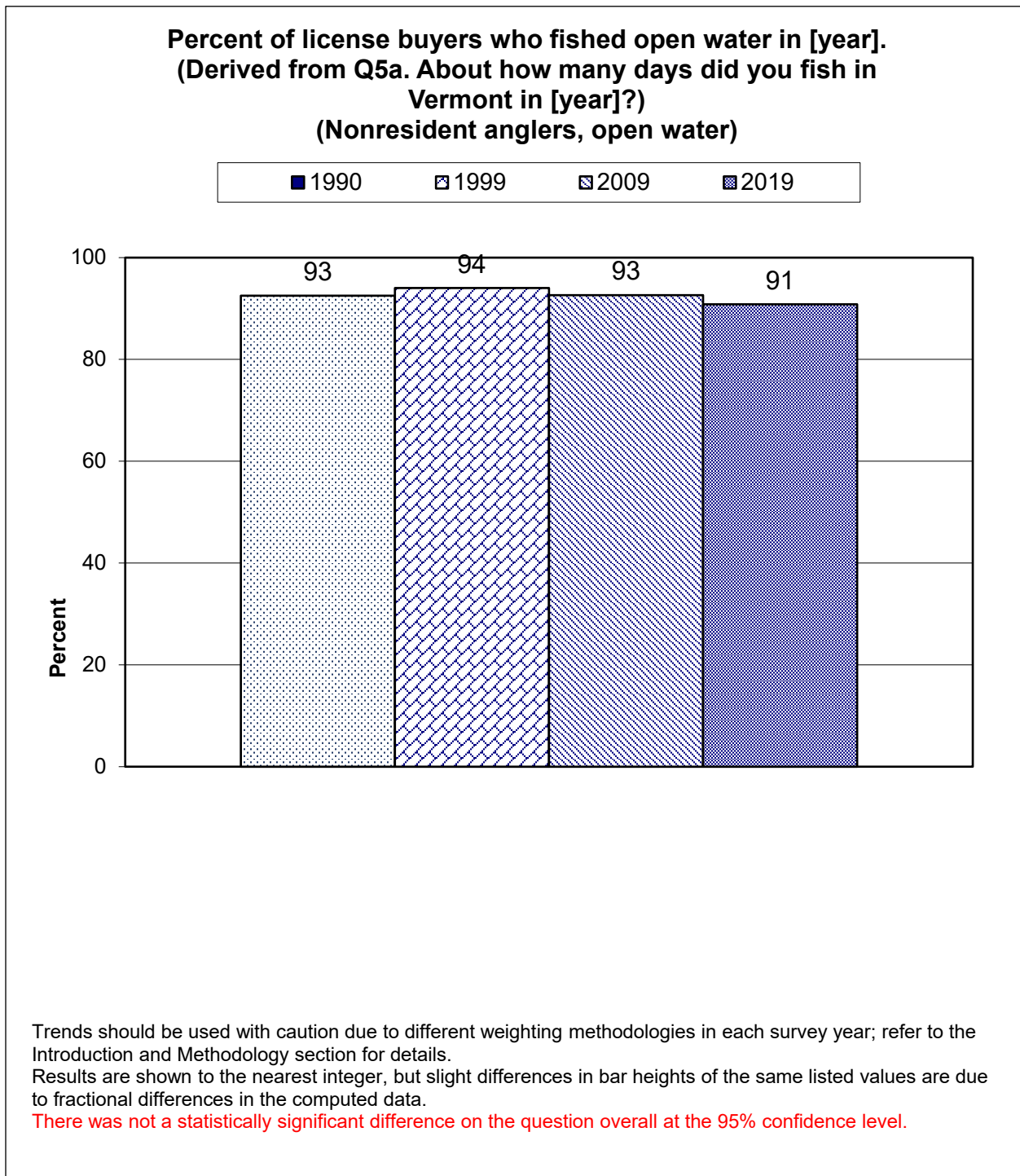


Figure 40. Trends in Percent Who Fished Open Water Among Nonresidents

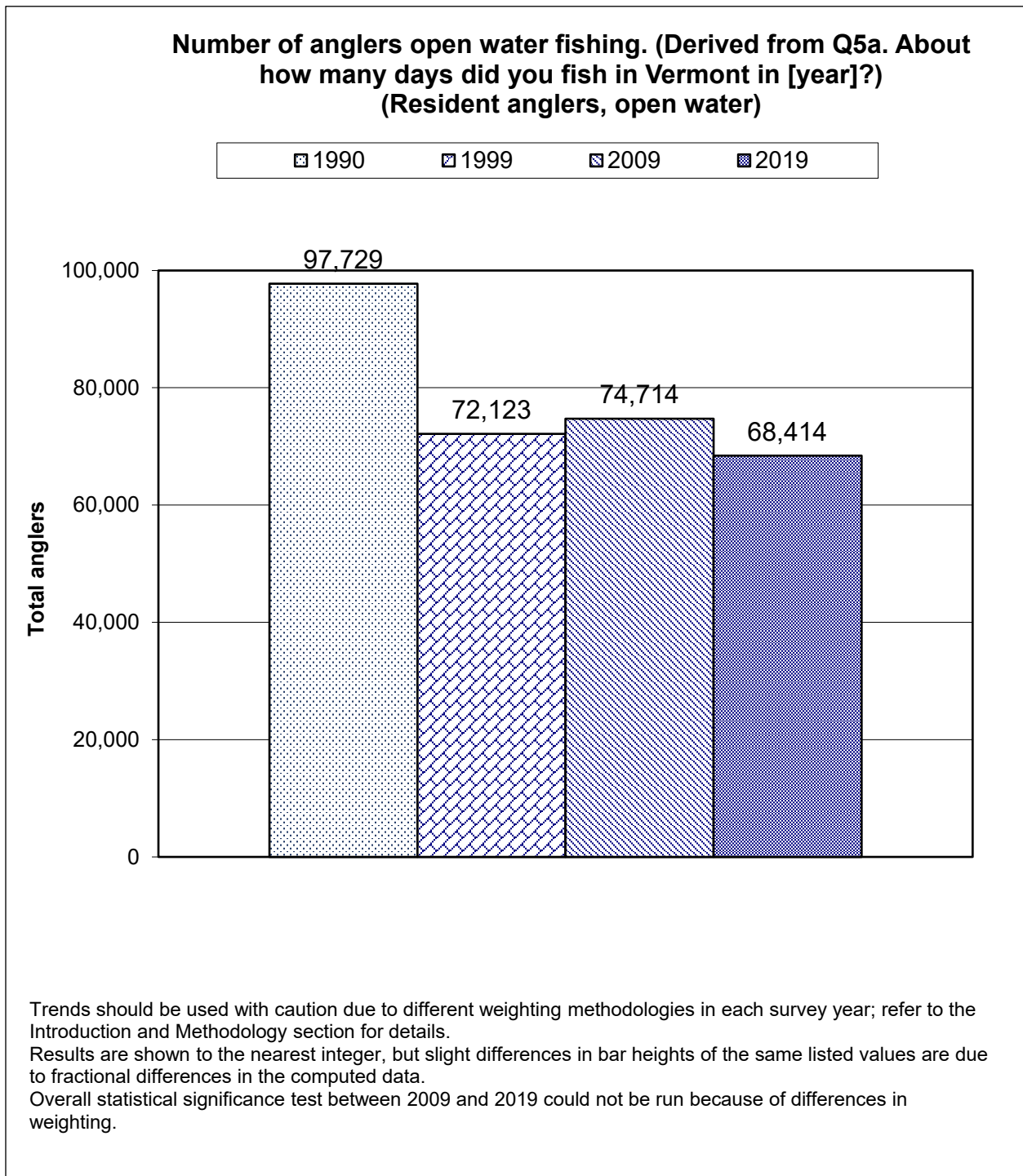


Figure 41. Trends in Number of Resident Anglers Who Fished Open Water

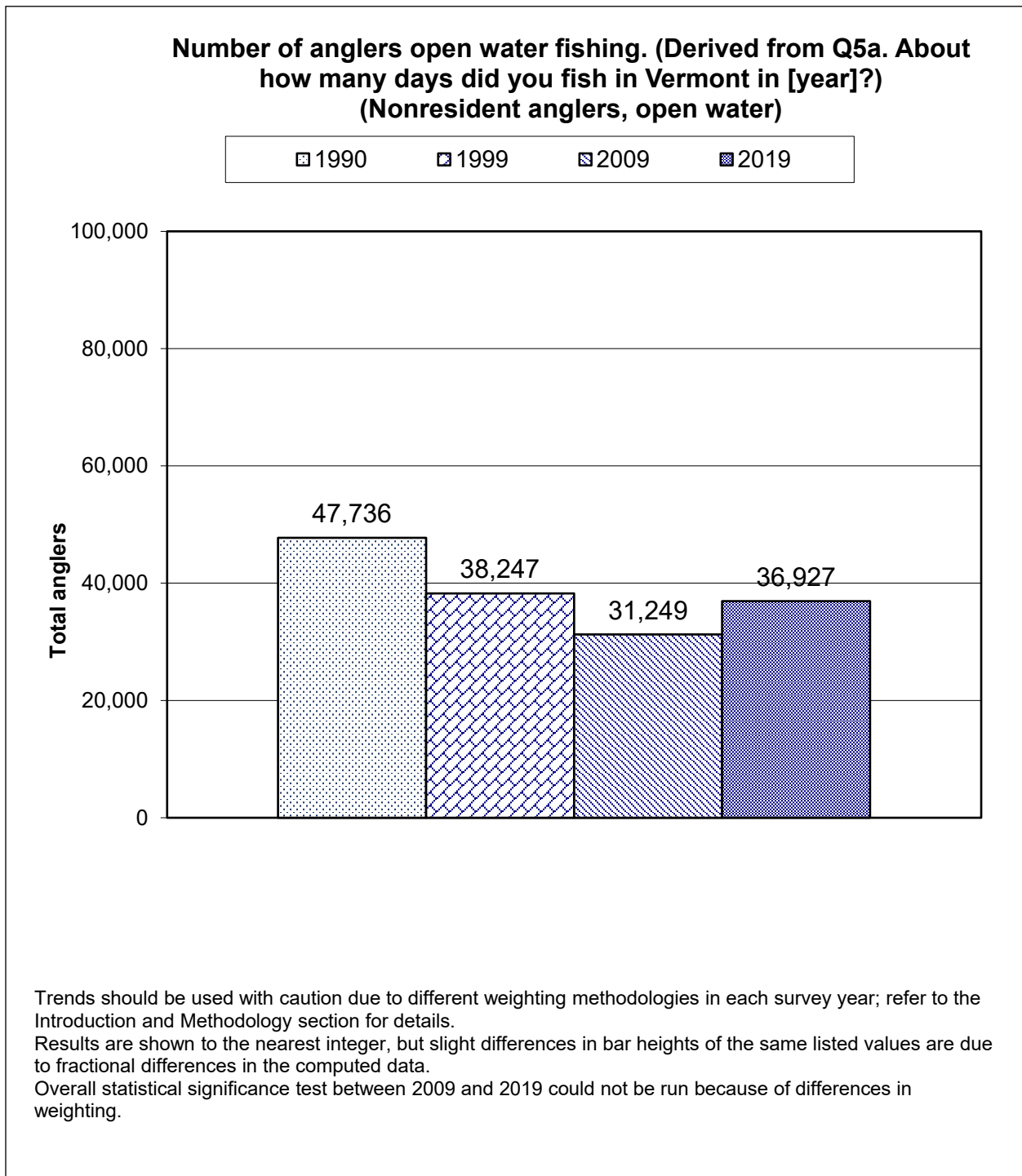


Figure 42. Trends in Number of Nonresident Anglers Who Fished Open Water

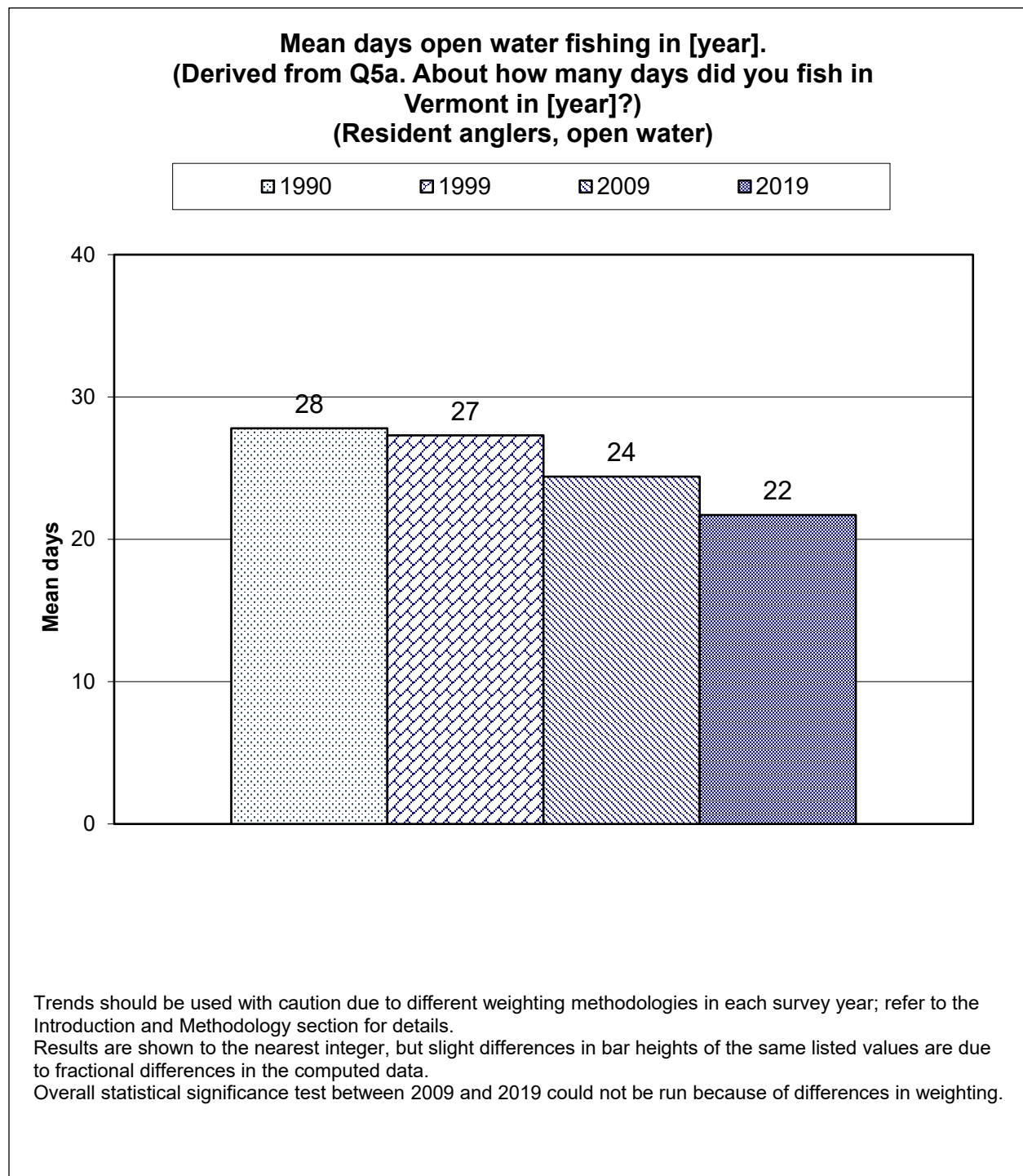


Figure 43. Trends in Mean Days Fished Open Water by Residents

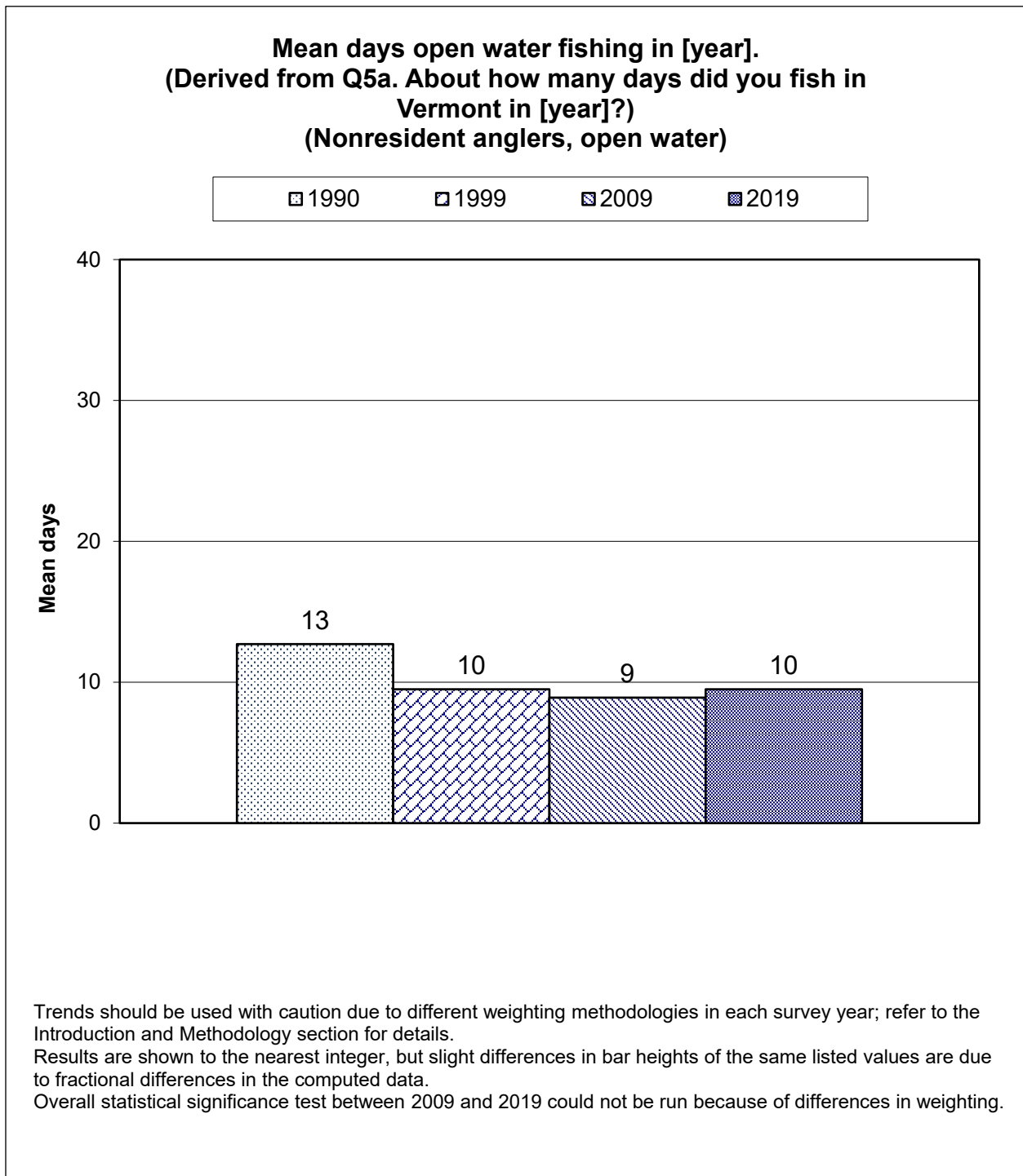


Figure 44. Trends in Mean Days Fished Open Water by Nonresidents

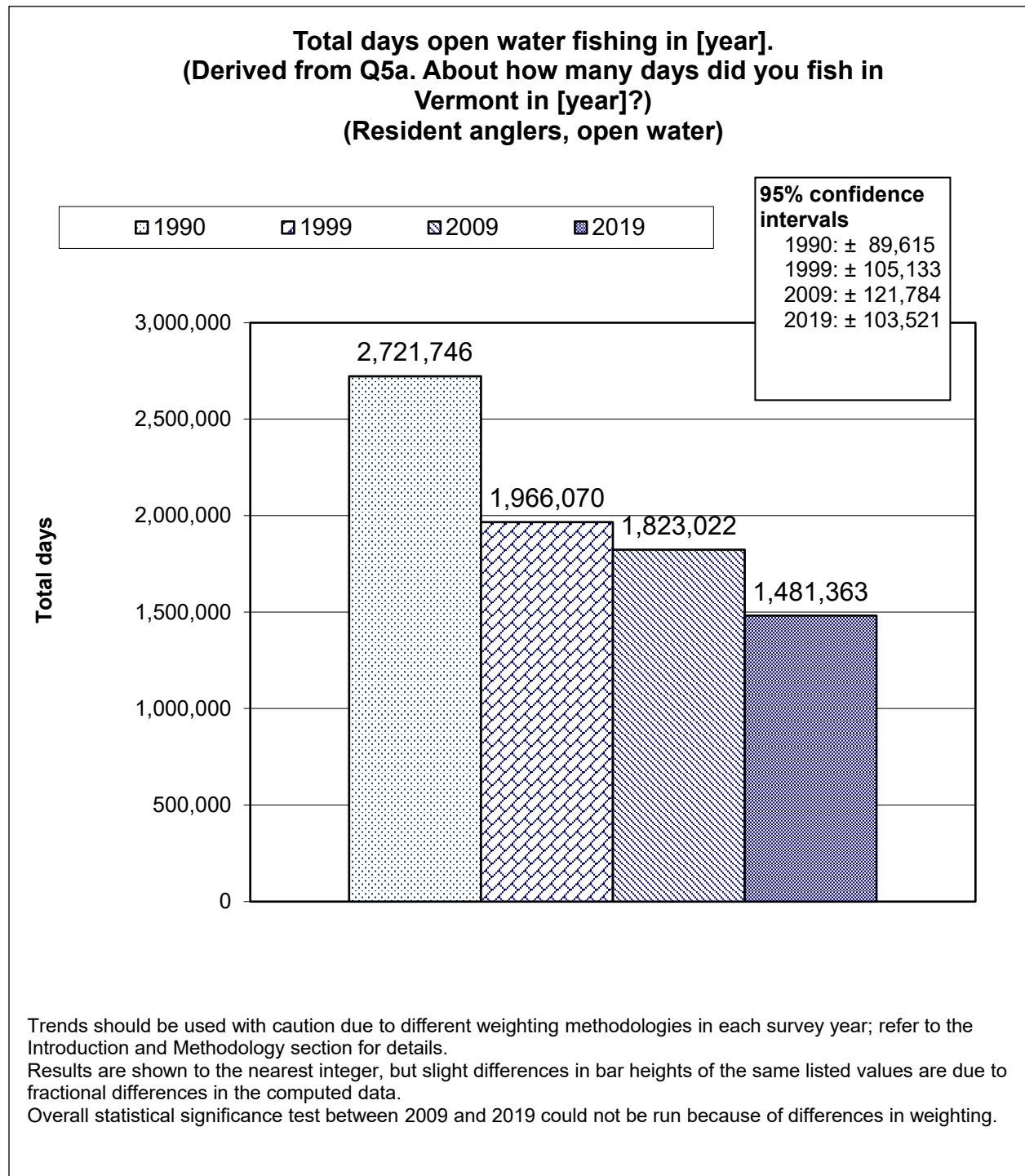


Figure 45. Trends in Total Days, Open Water, Residents

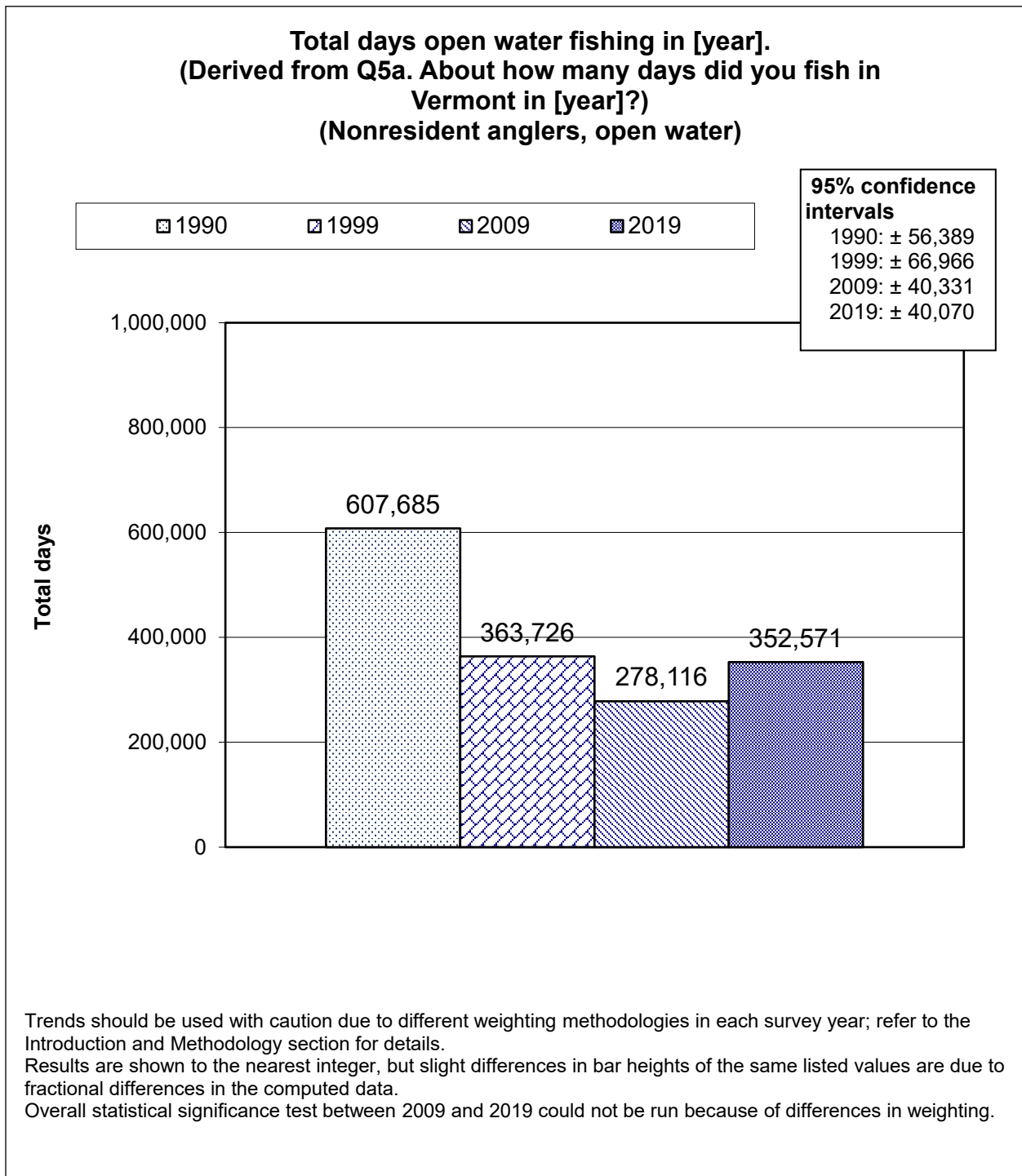


Figure 46. Trends in Total Days, Open Water, Nonresidents

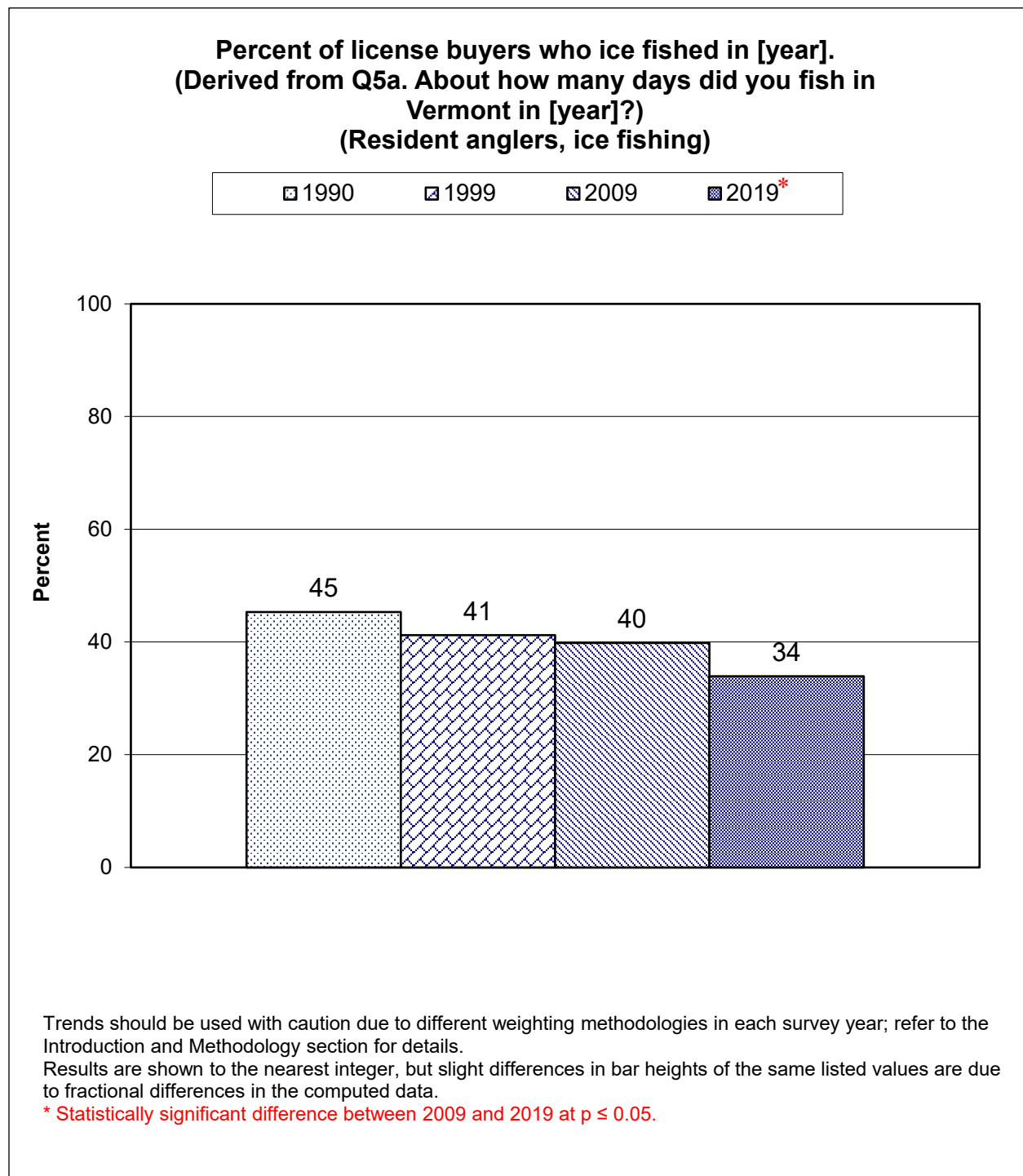


Figure 47. Trends in Percent Who Ice Fished Among Residents

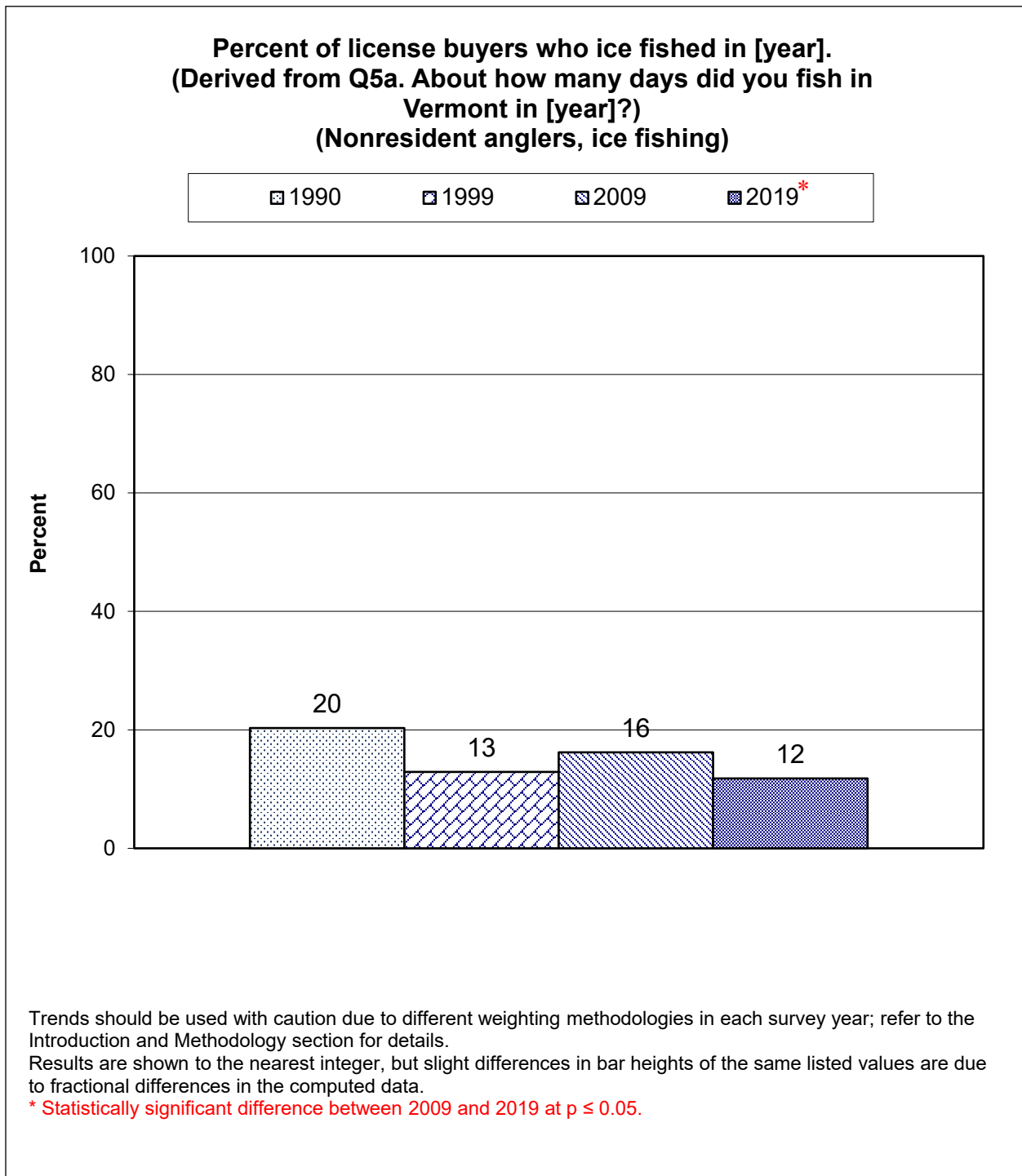


Figure 48. Trends in Percent Who Ice Fished Among Nonresidents

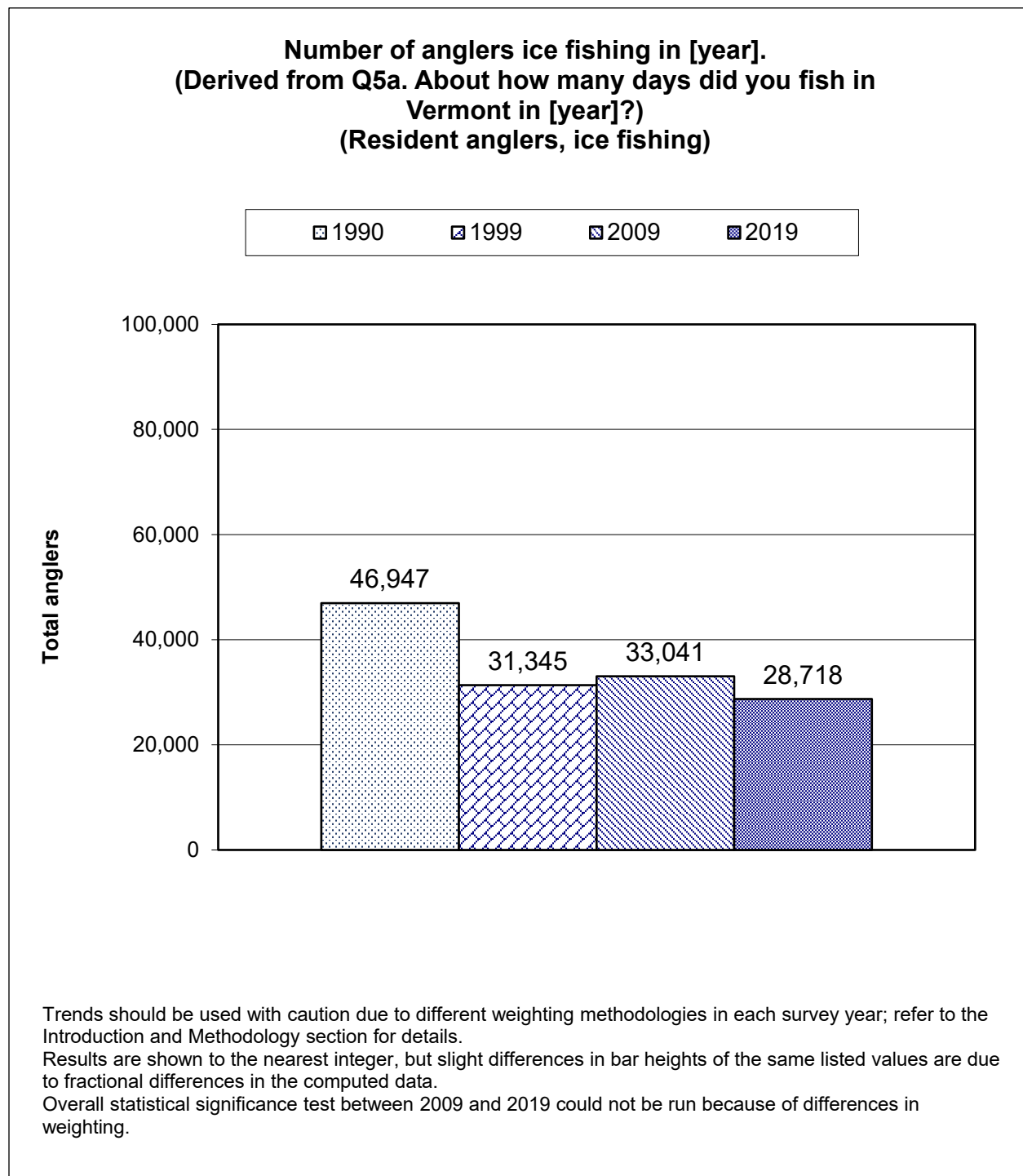


Figure 49. Trends in Number of Resident Anglers Who Ice Fished

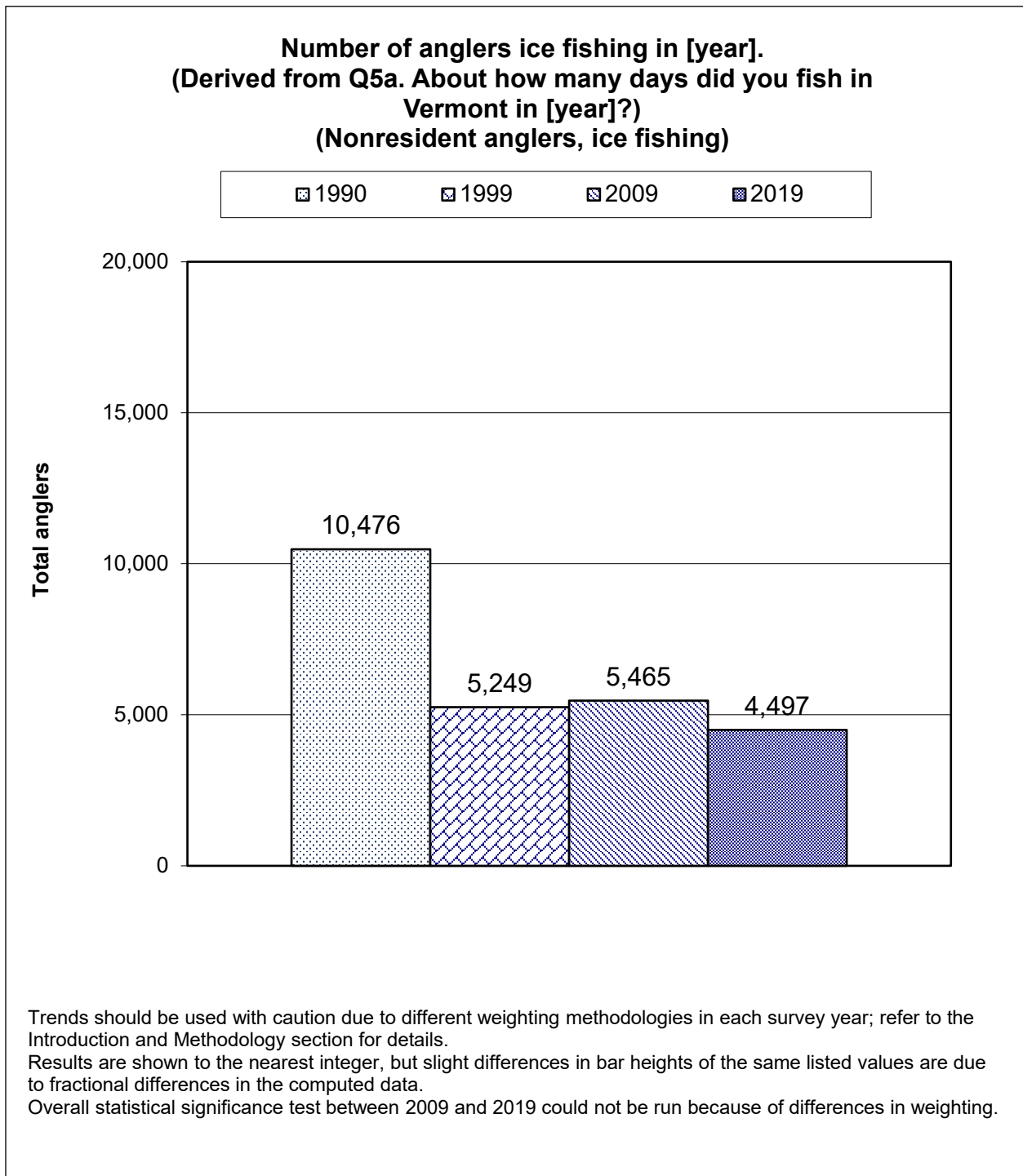


Figure 50. Trends in Number of Nonresident Anglers Who Ice Fished

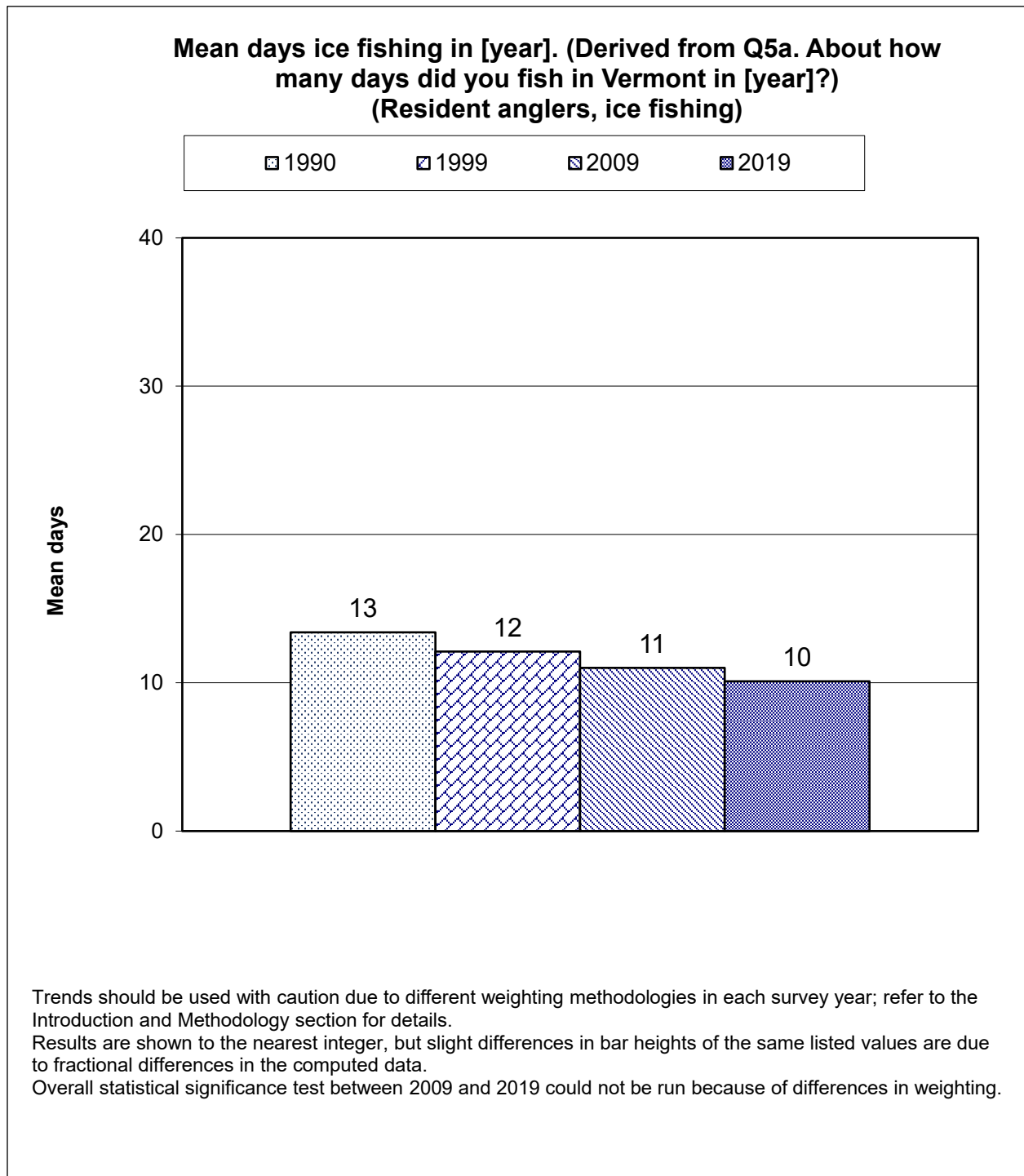


Figure 51. Trends in Mean Days Ice Fished by Residents

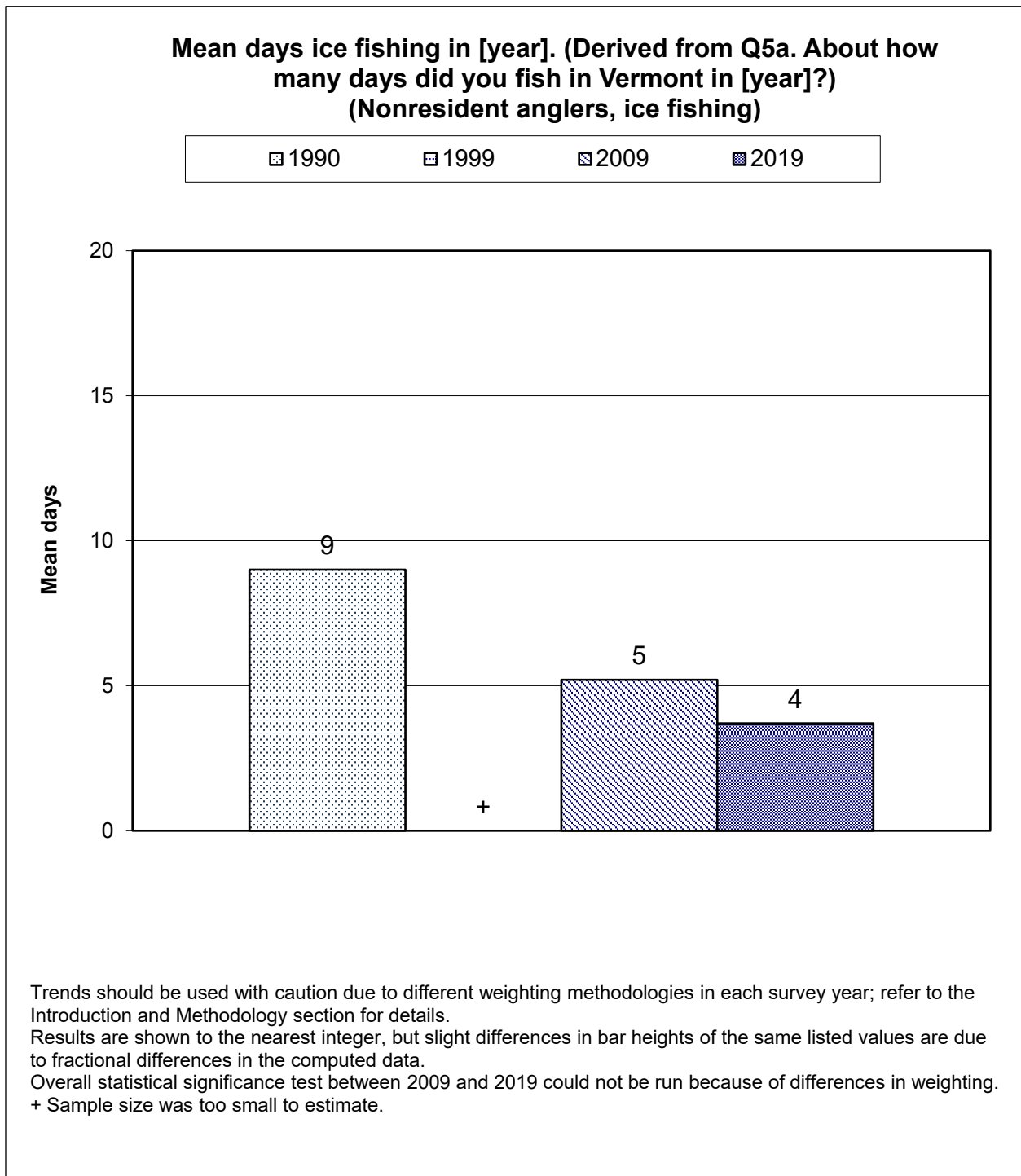


Figure 52. Trends in Mean Days Ice Fished by Nonresidents

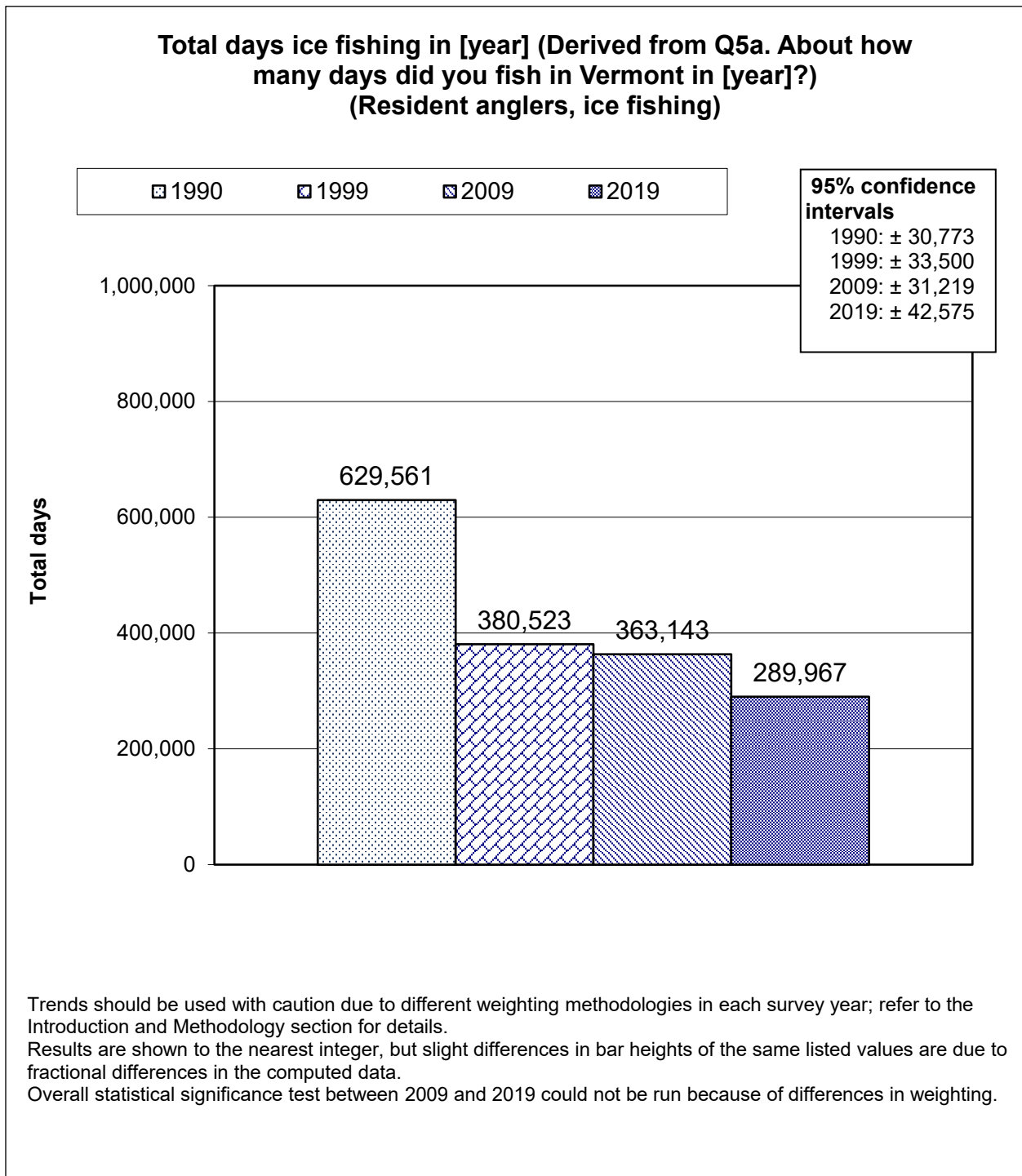


Figure 53. Trends in Total Angler Days of Ice Fishing by Residents

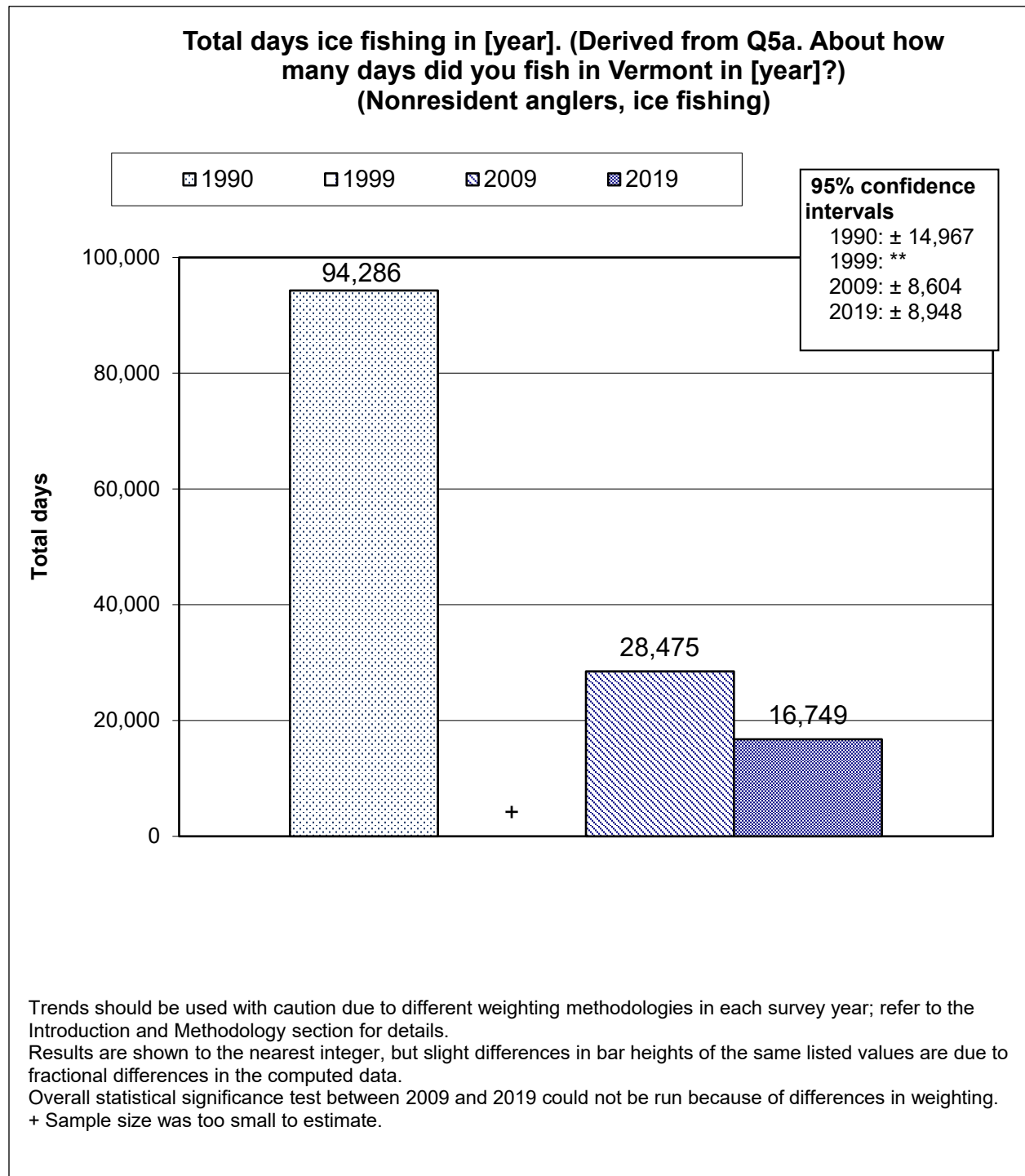


Figure 54. Trends in Total Angler Days of Ice Fishing by Nonresidents

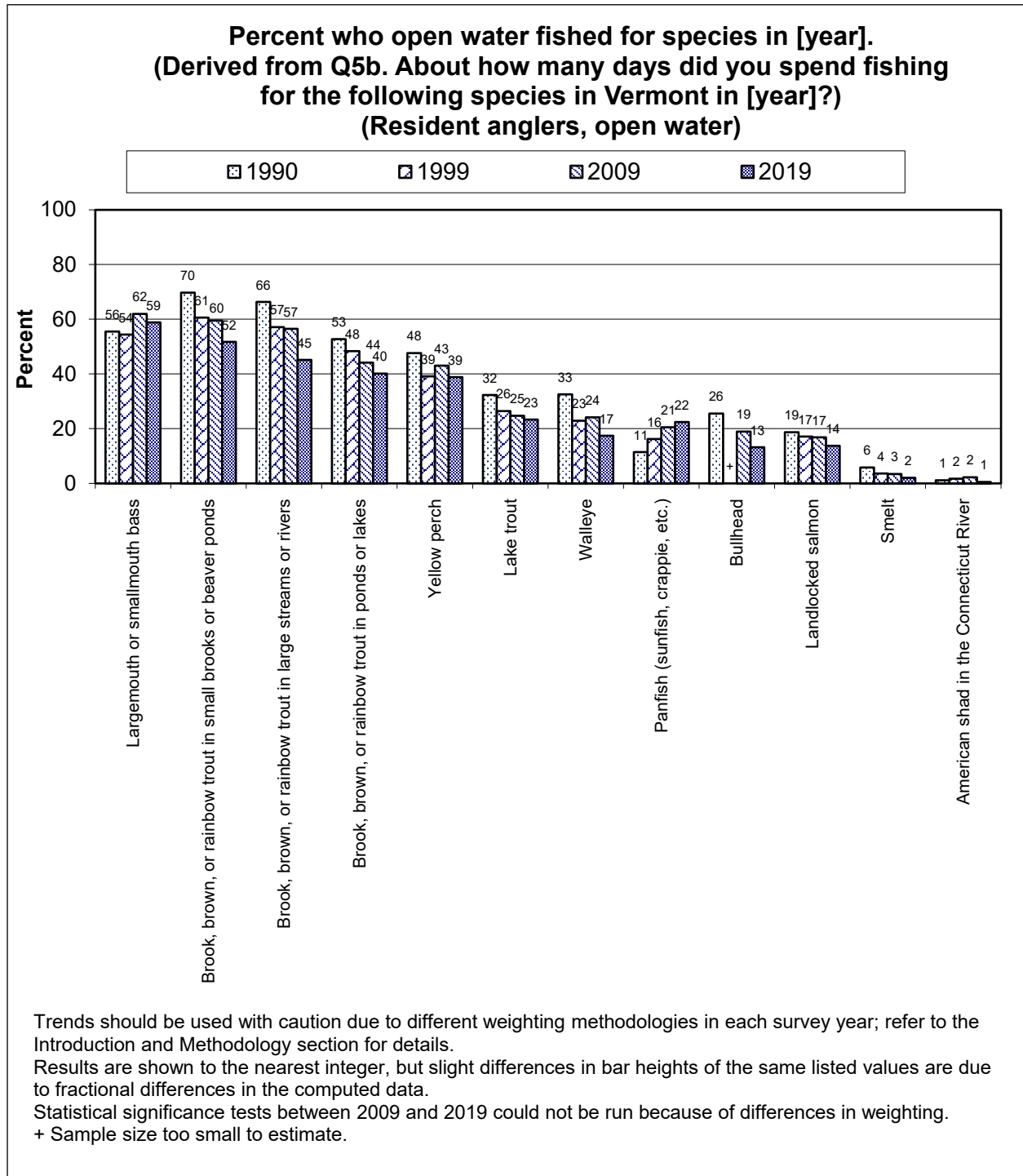


Figure 55. Trends in Percent Who Fished Various Species in Open Water, Residents

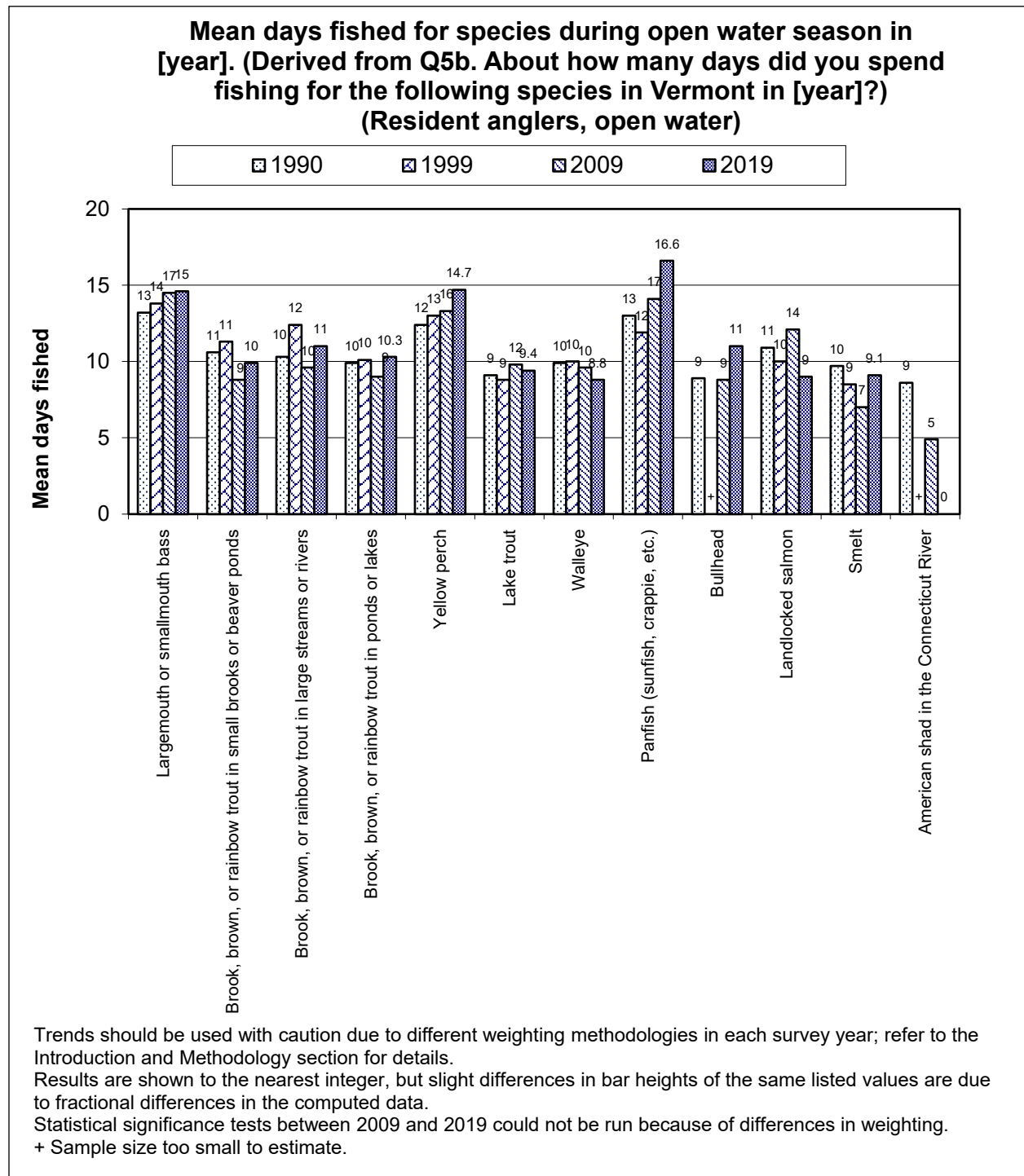


Figure 56. Trends in Mean Days Fished Various Species in Open Water, Residents

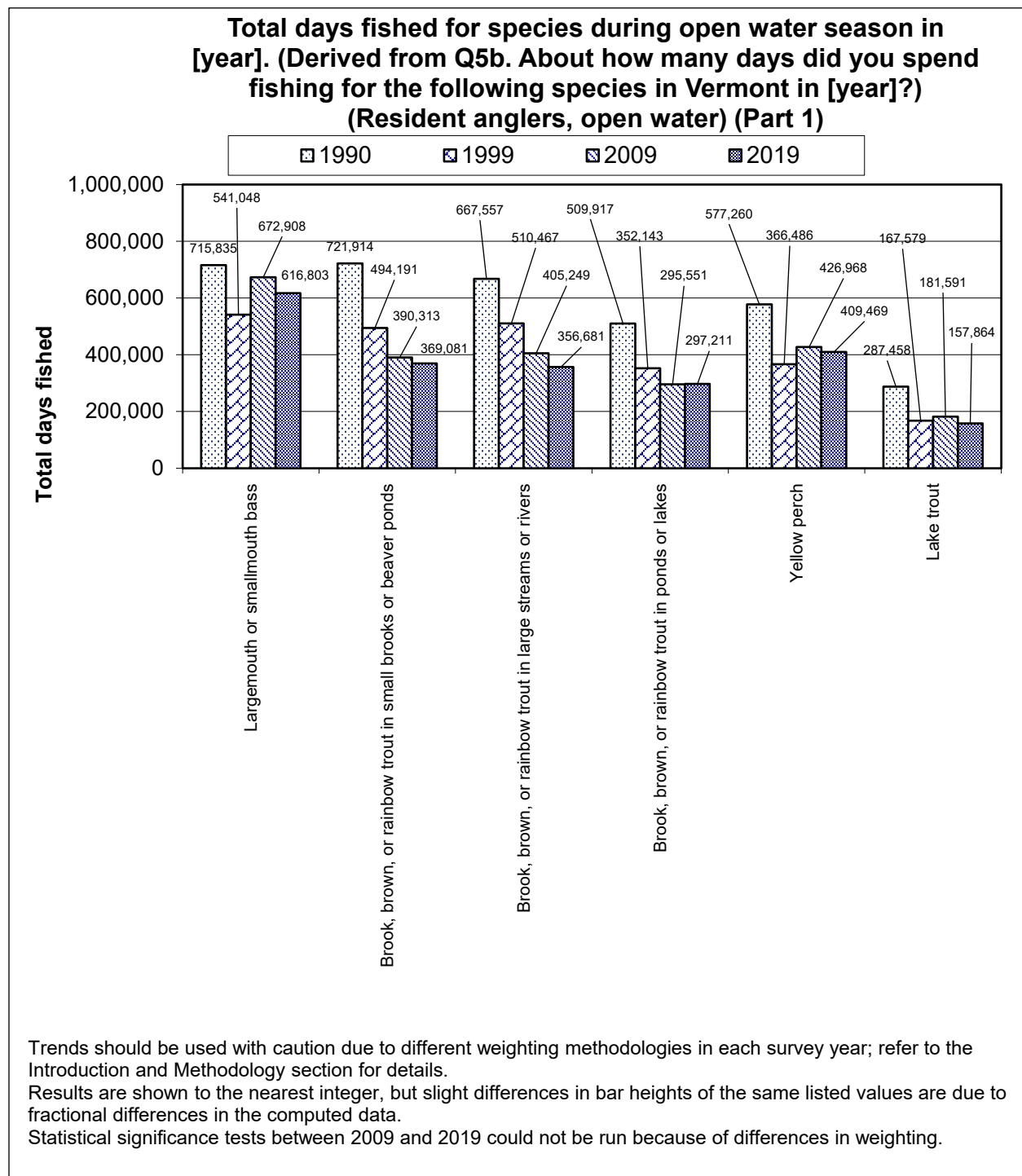


Figure 57. Trends in Total Days Fished Various Species in Open Water, Residents, Part 1

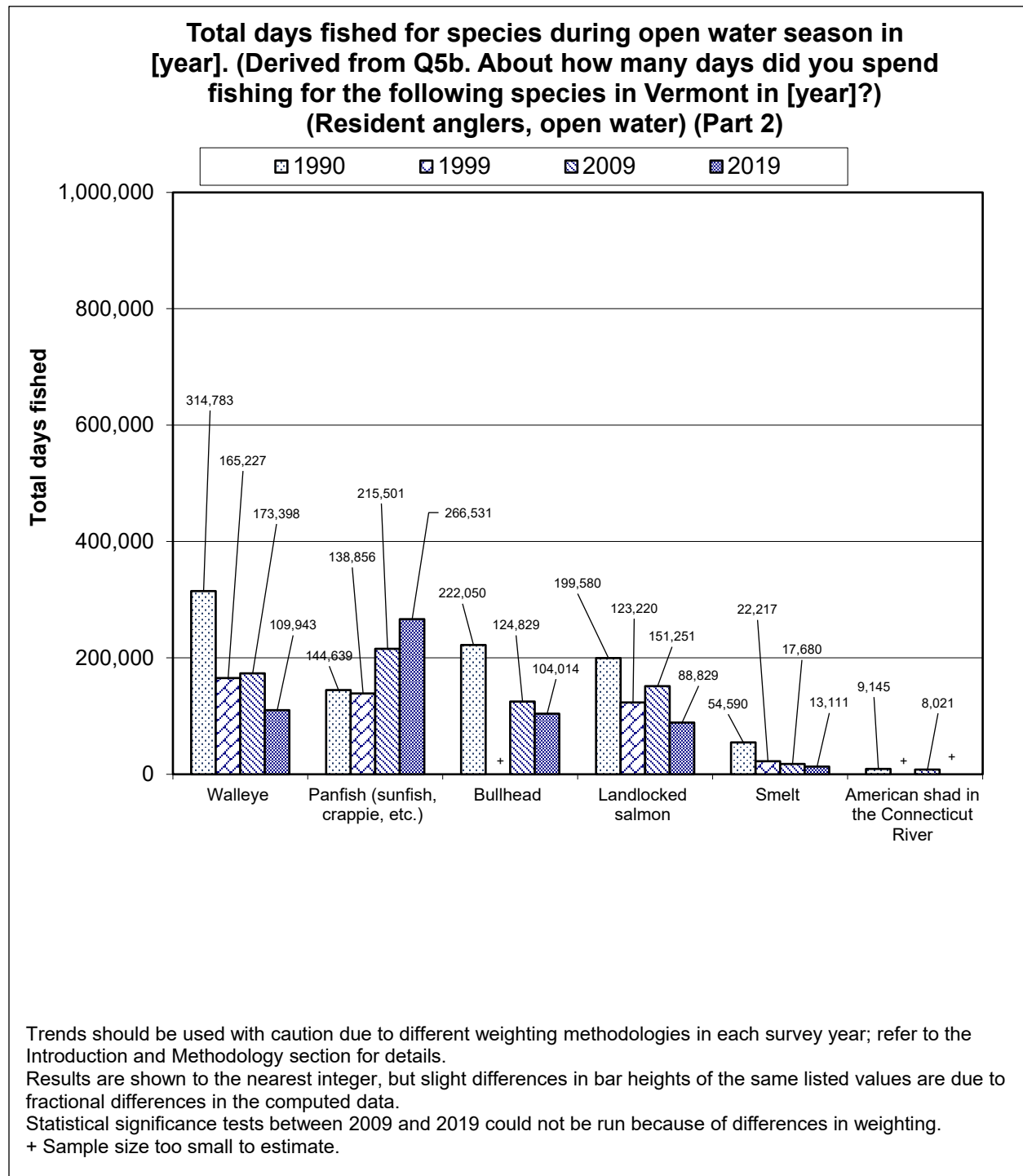


Figure 58. Trends in Total Days Fished Various Species in Open Water, Residents, Part 2

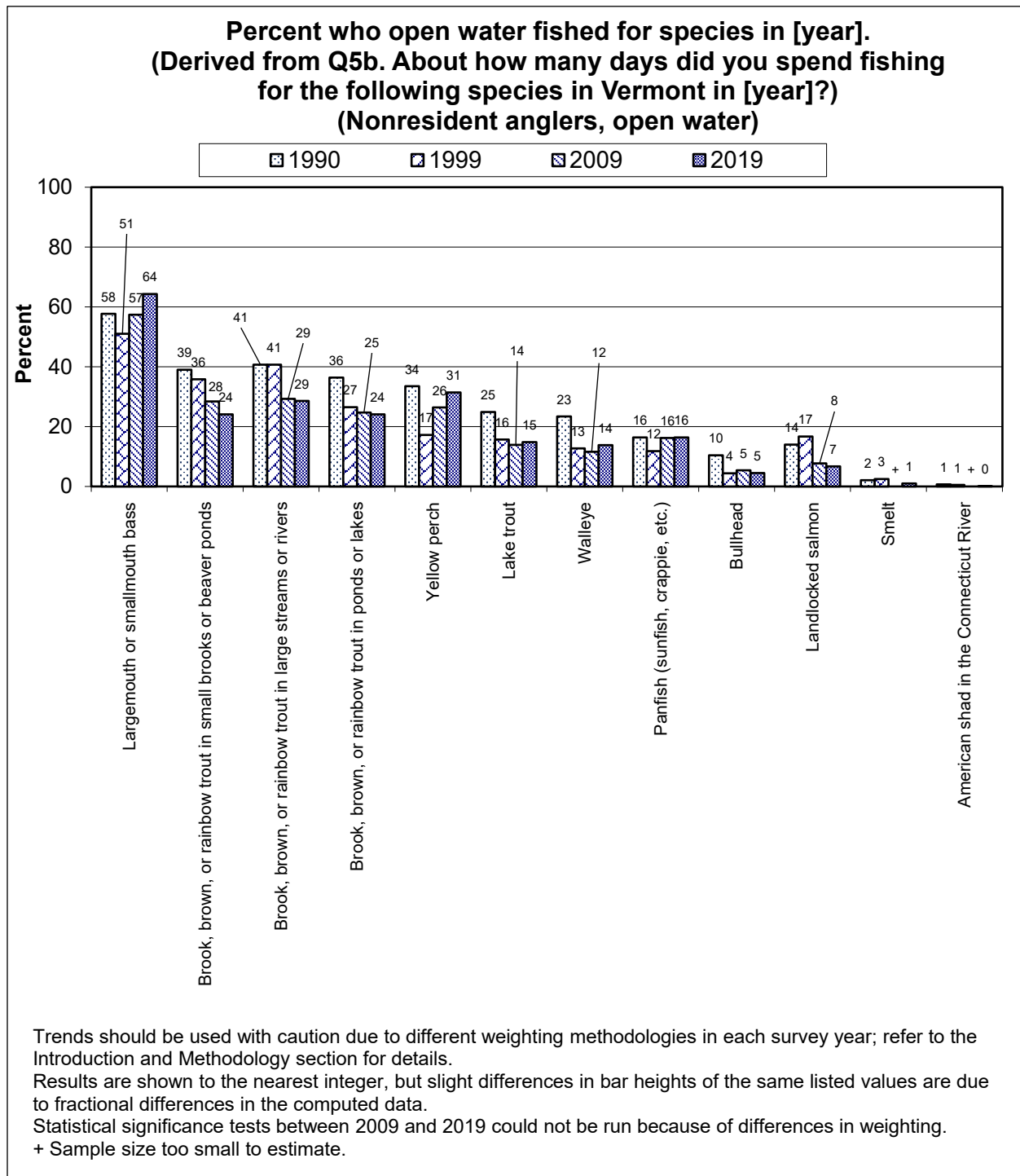


Figure 59. Trends in Percent Who Fished Various Species in Open Water, Nonresidents

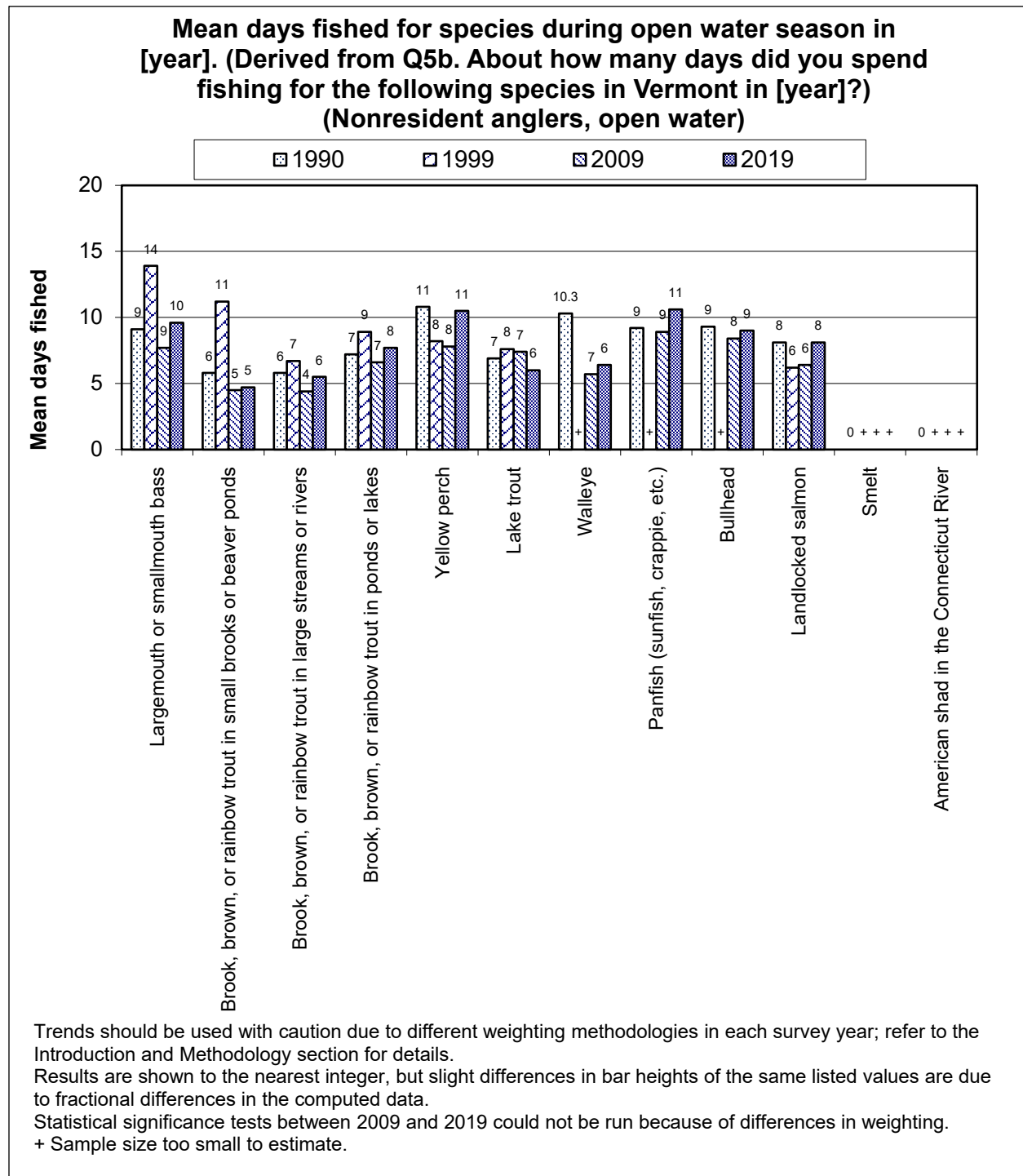


Figure 60. Trends in Mean Days Fished Various Species in Open Water, Nonresidents

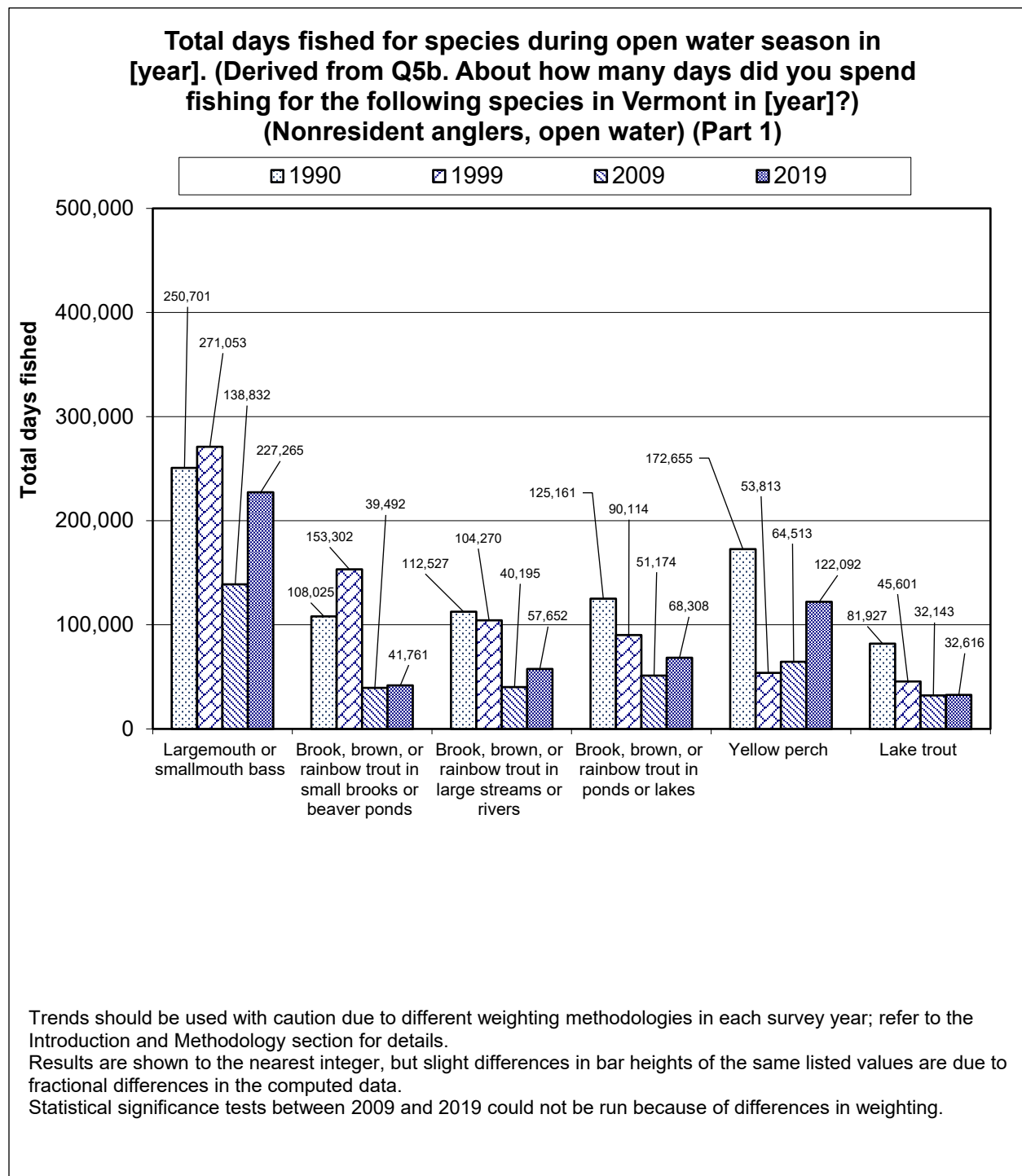


Figure 61. Trends in Total Days Fished Various Species in Open Water, Nonresidents, Part 1

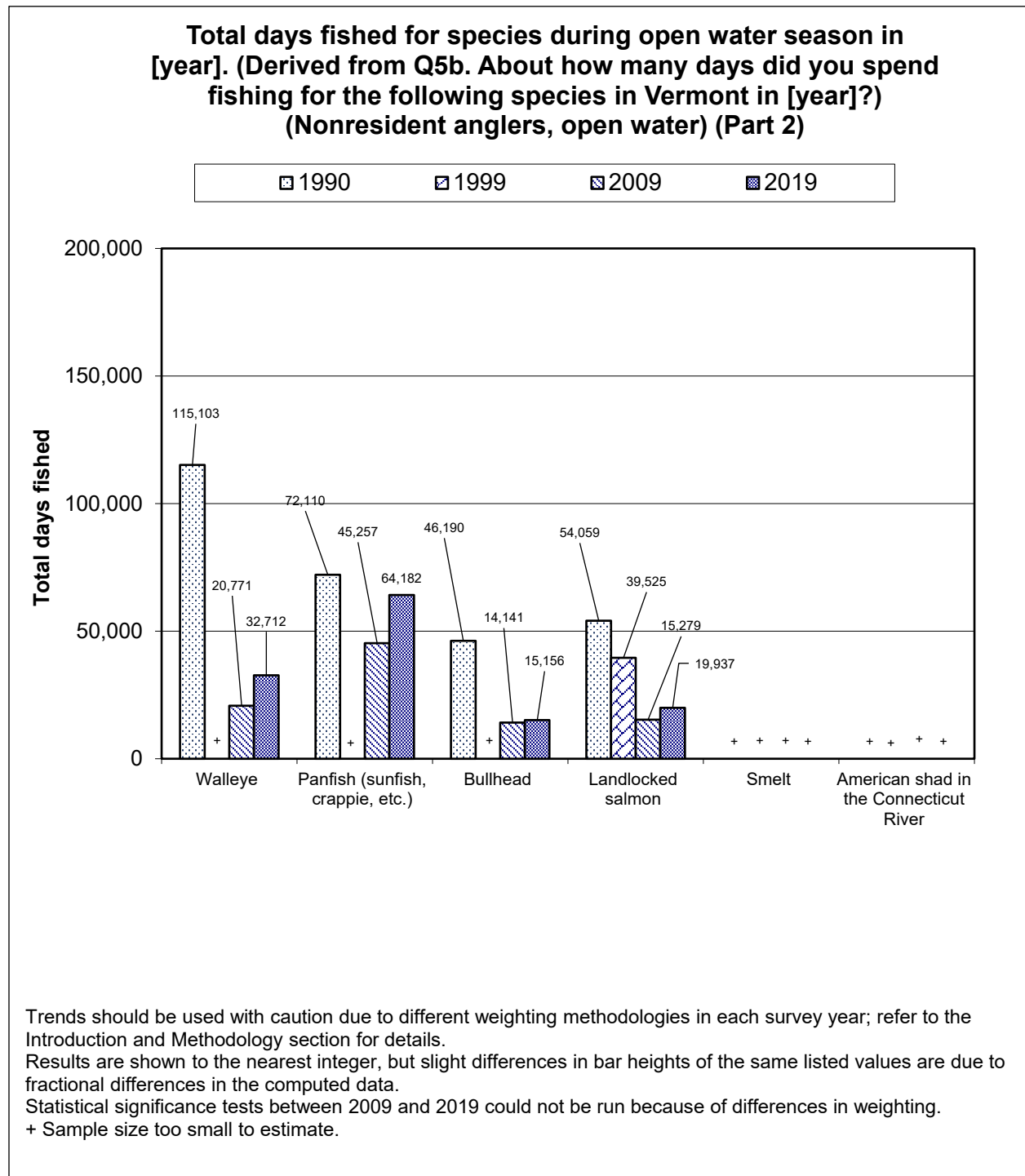


Figure 62. Trends in Total Days Fished Various Species in Open Water, Nonresidents, Part 2

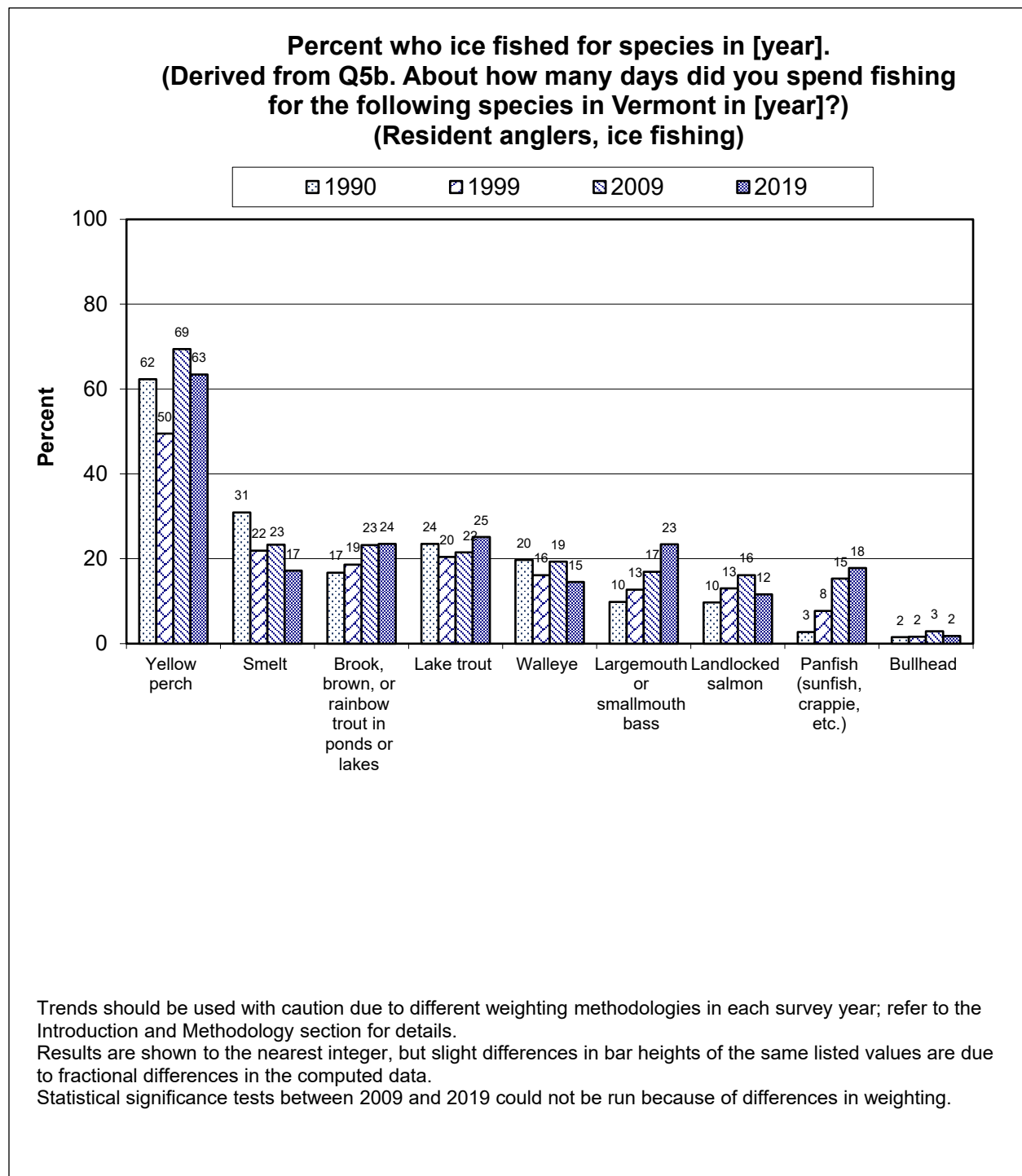


Figure 63. Trends in Percent Who Ice Fished Various Species, Residents

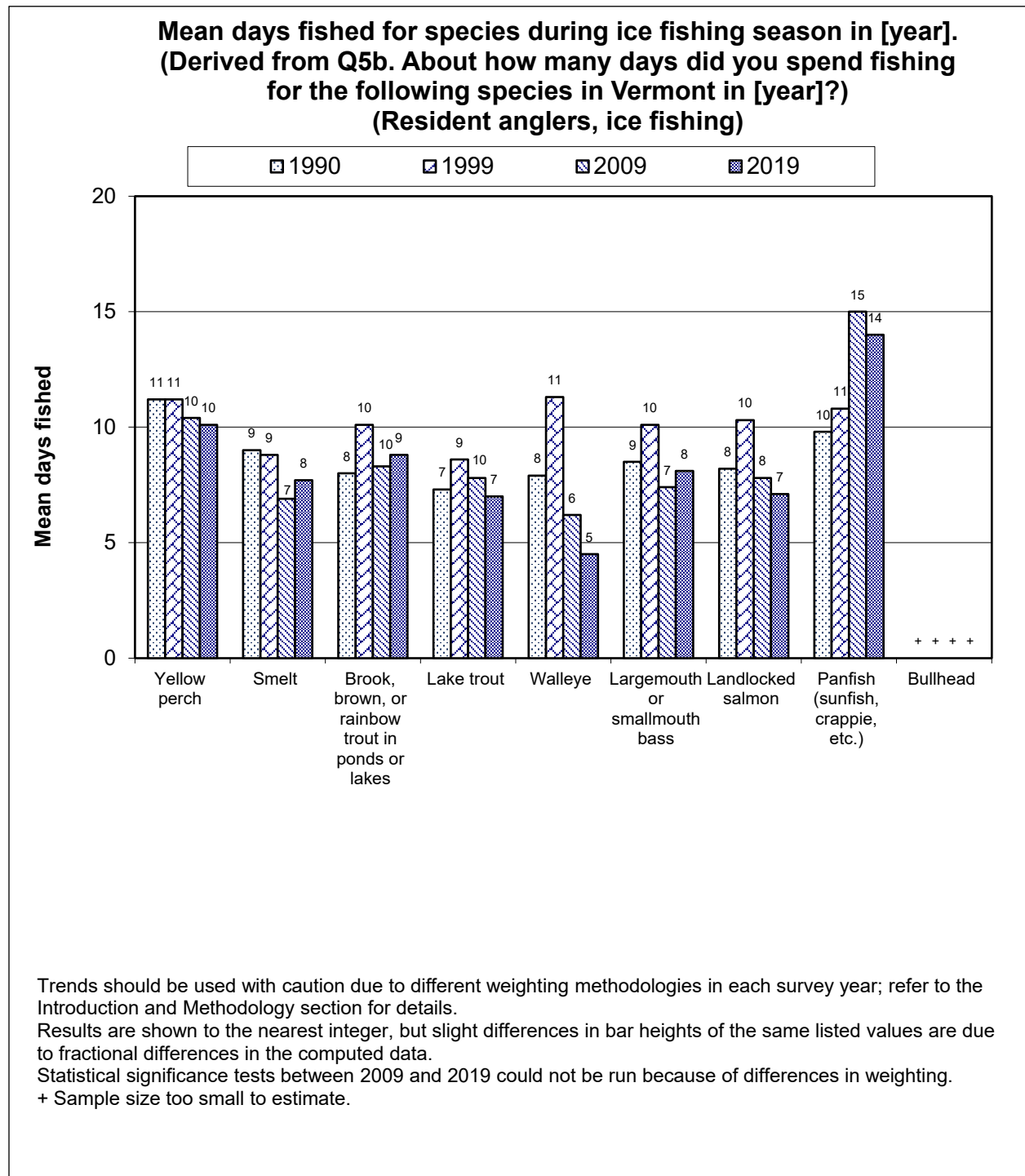


Figure 64. Trends in Mean Days Ice Fished Various Species, Residents

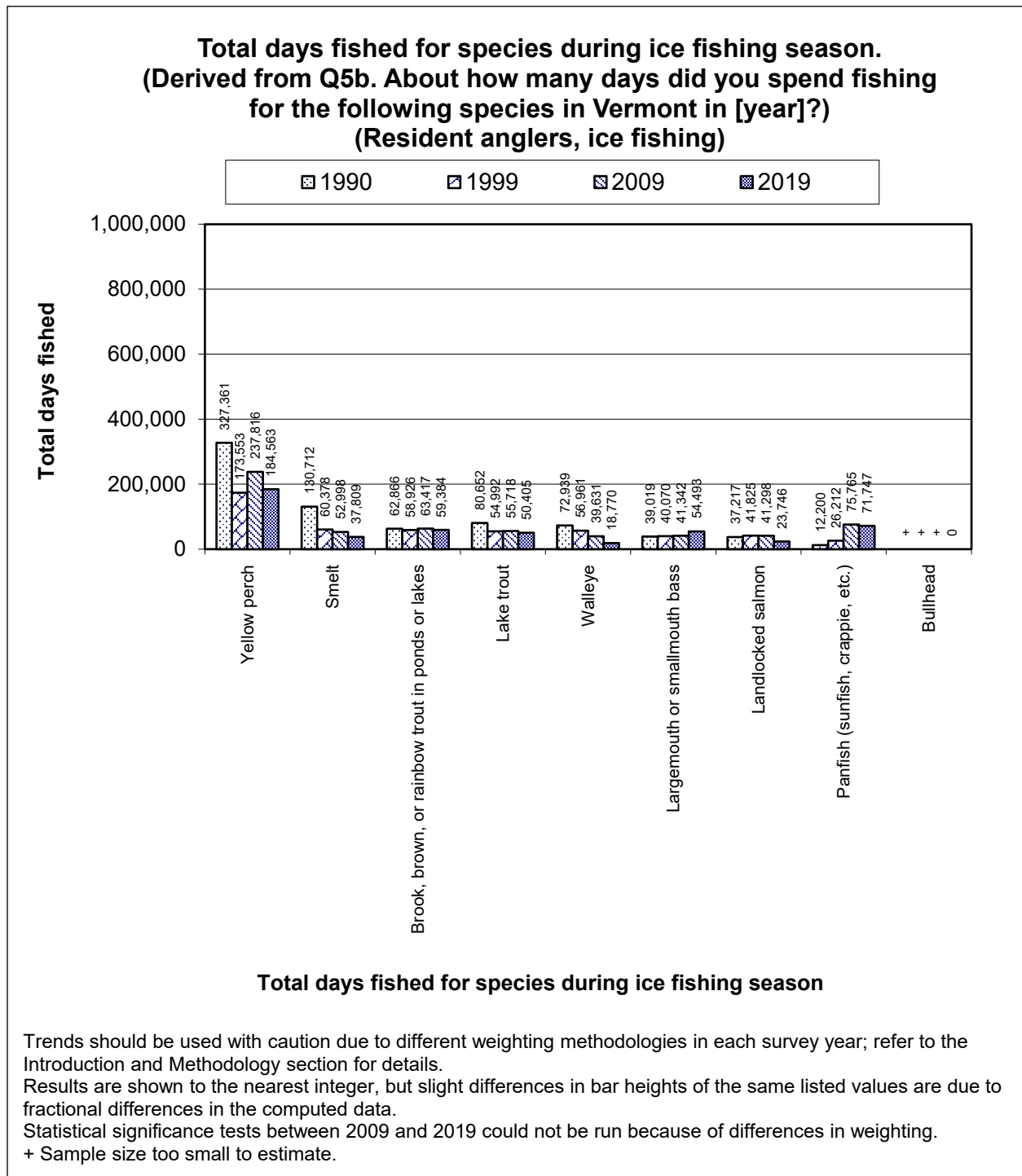


Figure 65. Trends in Total Days Ice Fished Various Species, Residents

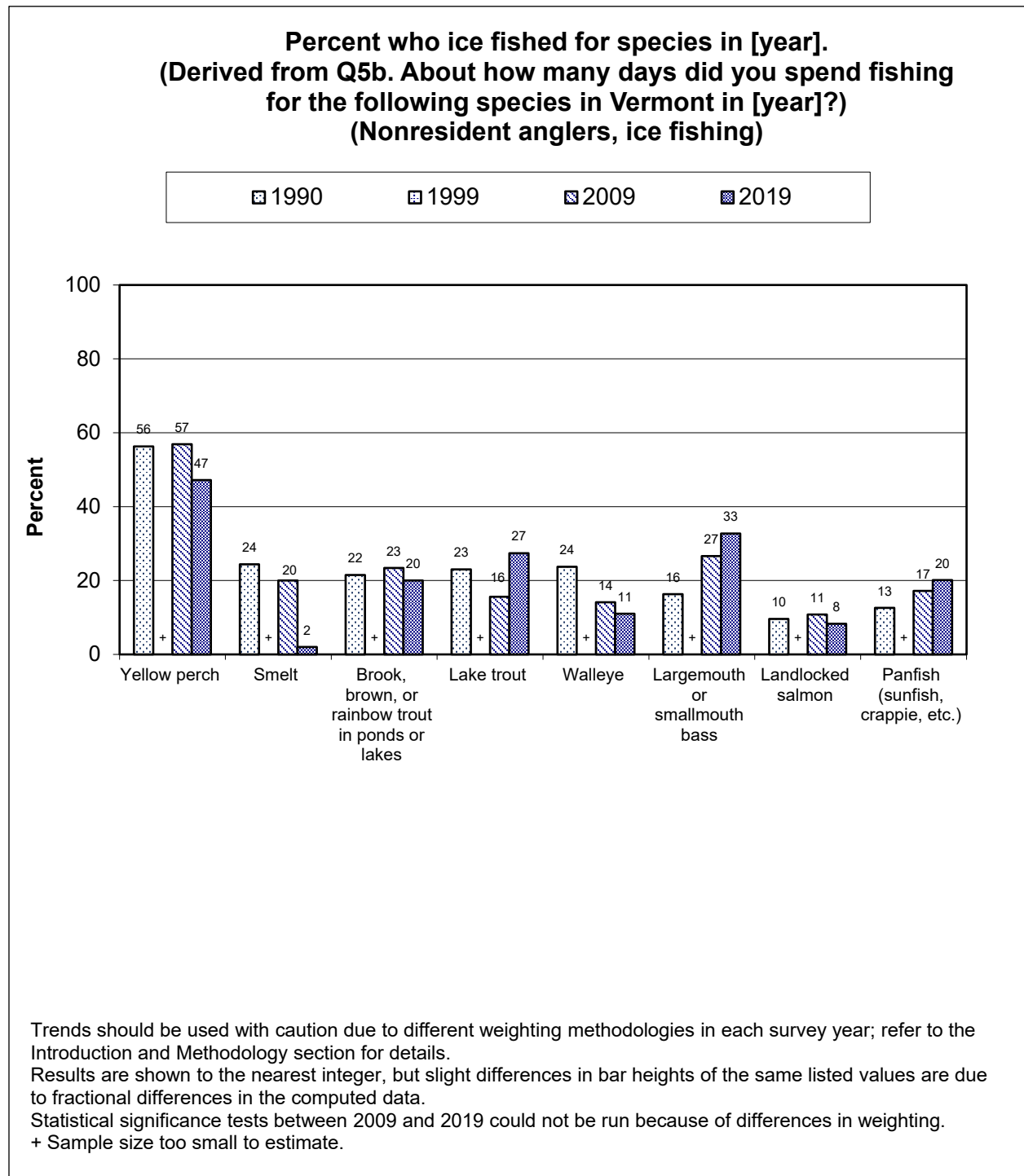


Figure 66. Trends in Percent Who Ice Fished Various Species, Nonresidents

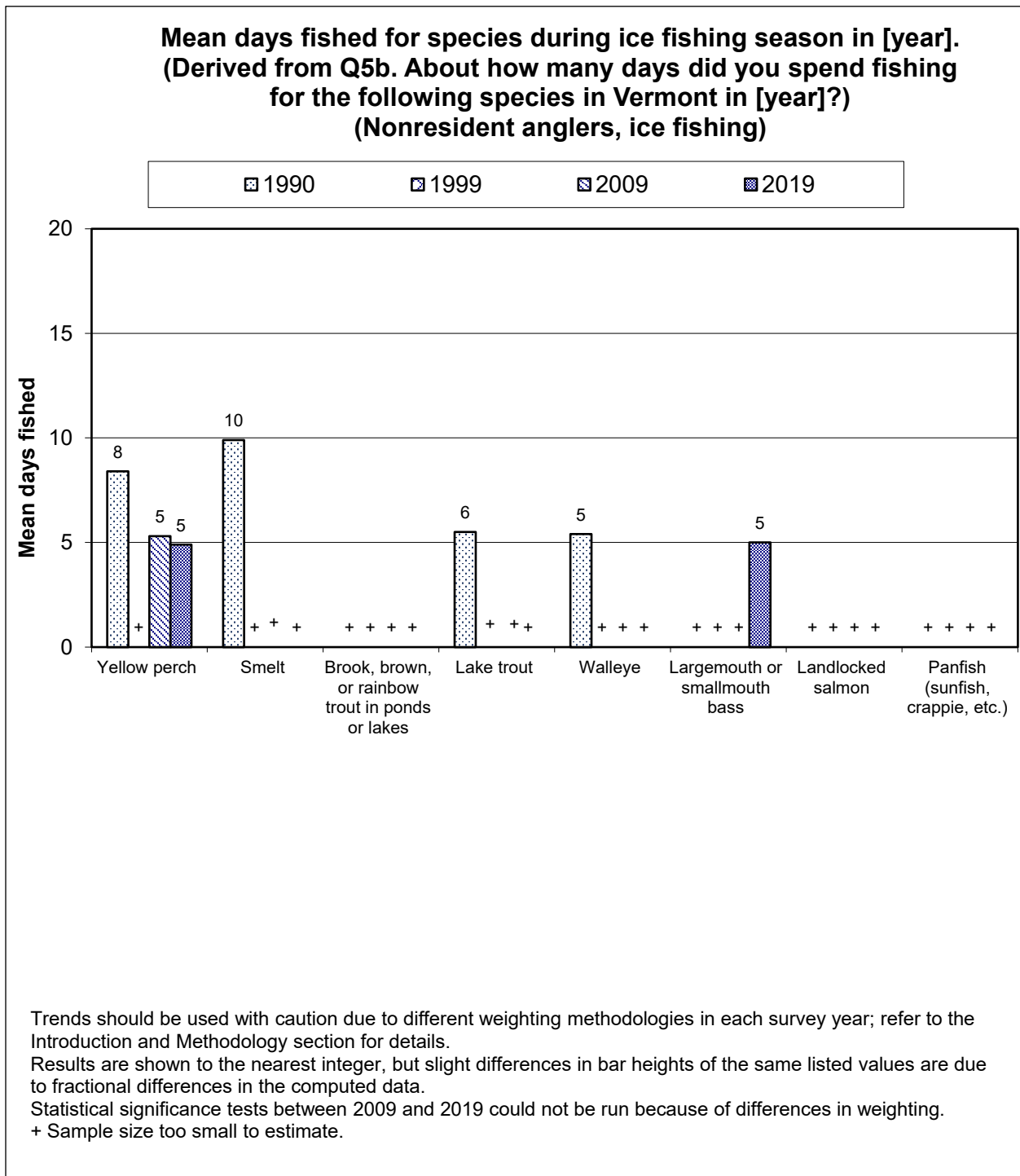


Figure 67. Trends in Mean Days Ice Fished Various Species, Nonresidents

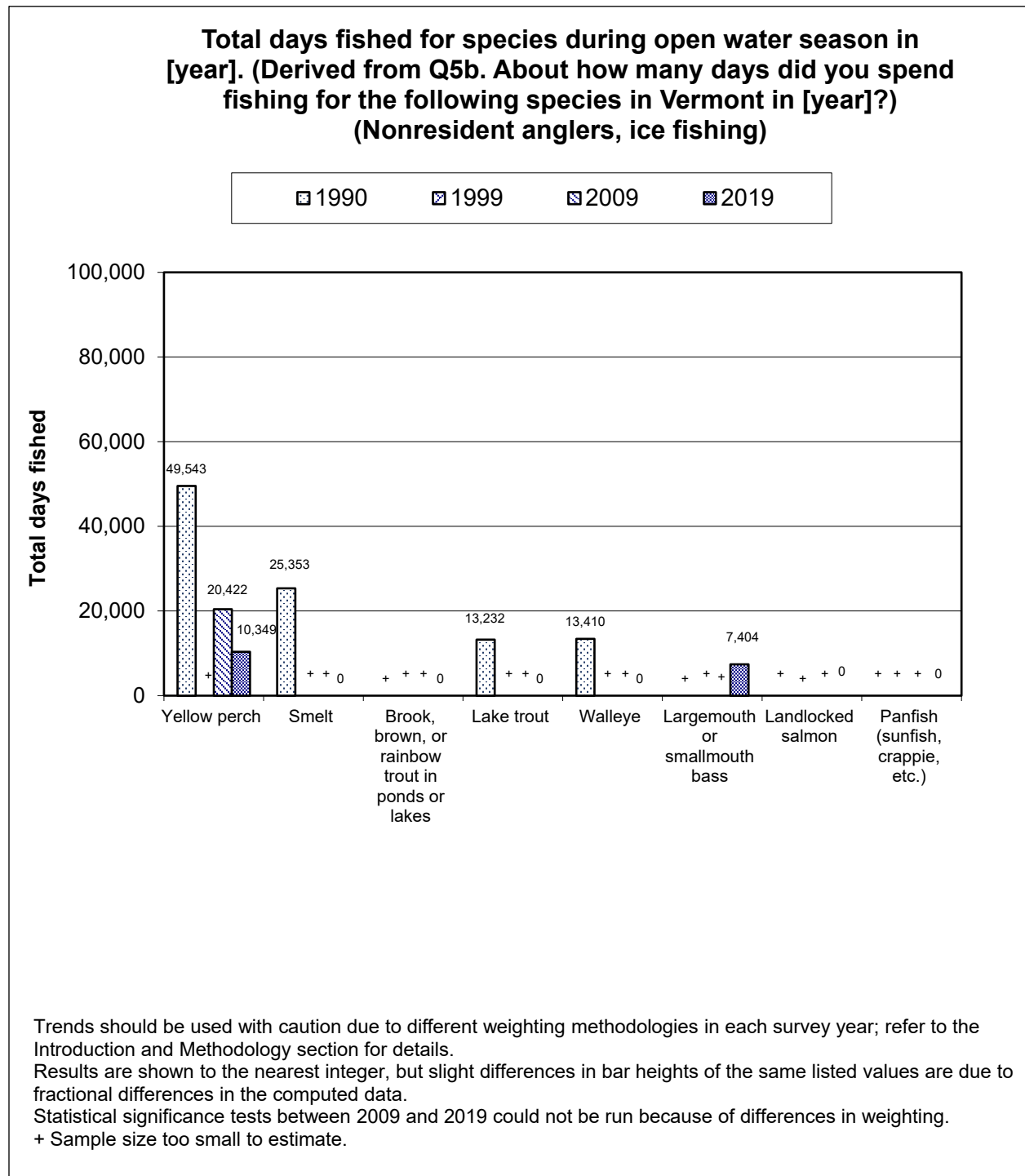


Figure 68. Trends in Total Days Ice Fished Various Species, Nonresidents

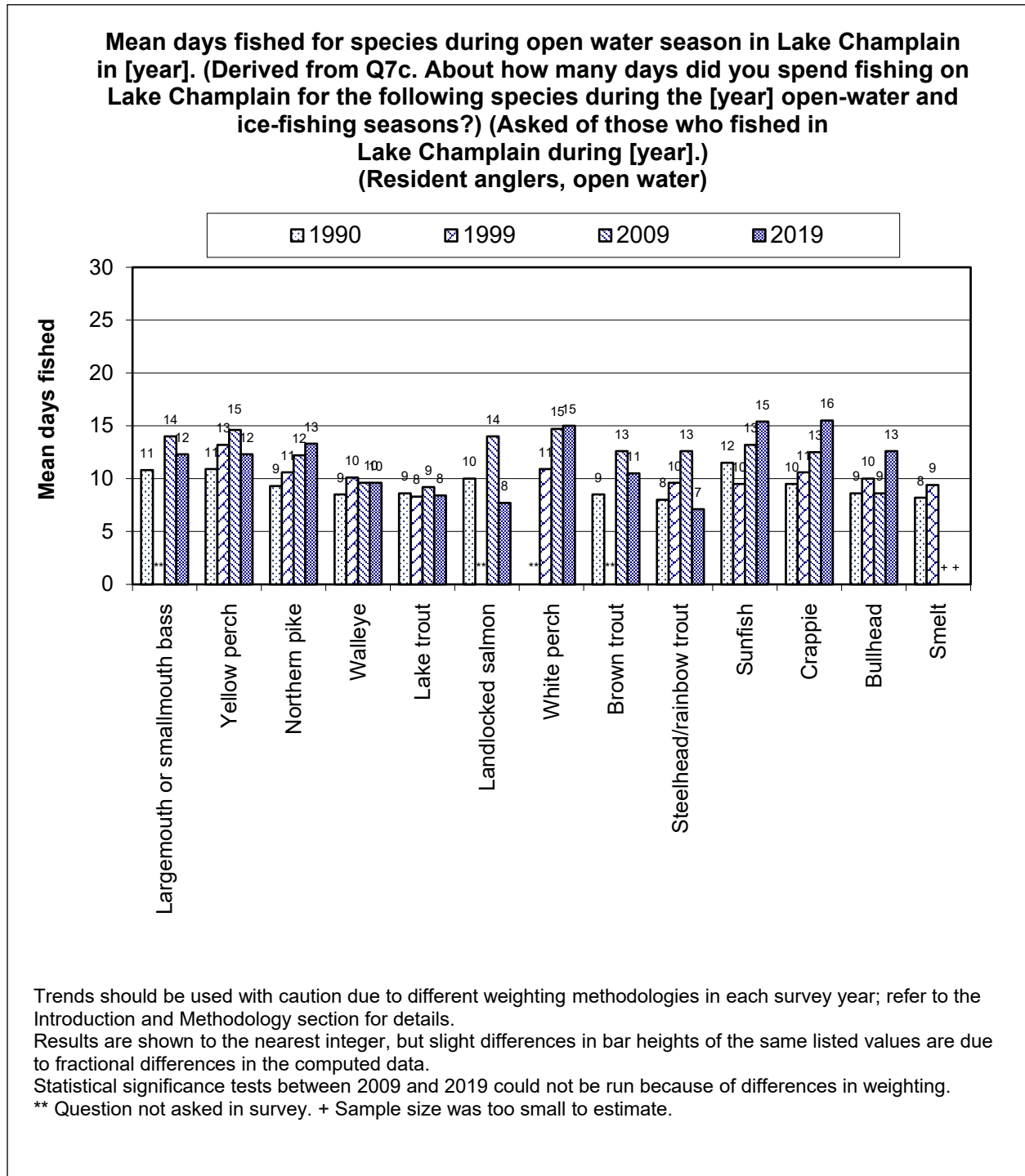


Figure 69. Trends in Mean Days Fished Various Species in Open Water, Lake Champlain, Residents

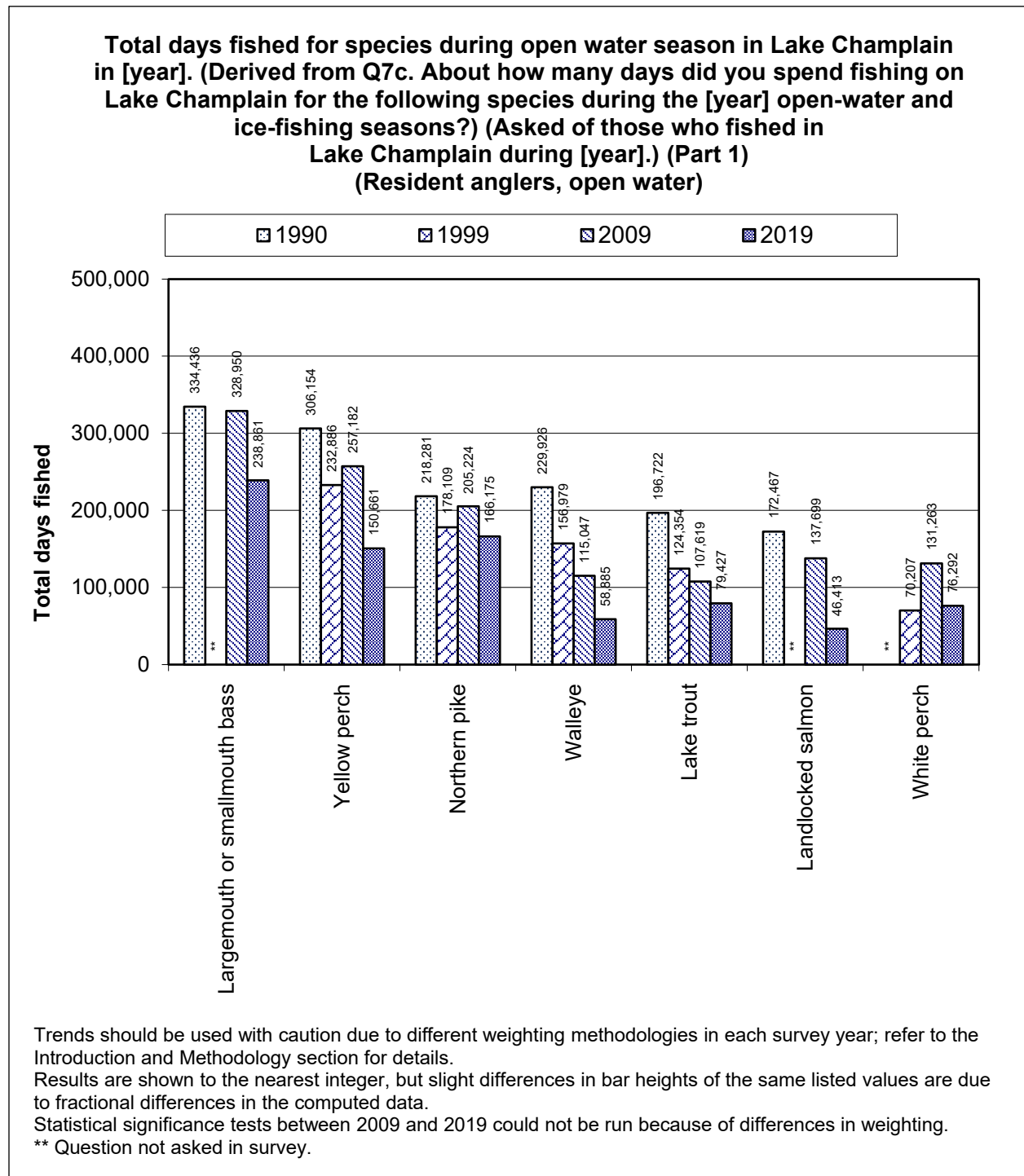


Figure 70. Trends in Total Days Fished Various Species in Open Water, Lake Champlain, Residents, Part 1

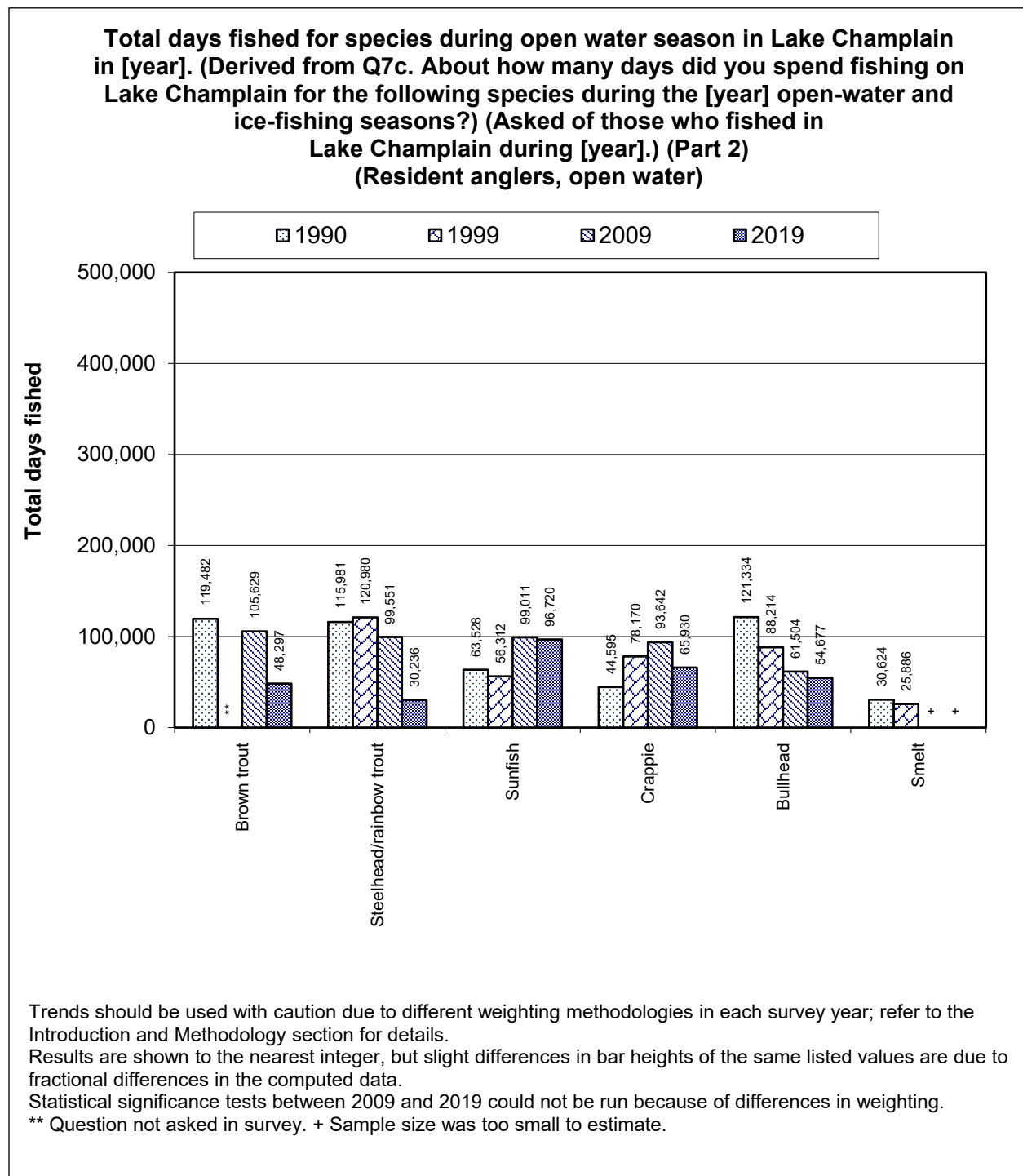


Figure 71. Trends in Total Days Fished Various Species in Open Water, Lake Champlain, Residents, Part 2

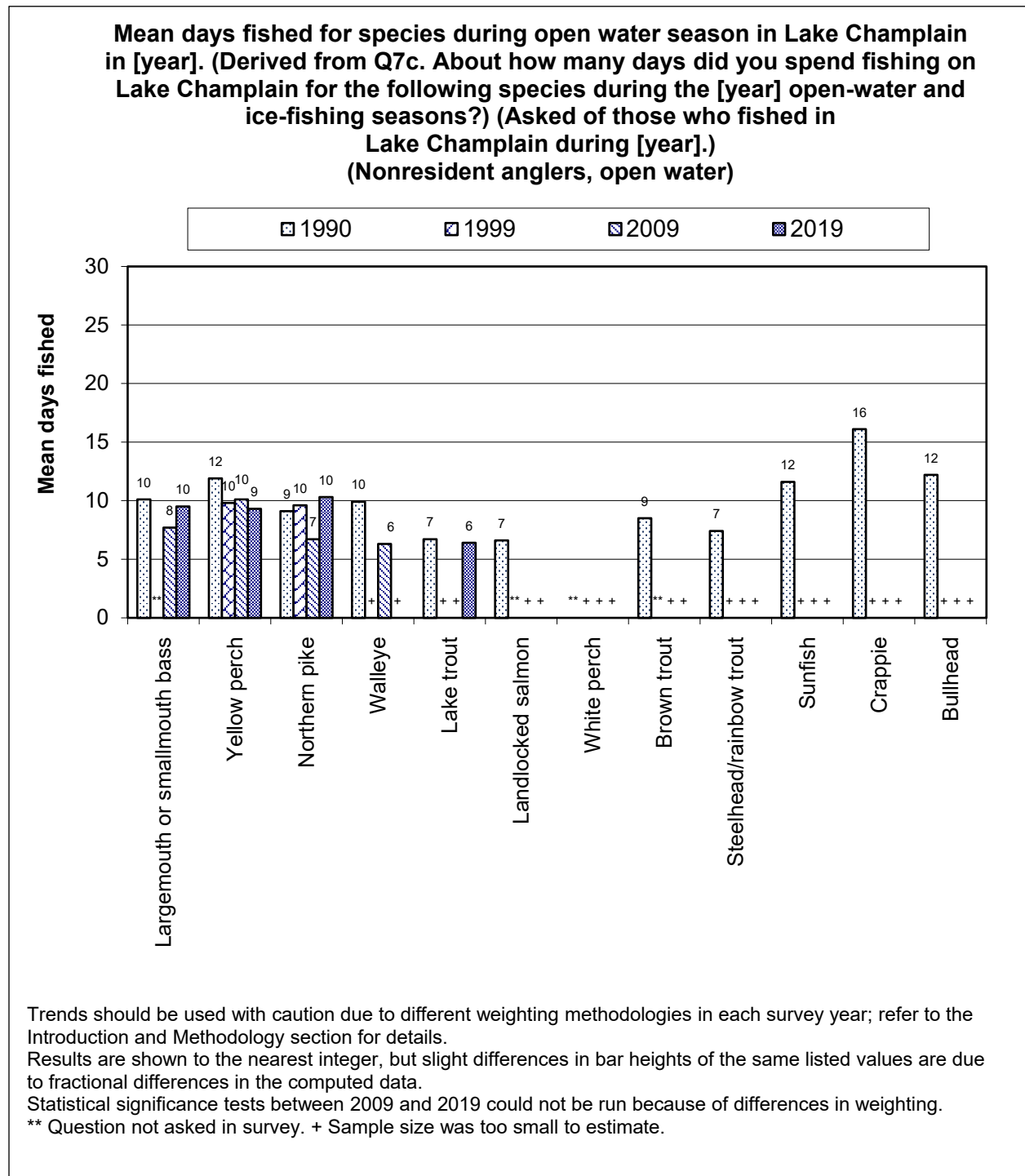


Figure 72. Trends in Mean Days Fished Various Species in Open Water, Lake Champlain, Nonresidents

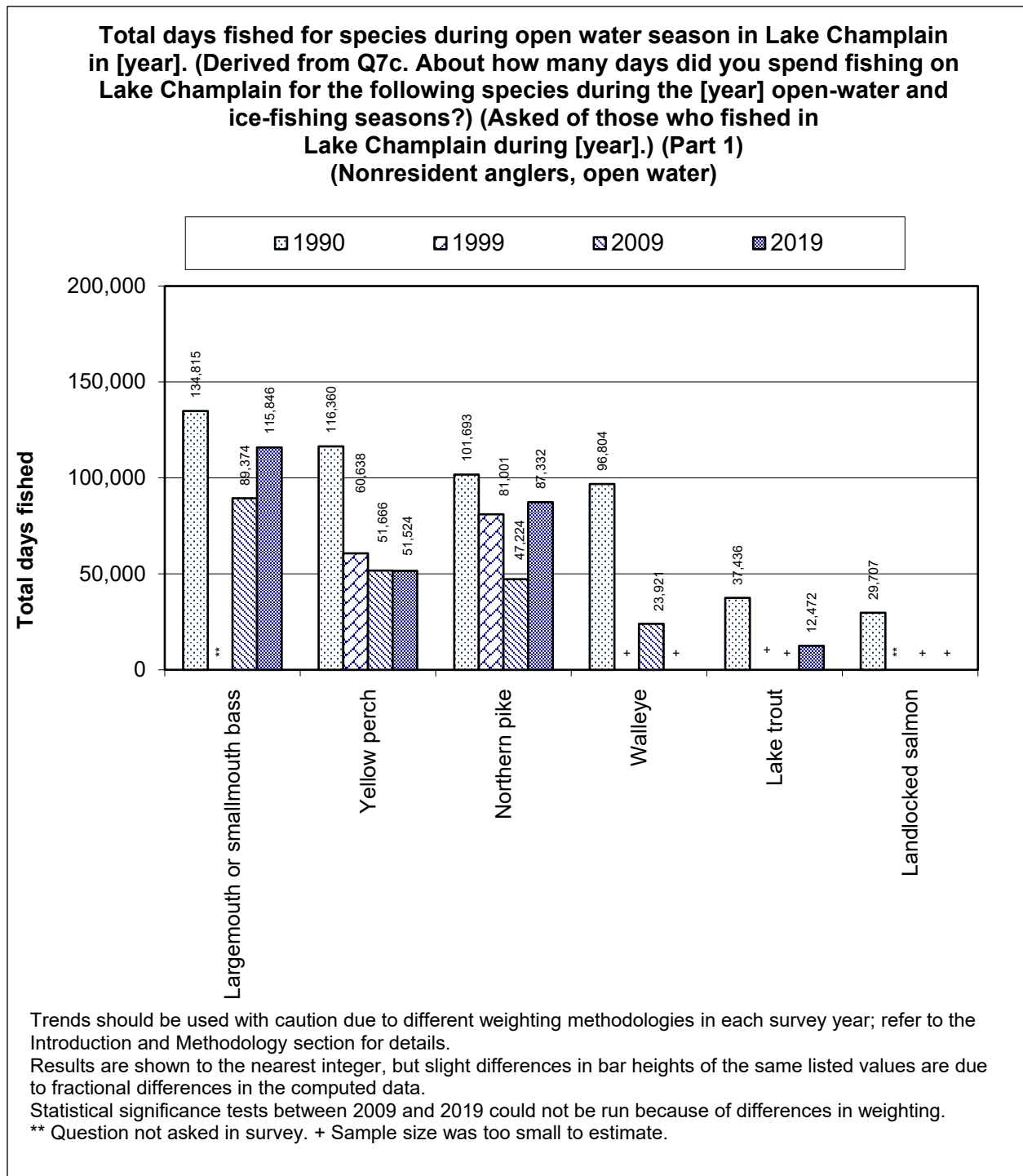


Figure 73. Trends in Total Days Fished Various Species in Open Water, Lake Champlain, Nonresidents, Part 1

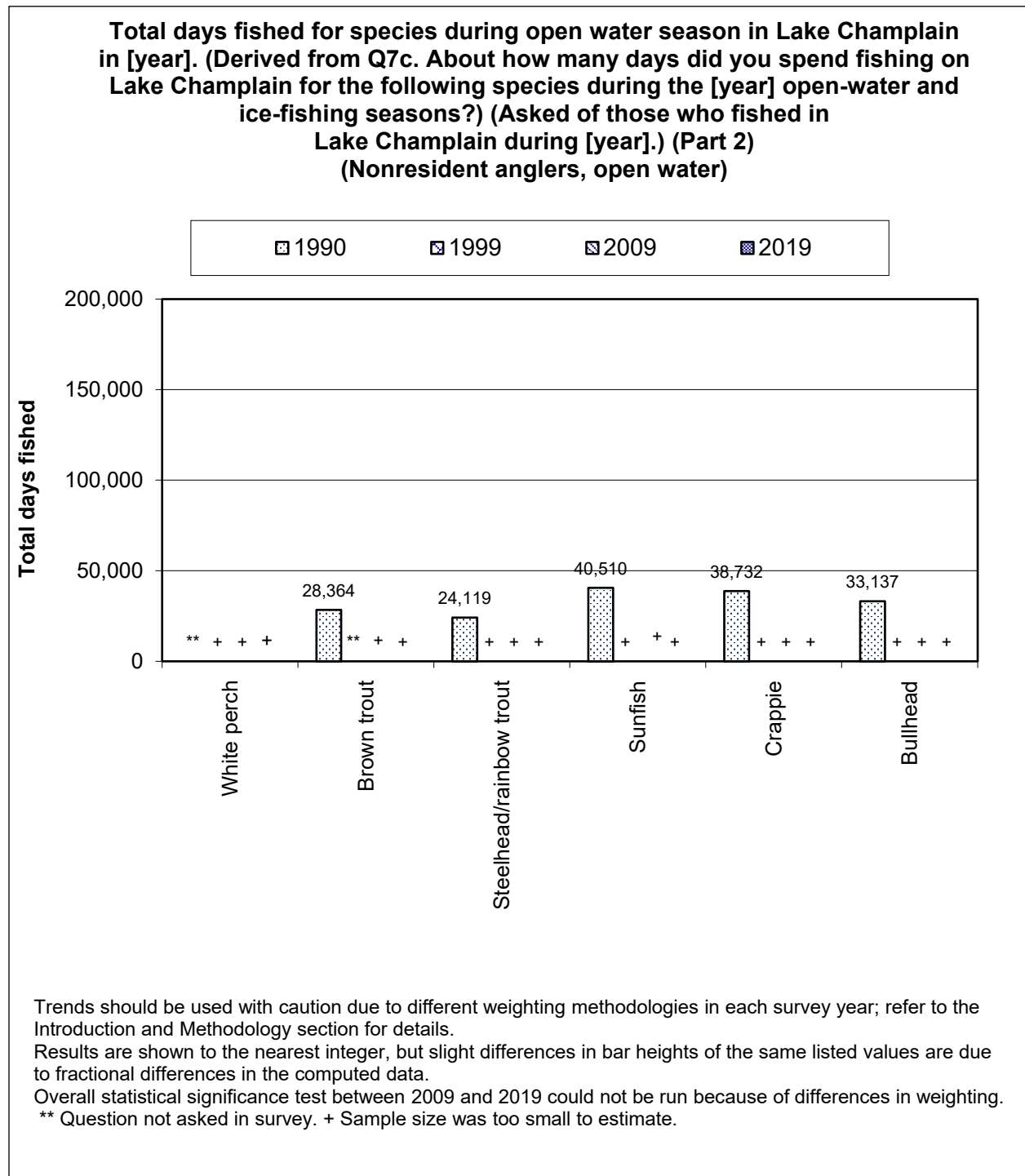


Figure 74. Trends in Total Days Fished Various Species in Open Water, Lake Champlain, Nonresidents, Part 2

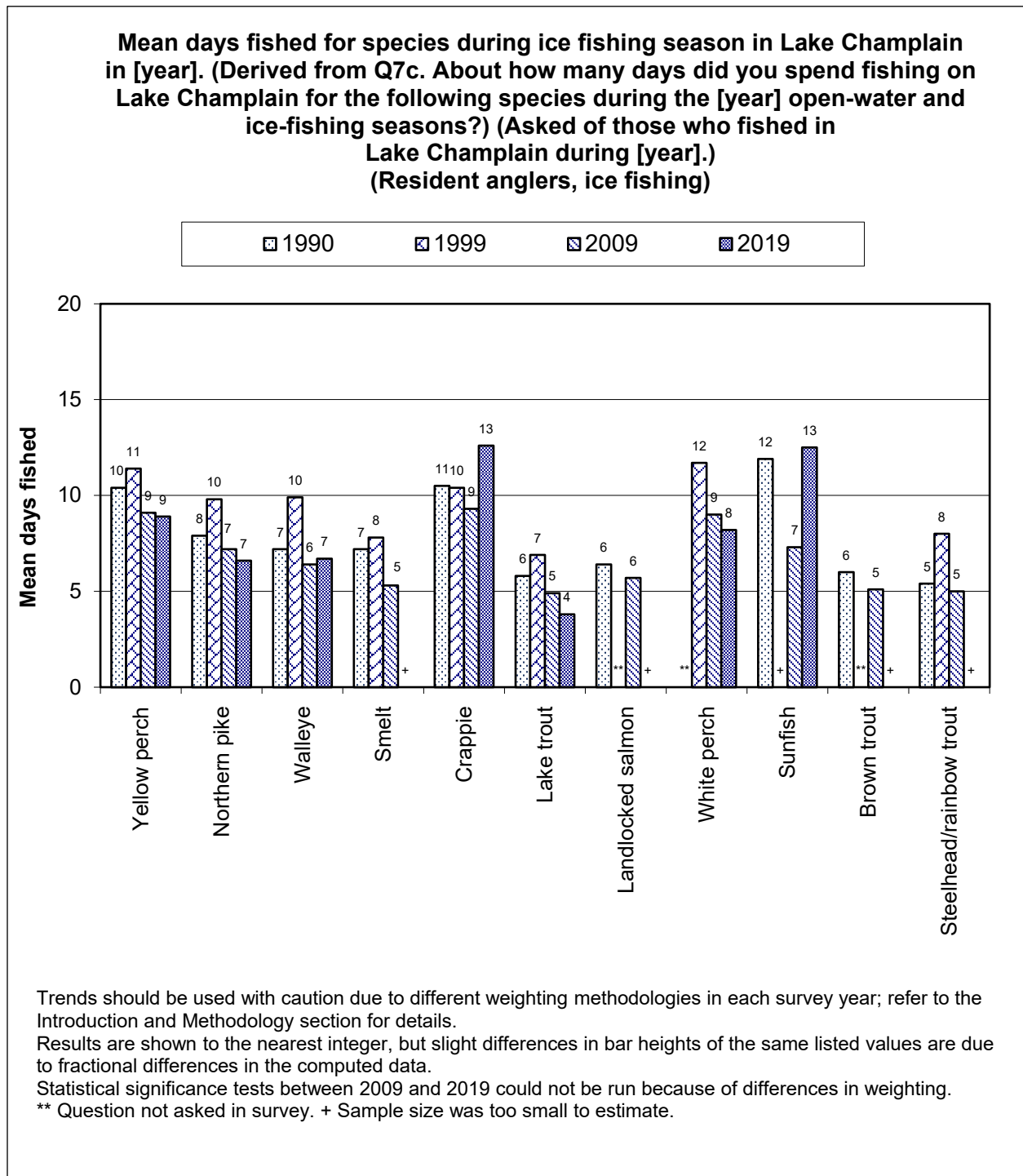


Figure 75. Trends in Mean Days Fished Various Species in Ice Fishing Season, Lake Champlain, Residents

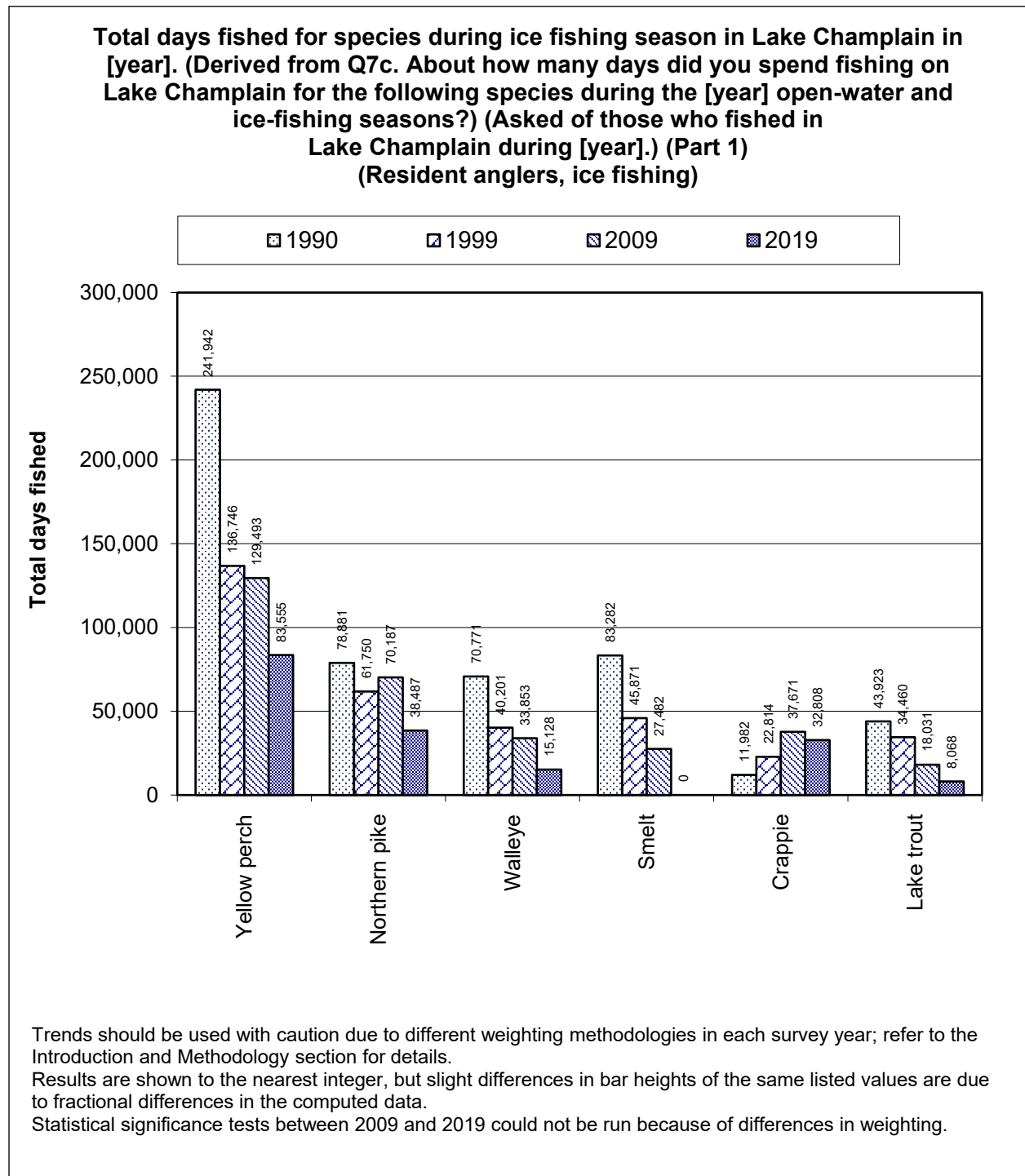


Figure 76. Trends in Total Days Fished Various Species in Ice Fishing Season, Lake Champlain, Residents, Part 1

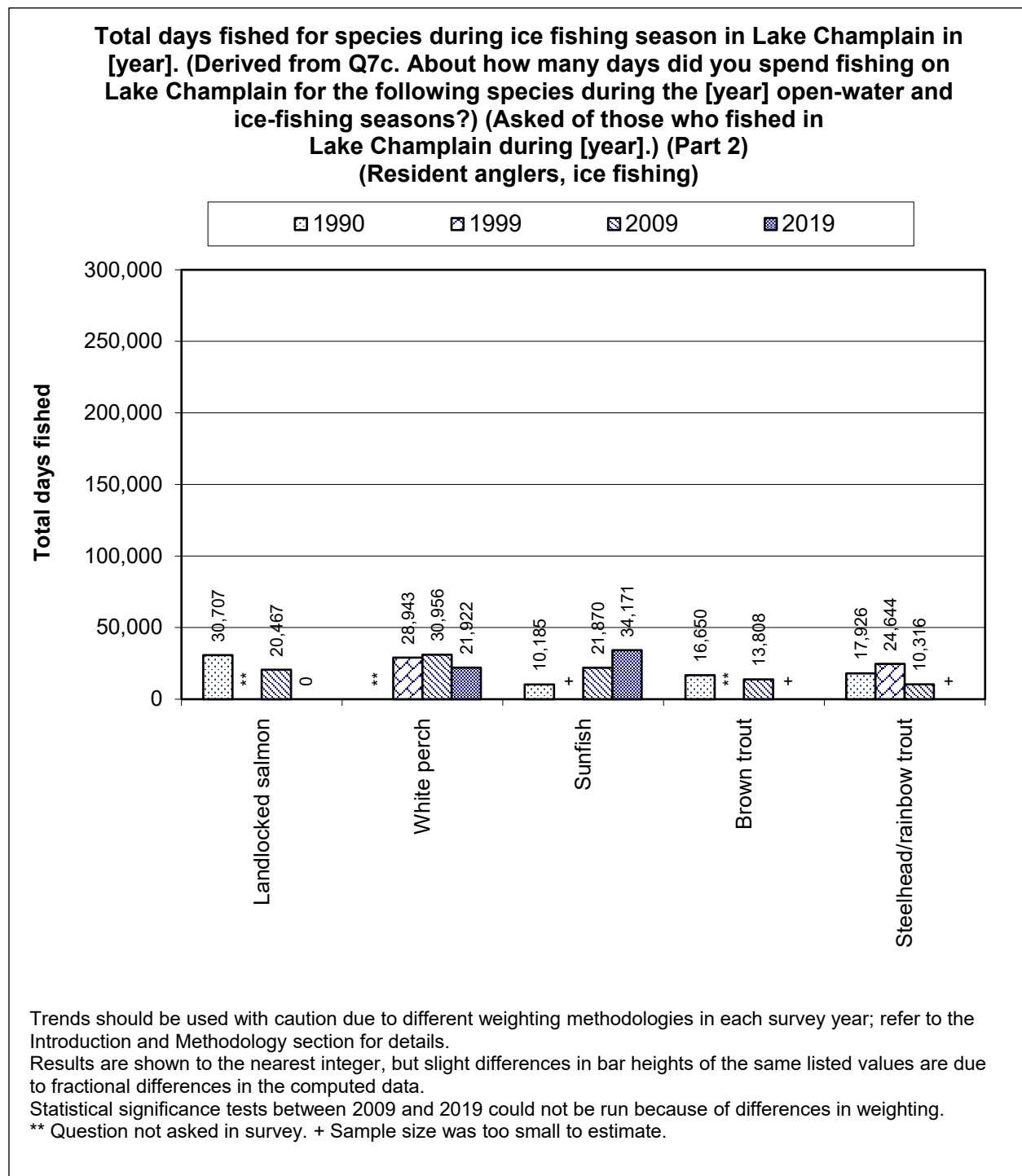


Figure 77. Trends in Total Days Fished Various Species in Ice Fishing Season, Lake Champlain, Residents, Part 2

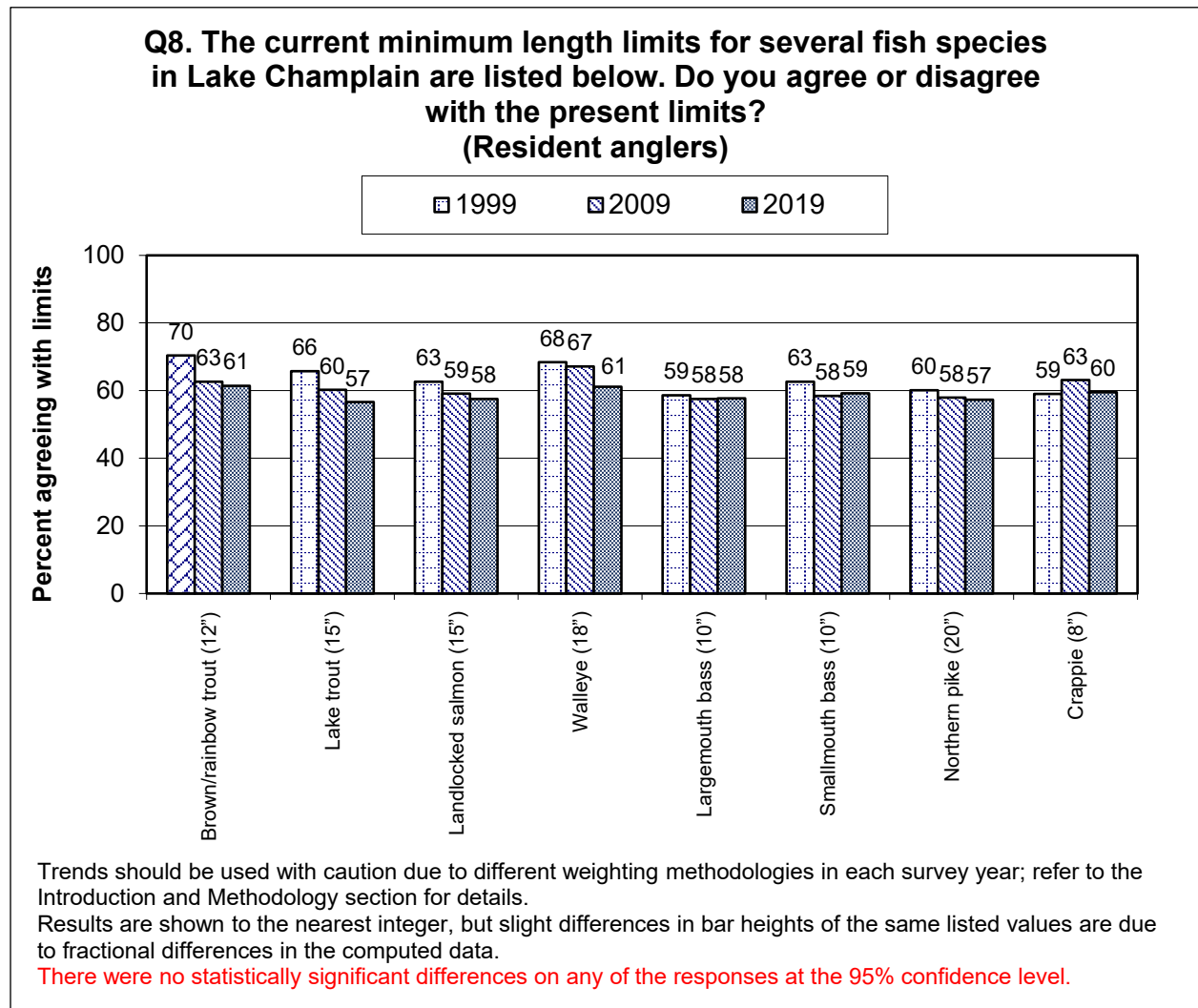


Figure 78. Trends in Percentage Agreeing With Length Limits in Lake Champlain, Residents

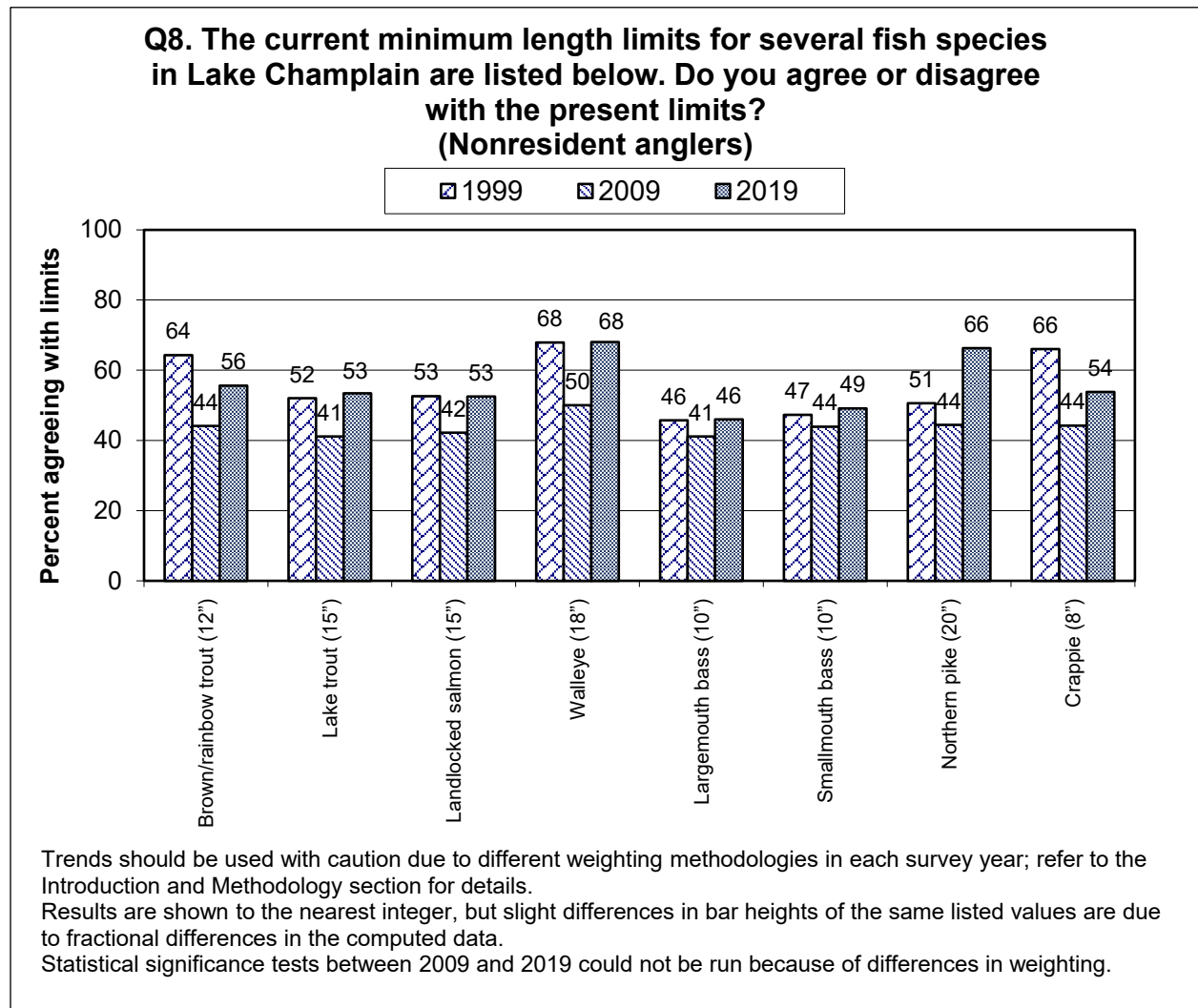


Figure 79. Trends in Percentage Agreeing With Length Limits in Lake Champlain, Nonresidents

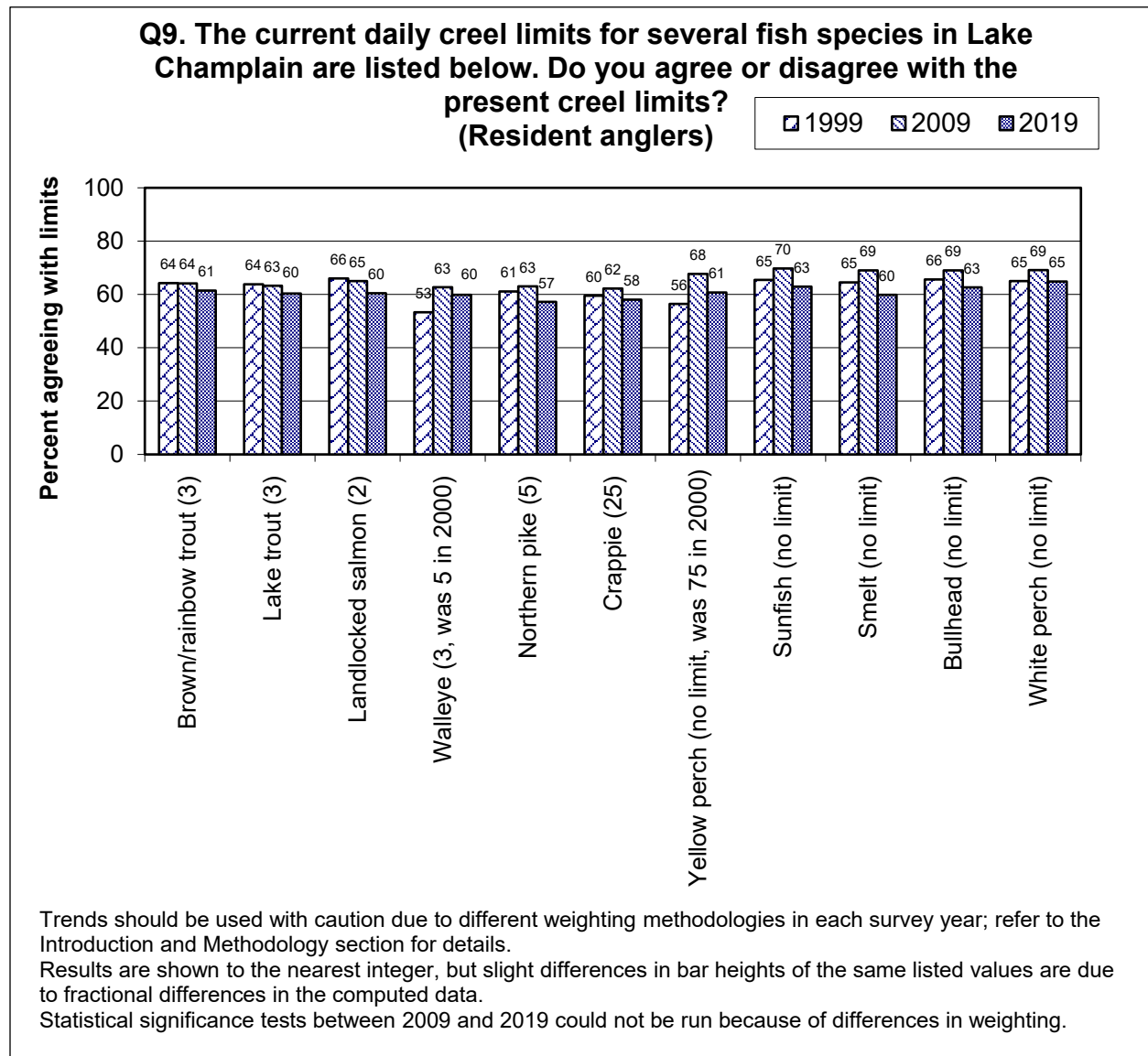


Figure 80. Trends in Percentage Agreeing With Creel Limits in Lake Champlain, Residents

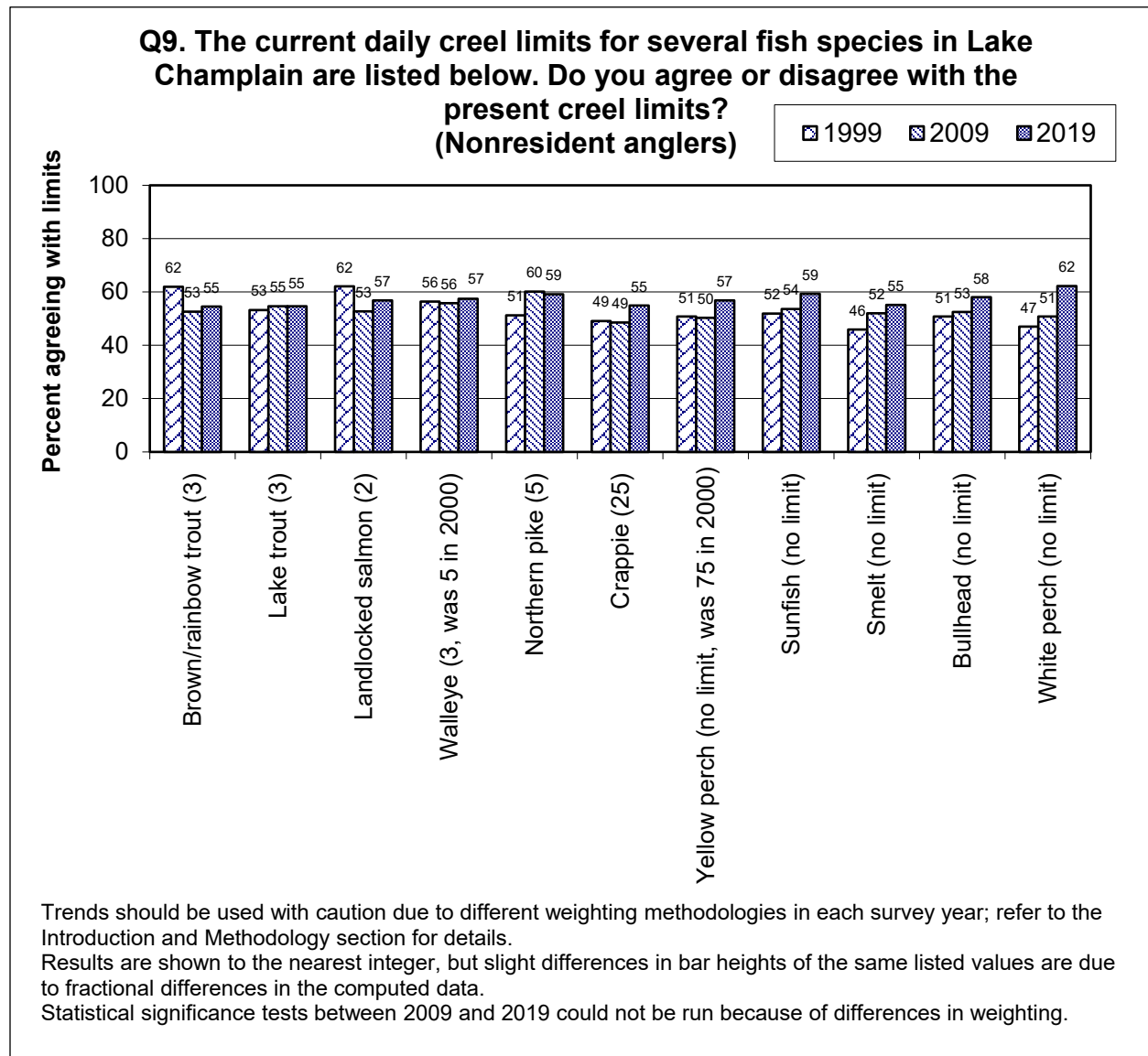


Figure 81. Trends in Percentage Agreeing With Creel Limits in Lake Champlain, Nonresidents

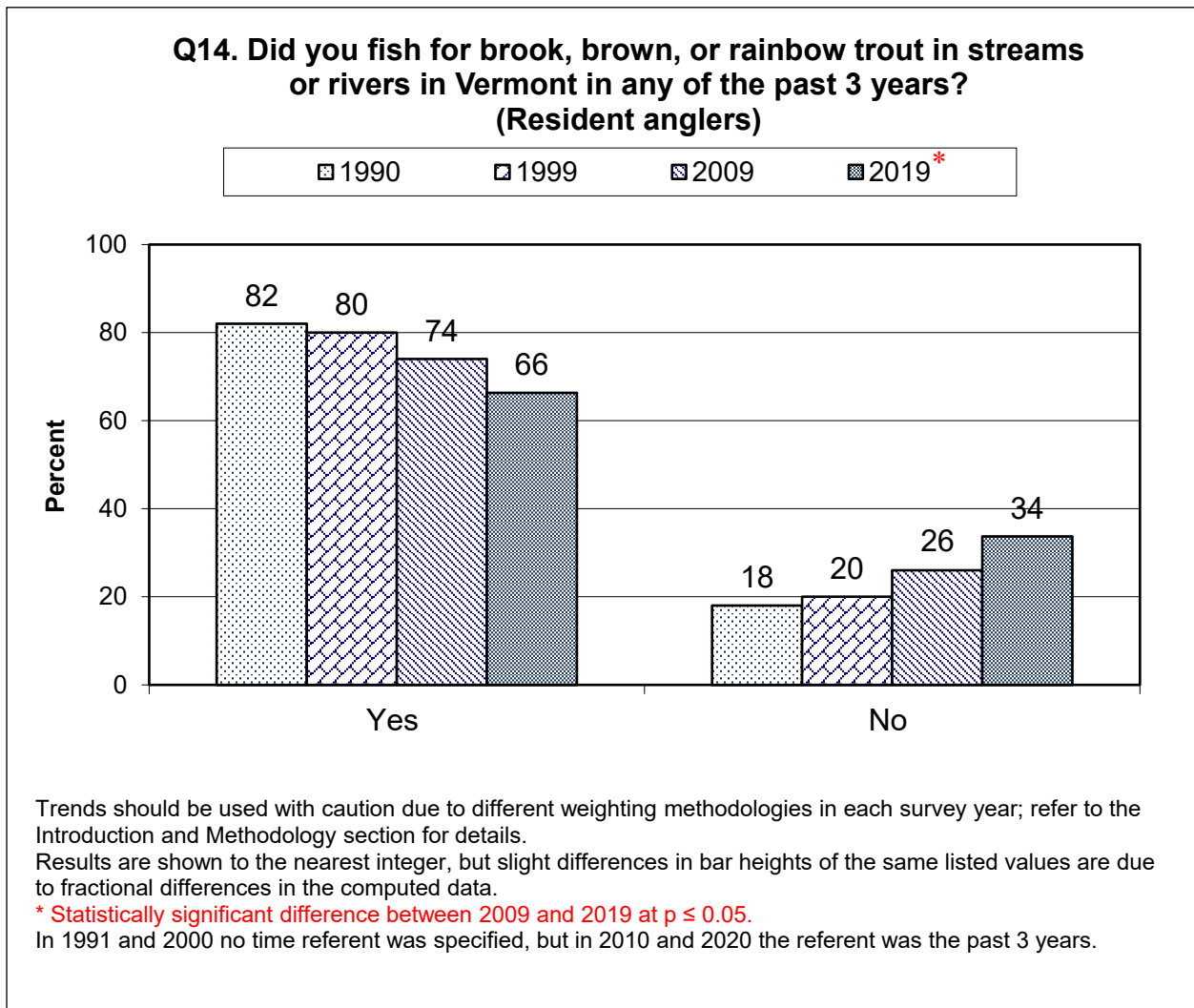


Figure 82. Trends in Fishing for Brook, Brown, or Rainbow Trout in Streams and Rivers in Vermont in the Past 3 Years, Residents

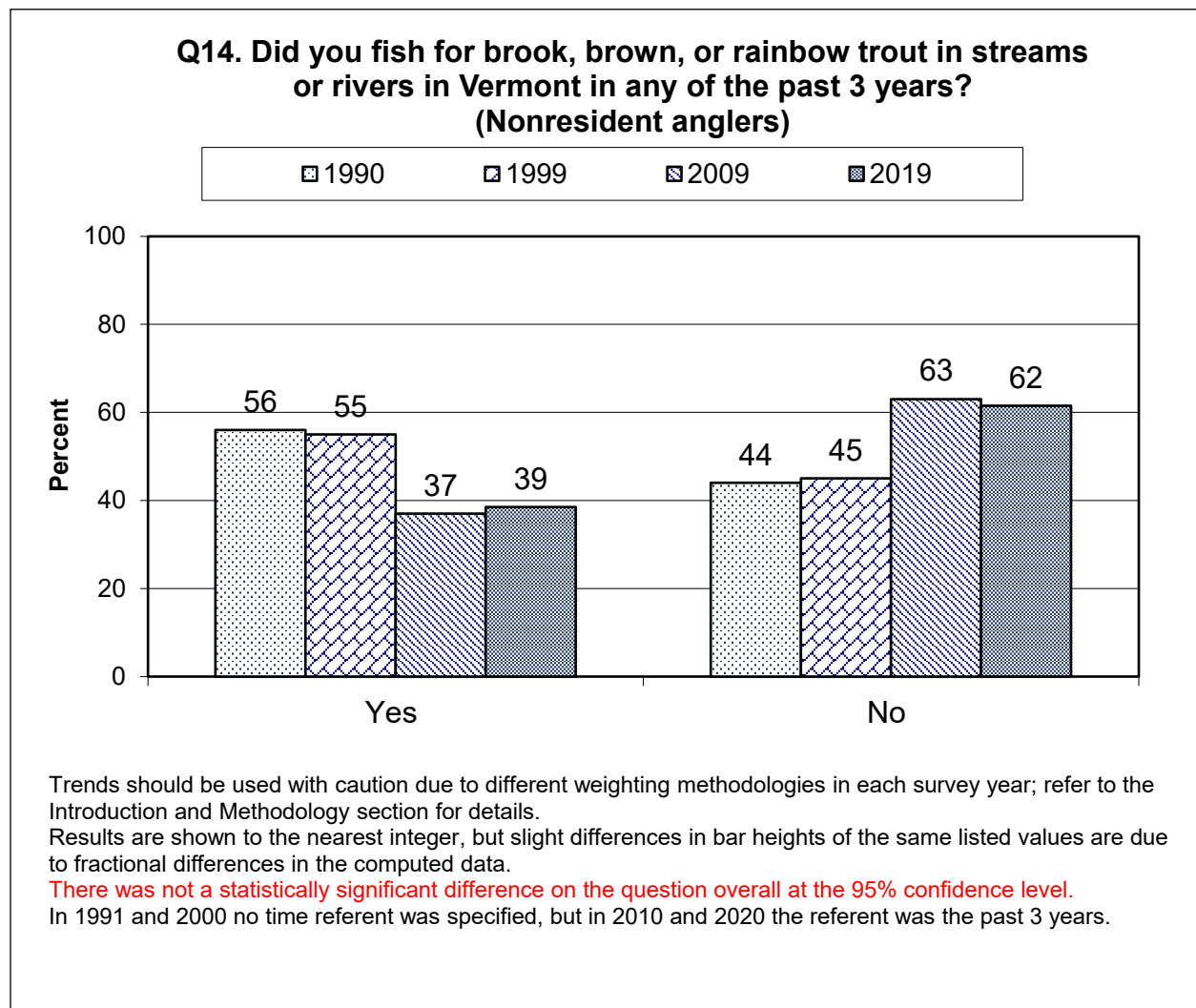


Figure 83. Trends in Fishing for Brook, Brown, or Rainbow Trout in Streams and Rivers in Vermont in the Past 3 Years, Nonresidents

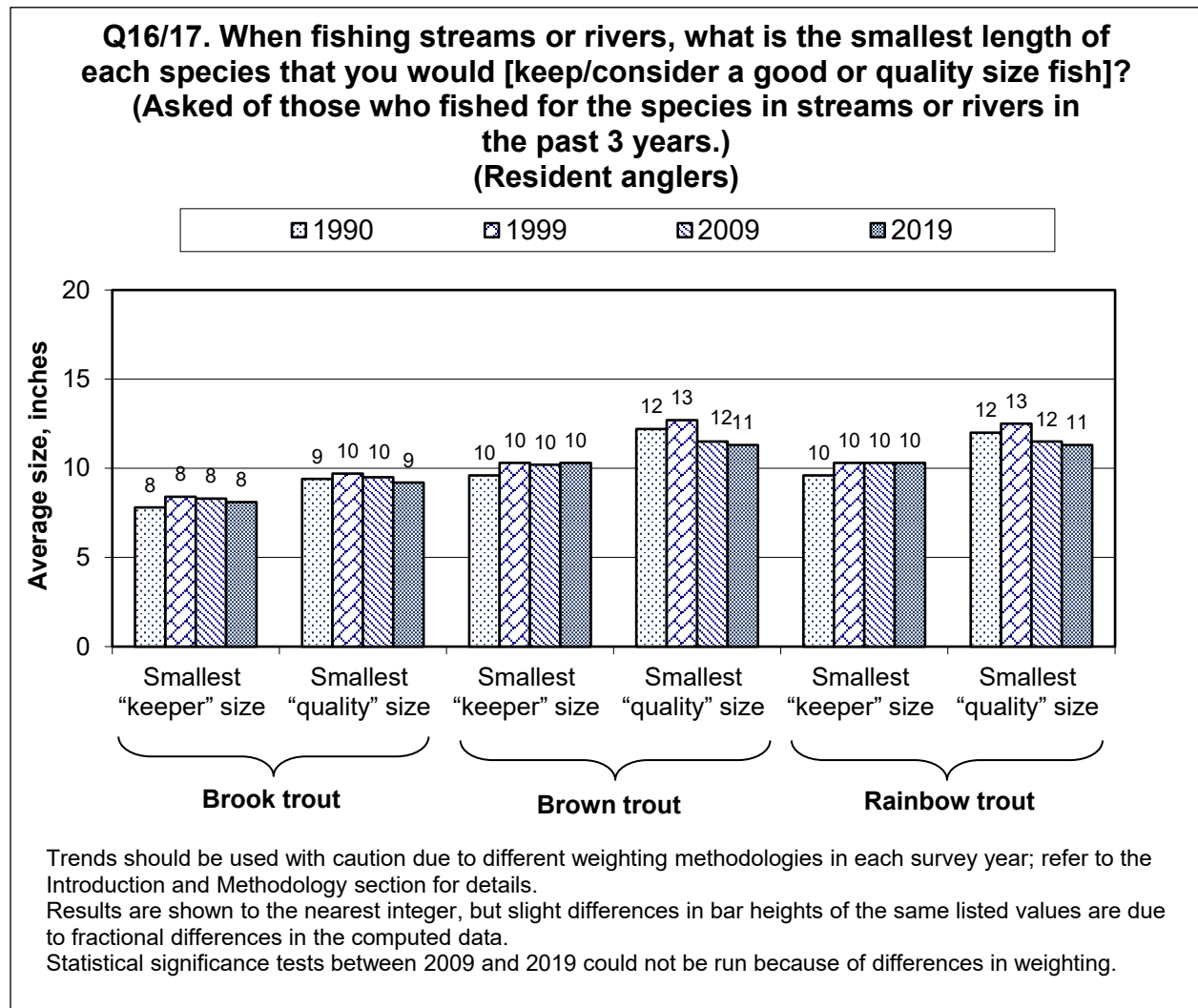


Figure 84. Trends in Opinion on Keeper and Quality Trout in Streams and Rivers, Residents

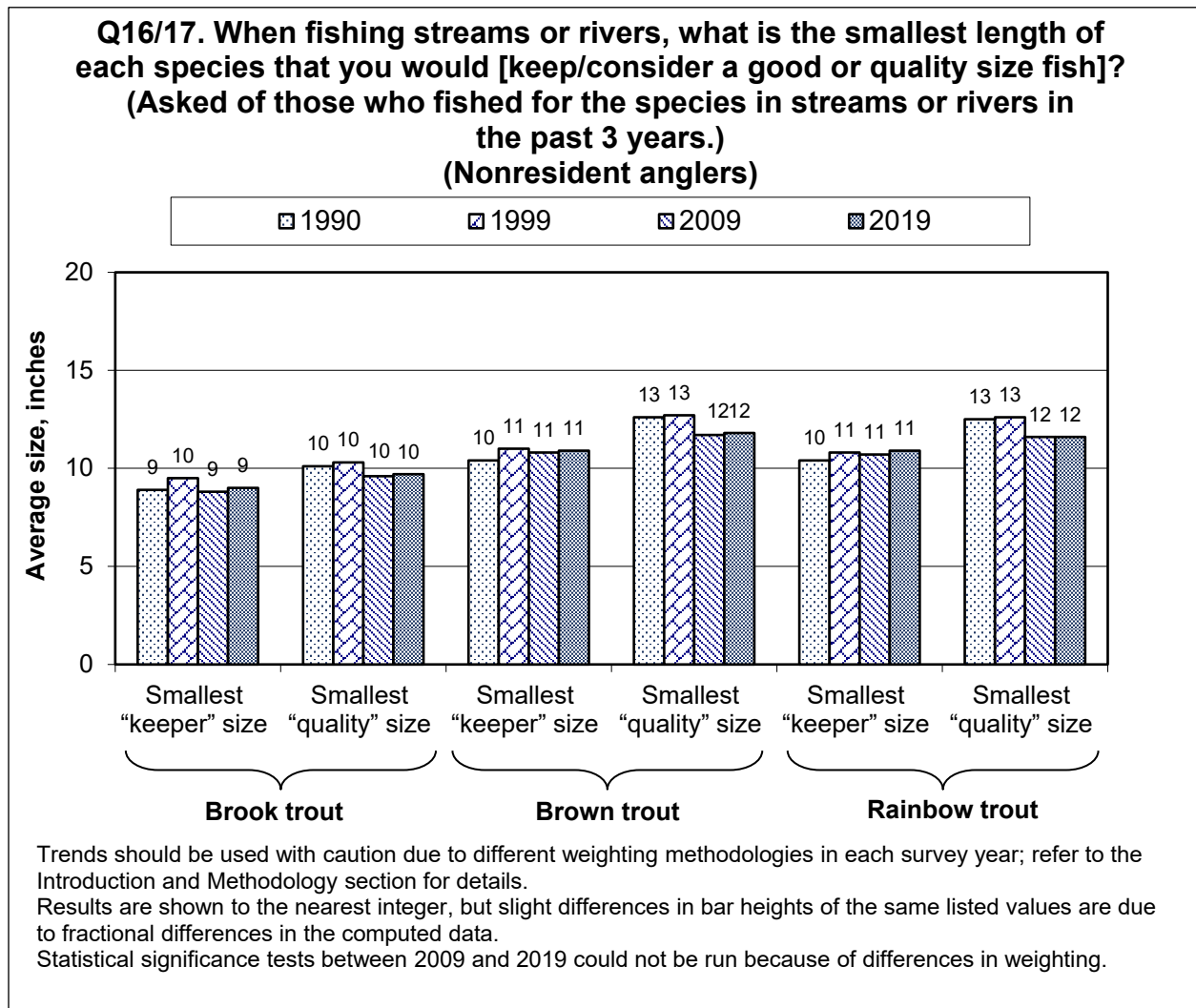


Figure 85. Trends in Opinion on Keeper and Quality Trout in Streams and Rivers, Nonresidents

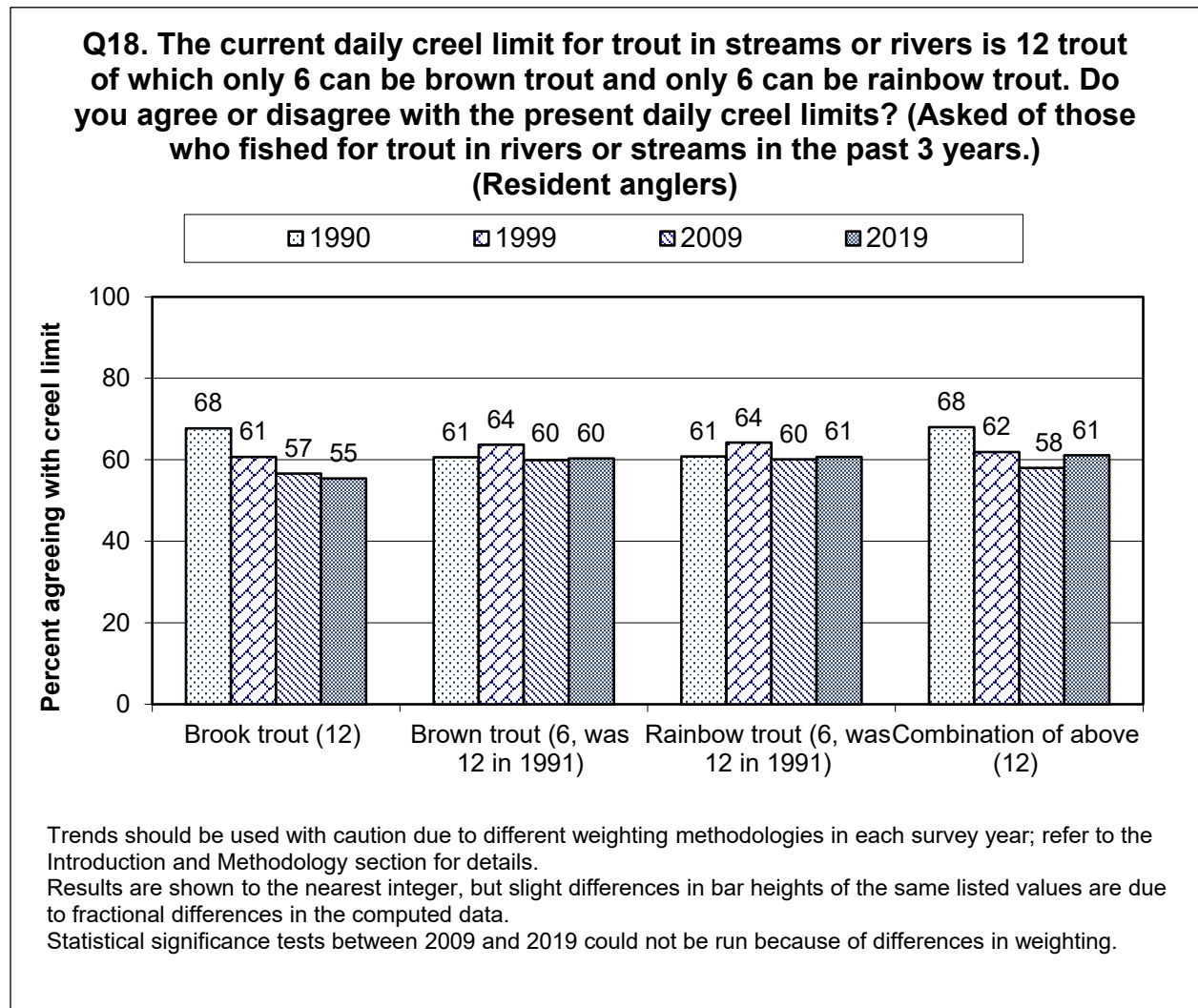


Figure 86. Trends in Opinion on Creel Limits for Trout in Streams and Rivers, Residents

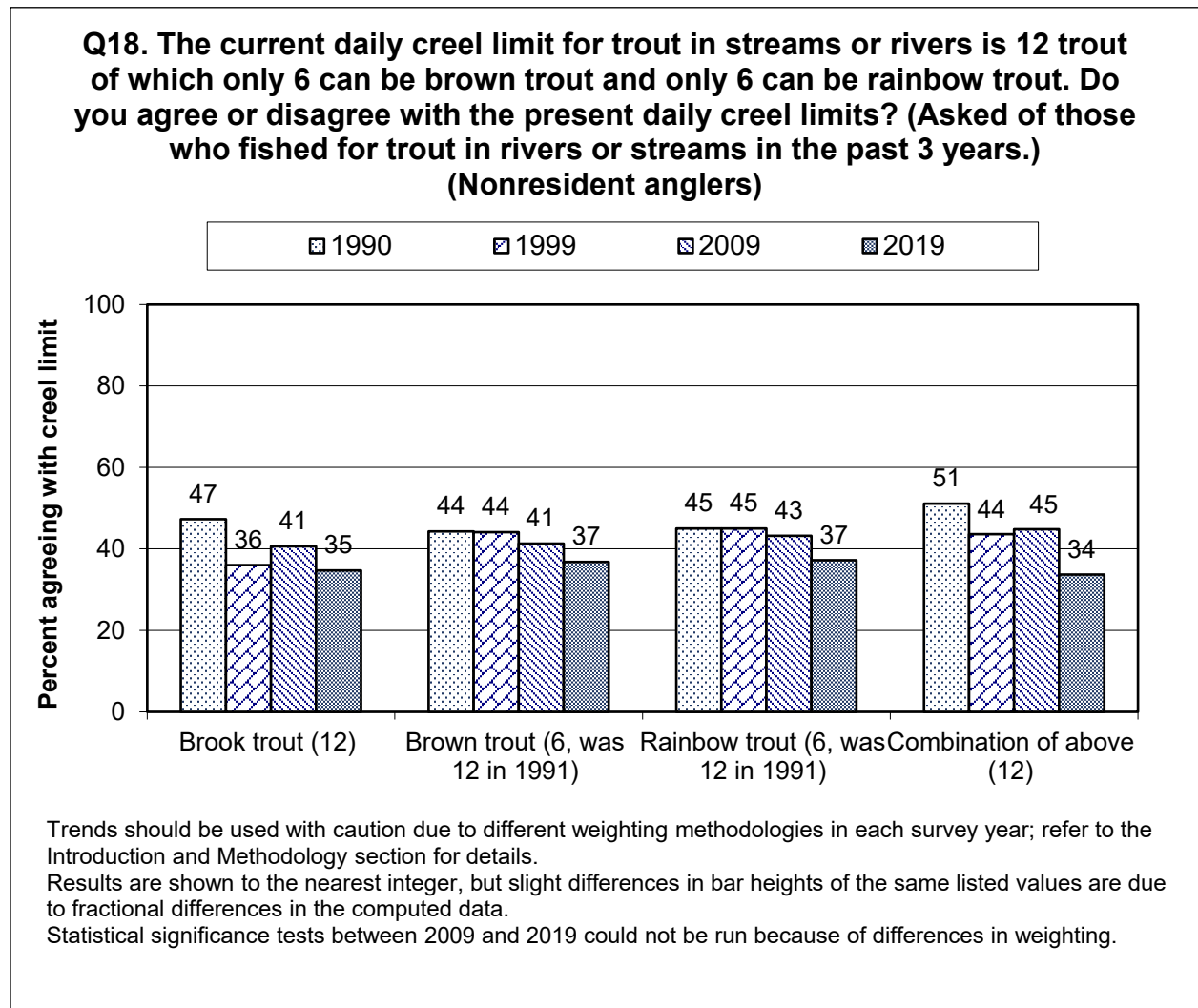


Figure 87. Trends in Opinion on Creel Limits for Trout in Streams and Rivers, Nonresidents

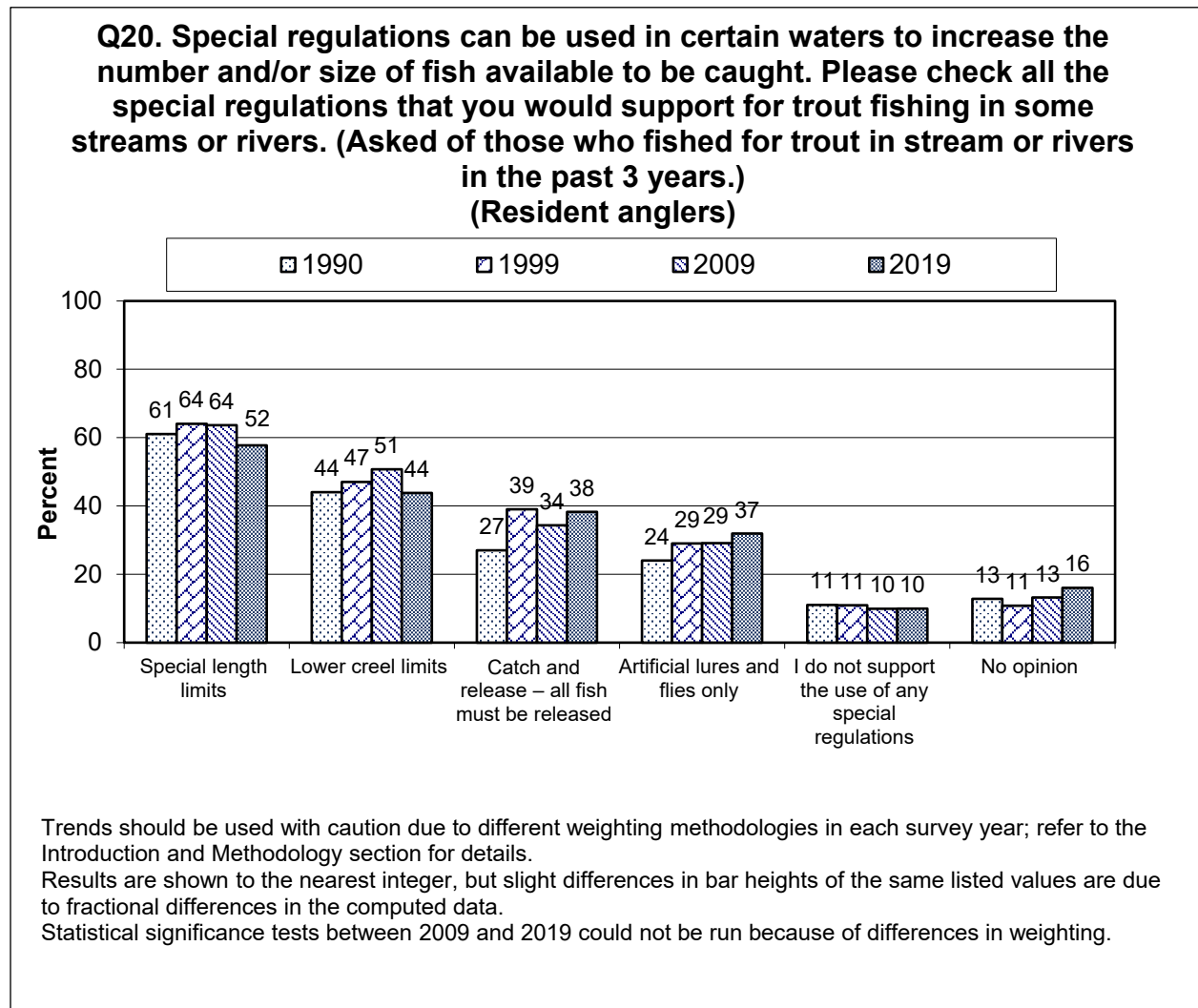


Figure 88. Trends in Opinion on Special Regulations for Trout in Streams and Rivers, Residents

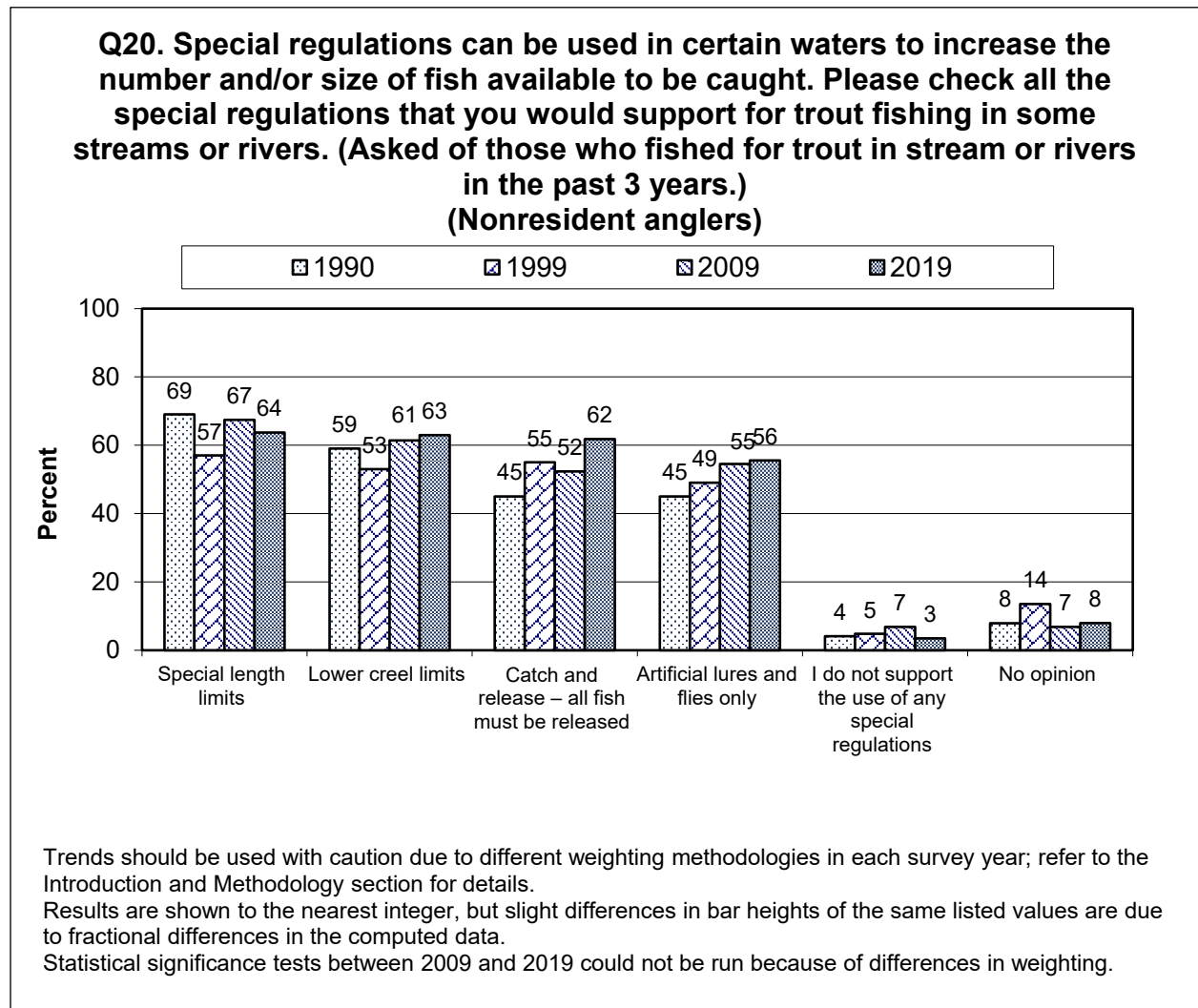


Figure 89. Trends in Opinion on Special Regulations for Trout in Streams and Rivers, Nonresidents

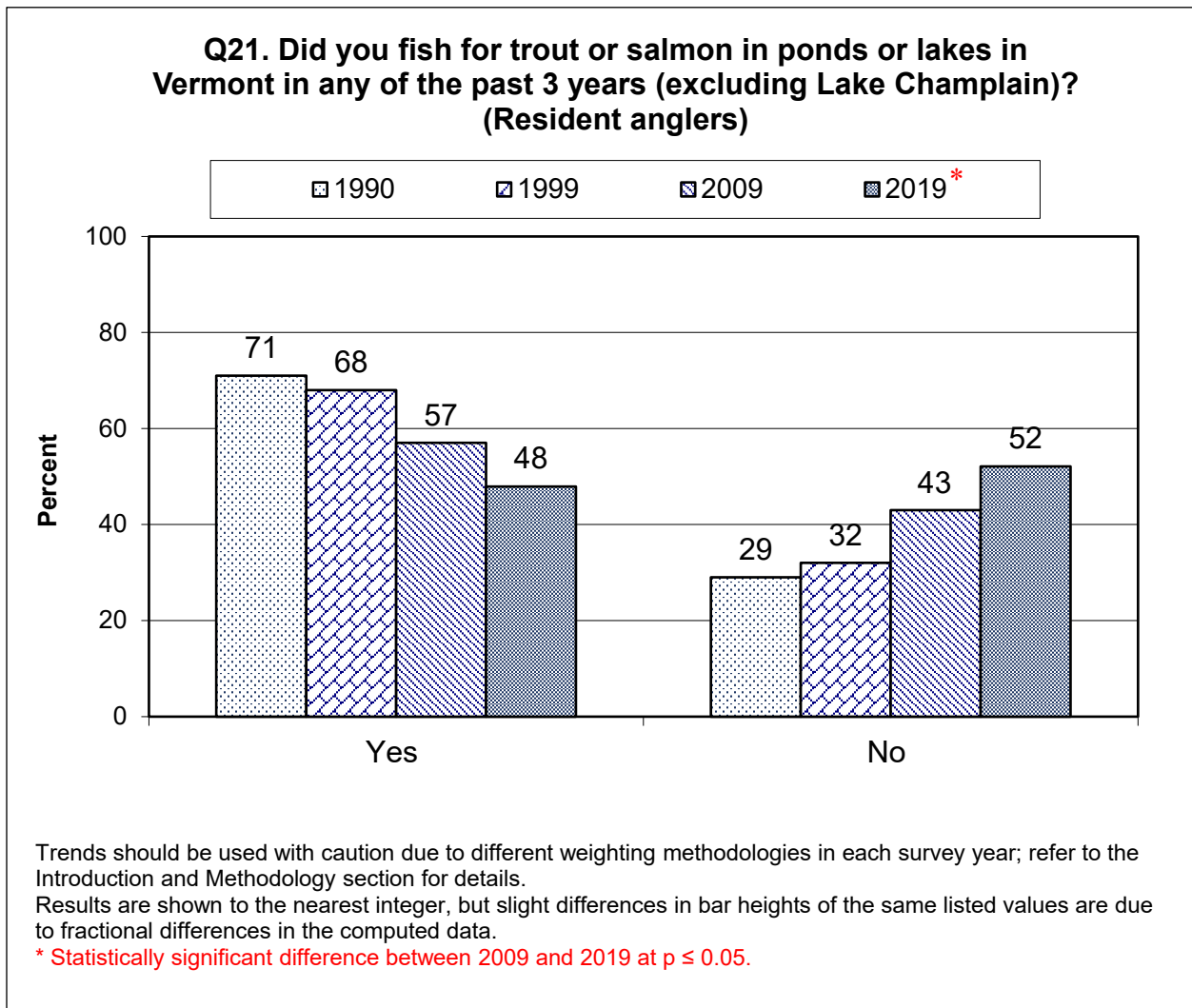


Figure 90. Trends in Fishing for Trout or Salmon in Ponds and Lakes, Residents

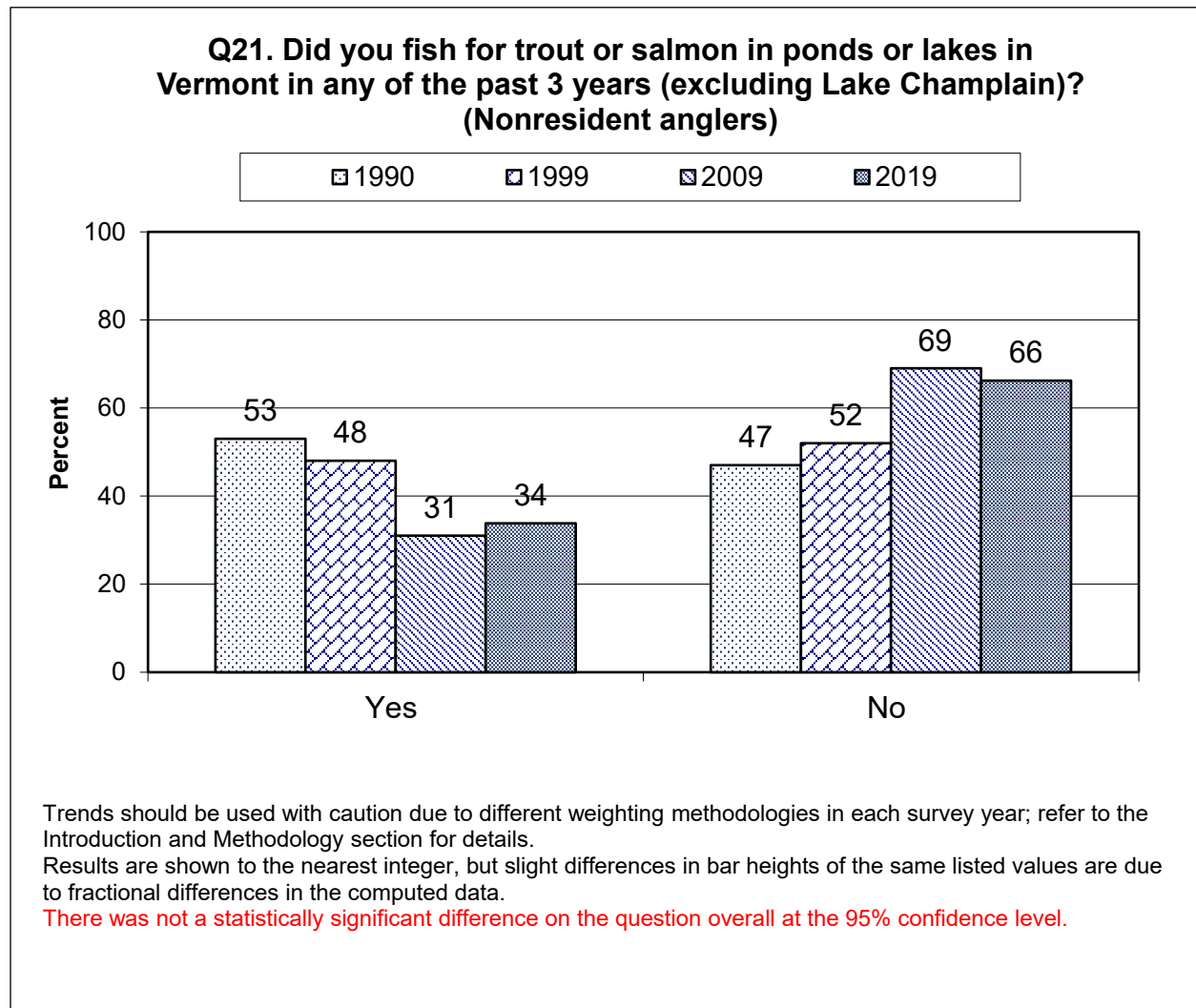


Figure 91. Trends in Fishing for Trout or Salmon in Ponds and Lakes, Nonresidents

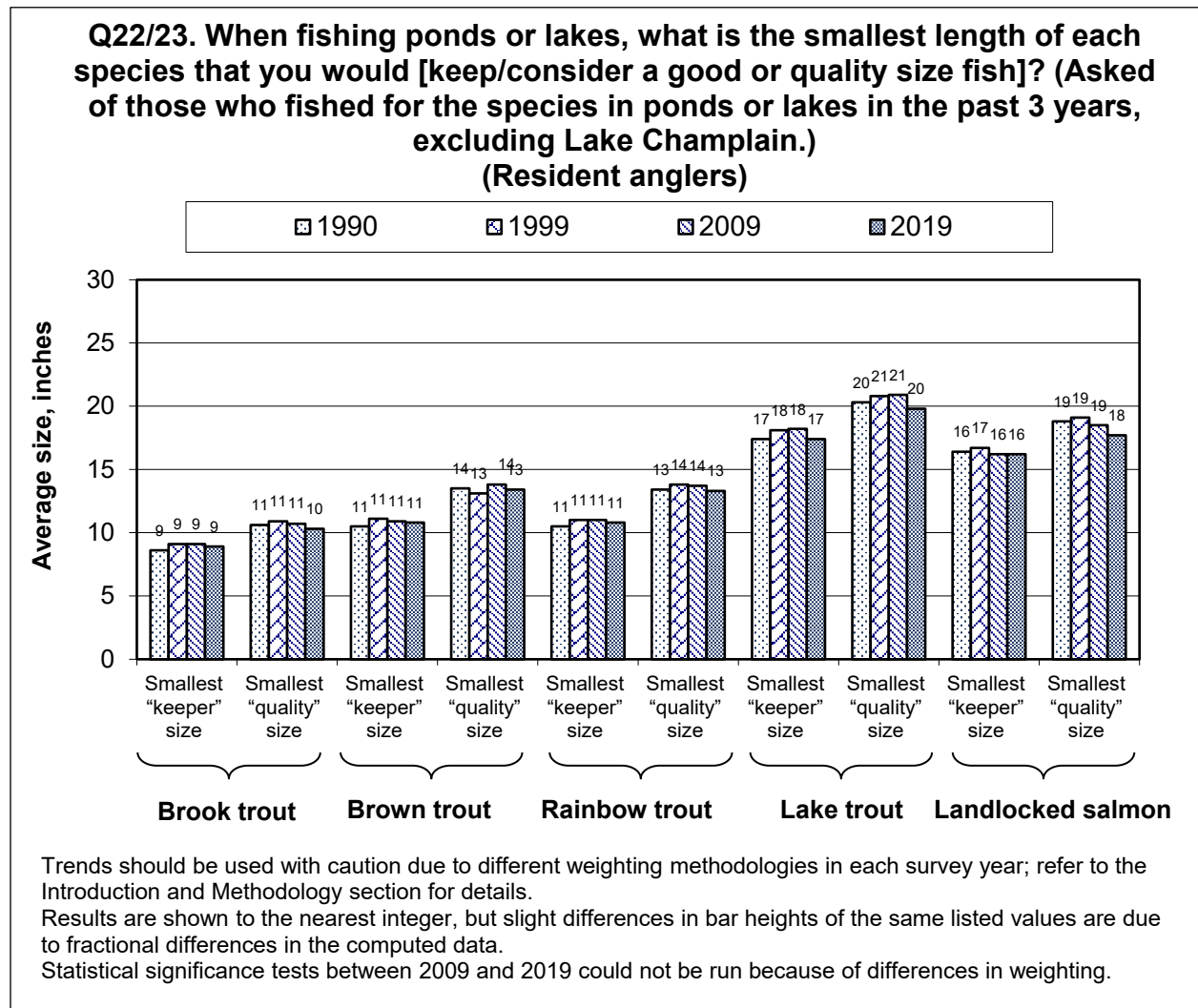


Figure 92. Trends in Opinion on Keeper and Quality Trout and Salmon in Ponds and Lakes, Residents

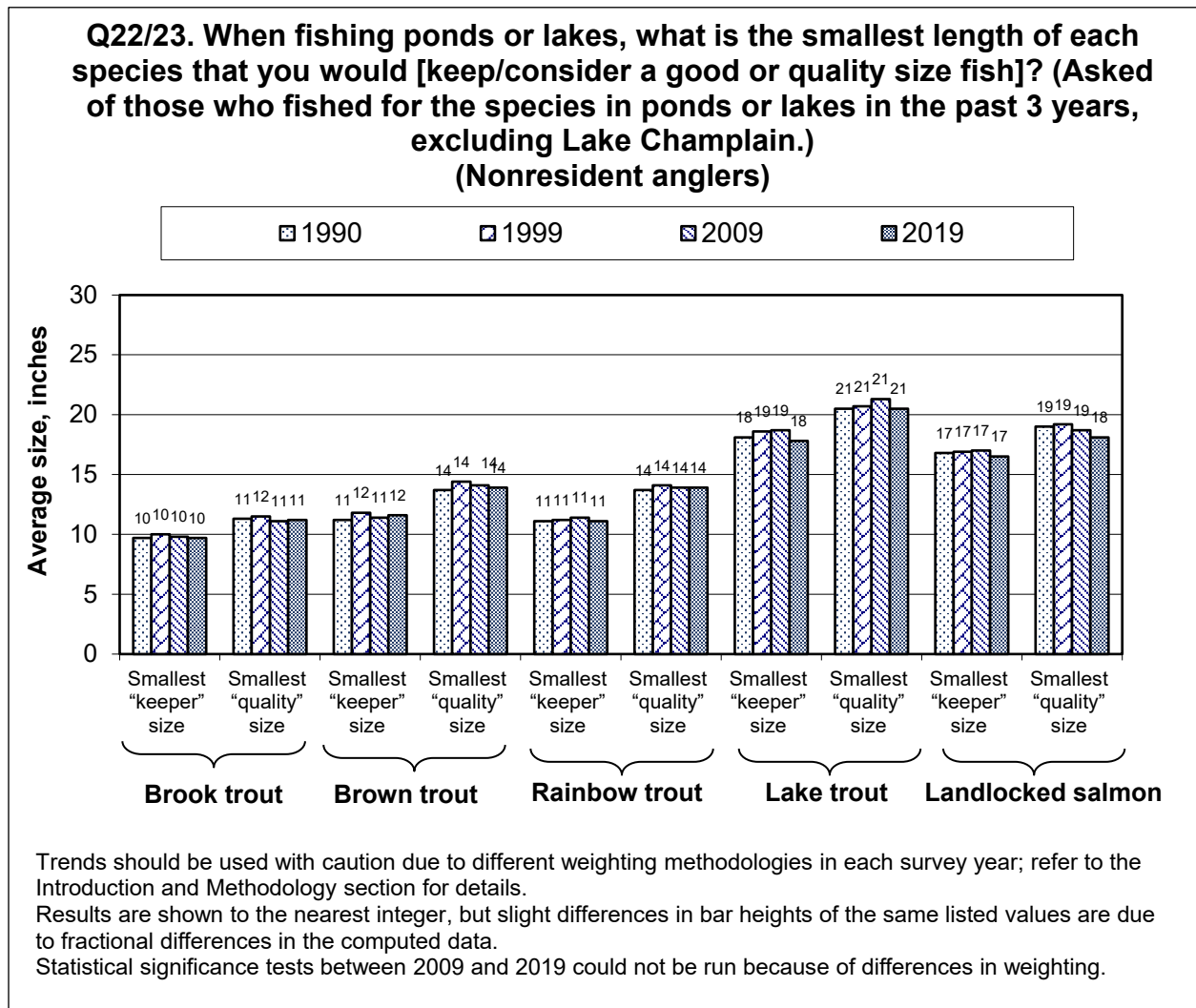
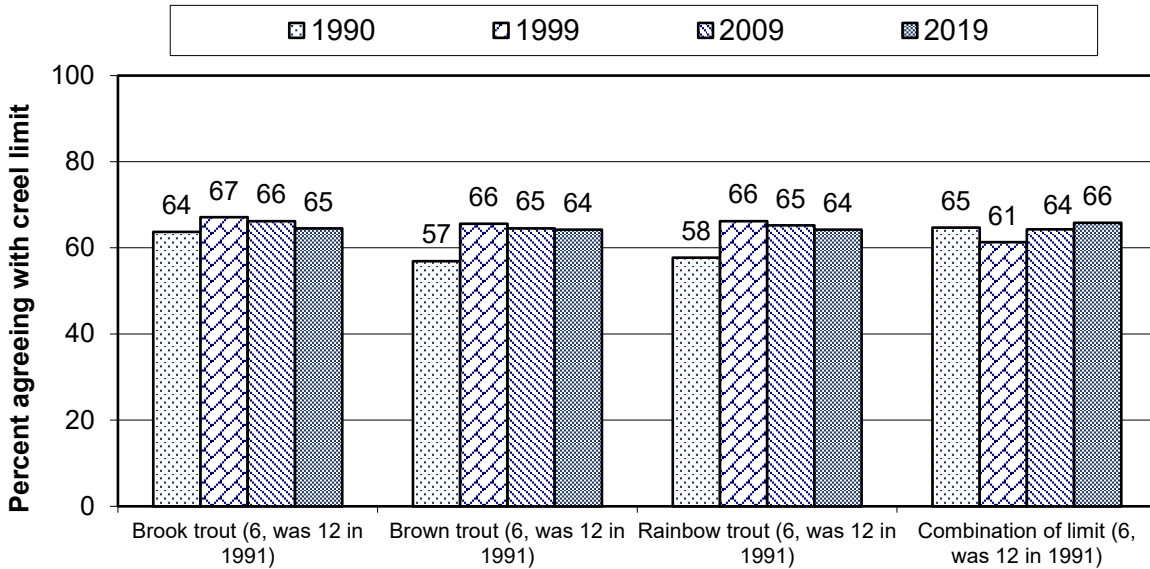


Figure 93. Trends in Opinion on Keeper and Quality Trout and Salmon in Ponds and Lakes, Nonresidents

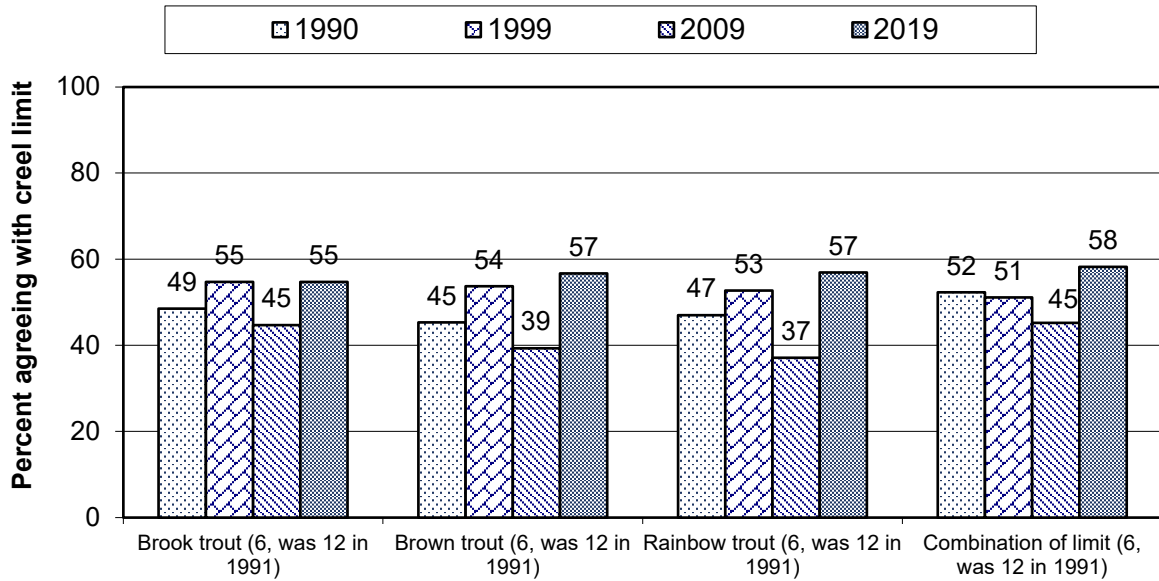
Q24. The general daily creel limits for brook, brown, and rainbow trout in ponds or lakes are listed below for each species and for a combined trout catch. Do you agree or disagree with the present daily creel limits? (Asked of those who fished for trout in ponds or lakes in the past 3 years, excluding Lake Champlain.) (Resident anglers)



Trends should be used with caution due to different weighting methodologies in each survey year; refer to the Introduction and Methodology section for details.
 Results are shown to the nearest integer, but slight differences in bar heights of the same listed values are due to fractional differences in the computed data.
 Statistical significance tests between 2009 and 2019 could not be run because of differences in weighting.

Figure 94. Trends in Opinion on Creel Limits for Trout in Ponds and Lakes, Residents

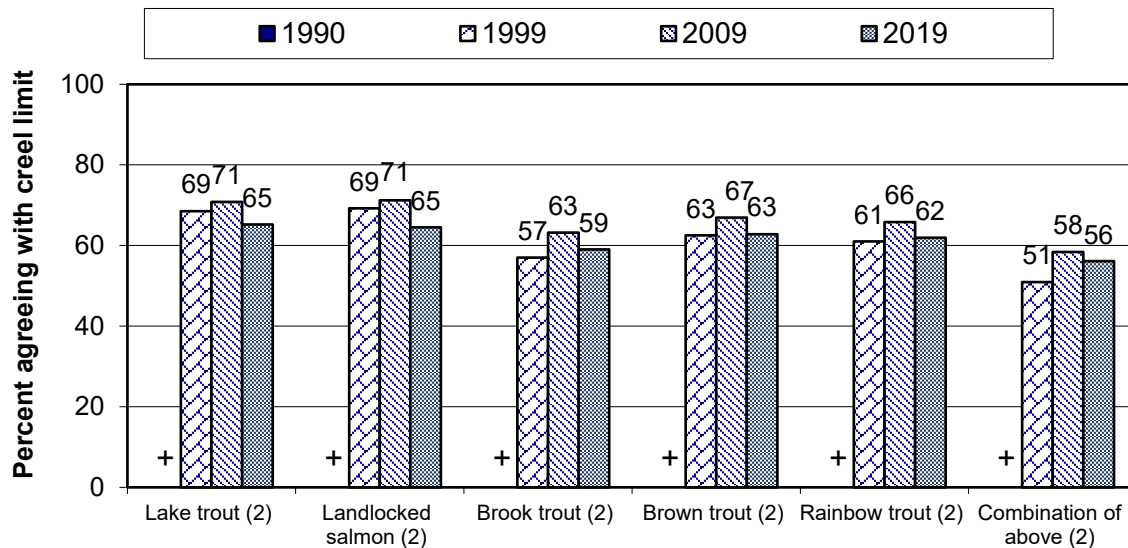
Q24. The general daily creel limits for brook, brown, and rainbow trout in ponds or lakes are listed below for each species and for a combined trout catch. Do you agree or disagree with the present daily creel limits? (Asked of those who fished for trout in ponds or lakes in the past 3 years, excluding Lake Champlain.) (Nonresident anglers)



Trends should be used with caution due to different weighting methodologies in each survey year; refer to the Introduction and Methodology section for details. Results are shown to the nearest integer, but slight differences in bar heights of the same listed values are due to fractional differences in the computed data. Statistical significance tests between 2009 and 2019 could not be run because of differences in weighting.

Figure 95. Trends in Opinion on Creel Limits for Trout in Ponds and Lakes, Nonresidents

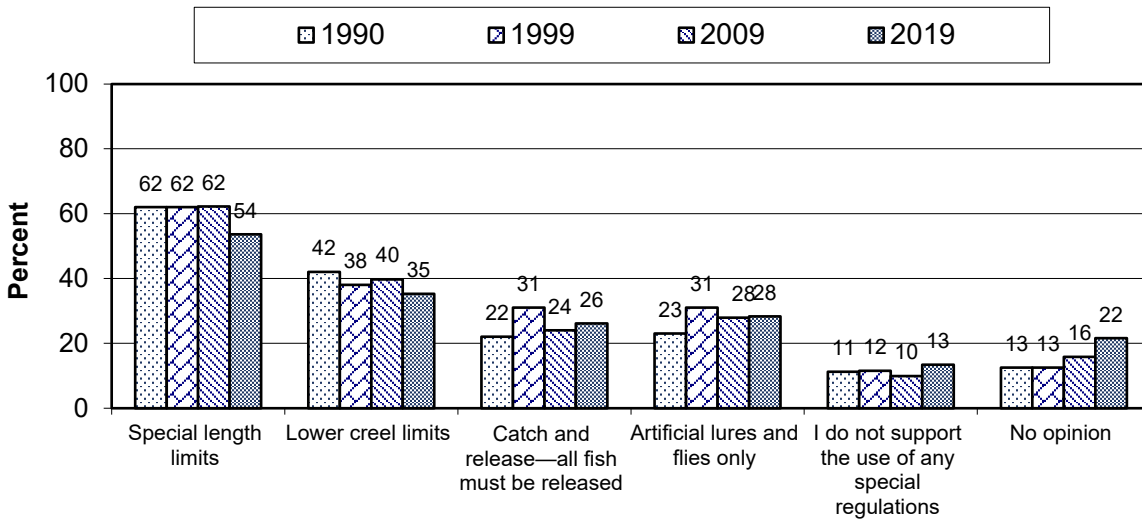
Q25. For the majority of lakes in Vermont that offer lake trout fishing, the current daily creel limit for lake trout, landlocked salmon, brook trout, brown trout, or rainbow trout is 2 fish of any one species or combination of species. Do you agree or disagree with the present daily creel limits? (Asked of those who fished for trout or salmon in ponds or lakes in the past 3 years, excluding Lake Champlain.) (Resident anglers)



Trends should be used with caution due to different weighting methodologies in each survey year; refer to the Introduction and Methodology section for details.
 Results are shown to the nearest integer, but slight differences in bar heights of the same listed values are due to fractional differences in the computed data.
 Statistical significance tests between 2009 and 2019 could not be run because of differences in weighting.
 + Question was not asked in 1991.

Figure 96. Trends in Opinion on Creel Limits for Trout and Salmon in Lakes That Offer Lake Trout, Residents

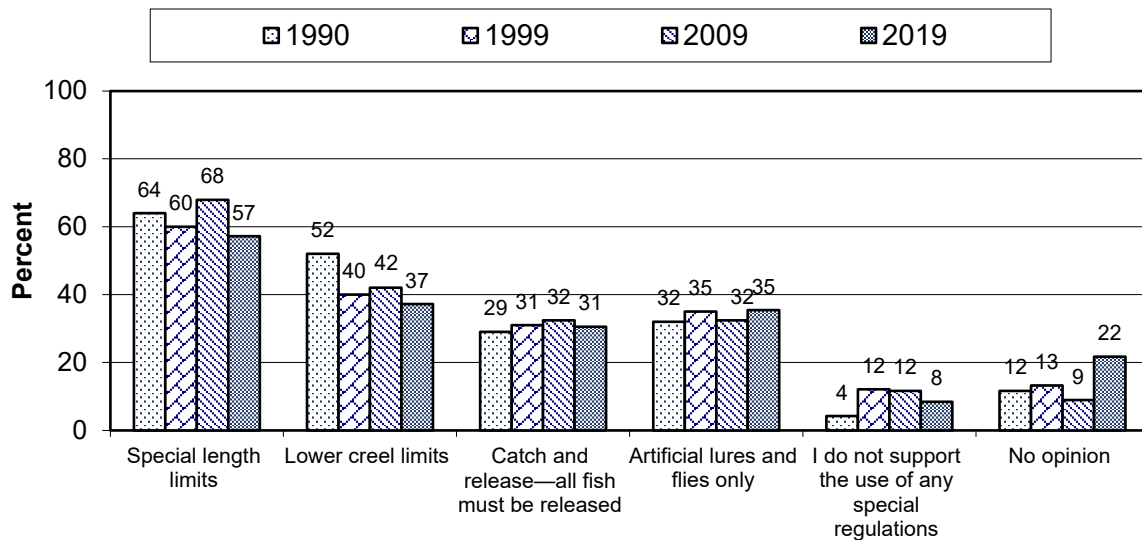
**Q27. Special regulations can be used in certain waters to increase the number and/or size of fish available to be caught. Please check all the special regulations that you would support in some ponds or lakes for the species listed. (Asked of those who fished for trout or salmon in ponds or lakes in the past 3 years, excluding Lake Champlain.)
(Brook, brown, and rainbow trout)
(Resident anglers)**



Trends should be used with caution due to different weighting methodologies in each survey year; refer to the Introduction and Methodology section for details.
Results are shown to the nearest integer, but slight differences in bar heights of the same listed values are due to fractional differences in the computed data.
Statistical significance tests between 2009 and 2019 could not be run because of differences in weighting.

Figure 97. Trends in Opinion on Special Regulations for Brook, Brown, and Rainbow Trout in Ponds and Lakes, Residents

**Q27. Special regulations can be used in certain waters to increase the number and/or size of fish available to be caught. Please check all the special regulations that you would support in some ponds or lakes for the species listed. (Asked of those who fished for trout or salmon in ponds or lakes in the past 3 years, excluding Lake Champlain.)
(Brook, brown, and rainbow trout)
(Nonresident anglers)**

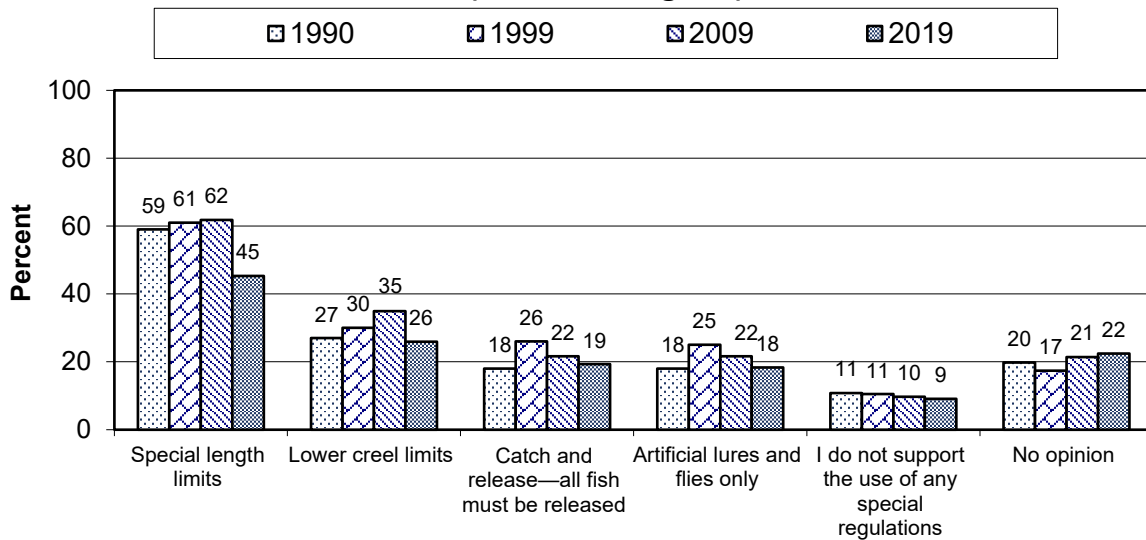


Trends should be used with caution due to different weighting methodologies in each survey year; refer to the Introduction and Methodology section for details.
Results are shown to the nearest integer, but slight differences in bar heights of the same listed values are due to fractional differences in the computed data.
Statistical significance tests between 2009 and 2019 could not be run because of differences in weighting.

Figure 98. Trends in Opinion on Special Regulations for Brook, Brown, and Rainbow Trout in Ponds and Lakes, Nonresidents

Q27. Special regulations can be used in certain waters to increase the number and/or size of fish available to be caught. Please check all the special regulations that you would support in some ponds or lakes for the species listed. (Asked of those who fished for trout or salmon in ponds or lakes in the past 3 years, excluding Lake Champlain.)

**(Lake trout)
(Resident anglers)**

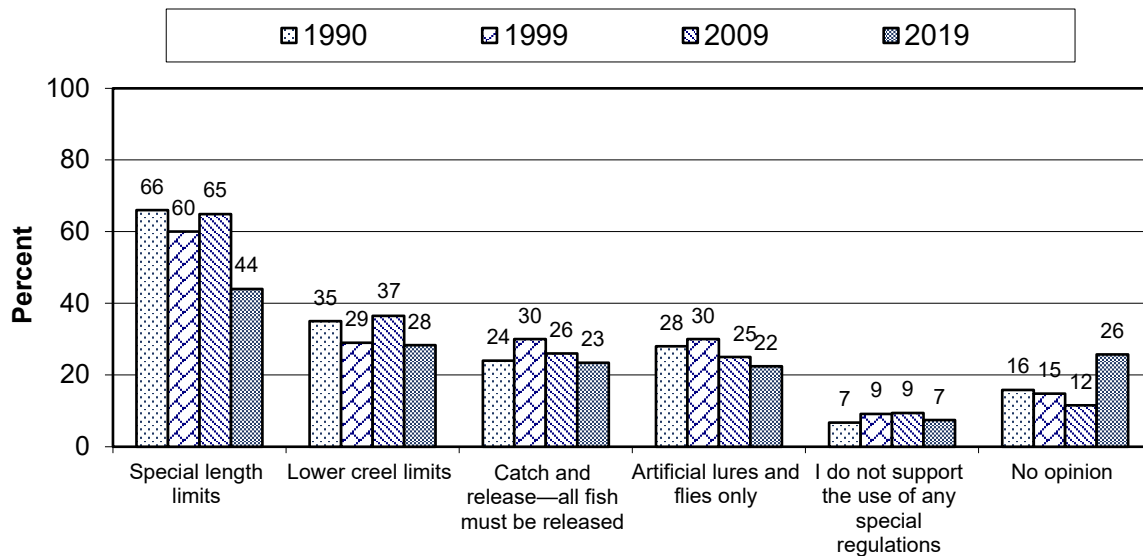


Trends should be used with caution due to different weighting methodologies in each survey year; refer to the Introduction and Methodology section for details.
 Results are shown to the nearest integer, but slight differences in bar heights of the same listed values are due to fractional differences in the computed data.
 Statistical significance tests between 2009 and 2019 could not be run because of differences in weighting.

Figure 99. Trends in Opinion on Special Regulations for Lake Trout in Ponds and Lakes, Residents

Q27. Special regulations can be used in certain waters to increase the number and/or size of fish available to be caught. Please check all the special regulations that you would support in some ponds or lakes for the species listed. (Asked of those who fished for trout or salmon in ponds or lakes in the past 3 years, excluding Lake Champlain.)

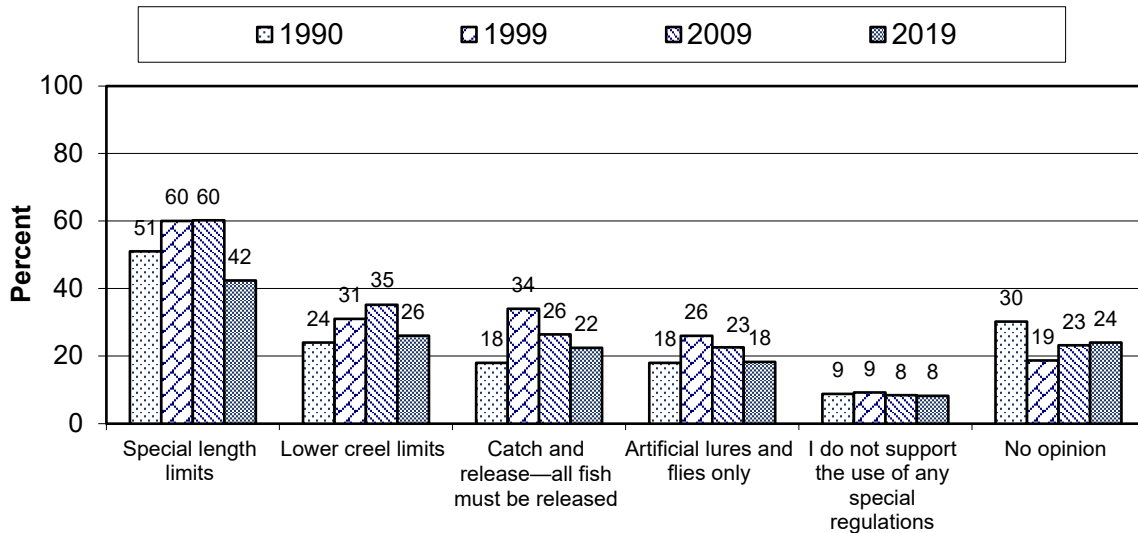
**(Lake trout)
(Nonresident anglers)**



Trends should be used with caution due to different weighting methodologies in each survey year; refer to the Introduction and Methodology section for details.
 Results are shown to the nearest integer, but slight differences in bar heights of the same listed values are due to fractional differences in the computed data.
 Statistical significance tests between 2009 and 2019 could not be run because of differences in weighting.

Figure 100. Trends in Opinion on Special Regulations for Lake Trout in Ponds and Lakes, Nonresidents

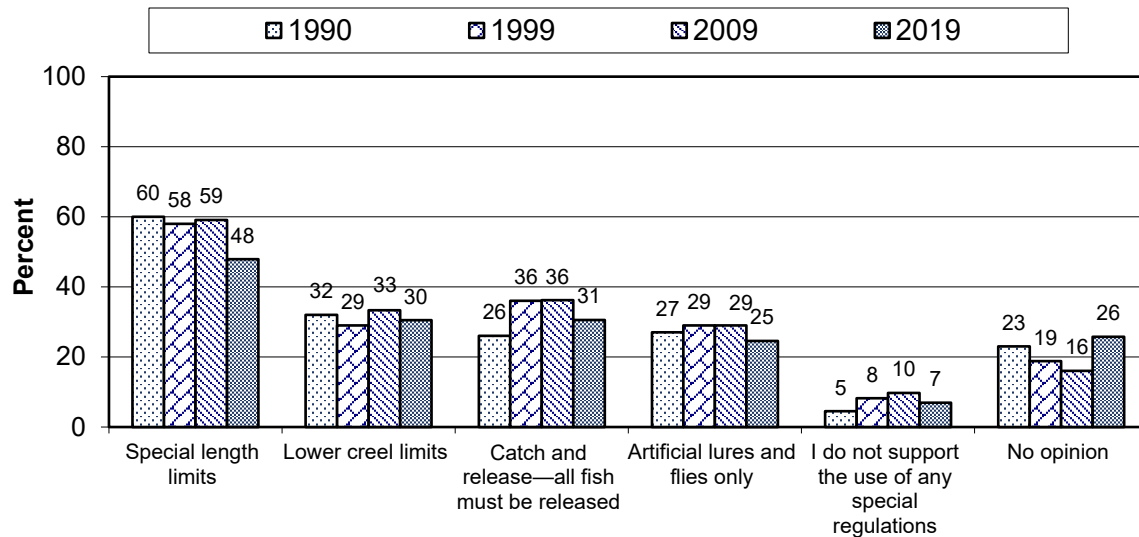
Q27. Special regulations can be used in certain waters to increase the number and/or size of fish available to be caught. Please check all the special regulations that you would support in some ponds or lakes for the species listed. (Asked of those who fished for trout or salmon in ponds or lakes in the past 3 years, excluding Lake Champlain.)
(Landlocked salmon)
(Resident anglers)



Trends should be used with caution due to different weighting methodologies in each survey year; refer to the Introduction and Methodology section for details.
 Results are shown to the nearest integer, but slight differences in bar heights of the same listed values are due to fractional differences in the computed data.
 Statistical significance tests between 2009 and 2019 could not be run because of differences in weighting.

Figure 101. Trends in Opinion on Special Regulations for Landlocked Salmon in Ponds and Lakes, Residents

Q27. Special regulations can be used in certain waters to increase the number and/or size of fish available to be caught. Please check all the special regulations that you would support in some ponds or lakes for the species listed. (Asked of those who fished for trout or salmon in ponds or lakes in the past 3 years, excluding Lake Champlain.)
(Landlocked salmon)
(Nonresident anglers)



Trends should be used with caution due to different weighting methodologies in each survey year; refer to the Introduction and Methodology section for details.
 Results are shown to the nearest integer, but slight differences in bar heights of the same listed values are due to fractional differences in the computed data.
 Statistical significance tests between 2009 and 2019 could not be run because of differences in weighting.

Figure 102. Trends in Opinion on Special Regulations for Landlocked Salmon in Ponds and Lakes, Nonresidents

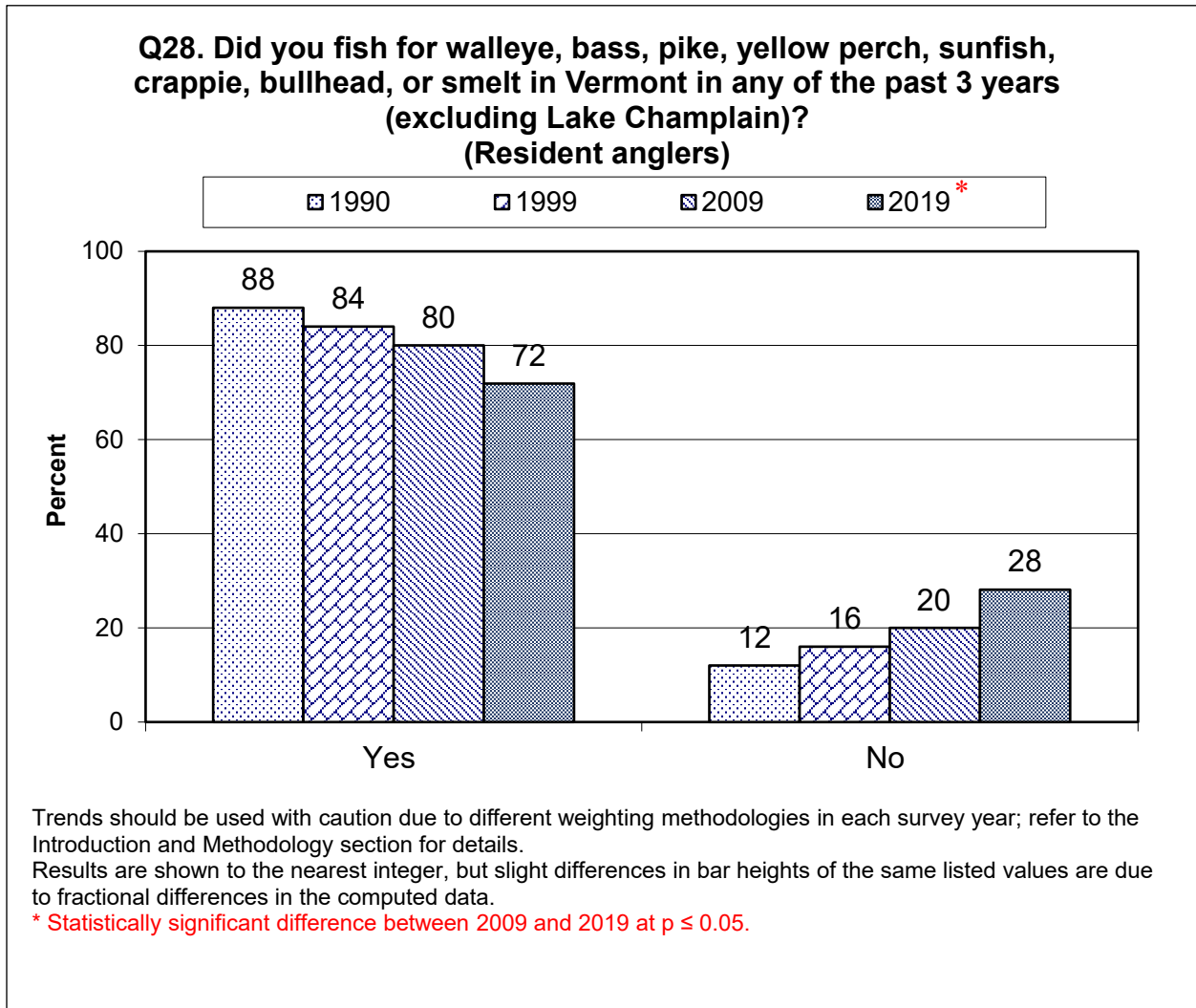


Figure 103. Trends in Fishing for Walleye, Bass, Pike, Yellow Perch, Sunfish, Crappie, Bullhead, or Smelt, Excluding Lake Champlain, Residents

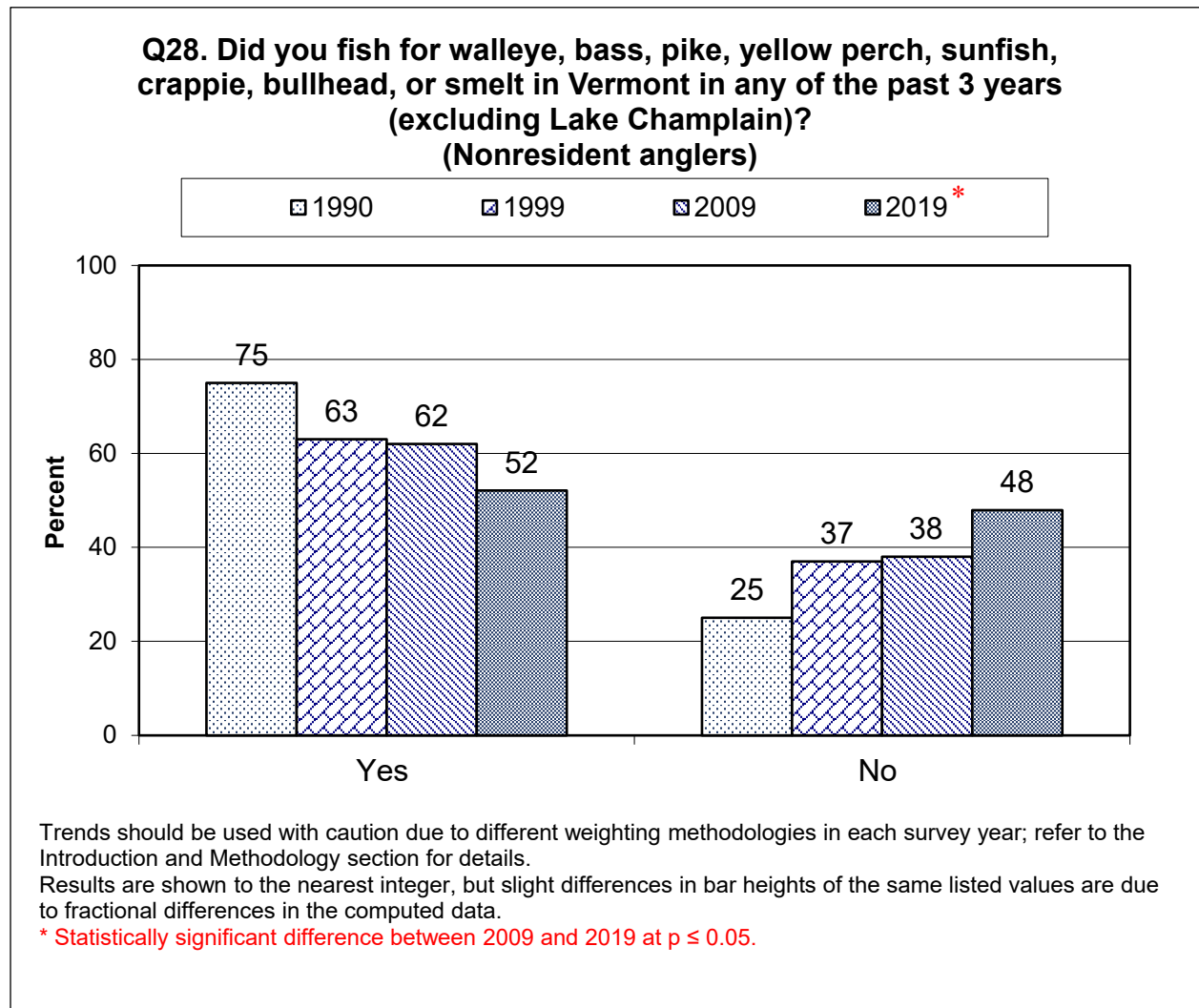


Figure 104. Trends in Fishing for Walleye, Bass, Pike, Yellow Perch, Sunfish, Crappie, Bullhead, or Smelt, Excluding Lake Champlain, Nonresidents

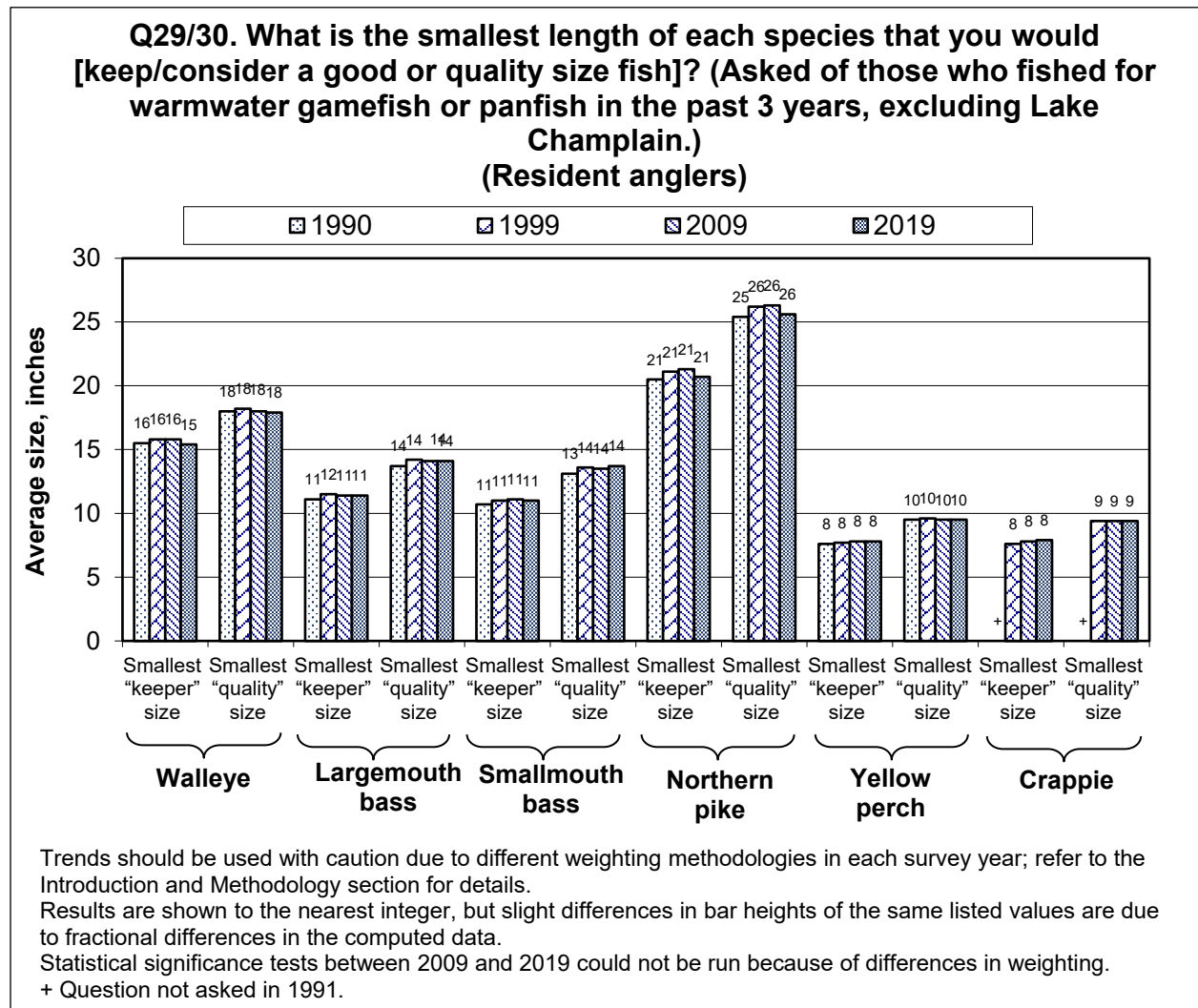


Figure 105. Trends in Opinion on Keeper and Quality Warmwater Gamefish and Panfish, Residents

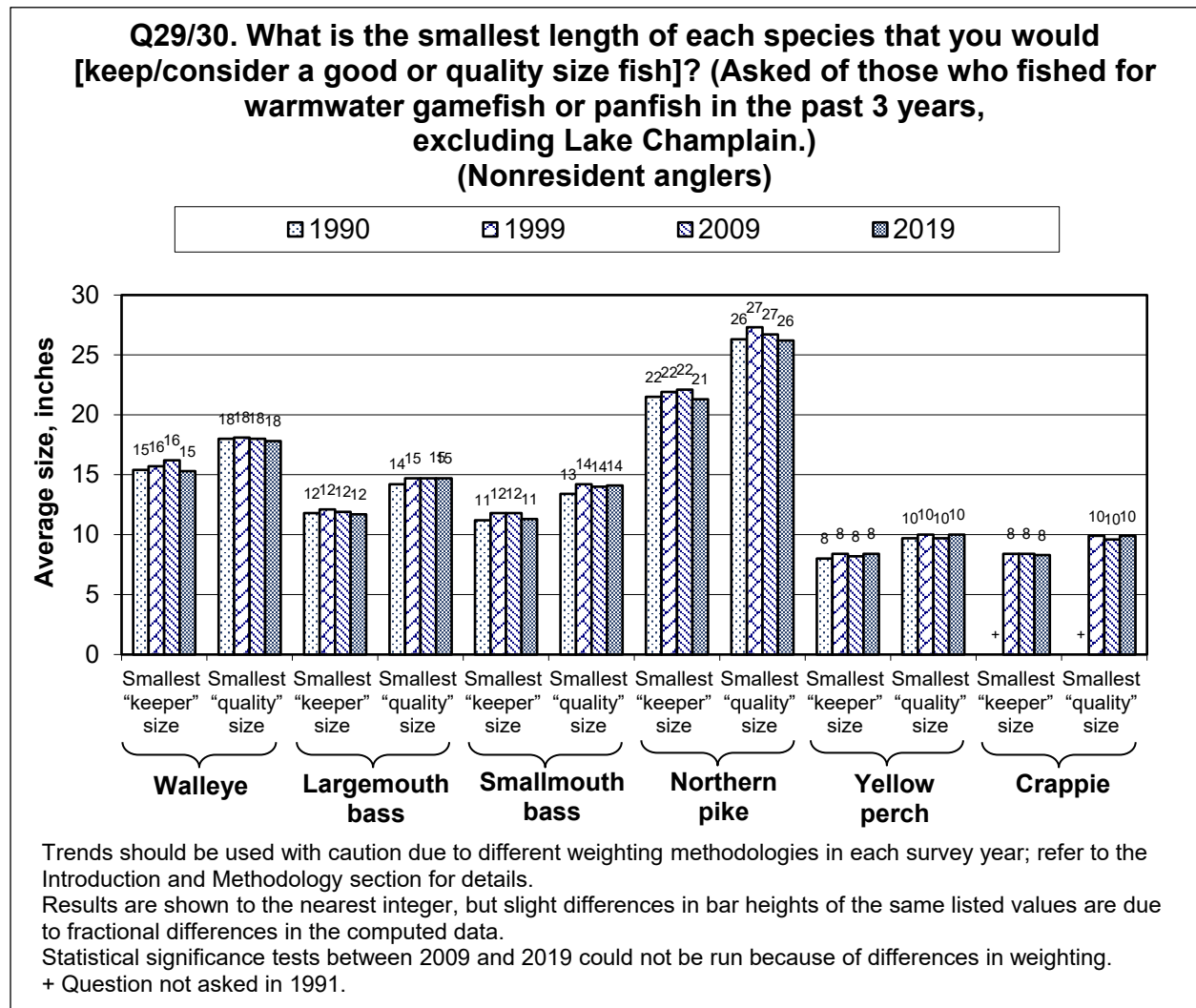


Figure 106. Trends in Opinion on Keeper and Quality Warmwater Gamefish and Panfish, Nonresidents

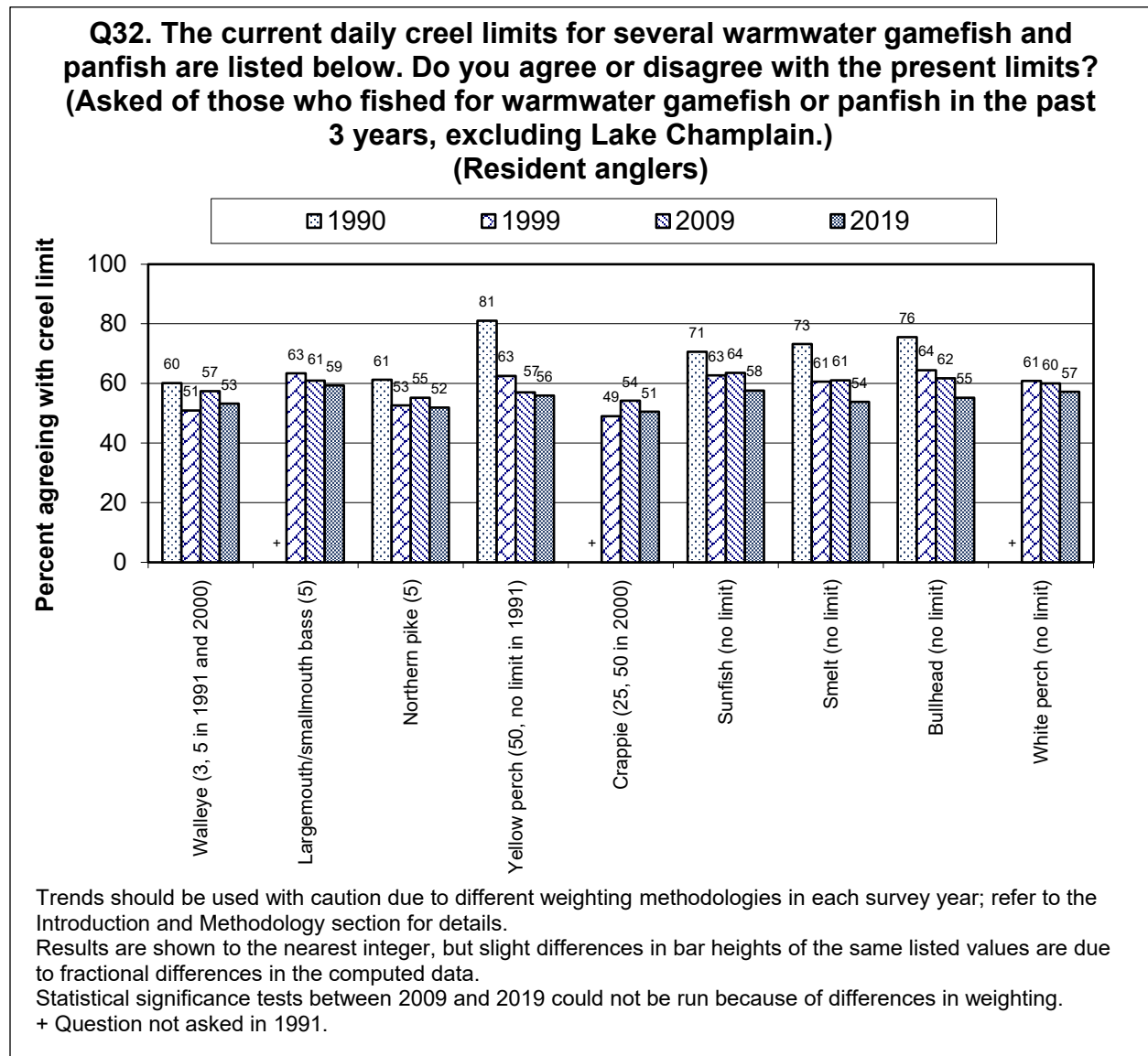


Figure 107. Trends in Opinion on Creel Limits for Warmwater Gamefish and Panfish, Residents

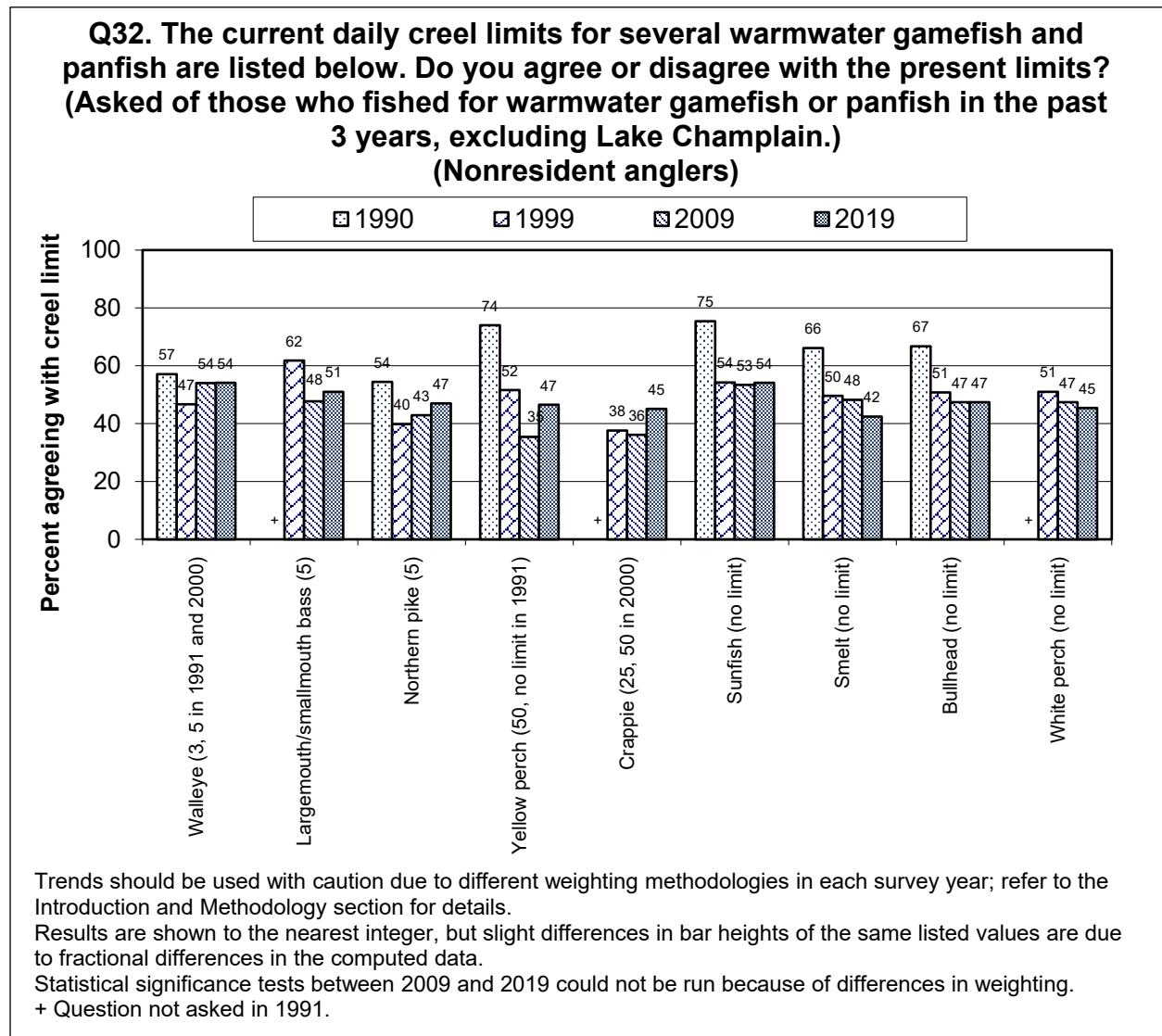
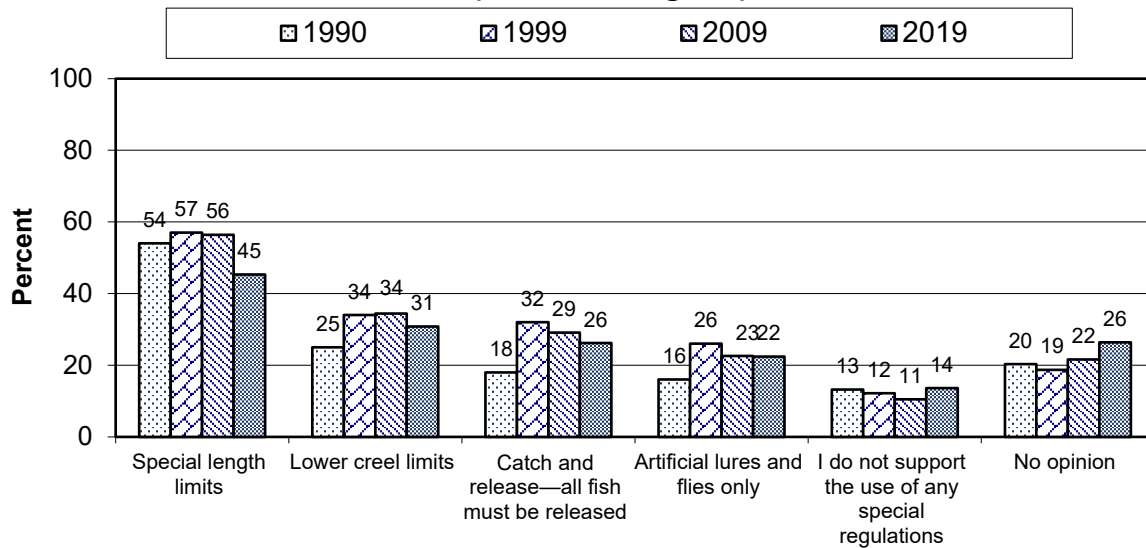


Figure 108. Trends in Opinion on Creel Limits for Warmwater Gamefish and Panfish, Nonresidents

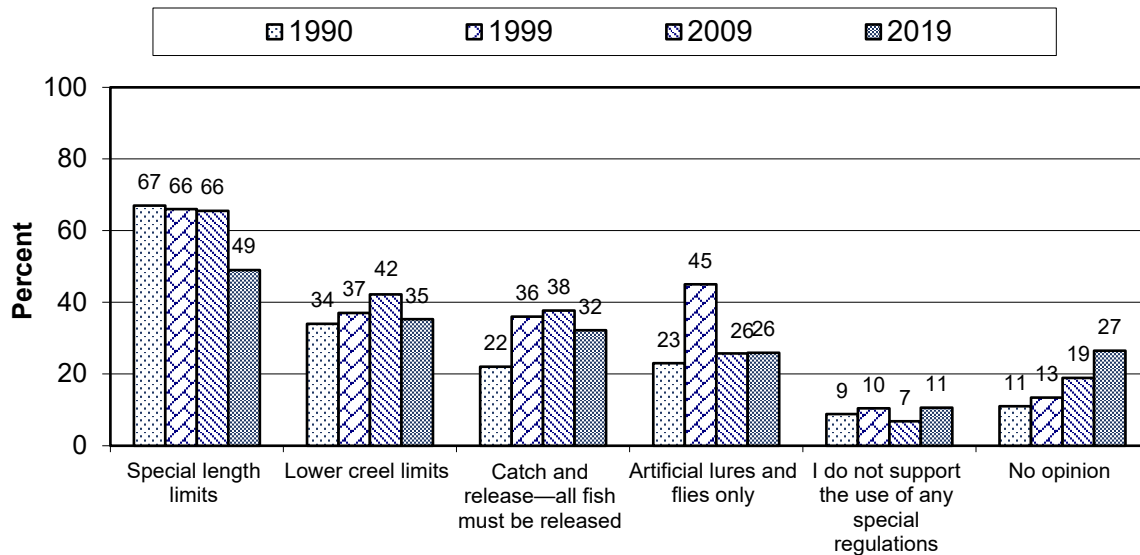
Q34. Special regulations can be used in certain waters to increase the number and/or size of fish available to be caught. Please check all the special regulations that you would support on some waters for the species listed. (Asked of those who fished for warmwater gamefish or panfish in the past 3 years, excluding Lake Champlain.) (Largemouth or smallmouth bass) (Resident anglers)



Trends should be used with caution due to different weighting methodologies in each survey year; refer to the Introduction and Methodology section for details. Results are shown to the nearest integer, but slight differences in bar heights of the same listed values are due to fractional differences in the computed data. Statistical significance tests between 2009 and 2019 could not be run because of differences in weighting.

Figure 109. Trends in Opinion on Special Regulations for Largemouth and Smallmouth Bass, Residents

Q34. Special regulations can be used in certain waters to increase the number and/or size of fish available to be caught. Please check all the special regulations that you would support on some waters for the species listed. (Asked of those who fished for warmwater gamefish or panfish in the past 3 years, excluding Lake Champlain.) (Largemouth or smallmouth bass) (Nonresident anglers)

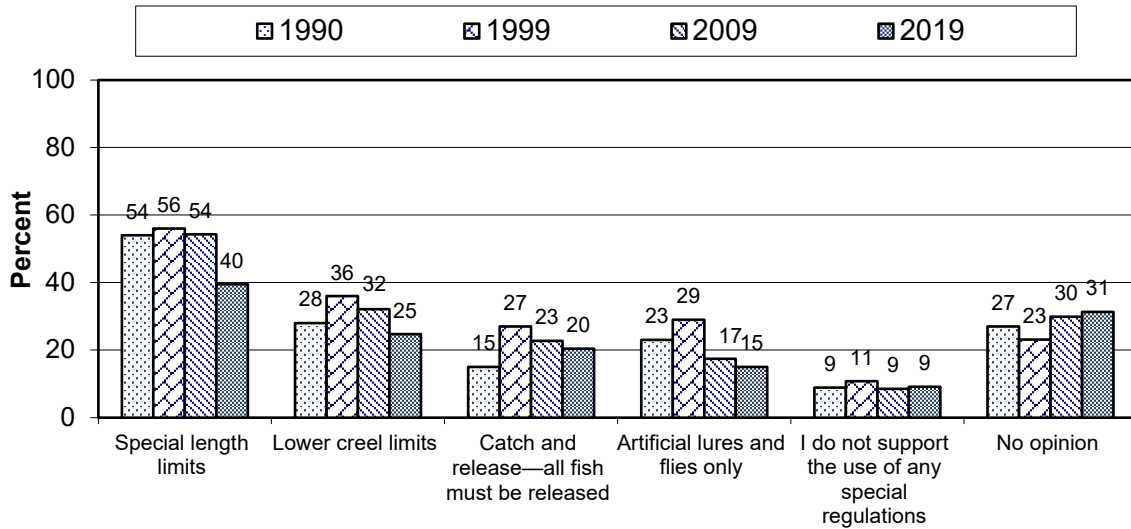


Trends should be used with caution due to different weighting methodologies in each survey year; refer to the Introduction and Methodology section for details. Results are shown to the nearest integer, but slight differences in bar heights of the same listed values are due to fractional differences in the computed data. Statistical significance tests between 2009 and 2019 could not be run because of differences in weighting.

Figure 110. Trends in Opinion on Special Regulations for Largemouth and Smallmouth Bass, Nonresidents

Q34. Special regulations can be used in certain waters to increase the number and/or size of fish available to be caught. Please check all the special regulations that you would support on some waters for the species listed. (Asked of those who fished for warmwater gamefish or panfish in the past 3 years, excluding Lake Champlain.)

**(Walleye)
(Resident anglers)**

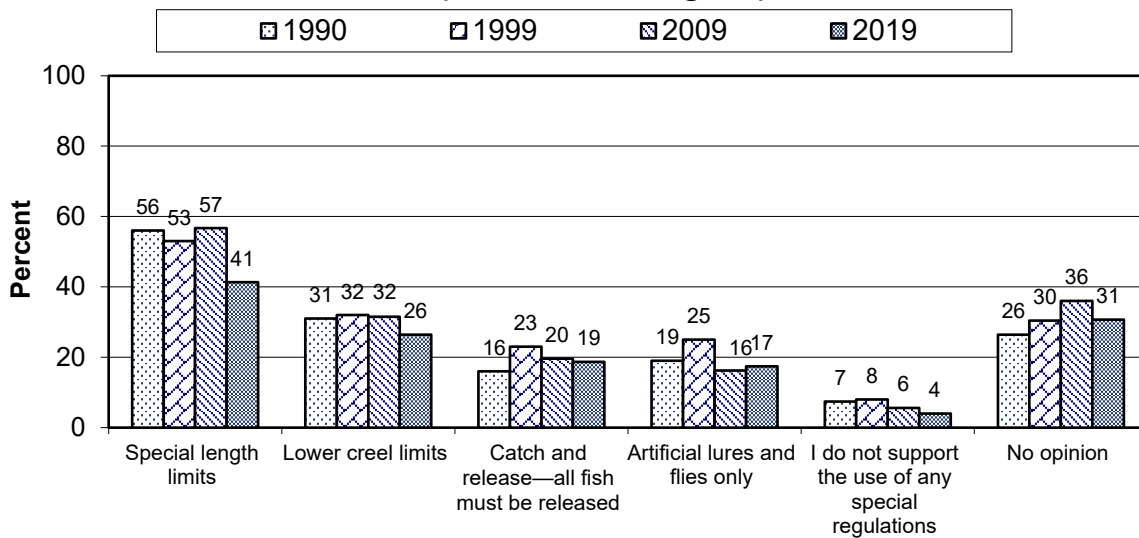


Trends should be used with caution due to different weighting methodologies in each survey year; refer to the Introduction and Methodology section for details. Results are shown to the nearest integer, but slight differences in bar heights of the same listed values are due to fractional differences in the computed data. Statistical significance tests between 2009 and 2019 could not be run because of differences in weighting.

Figure 111. Trends in Opinion on Special Regulations for Walleye, Residents

Q34. Special regulations can be used in certain waters to increase the number and/or size of fish available to be caught. Please check all the special regulations that you would support on some waters for the species listed. (Asked of those who fished for warmwater gamefish or panfish in the past 3 years, excluding Lake Champlain.)

**(Walleye)
(Nonresident anglers)**

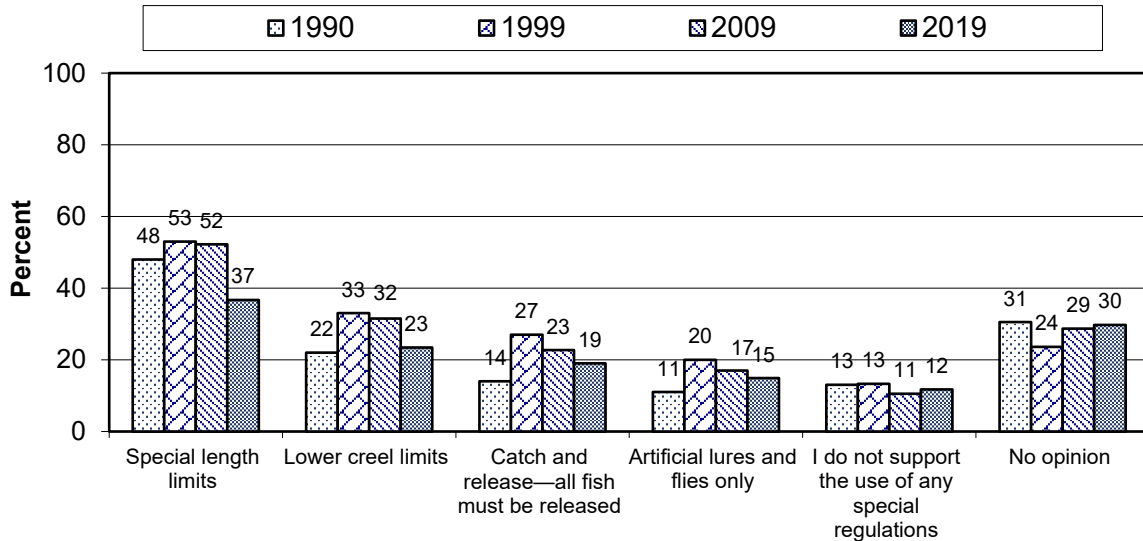


Trends should be used with caution due to different weighting methodologies in each survey year; refer to the Introduction and Methodology section for details.
 Results are shown to the nearest integer, but slight differences in bar heights of the same listed values are due to fractional differences in the computed data.
 Statistical significance tests between 2009 and 2019 could not be run because of differences in weighting.

Figure 112. Trends in Opinion on Special Regulations for Walleye, Nonresidents

Q34. Special regulations can be used in certain waters to increase the number and/or size of fish available to be caught. Please check all the special regulations that you would support on some waters for the species listed. (Asked of those who fished for warmwater gamefish or panfish in the past 3 years, excluding Lake Champlain.)

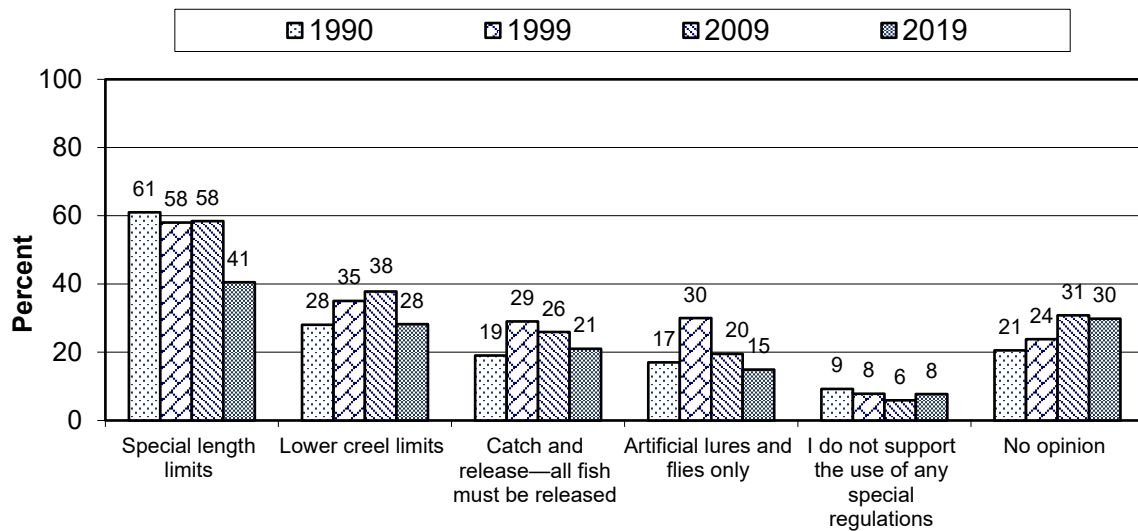
**(Northern pike)
(Resident anglers)**



Trends should be used with caution due to different weighting methodologies in each survey year; refer to the Introduction and Methodology section for details.
 Results are shown to the nearest integer, but slight differences in bar heights of the same listed values are due to fractional differences in the computed data.
 Statistical significance tests between 2009 and 2019 could not be run because of differences in weighting.

Figure 113. Trends in Opinion on Special Regulations for Northern Pike, Residents

Q34. Special regulations can be used in certain waters to increase the number and/or size of fish available to be caught. Please check all the special regulations that you would support on some waters for the species listed. (Asked of those who fished for warmwater gamefish or panfish in the past 3 years, excluding Lake Champlain.)
(Northern pike)
(Nonresident anglers)



Trends should be used with caution due to different weighting methodologies in each survey year; refer to the Introduction and Methodology section for details.
 Results are shown to the nearest integer, but slight differences in bar heights of the same listed values are due to fractional differences in the computed data.
 Statistical significance tests between 2009 and 2019 could not be run because of differences in weighting.

Figure 114. Trends in Opinion on Special Regulations for Northern Pike, Nonresidents

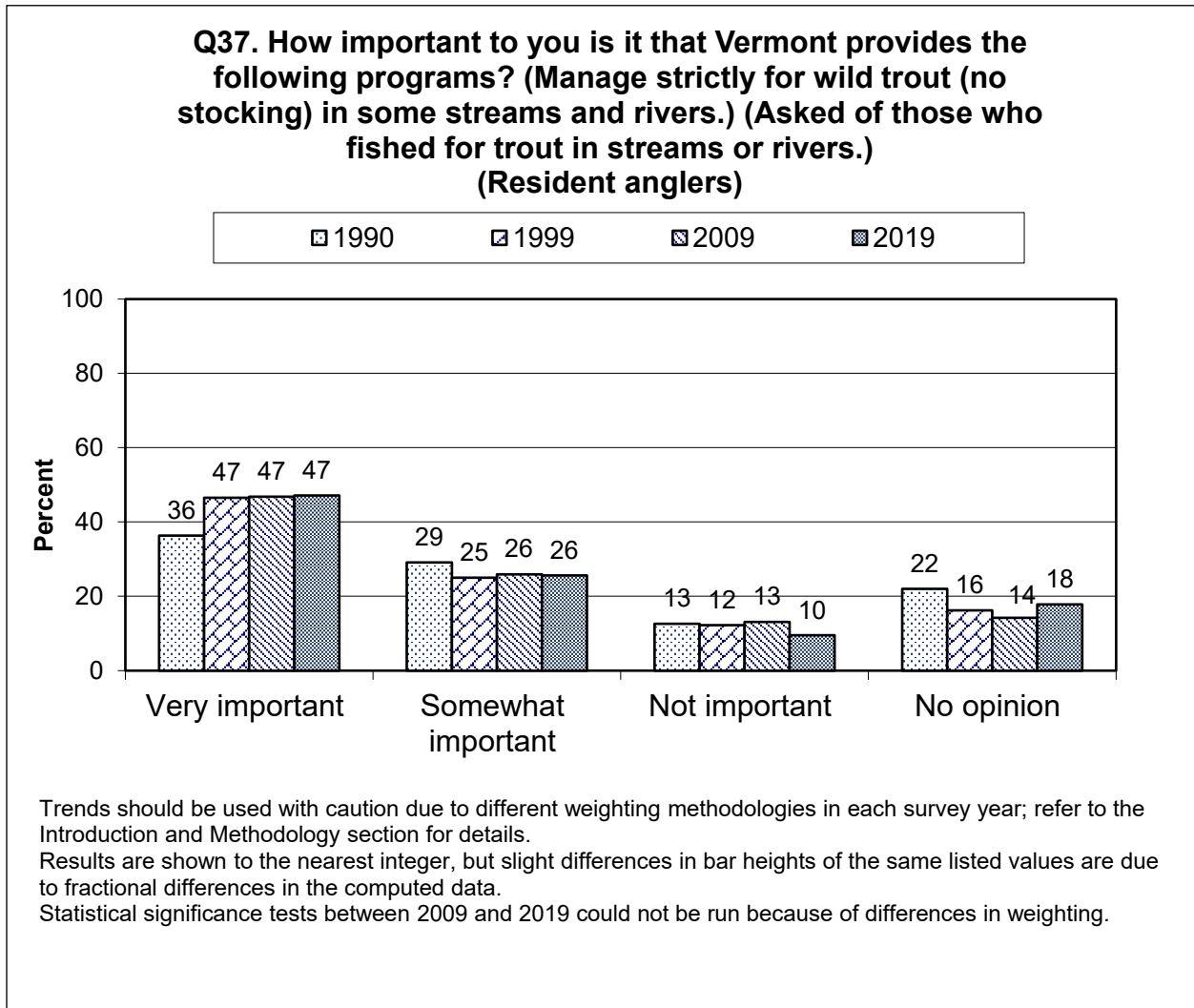


Figure 115. Trends in Importance of Managing for Wild Trout, Residents

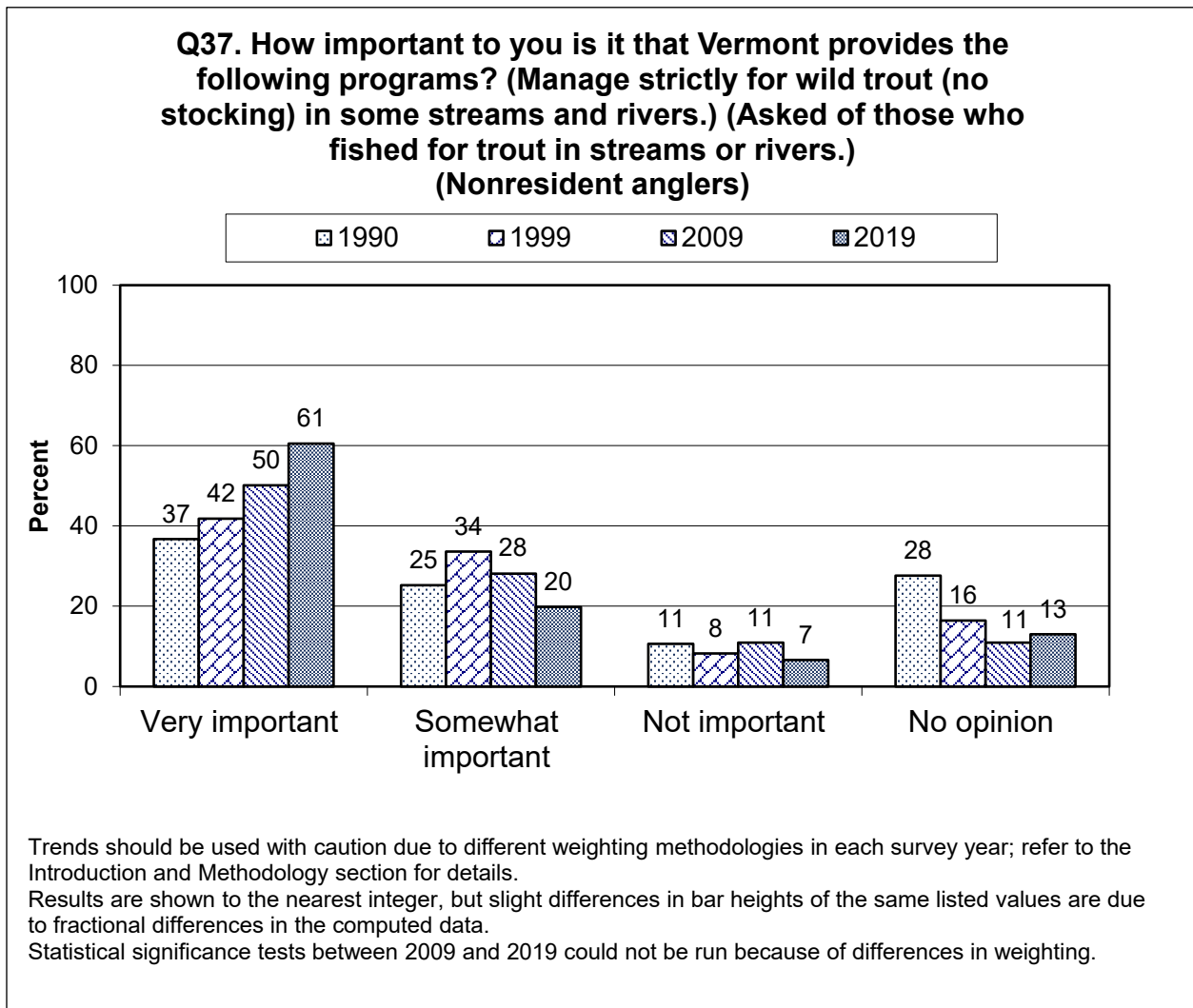


Figure 116. Trends in Importance of Managing for Wild Trout, Nonresidents

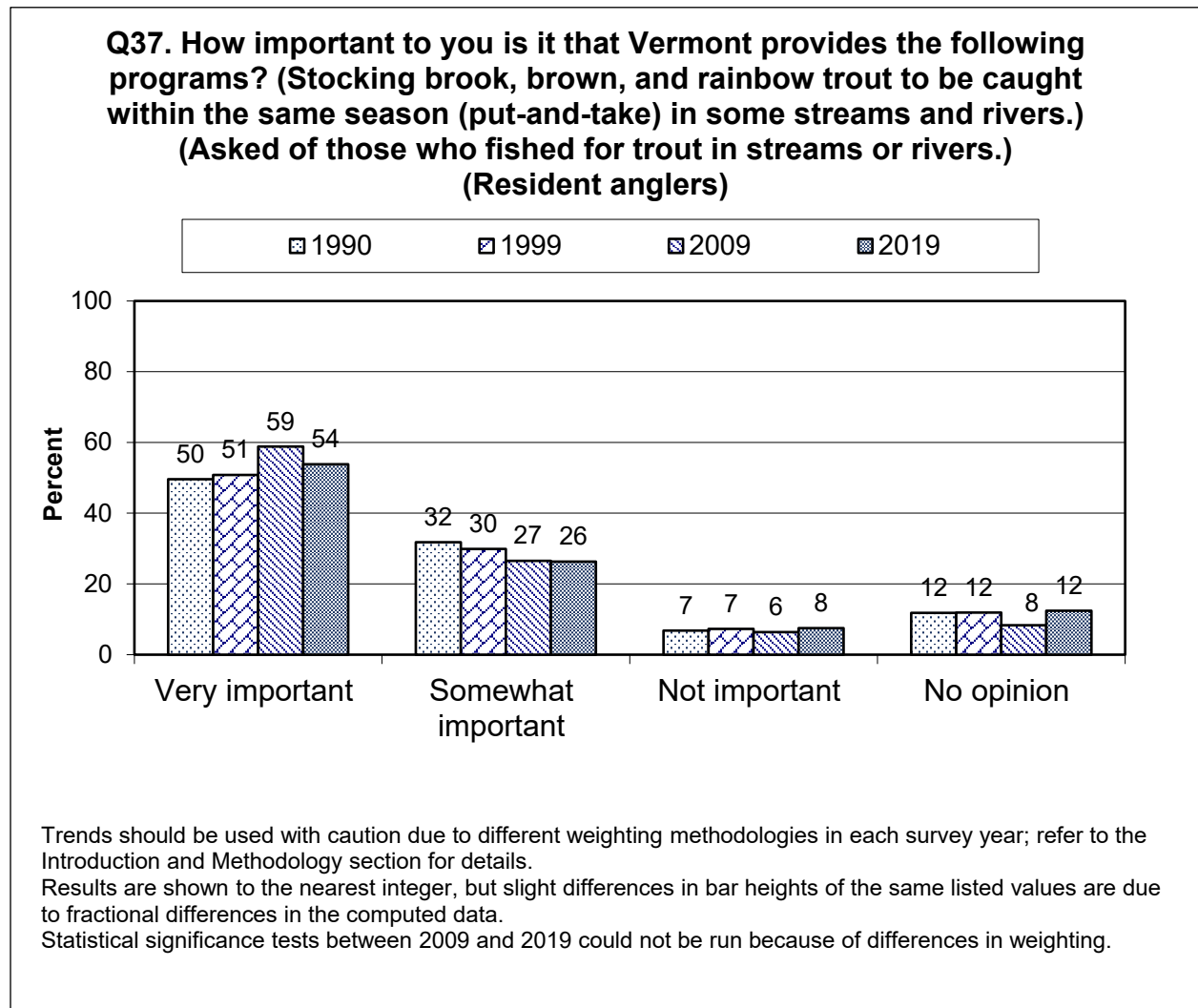


Figure 117. Trends in Importance of Stocking Trout, Residents

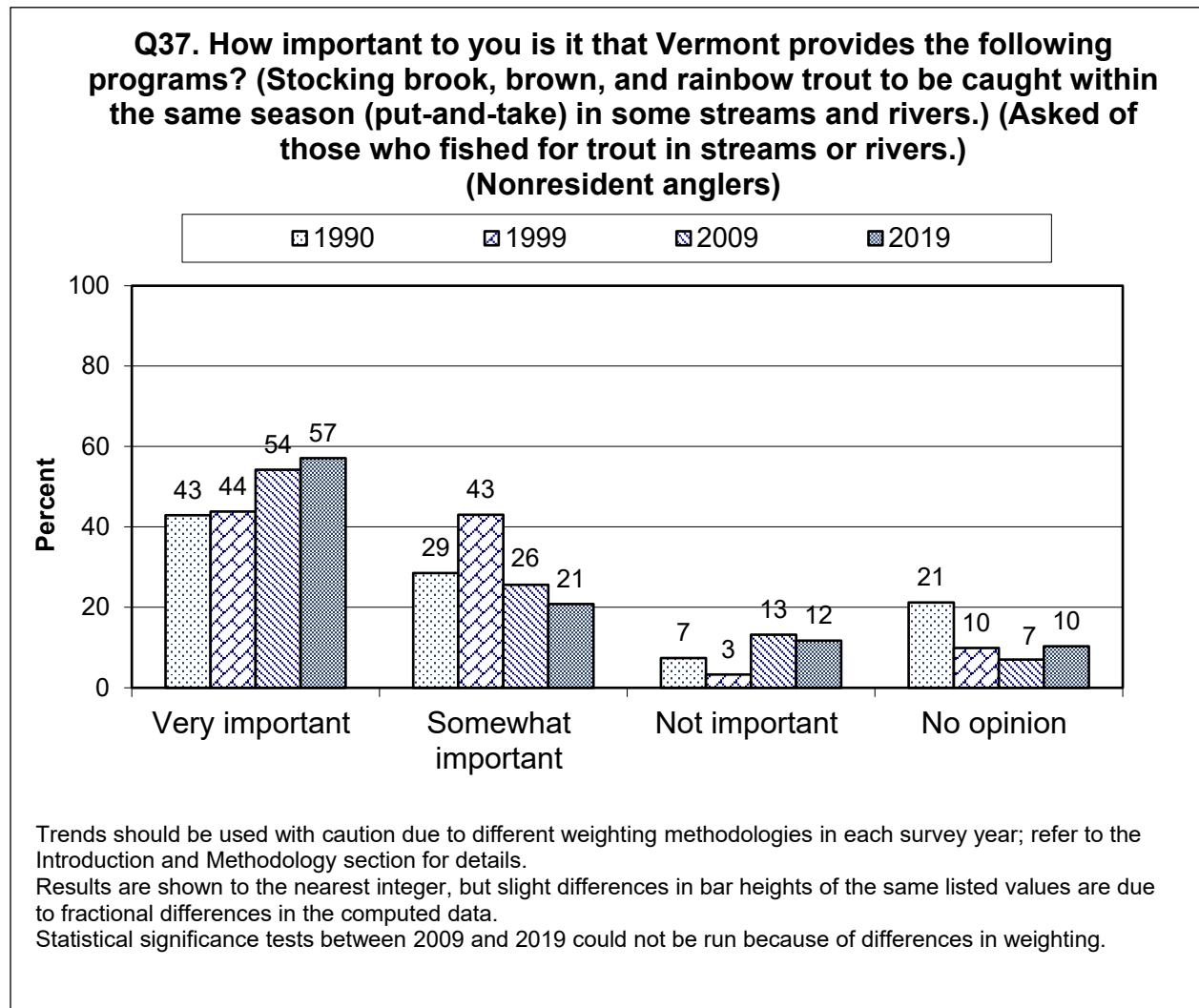


Figure 118. Trends in Importance of Stocking Trout, Nonresidents

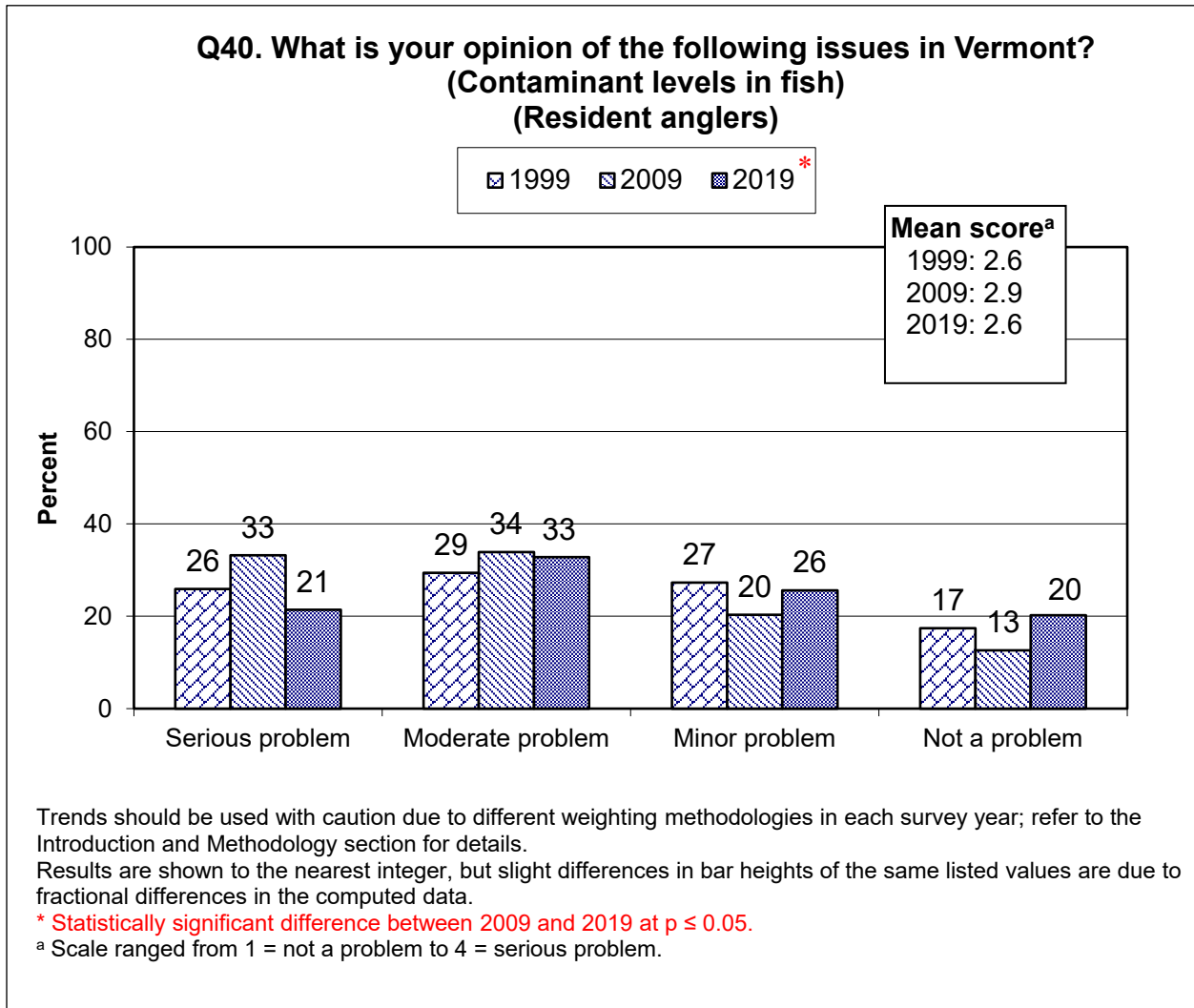


Figure 119. Trends in Rating of Contaminant Levels in Fish, Residents

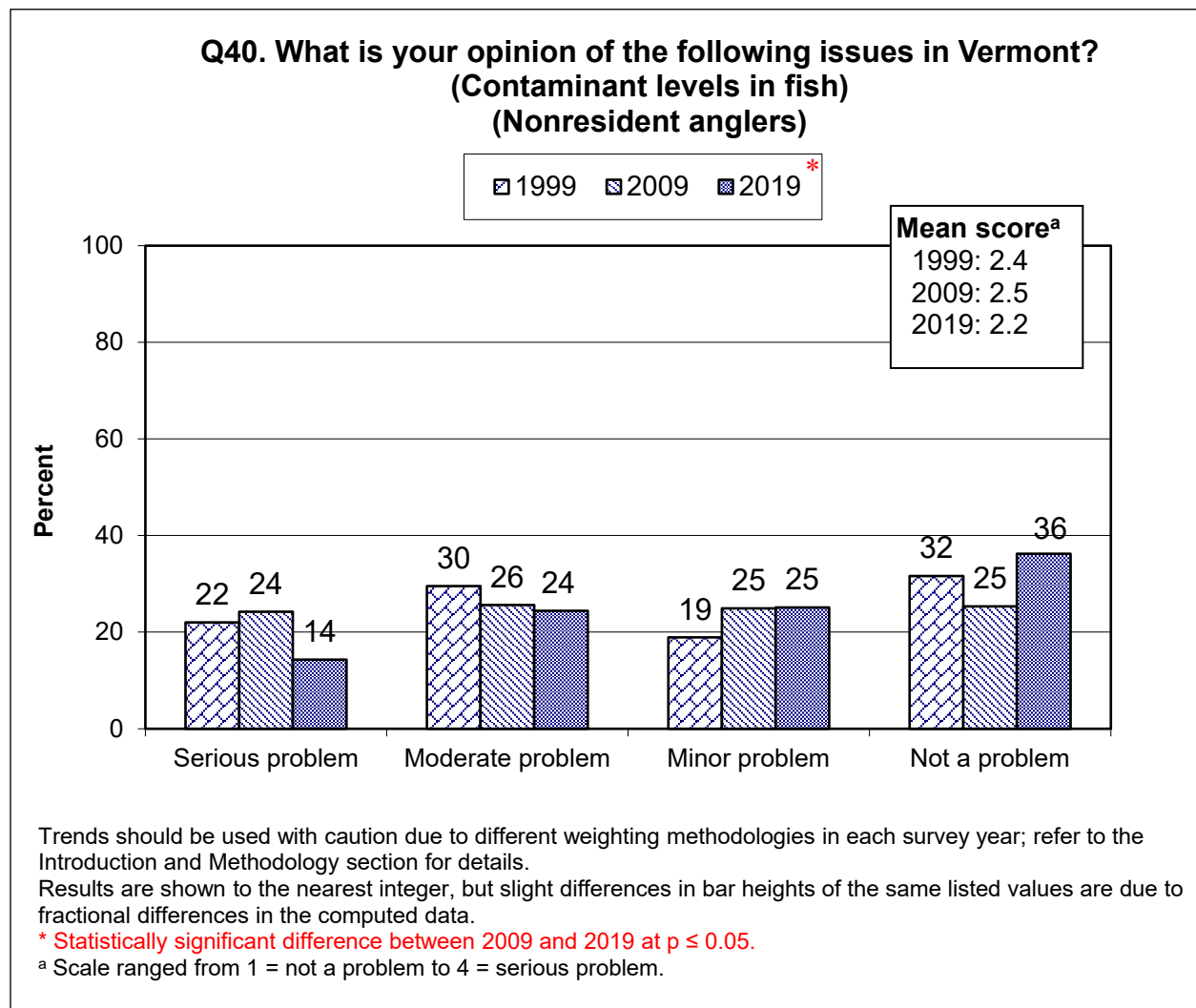


Figure 120. Trends in Rating of Contaminant Levels in Fish, Nonresidents

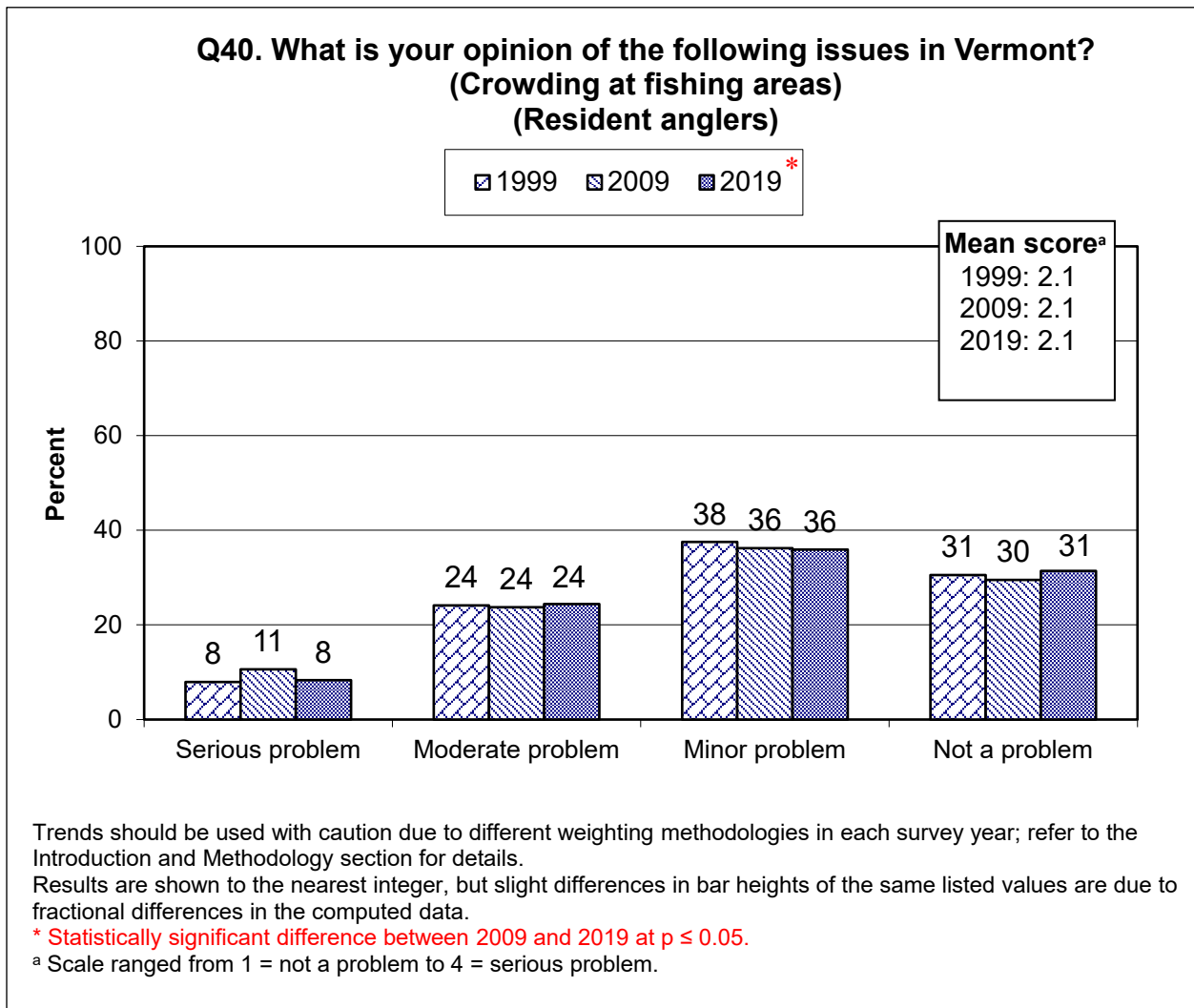


Figure 121. Trends in Rating of Crowding, Residents

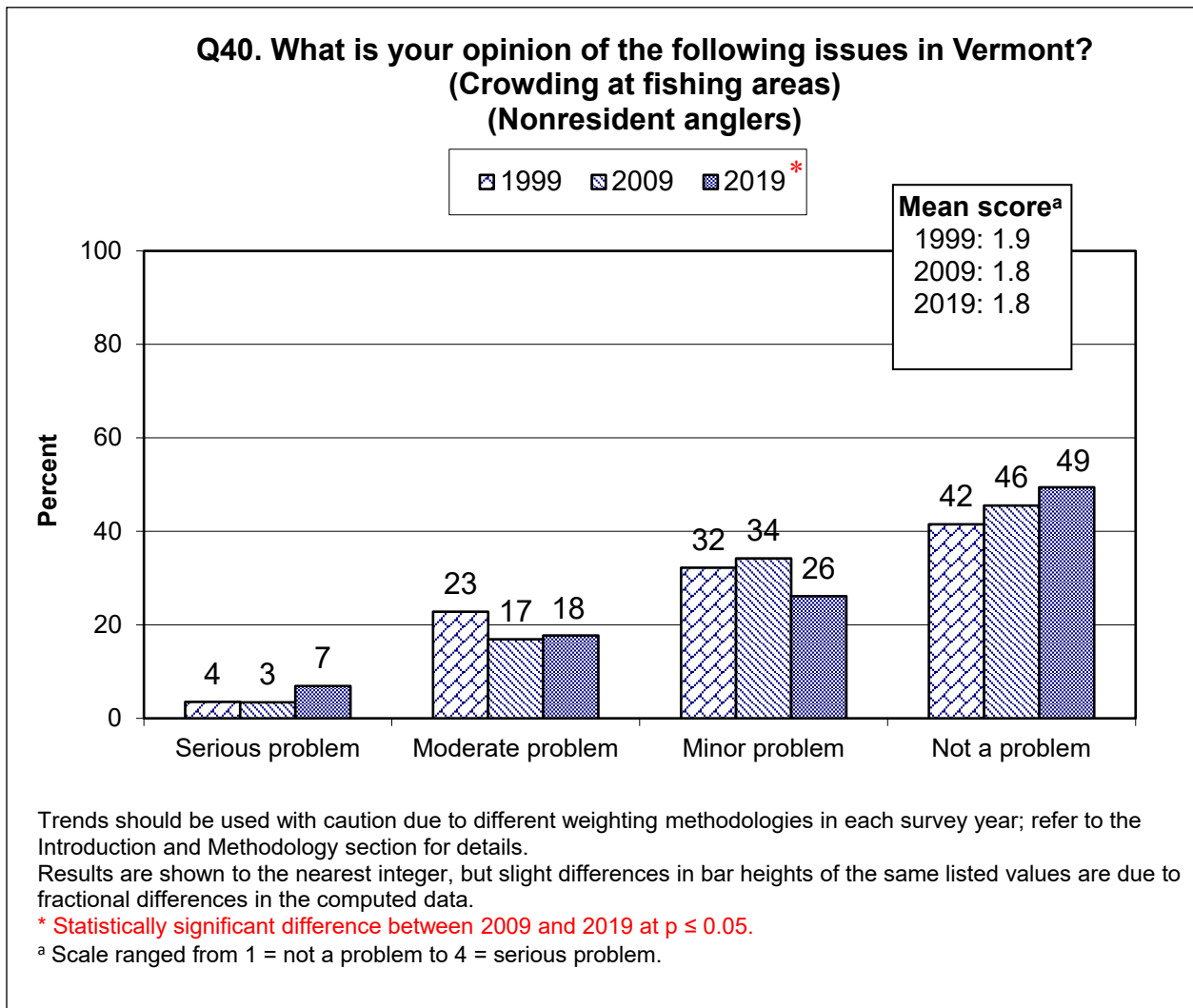


Figure 122. Trends in Rating of Crowding, Nonresidents

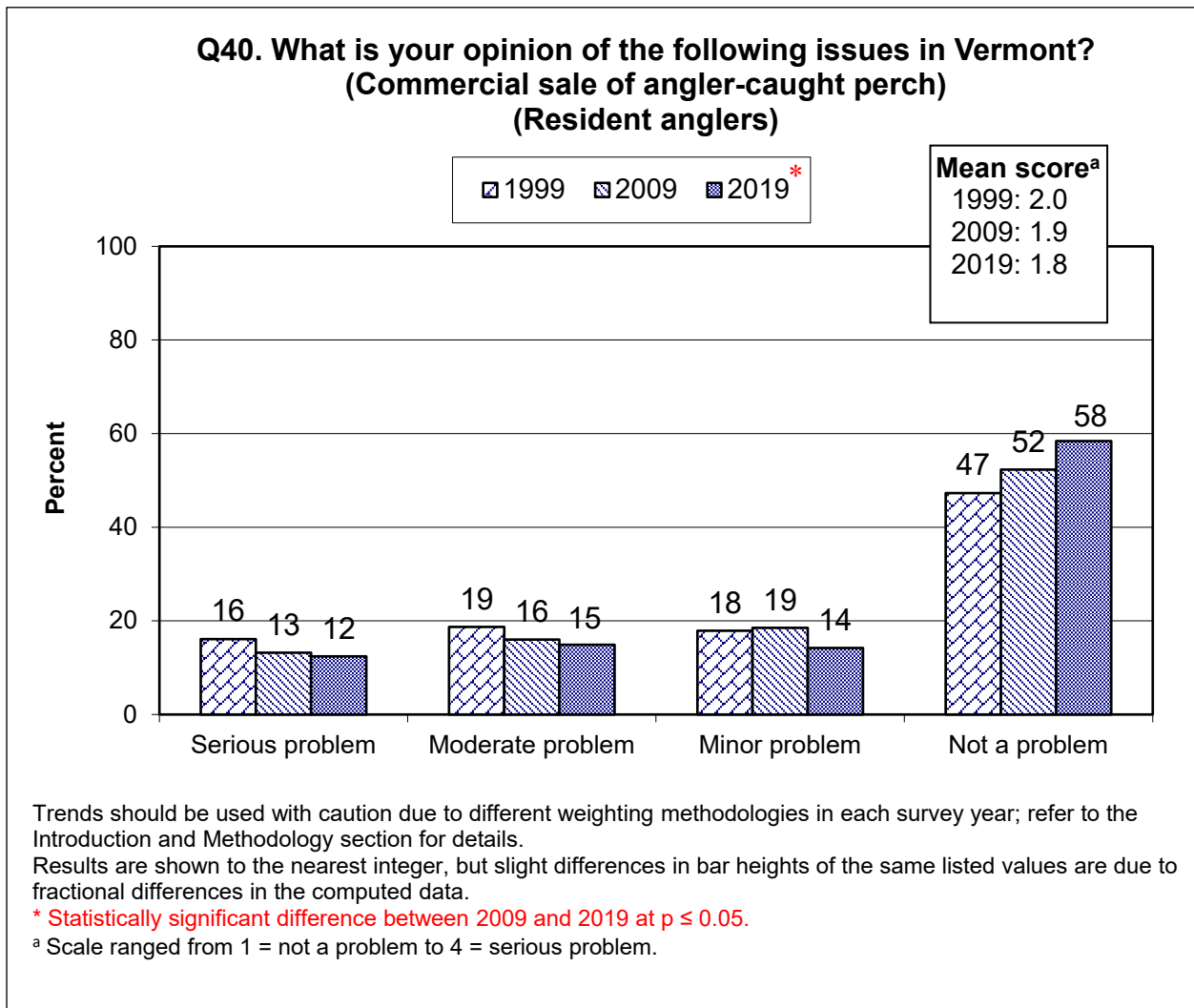


Figure 123. Trends in Rating of Commercial Sale of Perch, as a Problem, Residents

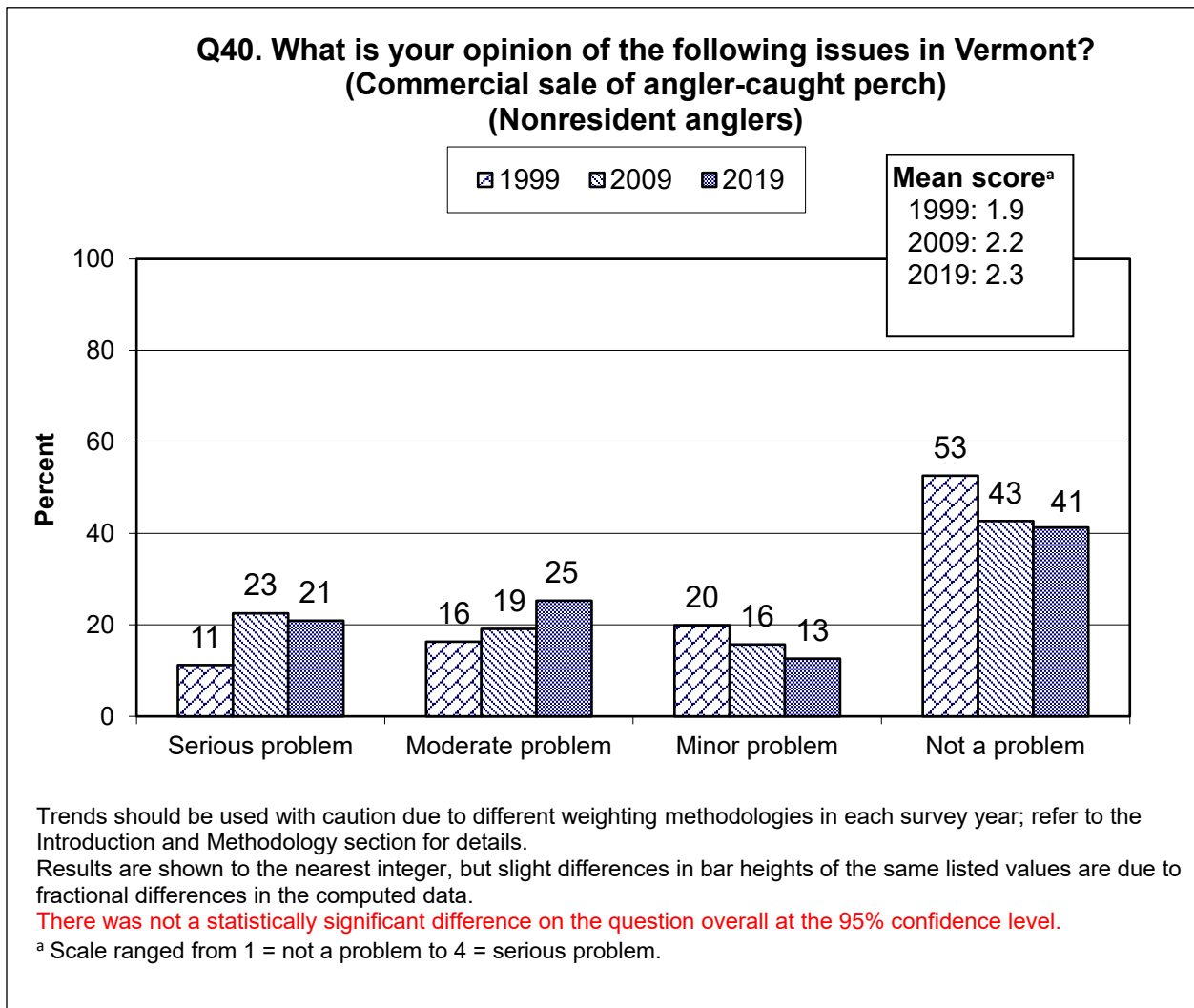


Figure 124. Trends in Rating of Commercial Sale of Perch, as a Problem, Nonresidents

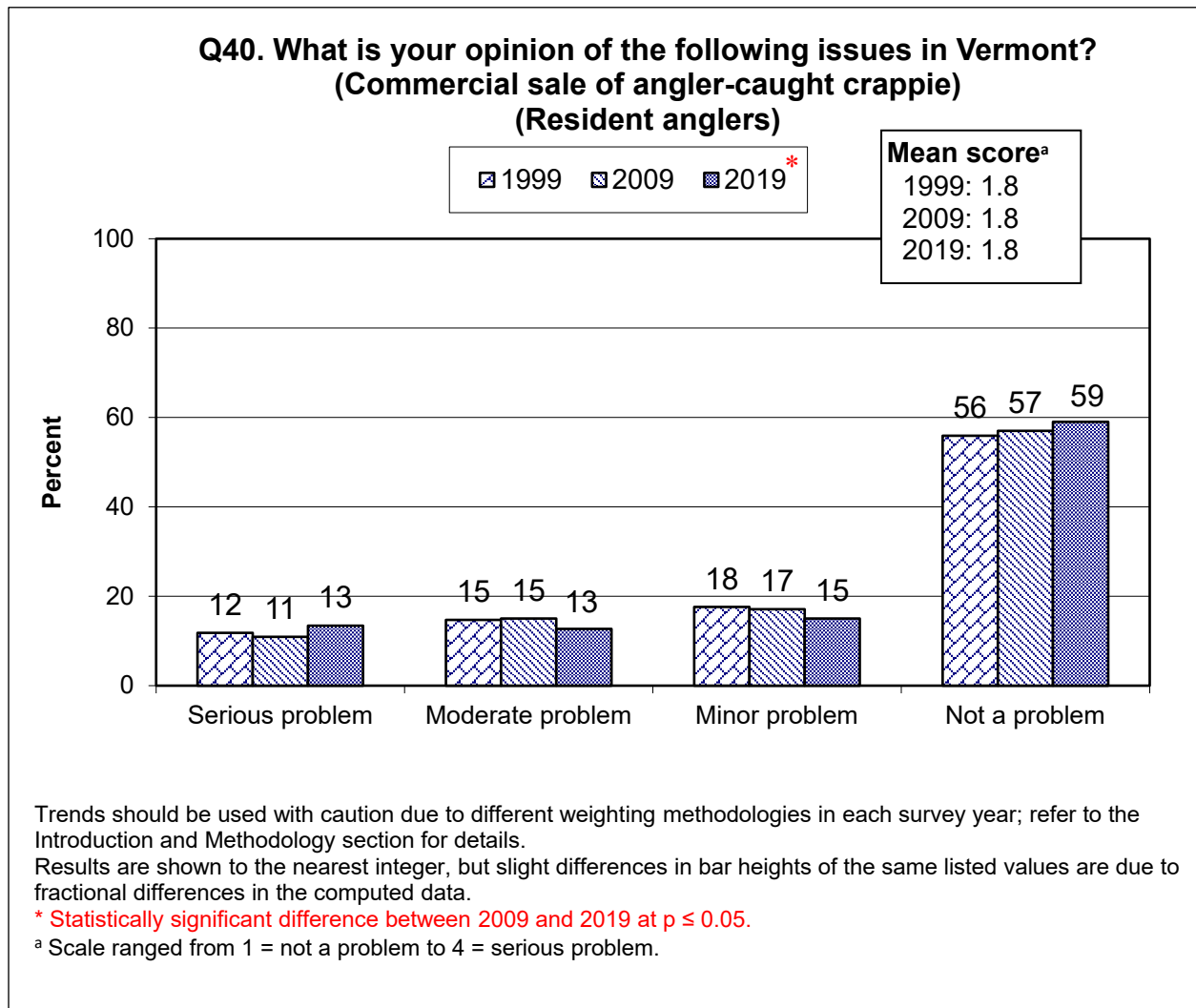


Figure 125. Trends in Rating of Commercial Sale of Crappie, as a Problem, Residents

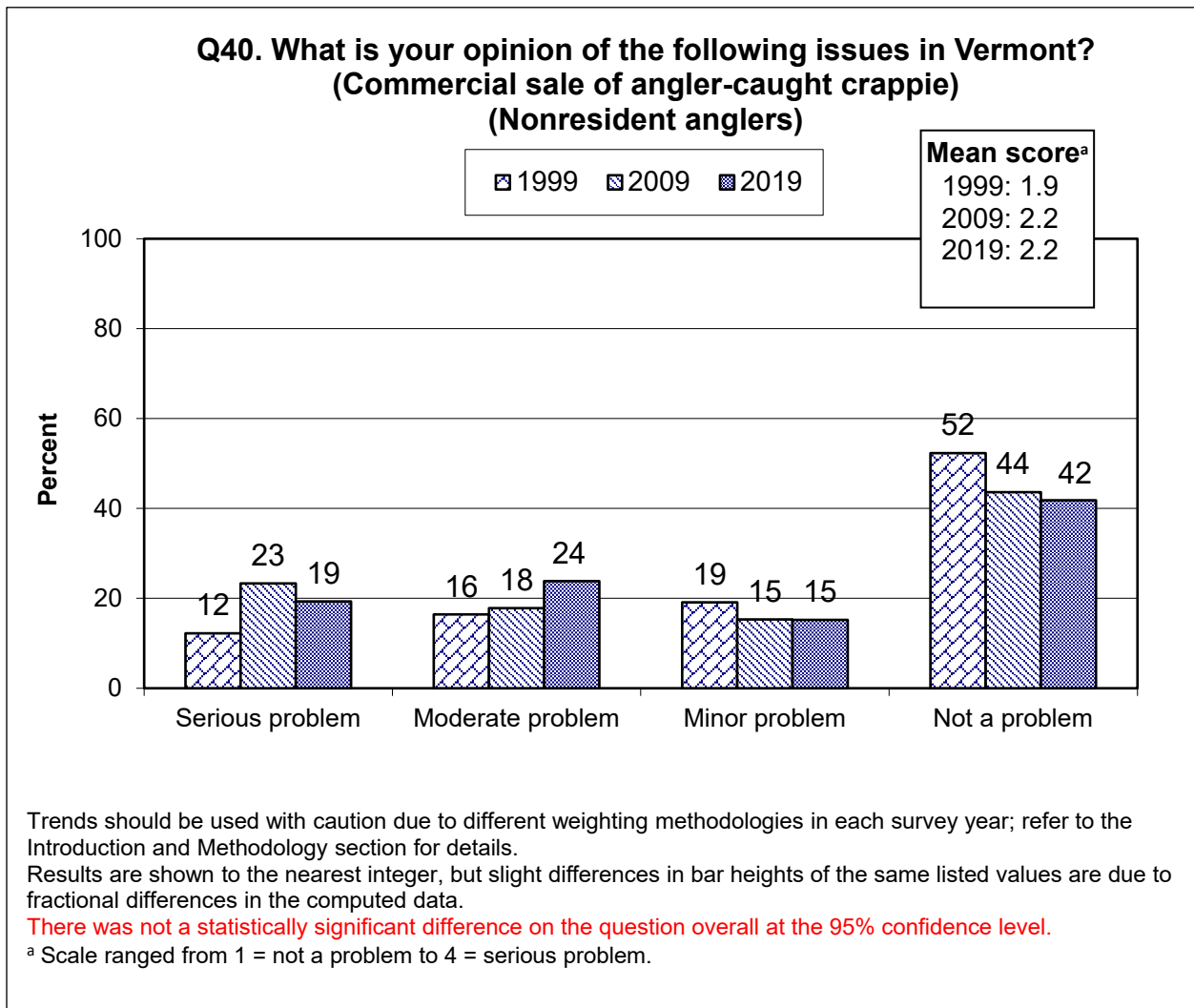


Figure 126. Trends in Rating of Commercial Sale of Crappie, as a Problem, Nonresidents

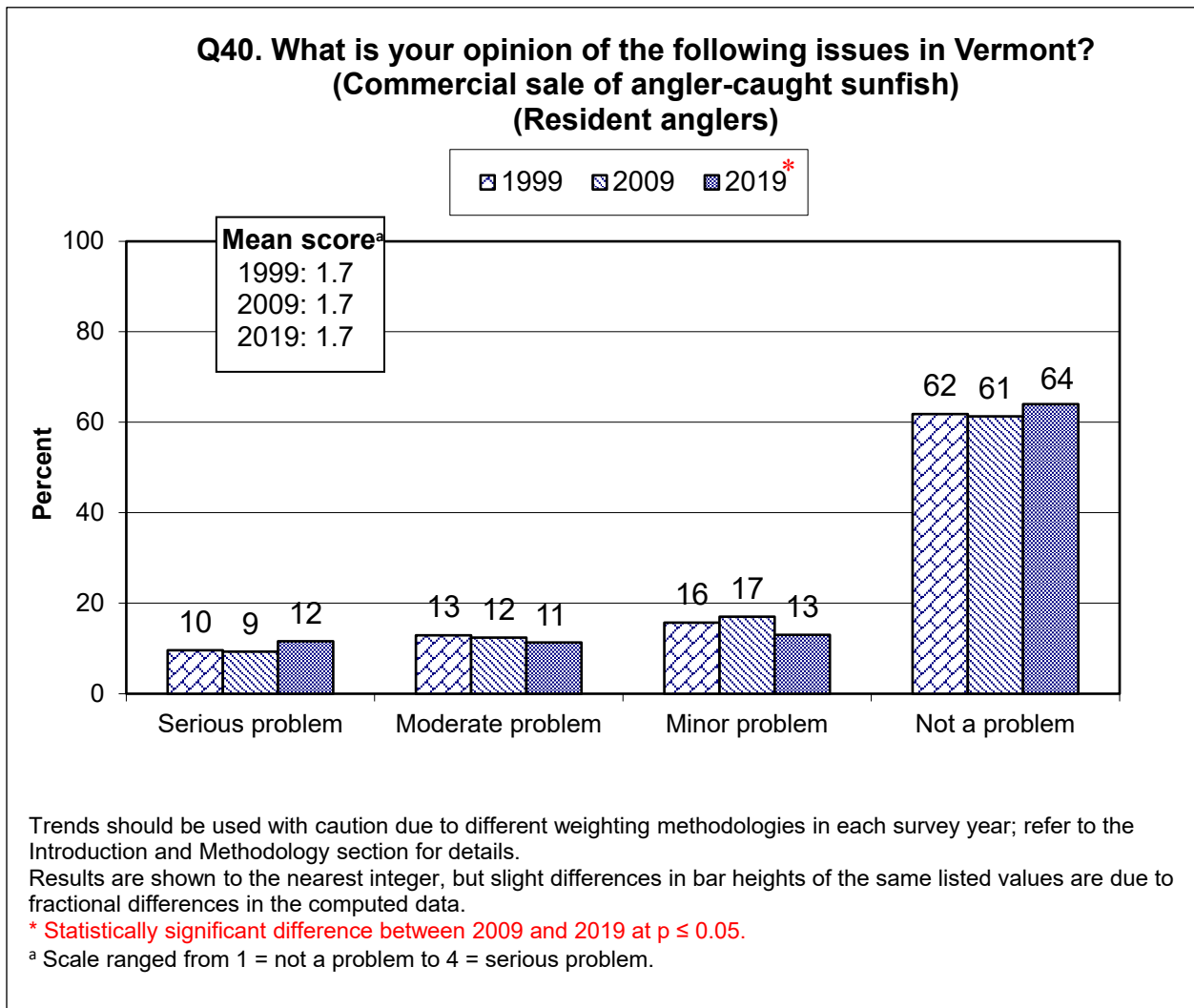


Figure 127. Trends in Rating of Commercial Sale of Sunfish, as a Problem, Residents

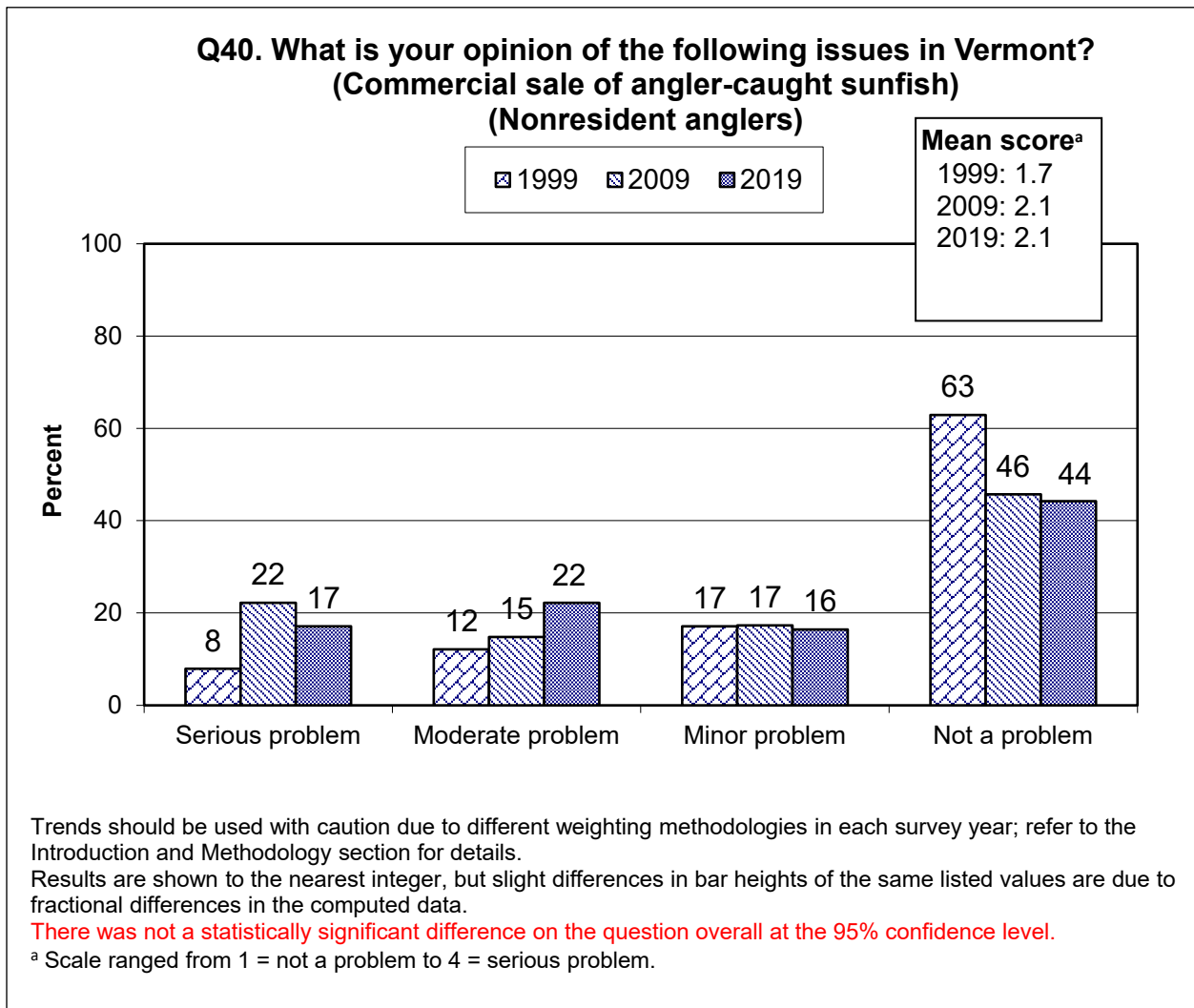


Figure 128. Trends in Rating of Commercial Sale of Sunfish, as a Problem, Nonresidents

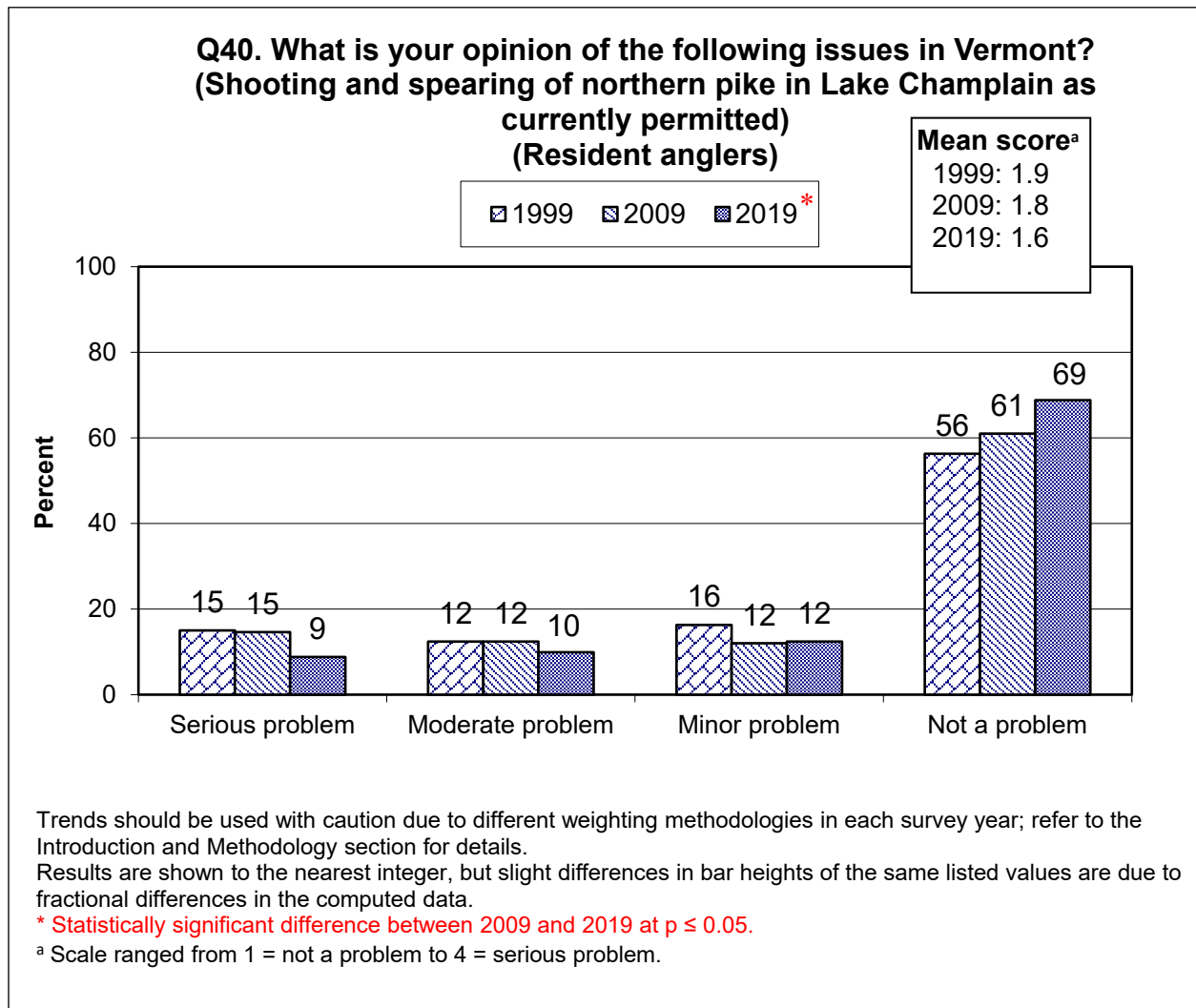


Figure 129. Trends in Rating of Shooting and Spearing of Northern Pike, as a Problem, Residents

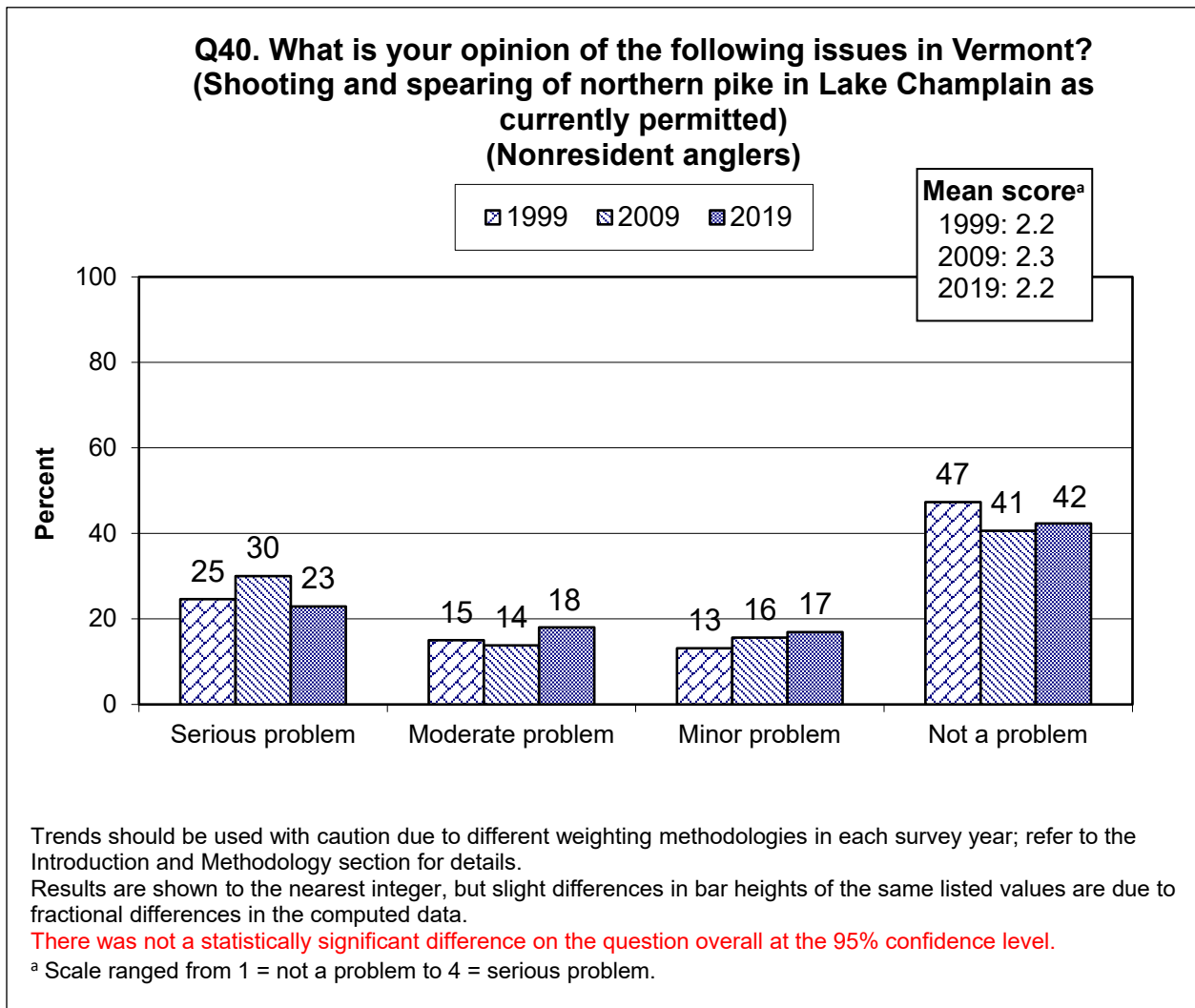


Figure 130. Trends in Rating of Shooting and Spearing of Northern Pike, as a Problem, Nonresidents

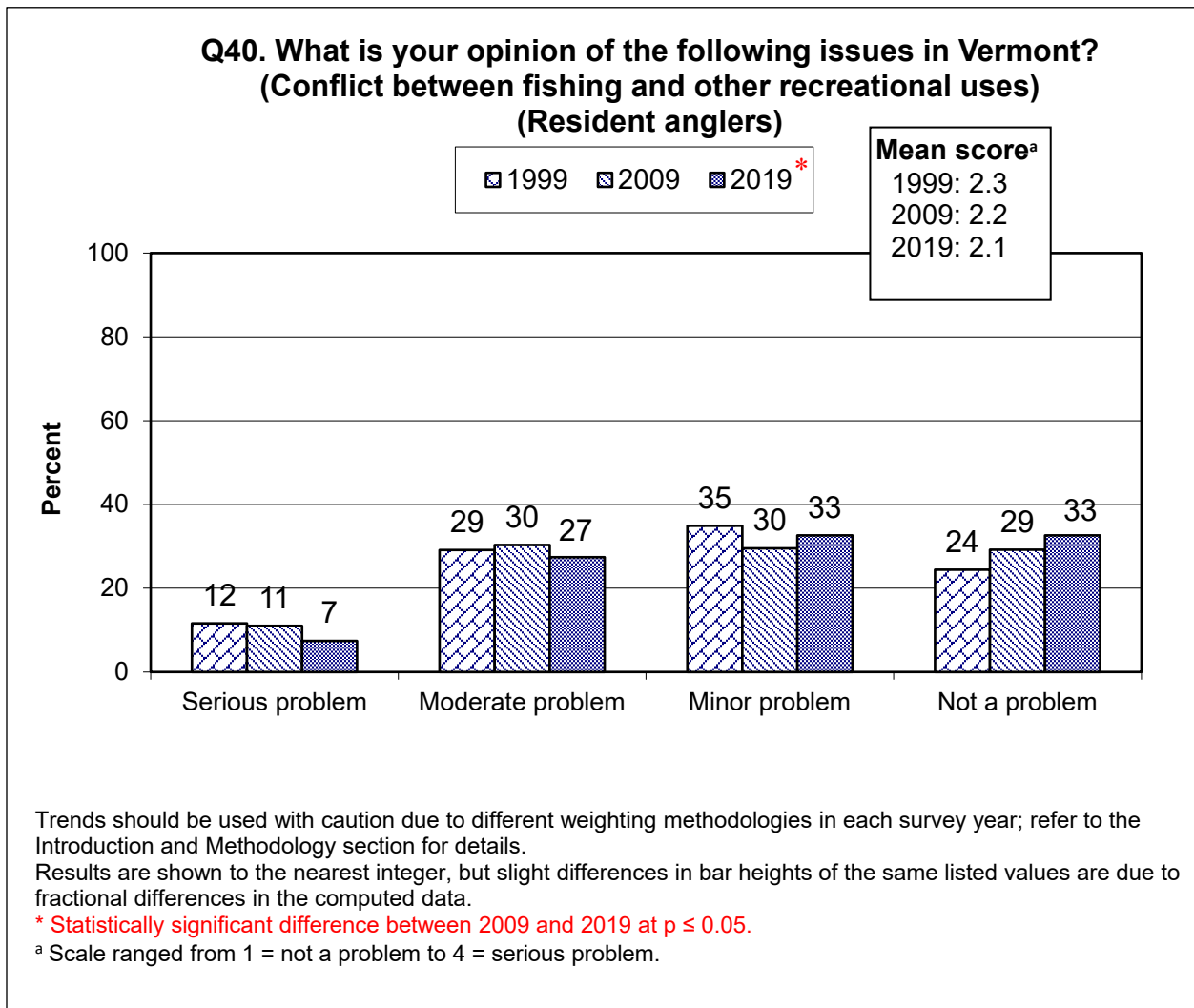


Figure 131. Trends in Rating of Conflict Between Anglers and Other Recreationists, as a Problem, Residents

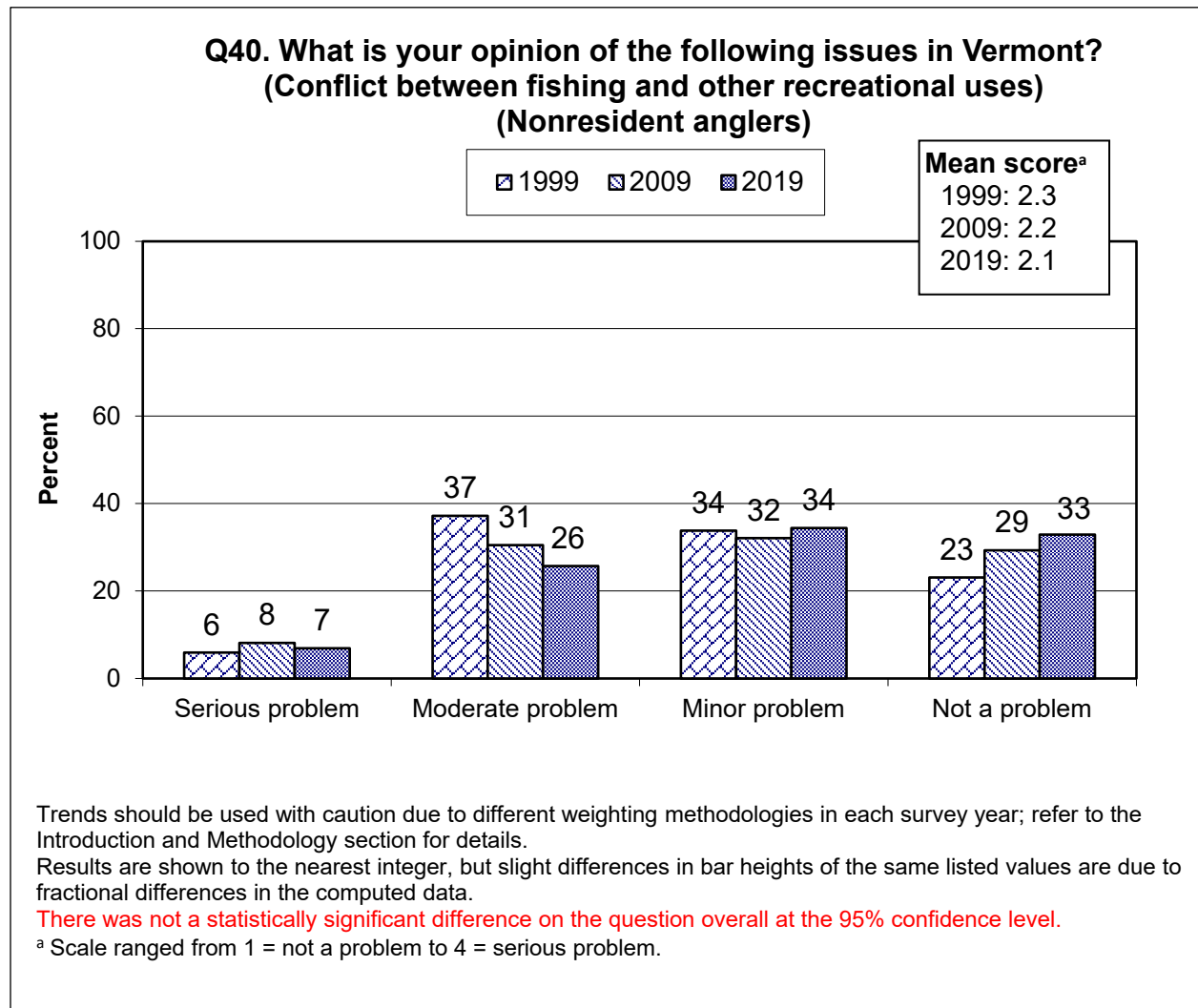


Figure 132. Trends in Rating of Conflict Between Anglers and Other Recreationists, as a Problem, Nonresidents

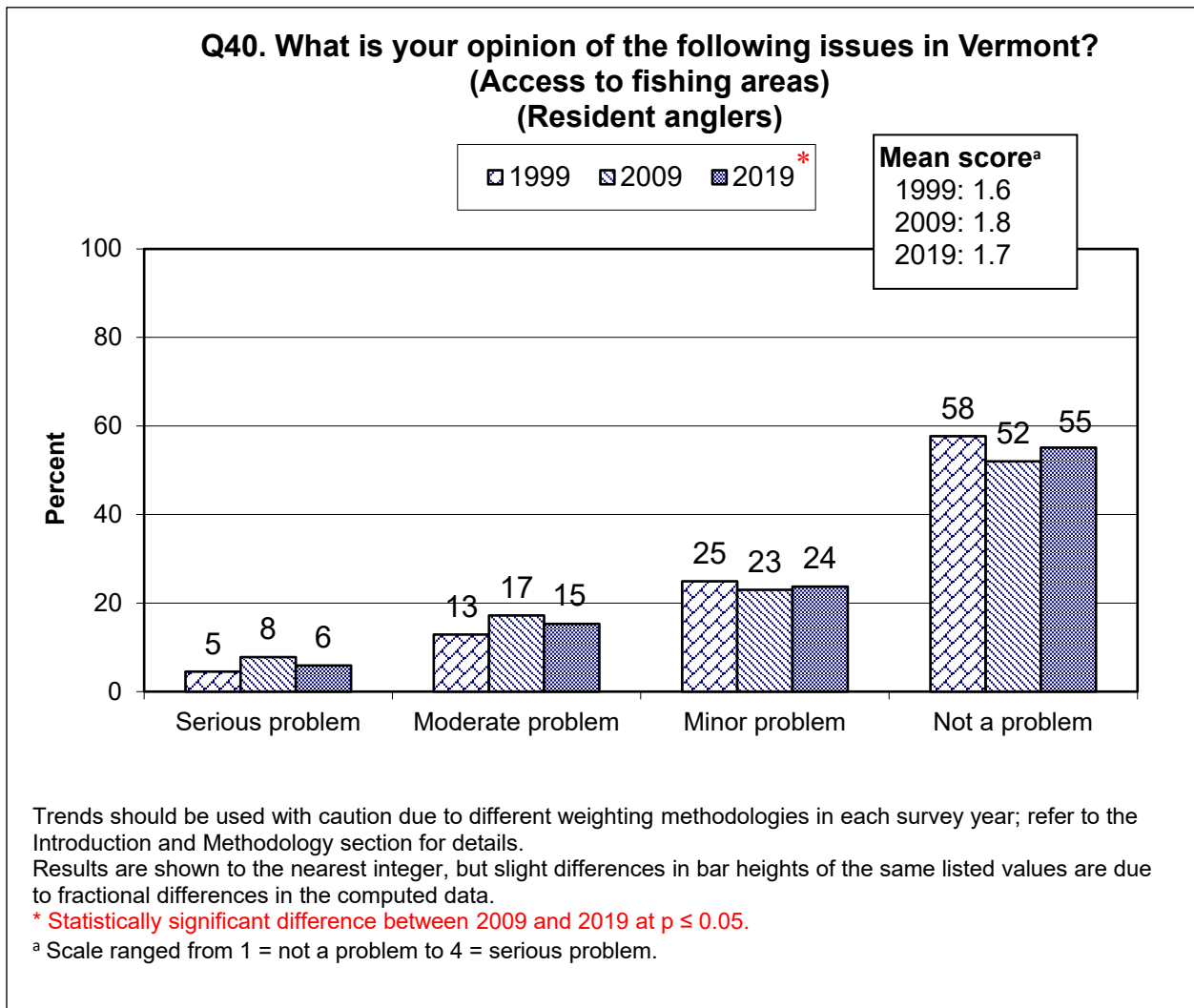


Figure 133. Trends in Ratings of Access, Residents

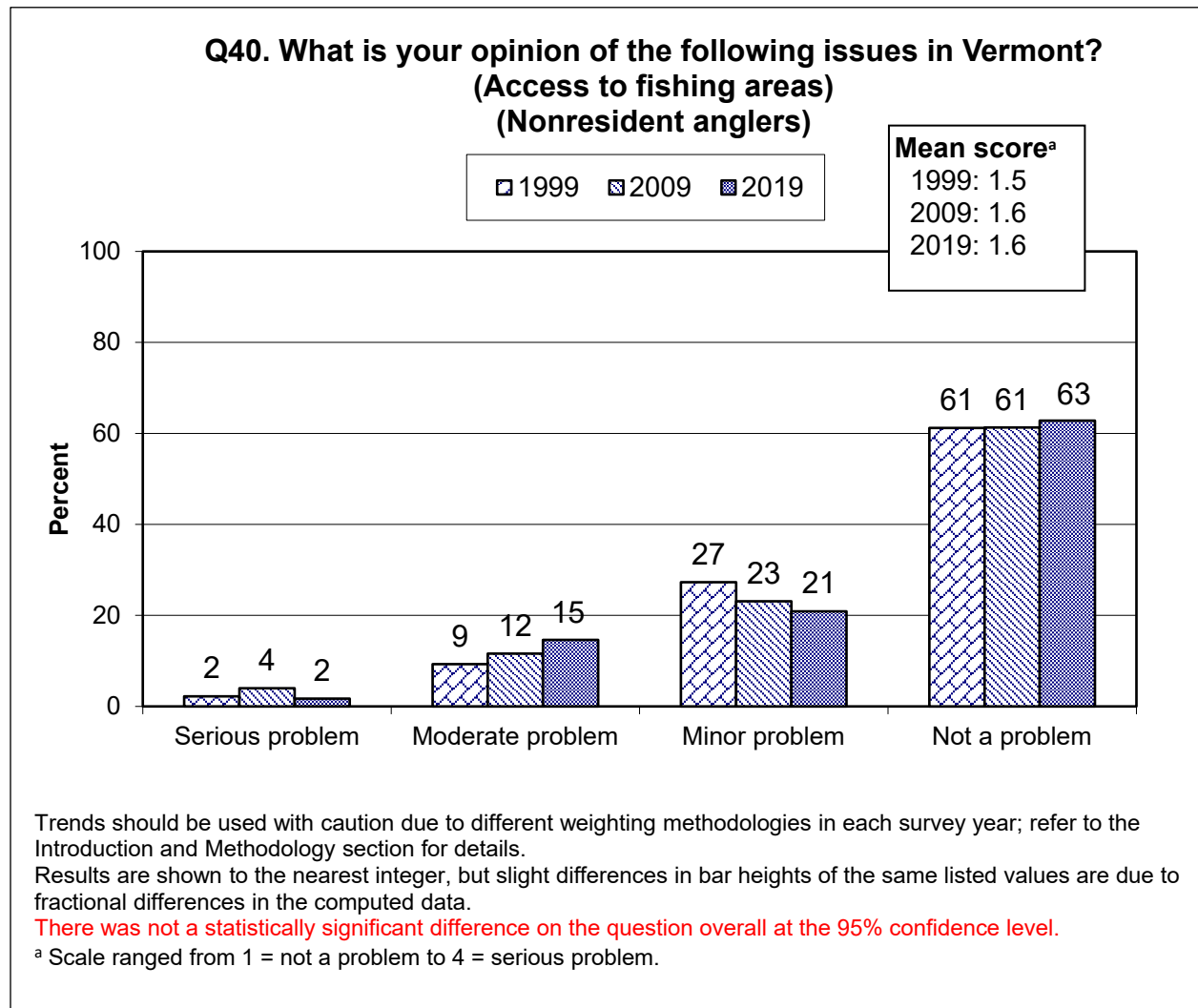


Figure 134. Trends in Ratings of Access, Nonresidents

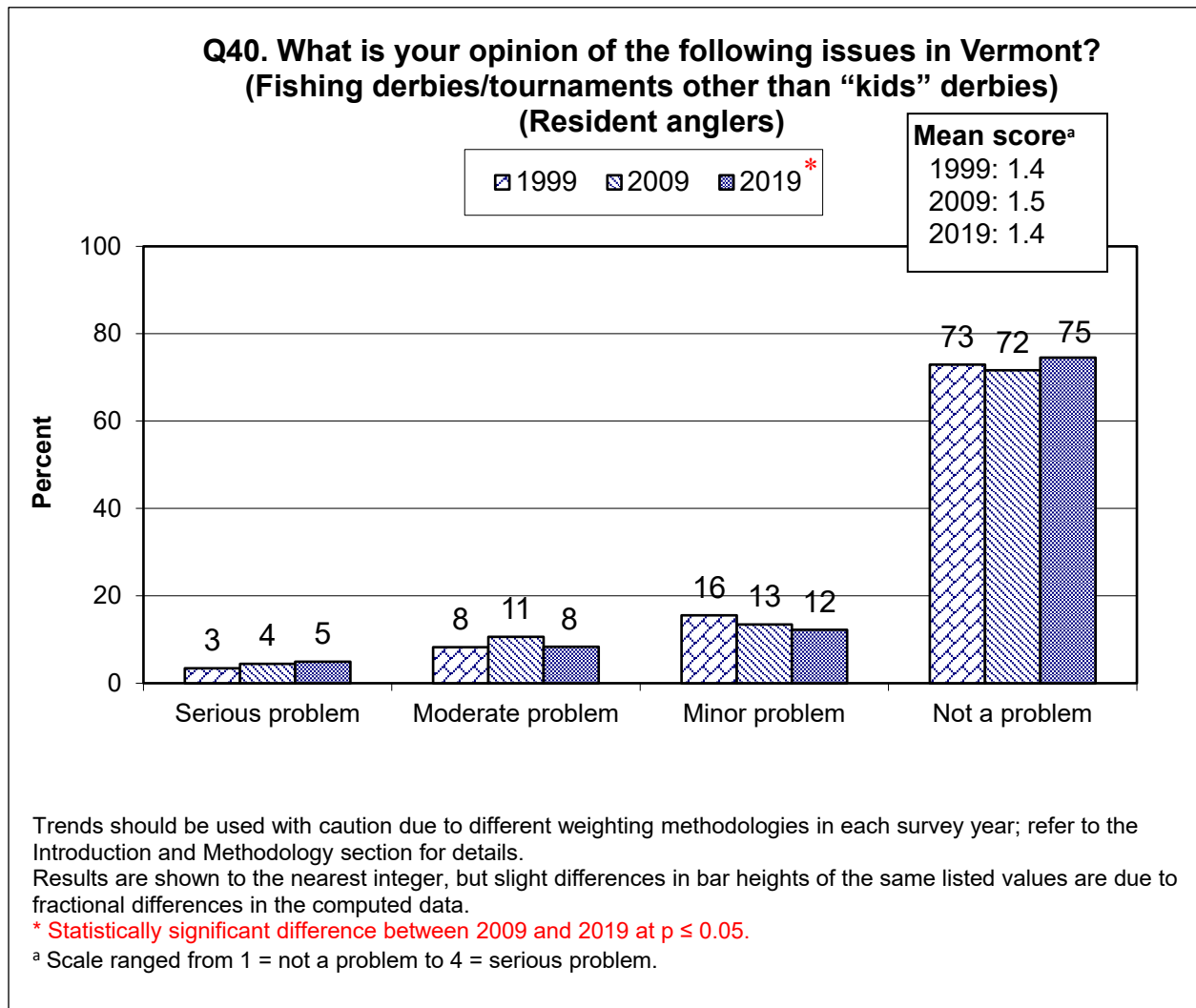


Figure 135. Trends in Rating of Fishing Derbies, as a Problem, Residents

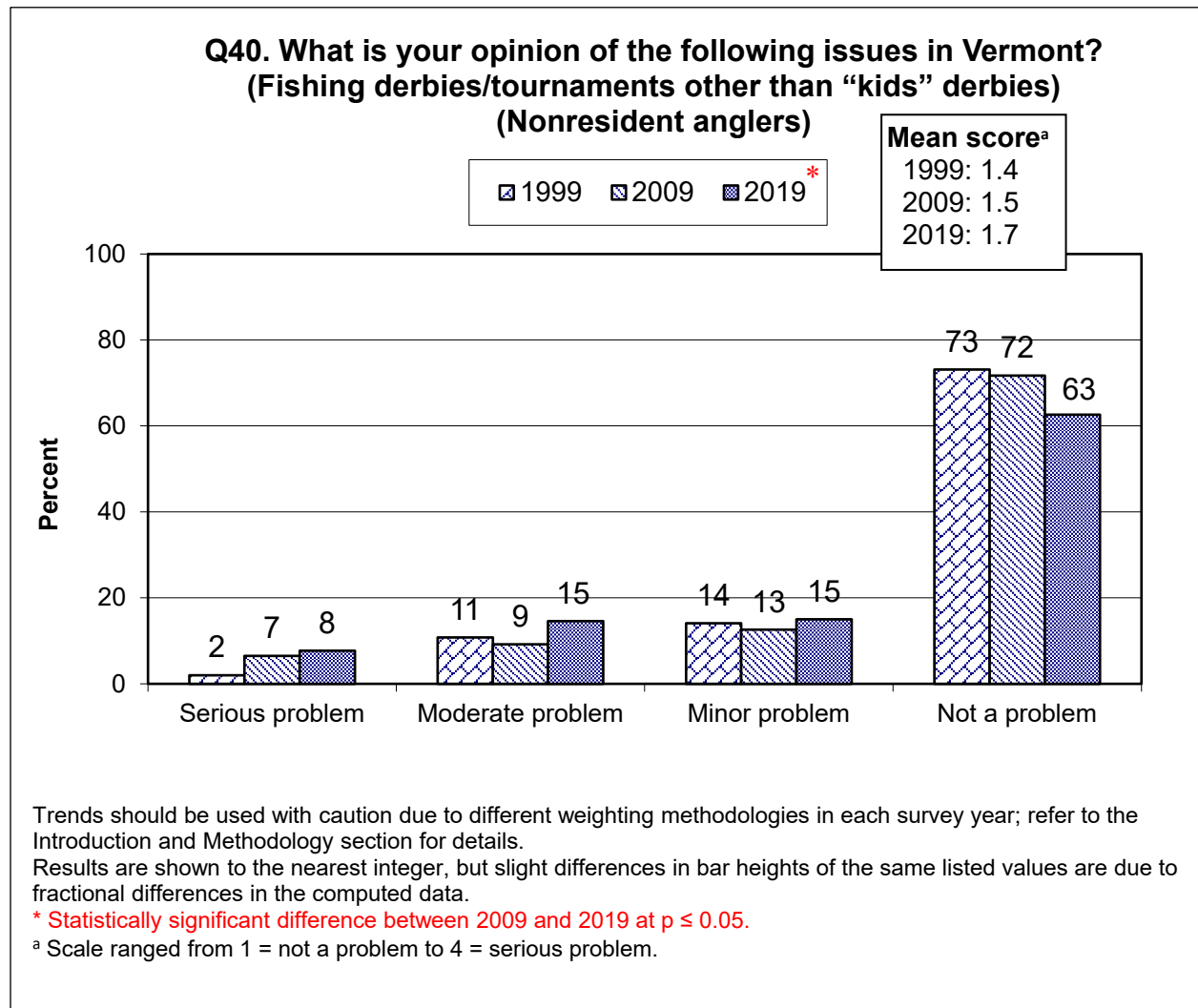


Figure 136. Trends in Rating of Fishing Derbies, as a Problem, Nonresidents

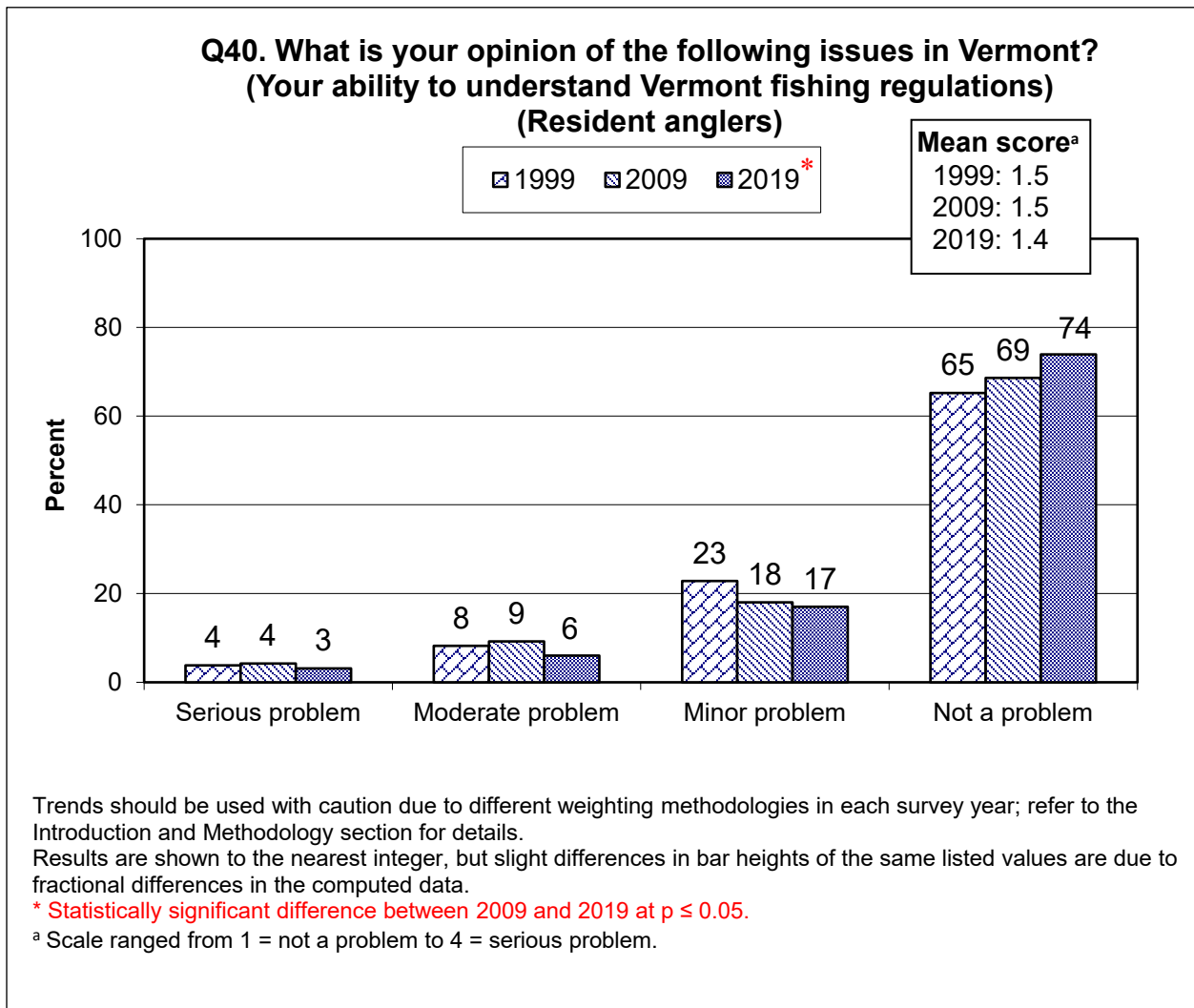


Figure 137. Trends in Ratings of Ability to Understand Regulations, Residents

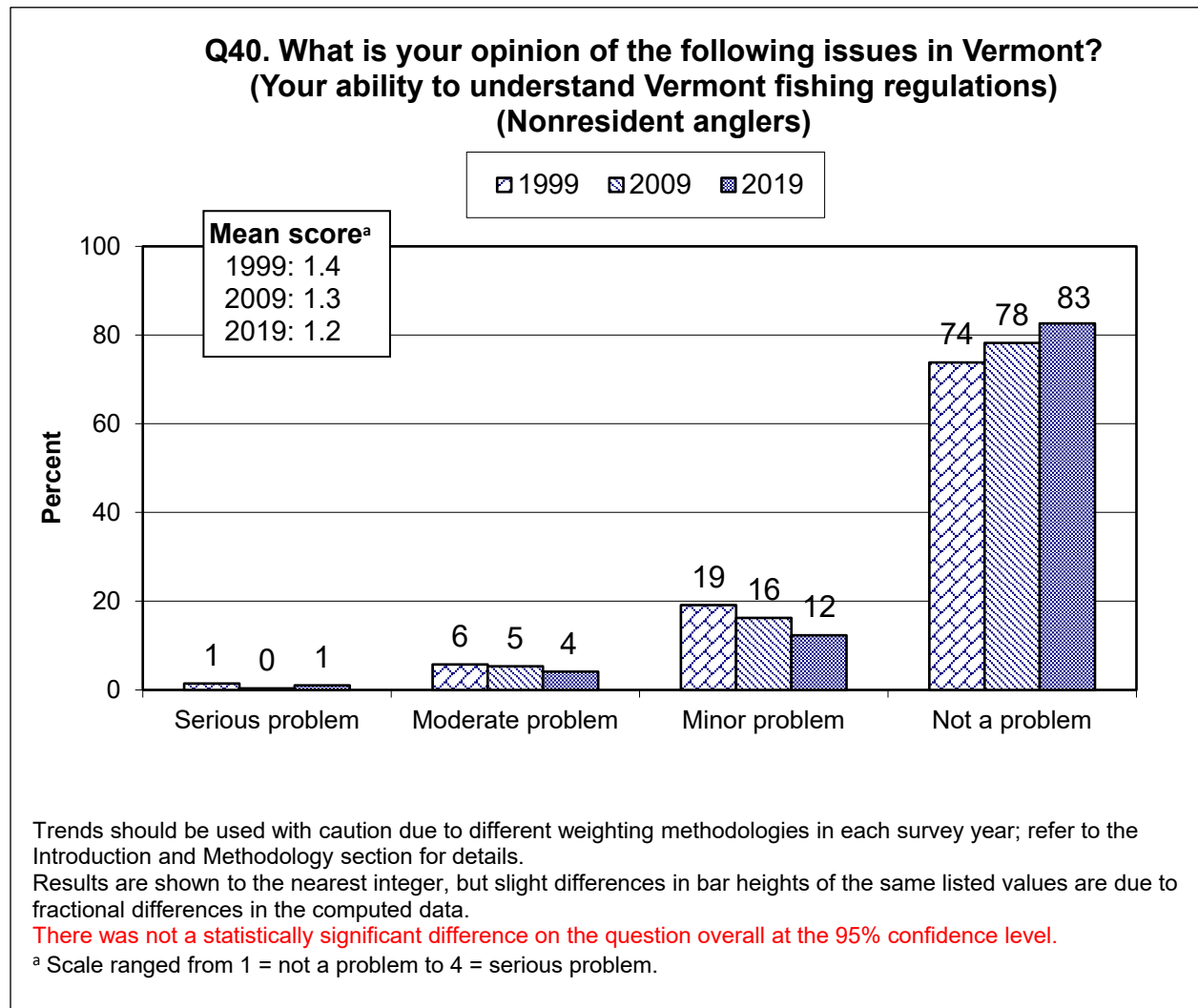


Figure 138. Trends in Ratings of Ability to Understand Regulations, Nonresidents

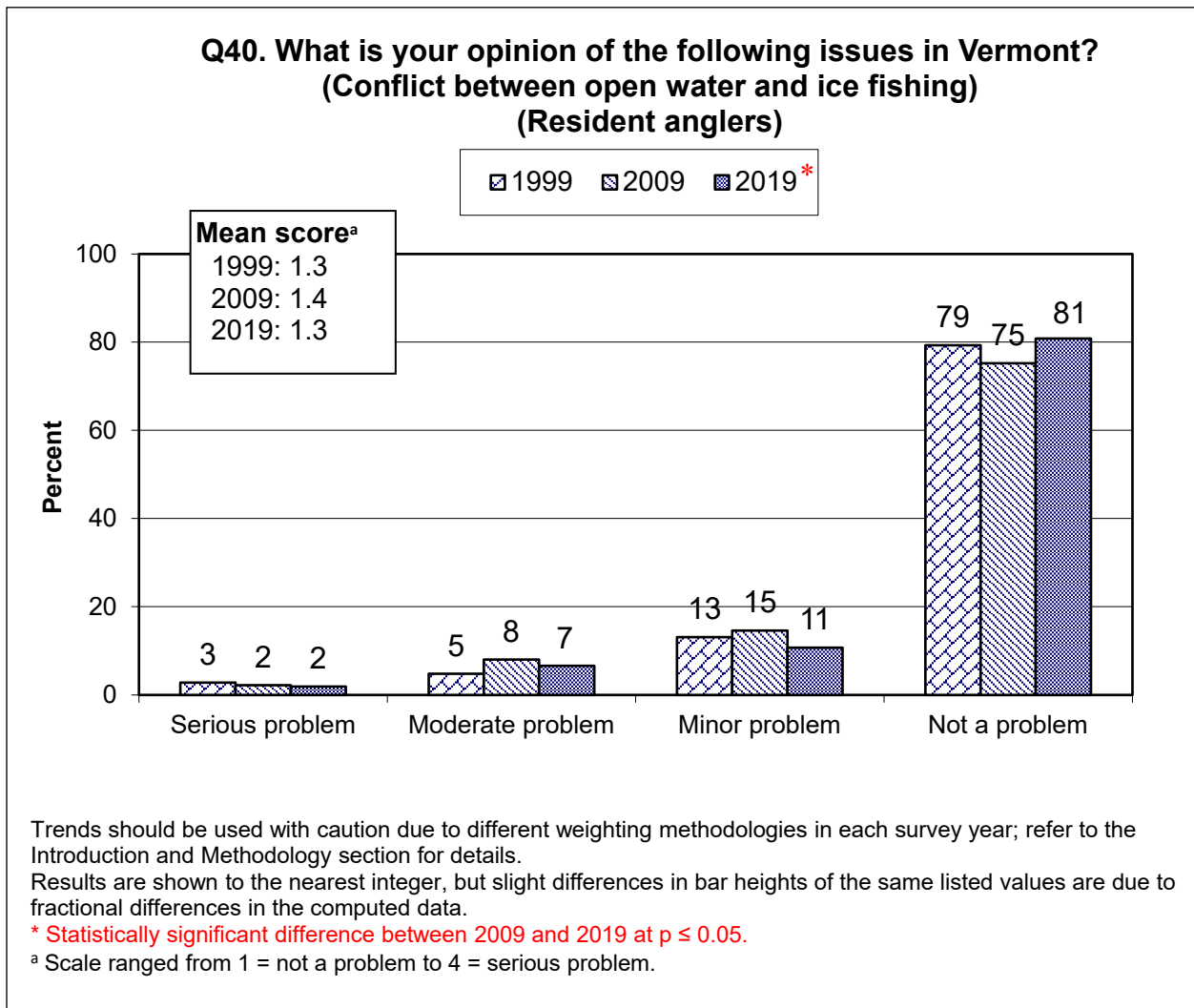


Figure 139. Trends in Rating of Conflict Between Open Water and Ice Fishing, as a Problem, Residents

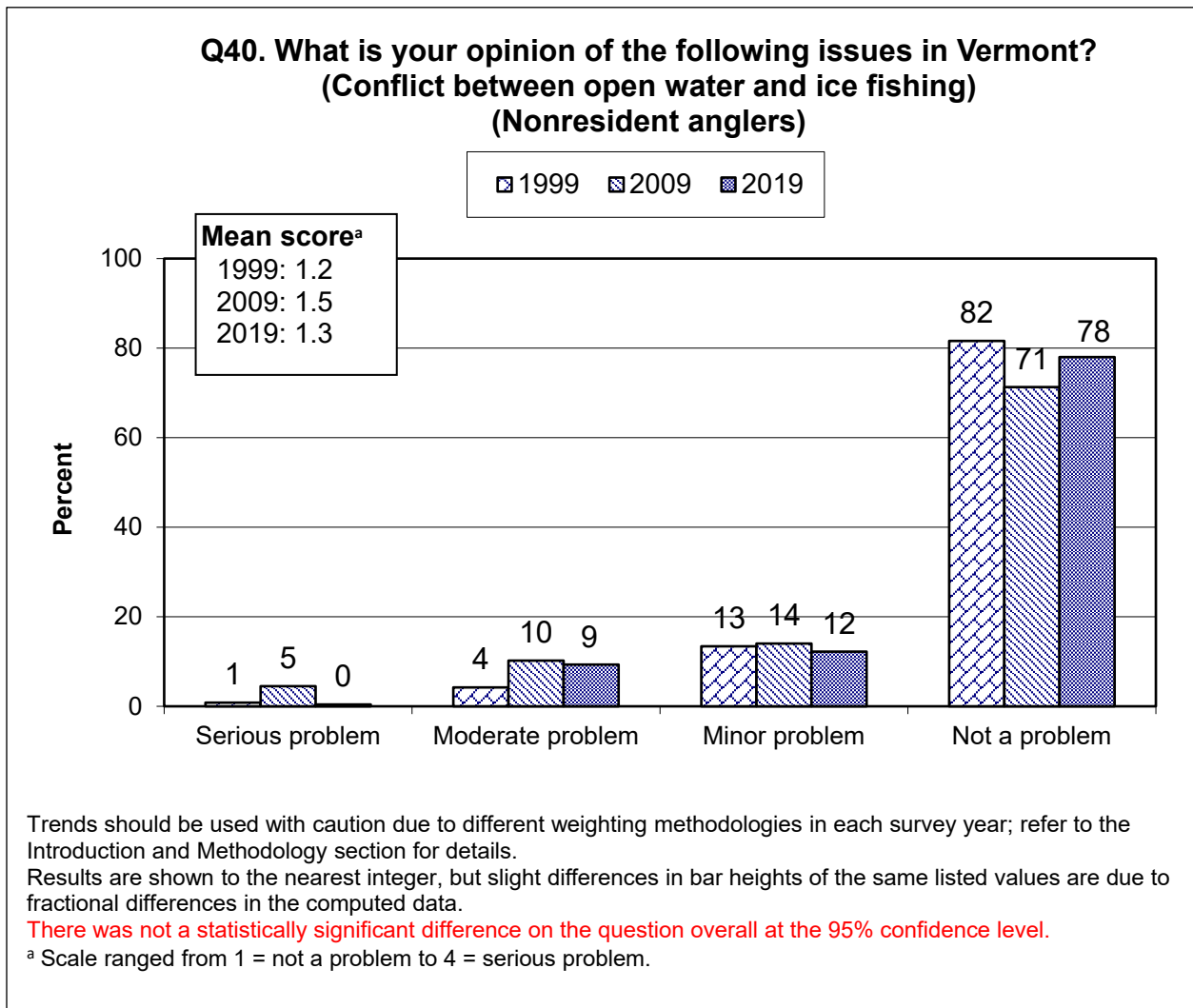


Figure 140. Trends in Rating of Conflict Between Open Water and Ice Fishing, as a Problem, Nonresidents

MAIL SURVEY VERSUS WEB SURVEY

One aspect of the project entailed a comparison of the results from respondents who completed the mail questionnaire and the results from respondents who completed the web version of the survey. Select questions were used in this comparison, as shown in Tables 163 through 169. The intent was to help assess the survey format for future surveys.

Web respondents were more likely than mail respondents to give an excellent rating to the quality of fishing.

Mail respondents, relative to web respondents, were slightly more likely to have fished for brook, brown, or rainbow trout in streams and rivers as well as in ponds and lakes, and they were more much more likely to have fished for warmwater game fish as a whole. In looking at individual species, mail respondents were also more likely to have fished for each of the species that was examined in this comparison.

The differences in opinions on the importance of programs and items that might be problems are mostly manifested in differences in the “no opinion” response.

Finally, web respondents are slightly more likely to have fished open water, while mail respondents are more likely to have ice fished. However, mail respondents are more avid, as measured by days fished, in both open water and ice fishing.

An implication is that a multi-modal approach in the future will help ameliorate these small differences in responses by data collection mode.

Response	Mail	Web	Test significance
<i>Fished in 2019</i>			
No	12.4	10.2	NS
Yes	87.6	89.8	
<i>Fished in 2018</i>			
No	31.3	30.0	NS
Yes	68.7	70.0	
<i>Fished in 2017</i>			
No	35.1	38.4	NS
Yes	64.9	61.6	

Response	Mail	Web	Test significance
<i>Quality of fishing in Vermont during the past 3 years</i>			
Poor	4.7	4.1	$x^2 = 18.3, df = 3, p < 0.01$
Fair	24.0	19.1	
Good	56.9	55.9	
Excellent	14.4	20.9	

Table 165. Comparison of Types of Fishing			
Response	Mail	Web	Test significance
<i>Fished for brook, brown, or rainbow trout in streams or rivers in Vermont in any of the past 3 years</i>			
No	40.7	47.2	$x^2 = 8.7, df = 1, p < 0.01$
Yes	59.3	52.8	
<i>Fished for trout or salmon in ponds or lakes in Vermont in any of the past 3 years</i>			
No	54.3	61.4	$x^2 = 10.3, df = 1, p < 0.01$
Yes	45.7	38.6	
<i>Fished for walleye, bass, pike, yellow perch, sunfish, crappie, bullhead or smelt in Vermont in any of the past 3 years</i>			
No	29.1	45.1	$x^2 = 57.0, df = 1, p < 0.01$
Yes	70.9	54.9	
<i>Fished on Lake Champlain during either the open water or ice fishing seasons in any of the past 3 years</i>			
No	54.8	50.6	NS
Yes	45.2	49.4	

Table 166. Comparison of Various Species Fished			
<i>Species fished past 3 years</i>			
Response	Mail	Web	Test significance
Smallmouth bass	64.7	52.3	$x^2 = 33.0, df = 1, p < 0.01$
Largemouth bass	62.4	47.0	$x^2 = 50.0, df = 1, p < 0.01$
Yellow perch	56.2	39.3	$x^2 = 59.1, df = 1, p < 0.01$
Brook trout	52.1	43.1	$x^2 = 16.5, df = 1, p < 0.01$
Rainbow trout	49.2	42.9	$x^2 = 7.9, df = 1, p < 0.01$
Brown trout	44.1	34.4	$x^2 = 19.6, df = 1, p < 0.01$
Northern pike	43.7	32.2	$x^2 = 28.0, df = 1, p < 0.01$
Sunfish (bluegill, pumpkinseed)	34.1	23.2	$x^2 = 28.8, df = 1, p < 0.01$
Lake trout	27.3	21.5	$x^2 = 9.0, df = 1, p < 0.01$
Pickerel	27.6	18.6	$x^2 = 22.3, df = 1, p < 0.01$

Table 167. Comparison of the Importance of Programs			
<i>How important to you is it that Vermont provides the following programs:</i>			
Response	Mail	Web	Test significance
<i>a. Manage strictly for wild trout in some streams and rivers</i>			
Not important	8.3	12.2	$x^2 = 30.3, df = 3, p < 0.01$
Somewhat important	22.0	21.4	
Very important	43.4	32.9	
No opinion	26.3	33.6	
<i>b. Manage strictly for wild trout in some lakes and ponds</i>			
Not important	9.1	14.0	$x^2 = 37.5, df = 3, p < 0.01$
Somewhat important	23.7	23.5	
Very important	39.5	27.9	
No opinion	27.7	34.6	
<i>c. Stocking brook, brown, and rainbow trout to be caught within the same season in some streams and rivers</i>			
Not important	7.5	7.8	$x^2 = 10.4, df = 3, p < 0.05$
Somewhat important	24.1	21.8	
Very important	46.7	42.7	
No opinion	21.7	27.7	
<i>d. Stocking brook, brown, and rainbow trout to be caught within the same season in some lakes and ponds</i>			
Not important	8.5	8.4	$x^2 = 14.8, df = 3, p < 0.01$
Somewhat important	23.6	20.9	
Very important	46.4	41.8	
No opinion	21.5	28.8	

Table 168. Comparison of Problems			
<i>Your opinion of the following issues in Vermont:</i>			
Response	Mail	Web	Test significance
<i>a. Your ability to understand Vermont fishing regulations</i>			
Not a problem	69.7	67.0	$x^2 = 39.4, df = 4, p < 0.01$
Minor problem	15.0	11.9	
Moderate problem	4.9	4.7	
Serious problem	2.7	1.1	
No opinion	7.6	15.4	
<i>b. Access to fishing areas</i>			
Response	Mail	Web	Test significance
Not a problem	53.0	49.1	$x^2 = 35.6, df = 4, p < 0.01$
Minor problem	21.3	18.9	
Moderate problem	13.8	12.9	
Serious problem	4.5	3.5	
No opinion	7.5	15.6	

Table 169. Comparison of Fishing Open Water and Ice Fishing and Days			
<i>For those who fished in Vermont in 2019:</i>			
Response	Mail	Web	Test significance
<i>Fished open water</i>			
No	6.5	2.9	$x^2 = 12.7, df = 1, p < 0.01$
Yes	93.5	97.1	
<i>Ice Fishing</i>			
Response	Mail	Web	Test significance
No	68.4	72.7	$x^2 = 4.5, df = 1, p < 0.05$
Yes	31.6	27.3	
<i>Days</i>			
Days open water fishing	19.1	15.9	$p < 0.01$
Days ice fishing	10.9	8.3	$p < 0.01$

LITERATURE CITED

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APPENDIX A: SURVEY QUESTIONNAIRE

2020 Vermont Angler Survey



A survey prepared for
Vermont Department of
Fish and Wildlife
by
Responsive Management



Please complete this paper survey and return using the enclosed
postage-paid envelope.

OR

This survey may be completed online at **VTfish.com**.

To complete the survey online, you will need to enter the following
5-digit access code:

VTFish.com ACCESS CODE 00000

2020 Vermont Angler Survey

Research conducted by Responsive Management

Funded and directed by the Vermont Department of Fish & Wildlife

The purpose of this survey is to learn more about your fishing experiences in Vermont, your interests in different types of fishing opportunities, and your opinions about fisheries management issues. The Vermont Department of Fish and Wildlife will use the information you and others provide to help direct future fisheries management programs.

Your name was selected to receive this survey because license sale records indicate that you have a license that allowed fishing in Vermont in 2019.

The questionnaire is divided into 6 sections. Depending on your answers, the directions may tell you to skip a whole section, so be on the lookout for that.

Please complete this questionnaire at your earliest convenience, seal it in the provided postage-paid envelope, and drop it in any mailbox.

If you prefer, you may also complete the survey online at VTfish.com. To access the survey, you will need the 5-digit access code printed on the front blue cover of this booklet. (When completing the survey online, we recommend completing it using a desktop or laptop computer, rather than a mobile device. While the survey will still function properly on a mobile device, the display of survey questions may be easier to read on a desktop or laptop computer.)

Your participation in this survey is voluntary, but we sincerely hope you will take just a few minutes to answer our questions, regardless of how often you fish. Your identity will be kept confidential, and the information you give us will never be associated with your name.

SECTION 1. FISHING IN VERMONT

1. In which of the past 3 years have you fished in Vermont?

(Check all that apply.)

- 2017 2018 2019
 I have not fished in Vermont in any of these years.



STOP!!!

**If you have not fished in Vermont in 2017, 2018, or 2019,
please stop here and return this questionnaire to us.**

**If you have fished in Vermont in 2017 OR 2018 OR 2019,
please continue with Question 2.**

2. Which of the following species have you fished for in Vermont in any of the past 3 years (2017, 2018, or 2019)?

(Check ALL the species of fish that you fished for.)

- | | | |
|---|---|--|
| <input type="checkbox"/> 1. Brook trout | <input type="checkbox"/> 11. Rock bass | <input type="checkbox"/> 21. White perch |
| <input type="checkbox"/> 2. Brown trout | <input type="checkbox"/> 12. Pickerel | <input type="checkbox"/> 22. Drum (sheepshead) |
| <input type="checkbox"/> 3. Rainbow trout | <input type="checkbox"/> 13. Northern pike | <input type="checkbox"/> 23. Carp |
| <input type="checkbox"/> 4. Lake trout | <input type="checkbox"/> 14. Muskellunge | <input type="checkbox"/> 24. Gar |
| <input type="checkbox"/> 5. Landlocked salmon | <input type="checkbox"/> 15. American shad
(Connecticut River) | <input type="checkbox"/> 25. Whitefish
(Lake Champlain) |
| <input type="checkbox"/> 6. Smelt | <input type="checkbox"/> 16. Channel catfish | <input type="checkbox"/> 26. Sucker |
| <input type="checkbox"/> 7. Walleye | <input type="checkbox"/> 17. Bullhead (hornpout) | <input type="checkbox"/> 27. Burbot (cusk) |
| <input type="checkbox"/> 8. Sauger | <input type="checkbox"/> 18. Yellow perch | <input type="checkbox"/> 28. Bowfin |
| <input type="checkbox"/> 9. Largemouth bass | <input type="checkbox"/> 19. Crappie | <input type="checkbox"/> 29. American eel |
| <input type="checkbox"/> 10. Smallmouth bass | <input type="checkbox"/> 20. Sunfish (bluegill, pumpkinseed) | <input type="checkbox"/> 30. Anything |

3. What seasons did you fish in Vermont in any of the past 3 years, and what kinds of fish do you prefer to fish for during those seasons?

(Please rank your top three choices by writing the species number from Question 2 on the line.)

	OPEN-WATER SEASON (spring, summer, fall)	ICE-FISHING SEASON
Check if fished in past 3 years	<input type="checkbox"/>	<input type="checkbox"/>
Species preference for each season (enter species # from list in Q2)	Species #	Species #
Most preferred	_____	_____
Second most preferred	_____	_____
Third most preferred	_____	_____
<u>OR</u> check here if no preference	<input type="checkbox"/>	<input type="checkbox"/>

4. Overall, how would you rate the quality of fishing in Vermont during the past 3 years?

- Poor
 Fair
 Good
 Excellent
 No opinion

5a. About how many days did you fish in Vermont in 2019?

_____ days in OPEN-WATER SEASON _____ days in ICE-FISHING SEASON

OR I did not fish in Vermont in 2019 (SKIP TO SECTION 2)

5b. About how many days did you spend fishing for the following species in Vermont in 2019? (The total does not have to equal the total in Question 5a; anglers can fish more than one species at a time.)

	OPEN	ICE
Brook, brown, or rainbow trout in small brooks or beaver ponds	____ days	NA
Brook, brown, or rainbow trout in large streams or rivers	____ days	NA
Brook, brown, or rainbow trout in ponds or lakes	____ days	____ days
Lake trout	____ days	____ days
Landlocked salmon	____ days	____ days
Walleye	____ days	____ days
Largemouth or smallmouth bass	____ days	____ days
Northern pike or pickerel	____ days	____ days
Muskellunge	____ days	____ days
American shad in the Connecticut River	____ days	NA
Yellow perch	____ days	____ days
Smelt	____ days	____ days
Panfish (sunfish, crappie, etc.)	____ days	____ days
Bullhead	____ days	____ days
Channel catfish	____ days	____ days
Other (bowfin, gar, American eel, etc.)	____ days	____ days

NA=Not Applicable

SECTION 2. FISHING ON LAKE CHAMPLAIN

The following section of questions is about fishing on Lake Champlain only. We will ask about your fishing for species in other waters after this section.

6. Did you fish on Lake Champlain during either the open-water or ice-fishing seasons in any of the past 3 years?
- No → SKIP TO SECTION 3
- Yes → CONTINUE TO QUESTION 7a ON THE NEXT PAGE

7a. About how many days did you fish on Lake Champlain during the past 3 years during the open-water and ice-fishing seasons?

_____ days in OPEN-WATER SEASON _____ days in ICE-FISHING SEASON

**7b. And how many days did you fish on Lake Champlain specifically during the 2019 open-water and ice-fishing seasons?
Please consider 2019 only.**

_____ days in OPEN-WATER SEASON _____ days in ICE-FISHING SEASON

OR I did not fish on Lake Champlain in 2019 (SKIP TO QUESTION 8)

7c. About how many days did you spend fishing on Lake Champlain for the following species during the 2019 open-water and ice-fishing seasons?

	OPEN	ICE
Brown trout	_____ days	_____ days
Steelhead / rainbow trout	_____ days	_____ days
Lake trout	_____ days	_____ days
Landlocked salmon	_____ days	_____ days
Walleye	_____ days	_____ days
Largemouth / smallmouth bass	_____ days	NA
Northern pike	_____ days	_____ days
Crappie	_____ days	_____ days
Yellow perch	_____ days	_____ days
Sunfish	_____ days	_____ days
Smelt	_____ days	_____ days
Bullhead	_____ days	_____ days
White perch	_____ days	_____ days
Muskellunge	_____ days	_____ days
Channel catfish	_____ days	_____ days
Other (bowfin, gar, American eel, etc.)	_____ days	_____ days

NA=Not Applicable

8. The current minimum length limits for several fish species in Lake Champlain are listed below. Do you agree or disagree with the present limits? If you disagree, please write in your recommended length limit.

	Present length limit	Agree <u>OR</u> Disagree	Recommended length limit	No opinion
Brown / rainbow trout	12"	<input type="radio"/> <input type="radio"/> →	_____	<input type="radio"/>
Lake trout	15"	<input type="radio"/> <input type="radio"/> →	_____	<input type="radio"/>
Landlocked salmon	15"	<input type="radio"/> <input type="radio"/> →	_____	<input type="radio"/>
Walleye	18"	<input type="radio"/> <input type="radio"/> →	_____	<input type="radio"/>
Largemouth bass	10"	<input type="radio"/> <input type="radio"/> →	_____	<input type="radio"/>
Smallmouth bass	10"	<input type="radio"/> <input type="radio"/> →	_____	<input type="radio"/>
Northern pike	20"	<input type="radio"/> <input type="radio"/> →	_____	<input type="radio"/>
Crappie	8"	<input type="radio"/> <input type="radio"/> →	_____	<input type="radio"/>

9. The current daily creel limits for several fish species in Lake Champlain are listed below. Do you agree or disagree with the present creel limits? If you disagree, please write in your recommended daily creel limit.

	Present daily limit	Agree <u>OR</u> Disagree	Recommended daily limit	No opinion
Brown / rainbow trout	3	<input type="radio"/> <input type="radio"/> →	_____	<input type="radio"/>
Lake trout	3	<input type="radio"/> <input type="radio"/> →	_____	<input type="radio"/>
Landlocked salmon	2	<input type="radio"/> <input type="radio"/> →	_____	<input type="radio"/>
Walleye	3	<input type="radio"/> <input type="radio"/> →	_____	<input type="radio"/>
Largemouth / smallmouth bass	5	<input type="radio"/> <input type="radio"/> →	_____	<input type="radio"/>
Northern pike	5	<input type="radio"/> <input type="radio"/> →	_____	<input type="radio"/>
Crappie	25	<input type="radio"/> <input type="radio"/> →	_____	<input type="radio"/>
Yellow perch	no limit	<input type="radio"/> <input type="radio"/> →	_____	<input type="radio"/>
Sunfish	no limit	<input type="radio"/> <input type="radio"/> →	_____	<input type="radio"/>
Smelt	no limit	<input type="radio"/> <input type="radio"/> →	_____	<input type="radio"/>
Bullhead	no limit	<input type="radio"/> <input type="radio"/> →	_____	<input type="radio"/>
White perch	no limit	<input type="radio"/> <input type="radio"/> →	_____	<input type="radio"/>
Bowfin	5	<input type="radio"/> <input type="radio"/> →	_____	<input type="radio"/>
Gar	5	<input type="radio"/> <input type="radio"/> →	_____	<input type="radio"/>
Redhorse (mullet)	5	<input type="radio"/> <input type="radio"/> →	_____	<input type="radio"/>

10. Overall, how would you rate the quality of fishing for the following species in Lake Champlain during the past 3 years? (Check one for each species.)

	Poor	Fair	Good	Excellent	No opinion
Brown trout	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Steelhead / rainbow trout	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lake trout	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Landlocked salmon	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Walleye	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Largemouth bass	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Smallmouth bass	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Northern pike	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Crappie	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Yellow perch	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sunfish	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Smelt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bullhead	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
White perch	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bowfin	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gar	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Redhorse (mullet)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. Do you support or oppose ice fishing for largemouth and smallmouth bass on Lake Champlain? (Currently it is not allowed.)

Support Oppose No opinion

12. Current regulations on Lake Champlain allow the use of 2 lines when fishing during the OPEN-WATER season and 15 lines (tip-ups or handlines) during the ICE-FISHING season. Do you agree or disagree with the number of lines allowed in each season? If you disagree, please write in your recommended number of lines.

	Present number of lines	Agree	OR	Disagree	Recommended number of lines	No opinion
Open-water season	2	<input type="radio"/>		<input type="radio"/> →	_____	<input type="radio"/>
Ice-fishing season	15	<input type="radio"/>		<input type="radio"/> →	_____	<input type="radio"/>

13. The fishing season for WALLEYE in Lake Champlain is from the first Saturday in May to the following March 15th. What is your opinion about the length of the season? (Check one for each season, or check year-round.)

	Just right	Should be earlier	Should be later	No opinion
Opening day (1st Saturday in May)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Closing day (March 15th)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

OR Check here if you want it open year-round

**SECTION 3. BROOK, BROWN, RAINBOW TROUT
STREAMS / RIVERS**

14. Did you fish for brook, brown, or rainbow trout in STREAMS or RIVERS in Vermont in any of the past 3 years?

- No → **SKIP TO SECTION 4**
 Yes → **CONTINUE TO QUESTION 15 BELOW**

15. What tackle did you use most often to fish for brook, brown, or rainbow trout in STREAMS or RIVERS? (Check only one.)

- Bait Flies Lures Lures with bait Not sure

16. If there were no minimum length limits, what is the smallest length of each species that you would keep when fishing in STREAMS or RIVERS? (Check one for each species. If you do not keep a particular species, check "Do not keep." If you do not fish for a species, check "Do not fish for species.")

	6" or less	8"	10"	12"	14" or more	No opinion	Do not keep	Do not fish for species
Brook trout	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Brown trout	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rainbow trout	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. When fishing STREAMS or RIVERS, what is the smallest length of each species that you would consider a good or quality size fish?

(Even if you do not keep.) (Check one for each species, or check no opinion. If you do not fish for a species, check "Do not fish for species.")

	6" or less	8"	10"	12"	14" or more	No opinion	Do not fish for species
Brook trout	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Brown trout	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rainbow trout	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18. The current daily creel limit for trout in STREAMS or RIVERS is 12 trout of which only 6 can be brown trout and only 6 can be rainbow trout. Do you agree or disagree with the present daily creel limits? If you disagree, please write in your recommended daily creel limit.

	Present daily limit	Agree	OR Disagree	Recommended daily limit	No opinion
Brook trout	12	<input type="radio"/>	<input type="radio"/>	→ _____	<input type="radio"/>
Brown trout	6	<input type="radio"/>	<input type="radio"/>	→ _____	<input type="radio"/>
Rainbow trout	6	<input type="radio"/>	<input type="radio"/>	→ _____	<input type="radio"/>
Combination of above	12	<input type="radio"/>	<input type="radio"/>	→ _____	<input type="radio"/>

23. When fishing PONDS or LAKES, what is the smallest length of each species that you would consider a good or quality size fish?

(Even if you do not keep.) (Check one for each species, or check no opinion.

If you do not fish for a species, check "Do not fish for species.")

	8" or less	10"	12"	14"	16" or more	No opinion	Do not fish for species
Brook trout	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	10" or less	12"	14"	16"	18" or more	No opinion	Do not fish for species
Brown trout	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rainbow trout	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	15" or less	18"	21"	24"	27" or more	No opinion	Do not fish for species
Lake trout	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	12" or less	15"	18"	21"	24" or more	No opinion	Do not fish for species
Landlocked salmon	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

24. The general daily creel limits for brook, brown, and rainbow trout in PONDS or LAKES are listed below for each species and for a combined trout catch. Do you agree or disagree with the present daily creel limits?

If you disagree, please write in your recommended daily creel limit.

	Present daily limit	Agree <u>OR</u> Disagree		Recommended daily limit	No opinion
Brook trout	6	<input type="radio"/>	<input type="radio"/>	→ _____	<input type="radio"/>
Brown trout	6	<input type="radio"/>	<input type="radio"/>	→ _____	<input type="radio"/>
Rainbow trout	6	<input type="radio"/>	<input type="radio"/>	→ _____	<input type="radio"/>
Combination of above	6	<input type="radio"/>	<input type="radio"/>	→ _____	<input type="radio"/>

25. For the majority of lakes in Vermont that offer lake trout fishing, the current daily creel limit for lake trout, landlocked salmon, brook trout, brown trout, or rainbow trout is 2 fish of any one species or combination of species. Do you agree or disagree with the present limits?

If you disagree, please write in your recommended daily creel limit.

	Present daily limit	Agree <u>OR</u> Disagree		Recommended daily limit	No opinion
Lake trout	2	<input type="radio"/>	<input type="radio"/>	→ _____	<input type="radio"/>
Landlocked salmon	2	<input type="radio"/>	<input type="radio"/>	→ _____	<input type="radio"/>
Brook trout	2	<input type="radio"/>	<input type="radio"/>	→ _____	<input type="radio"/>
Brown trout	2	<input type="radio"/>	<input type="radio"/>	→ _____	<input type="radio"/>
Rainbow trout	2	<input type="radio"/>	<input type="radio"/>	→ _____	<input type="radio"/>
Combination of above	2	<input type="radio"/>	<input type="radio"/>	→ _____	<input type="radio"/>

29b. If there were no minimum length limits, what is the smallest length of each species that you would keep? (continued)

	6" or less	7"	8"	9"	10" or more	No opinion	Do not keep	Do not fish for species
Yellow perch	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Crappie	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

30. What is the smallest length of each species that you would consider a good or quality size fish? (Even if you do not keep.) (Check one for each species, check no opinion, or check "Do not fish for species.")

	12" or less	15"	18"	21"	24" or more	No opinion	Do not fish for species
Walleye	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	10" or less	12"	14"	16"	18" or more	No opinion	Do not fish for species
Largemouth bass	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Smallmouth bass	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	18" or less	22"	26"	30"	34" or more	No opinion	Do not fish for species
Northern pike	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	8" or less	9"	10"	11"	12" or more	No opinion	Do not fish for species
Yellow perch	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Crappie	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

31. Do you support or oppose ice-fishing for largemouth and smallmouth bass on selected lakes and ponds (as currently allowed)?

- Support Oppose No opinion

32. The current daily creel limits for several warmwater gamefish and panfish are listed below. Do you agree or disagree with the present limits? If you disagree, please write in your recommended daily creel limit.

	Present daily limit	Agree	OR	Disagree	Recommended daily limit	No opinion
Walleye	3	<input type="radio"/>		<input type="radio"/>	→ _____	<input type="radio"/>
Largemouth/smallmouth bass	5	<input type="radio"/>		<input type="radio"/>	→ _____	<input type="radio"/>
Northern pike	5	<input type="radio"/>		<input type="radio"/>	→ _____	<input type="radio"/>
Yellow perch	50	<input type="radio"/>		<input type="radio"/>	→ _____	<input type="radio"/>
Crappie	25	<input type="radio"/>		<input type="radio"/>	→ _____	<input type="radio"/>
Sunfish	no limit	<input type="radio"/>		<input type="radio"/>	→ _____	<input type="radio"/>
Smelt	no limit	<input type="radio"/>		<input type="radio"/>	→ _____	<input type="radio"/>
Bullhead	no limit	<input type="radio"/>		<input type="radio"/>	→ _____	<input type="radio"/>
White perch	no limit	<input type="radio"/>		<input type="radio"/>	→ _____	<input type="radio"/>

33. Overall, how would you rate the quality of fishing for warmwater gamefish and panfish in Vermont during the past 3 years (excluding Lake Champlain)? (Check one for each species.)

	Poor	Fair	Good	Excellent	No opinion
Walleye	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Largemouth bass	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Smallmouth bass	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Northern pike	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Yellow perch	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Crappie	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

34. Special regulations can be used in certain waters to increase the number and/or size of fish available to be caught. Please check ALL the special regulations that you would support on some waters for the species listed.

	Largemouth or smallmouth bass	Walleye	Northern pike
Catch and release – All fish must be released	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Artificial lures and flies only	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Special length limits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lower creel limits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I do not support the use of any special regulations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No opinion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SECTION 6. OPINIONS AND INFORMATION ABOUT FISHING

35. Where do you get your baitfish? (Check only one.)

- Always purchase at bait shop
- Usually purchase at bait shop
- Purchase and harvest bait equally
- Usually harvest my own bait
- Always harvest my own bait
- Do not use baitfish
- Not sure

36. If you used baitfish in the past 3 years, check all the species that you used, and then rank your top three preferred species.

	Used in past 3 years	Top three preferred species (enter ranking of top three)
White sucker	<input type="radio"/>	_____
Golden shiner	<input type="radio"/>	_____
Rainbow smelt	<input type="radio"/>	_____
Eastern silvery minnow (hunts)	<input type="radio"/>	_____
Fathead minnow	<input type="radio"/>	_____
Other _____	<input type="radio"/>	_____

37. How important to you is it that Vermont provides the following programs?

	Not important	Somewhat important	Very important	No opinion
Manage strictly for wild trout (no stocking):				
in some streams and rivers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
in some lakes and ponds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stocking brook, brown, and rainbow trout to be caught within the same season (put-and-take):				
in some streams and rivers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
in some lakes and ponds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

38. General regulations allow the use of 2 lines when fishing during the OPEN-WATER season and 8 lines during the ICE-FISHING season. Do you agree or disagree with the number of lines allowed in each season? If you disagree, please write in your recommended number of lines.

	Present number of lines	Agree <u>OR</u> Disagree	Recommended number of lines	No opinion
Open-water season	2	<input type="radio"/> <input type="radio"/> →	_____	<input type="radio"/>
Ice-fishing season	8	<input type="radio"/> <input type="radio"/> →	_____	<input type="radio"/>

39. Where did you get information about fishing in Vermont in 2019? Please check all that apply in the first column, then check the one source you are most likely to use in 2020 in the second column.

	Check all used in 2019	Check the <u>one</u> source most likely to use in 2020
<i>Fishing Regulations Guide</i> from the Vermont Department of Fish & Wildlife	<input type="radio"/>	<input type="radio"/>
Other pamphlets or documents from the Vermont Department of Fish & Wildlife	<input type="radio"/>	<input type="radio"/>
Website of the Vermont Department of Fish & Wildlife	<input type="radio"/>	<input type="radio"/>
Other websites	<input type="radio"/>	<input type="radio"/>
Direct contact with Vermont Department of Fish & Wildlife personnel	<input type="radio"/>	<input type="radio"/>
Social media, such as Facebook, Twitter, Instagram, etc.	<input type="radio"/>	<input type="radio"/>
Other online posts, discussions, forums, or chatrooms	<input type="radio"/>	<input type="radio"/>
Newspaper	<input type="radio"/>	<input type="radio"/>
Magazine	<input type="radio"/>	<input type="radio"/>
TV or radio	<input type="radio"/>	<input type="radio"/>
Bait and tackle shops	<input type="radio"/>	<input type="radio"/>
Guides or charter boat operators	<input type="radio"/>	<input type="radio"/>
Newsletters from fishing clubs / sportsmen's organizations	<input type="radio"/>	<input type="radio"/>
Friends / word-of-mouth	<input type="radio"/>	<input type="radio"/>

40. What is your opinion of the following issues in Vermont?

(Check one for each issue.)

	Not a problem	Minor problem	Moderate problem	Serious problem	No opinion
Conflict between open-water fishing and ice-fishing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conflict between fishing and other recreational uses (e.g., water skiing, boating)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Shooting and spearing of northern pike in Lake Champlain as currently permitted	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Commercial sale of angler-caught:					
Perch	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Crappie	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sunfish	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fishing derbies / tournaments (other than "kids" derbies)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your ability to understand Vermont fishing regulations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access to fishing areas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Contaminant levels in fish	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Crowding at fishing areas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

41. The Vermont Department of Fish and Wildlife strives to construct boat launches and fishing access sites that meet the needs of anglers. How important to you is it that these sites have the following?

	Not important	Somewhat important	Very important	No opinion
Boat ramps	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Docks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fishing piers or other shore fishing opportunities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Portable toilets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bulletin boards with information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Thank you for your time and effort!

To return this questionnaire, simply seal it in the provided postage-paid envelope, and drop it in any mailbox (return postage has been provided).

Please use the space on the back blue cover of this booklet for any additional comments you may wish to make. (You may include additional sheets, if needed).

Please use the space below for any additional comments you may wish to make. (You may include additional sheets, if needed).

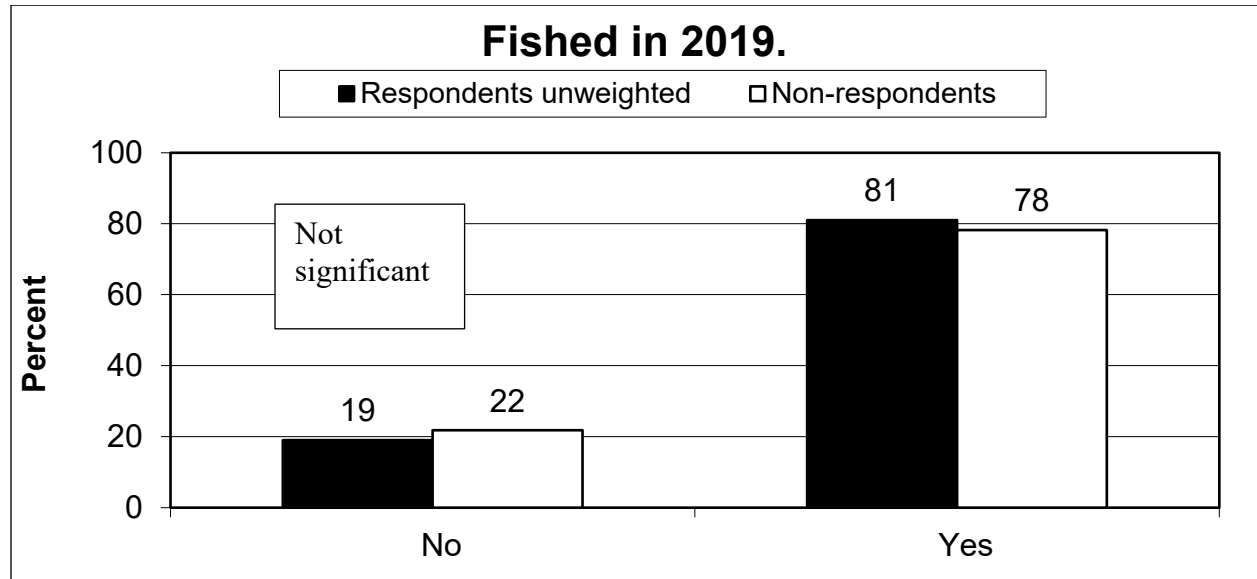
COMMENTS:

Thank you for your time and effort!

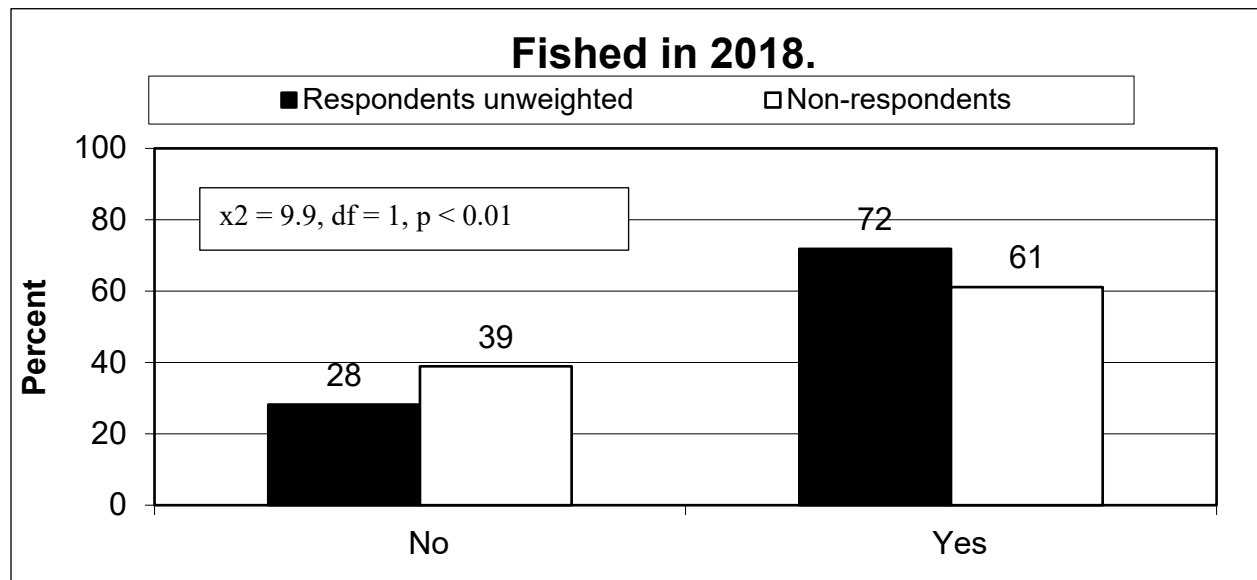
To return this questionnaire, simply seal it in the provided postage-paid envelope, and drop it in any mailbox (return postage has been provided).

APPENDIX B: FIRST NON-RESPONSE BIAS TEST RESULTS

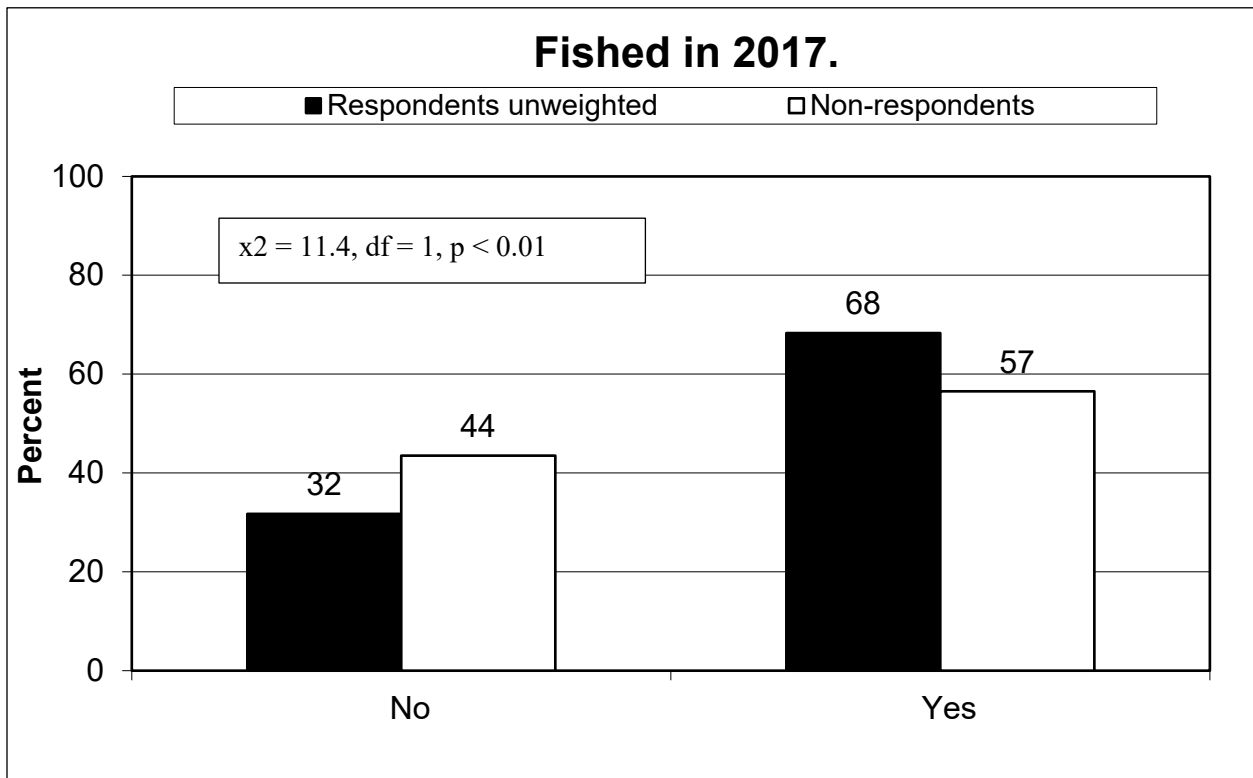
Appendix B Figures 1 through 17 present the results of overall respondents versus non-respondents. The statistical significance is noted (those graphs with an equation are statistically significant; those graphs without an equation are not significant and are marked as being not significant).



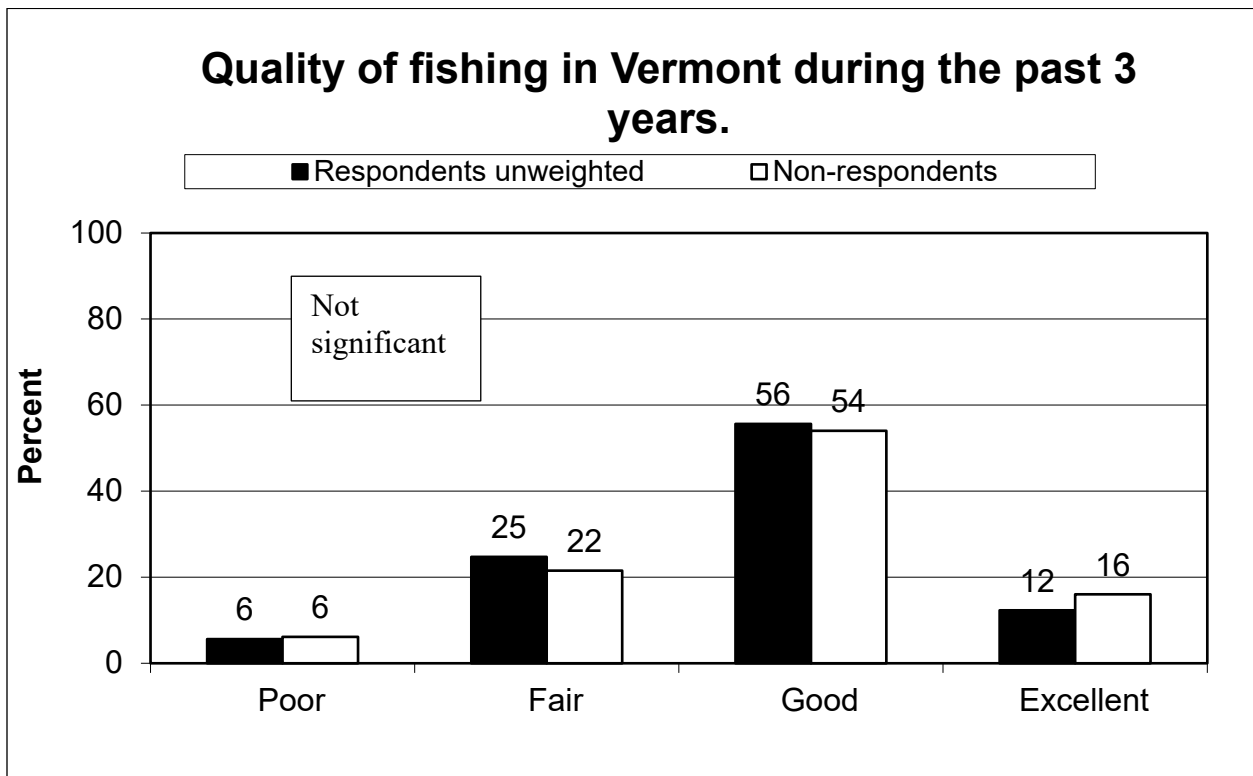
Appendix B Figure 1. Fishing Participation in 2019



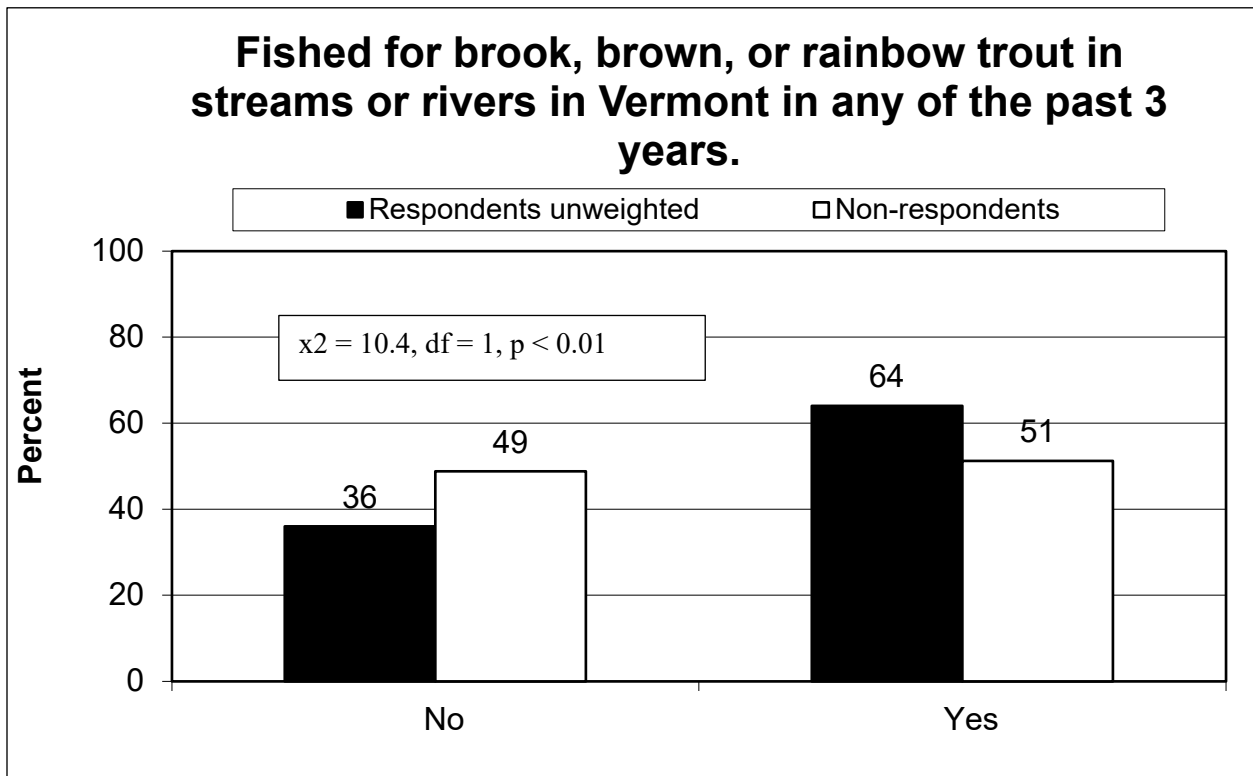
Appendix B Figure 2. Fishing Participation in 2018



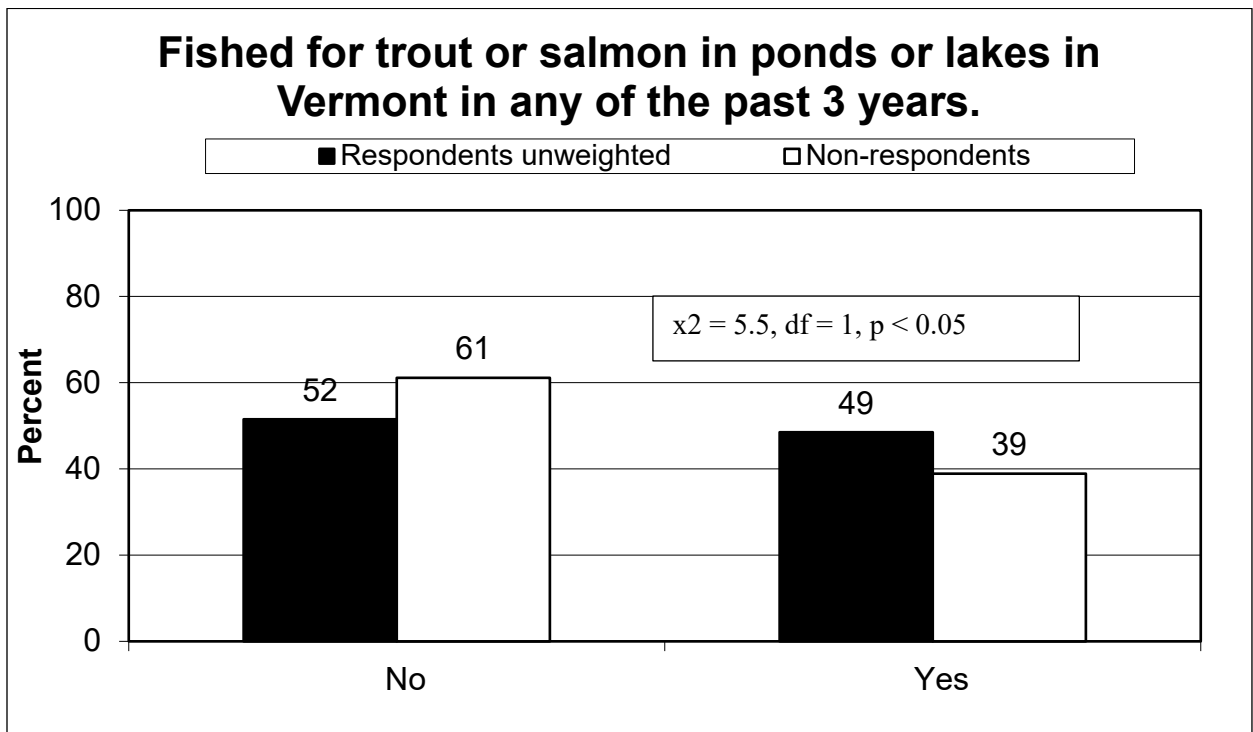
Appendix B Figure 3. Fishing Participation in 2017



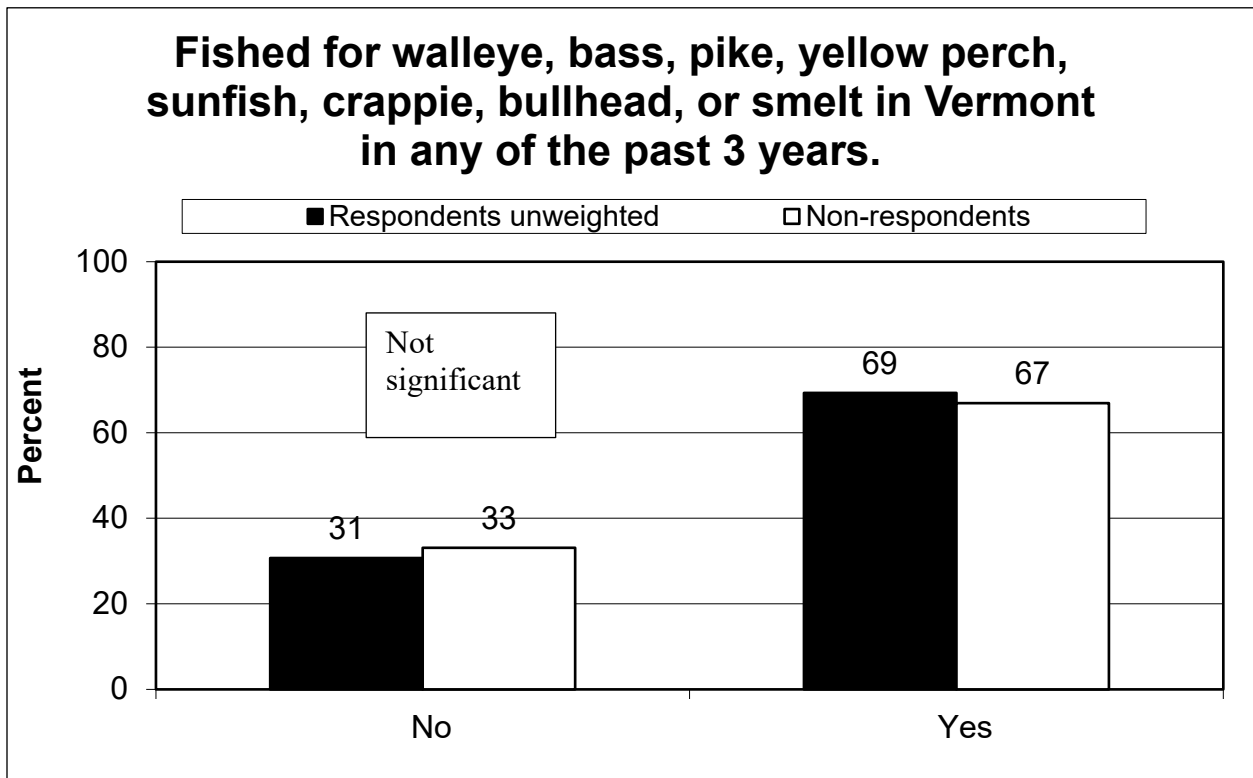
Appendix B Figure 4. Rating of the Quality of Fishing



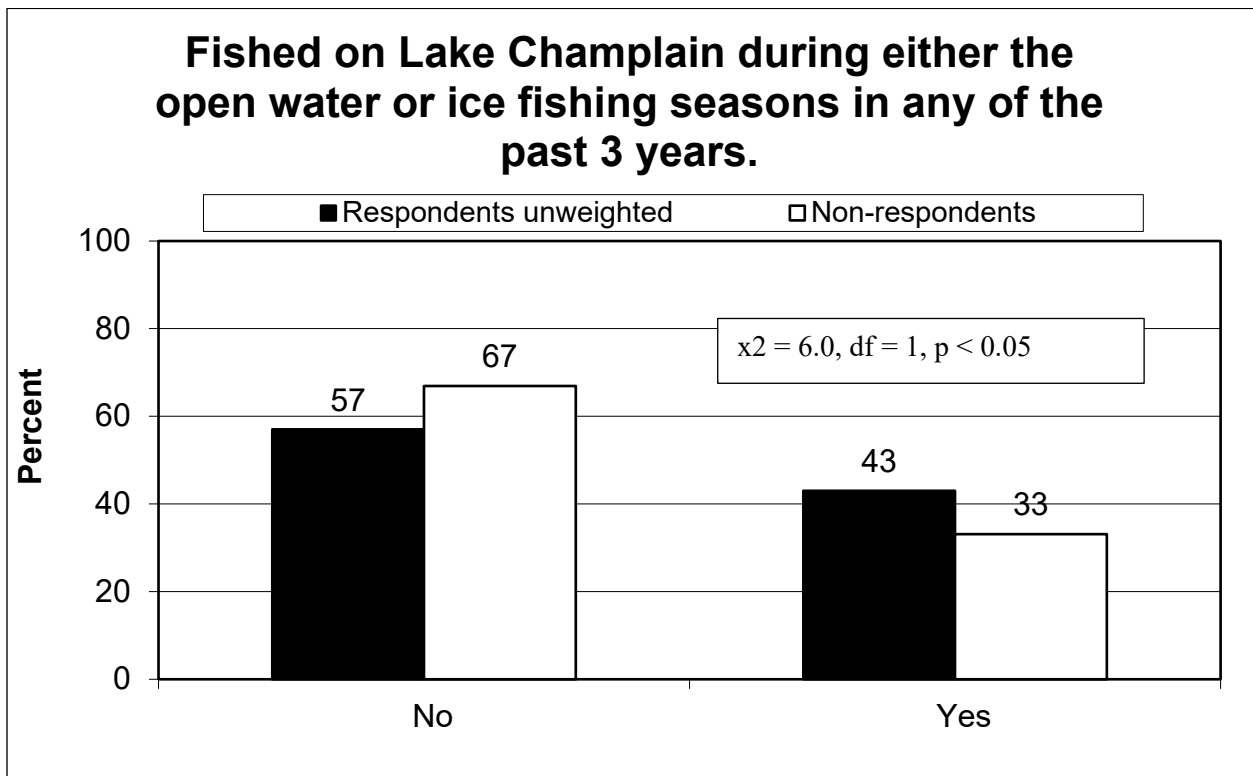
Appendix B Figure 5. Participation in Fishing for Trout in Streams or Rivers



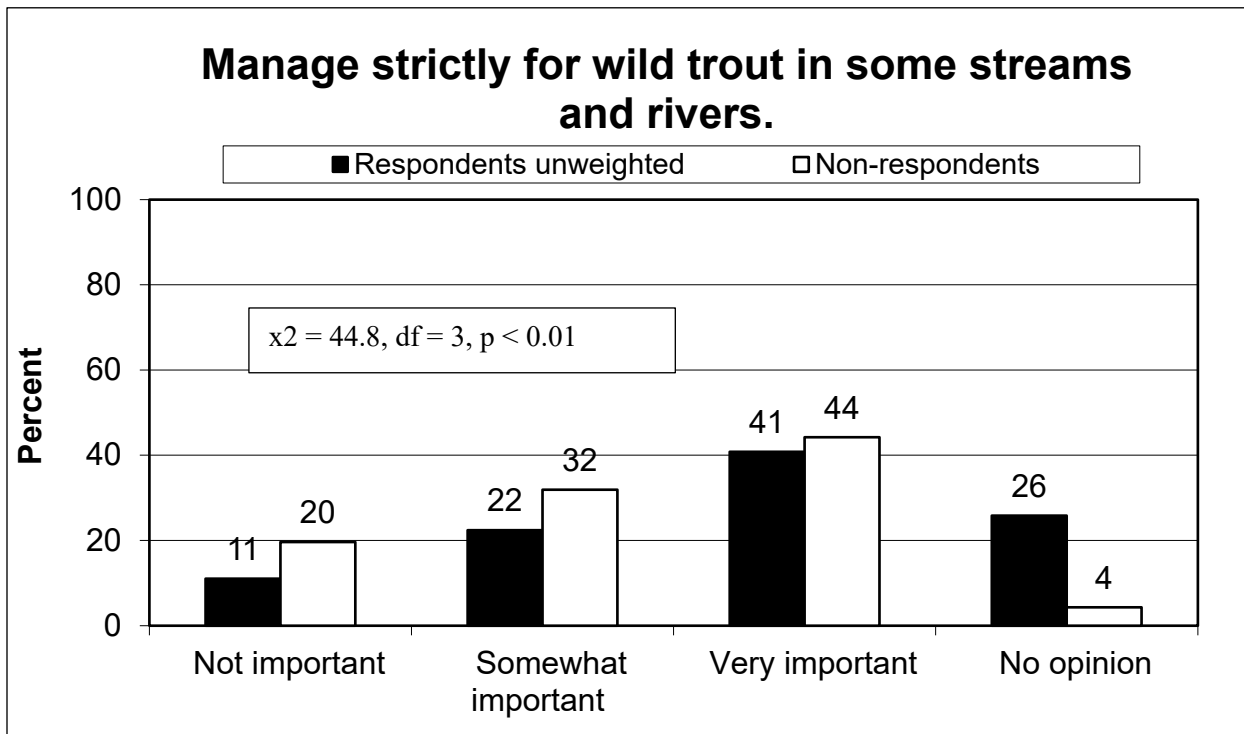
Appendix B Figure 6. Participation in Fishing for Trout and Salmon in Ponds or Lakes



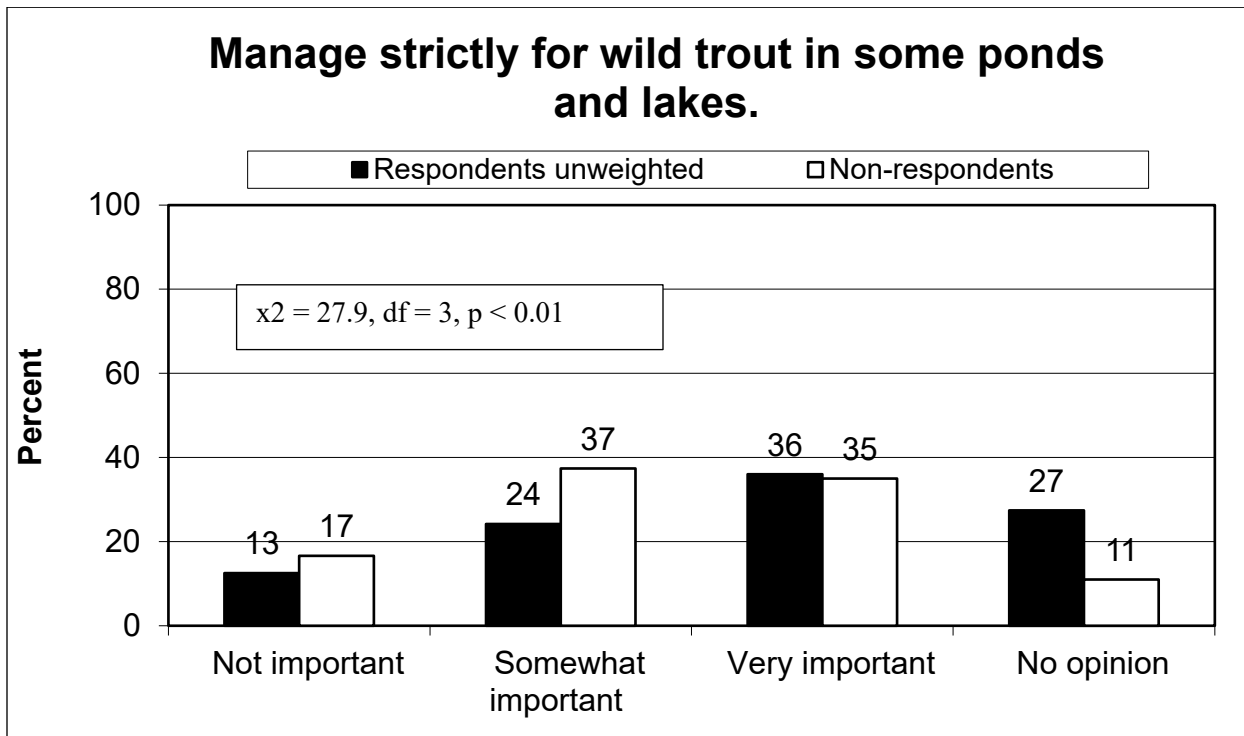
Appendix B Figure 7. Participation in Fishing for Non-Trout, Non-Salmon Species



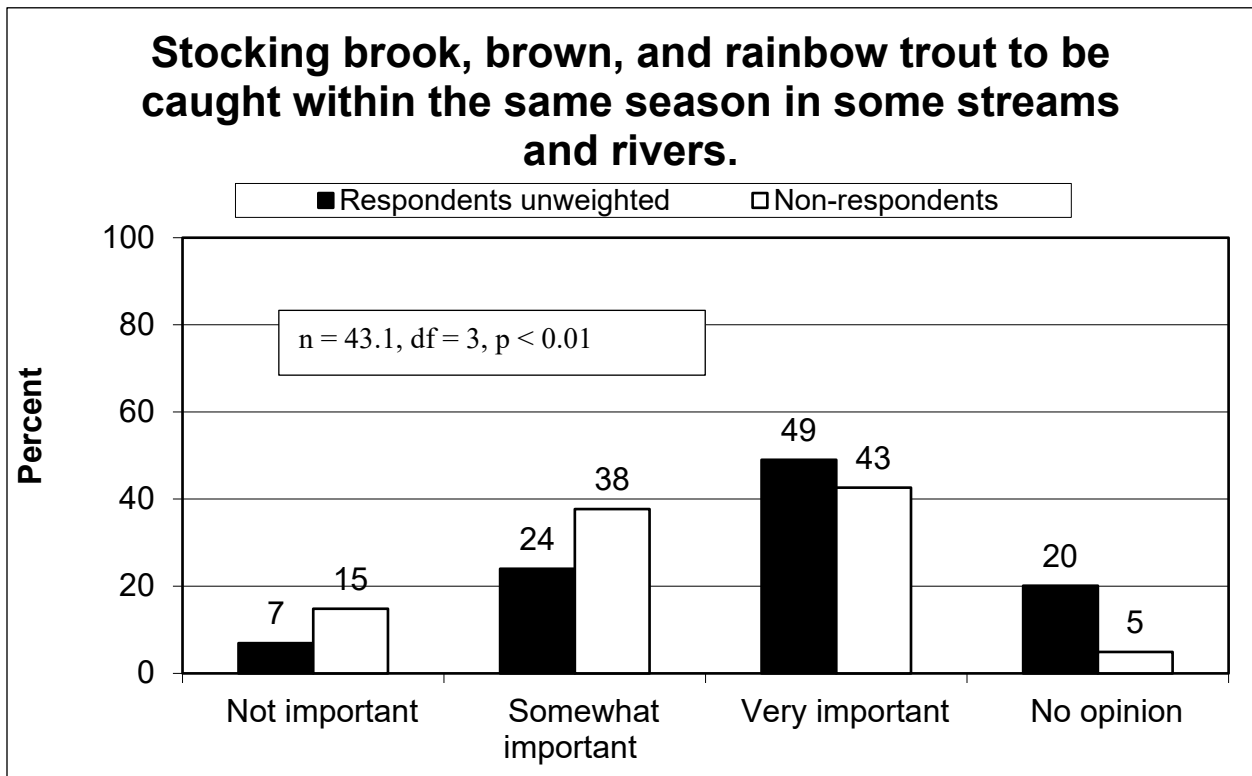
Appendix B Figure 8. Participation in Fishing on Lake Champlain



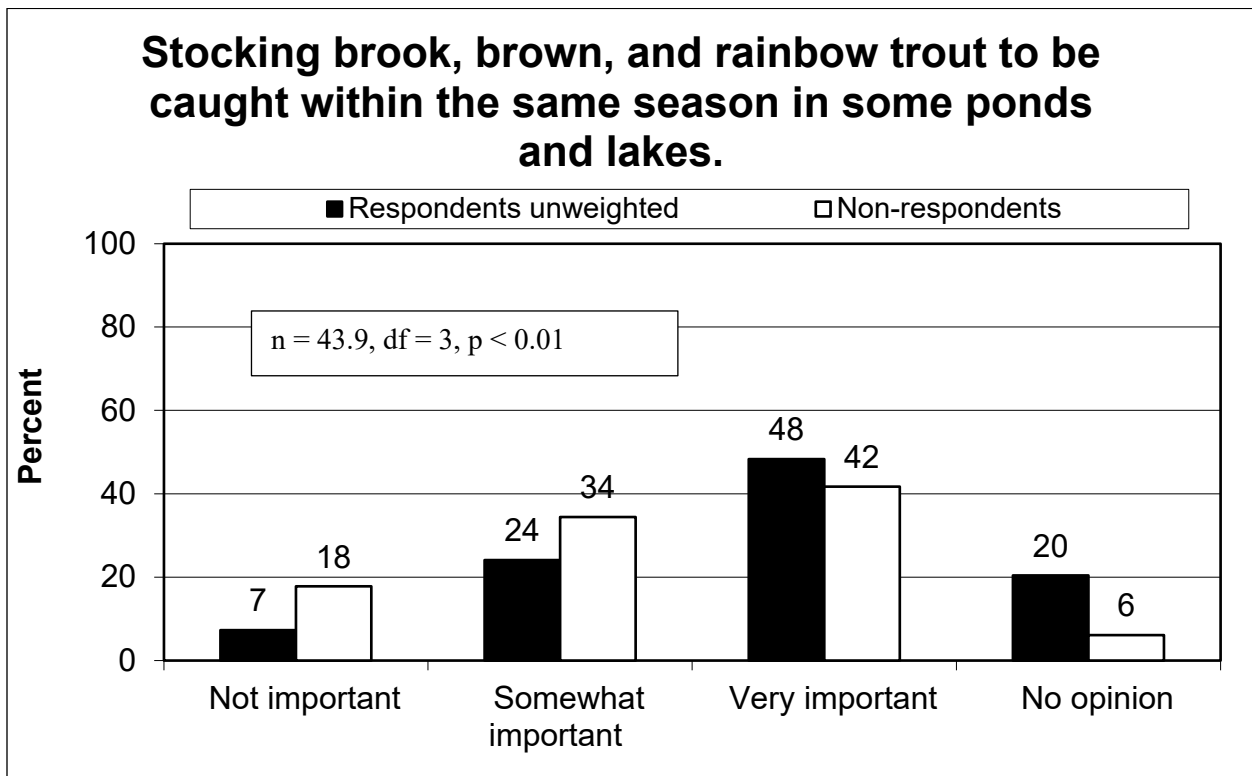
Appendix B Figure 9. Opinion on Managing Strictly for Wild Trout in Some Streams/Rivers



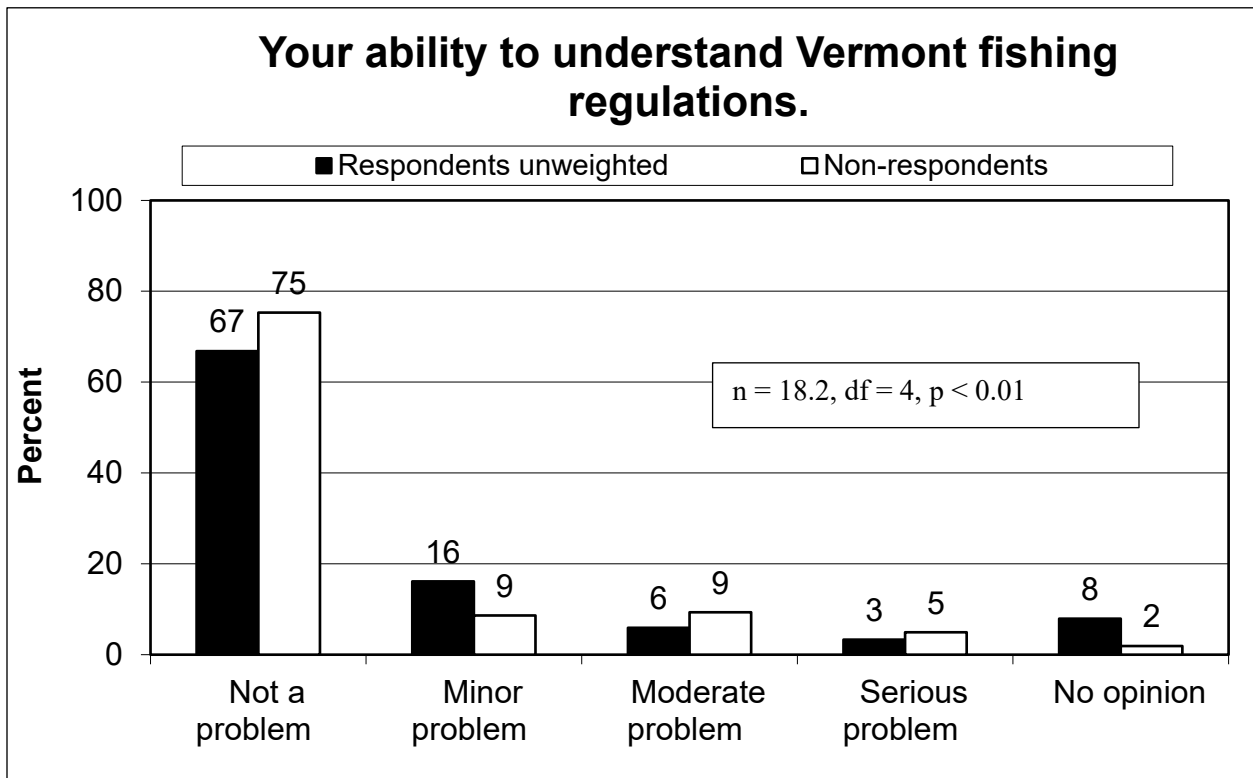
Appendix B Figure 10. Opinion on Managing Strictly for Wild Trout in Some Lakes/Ponds



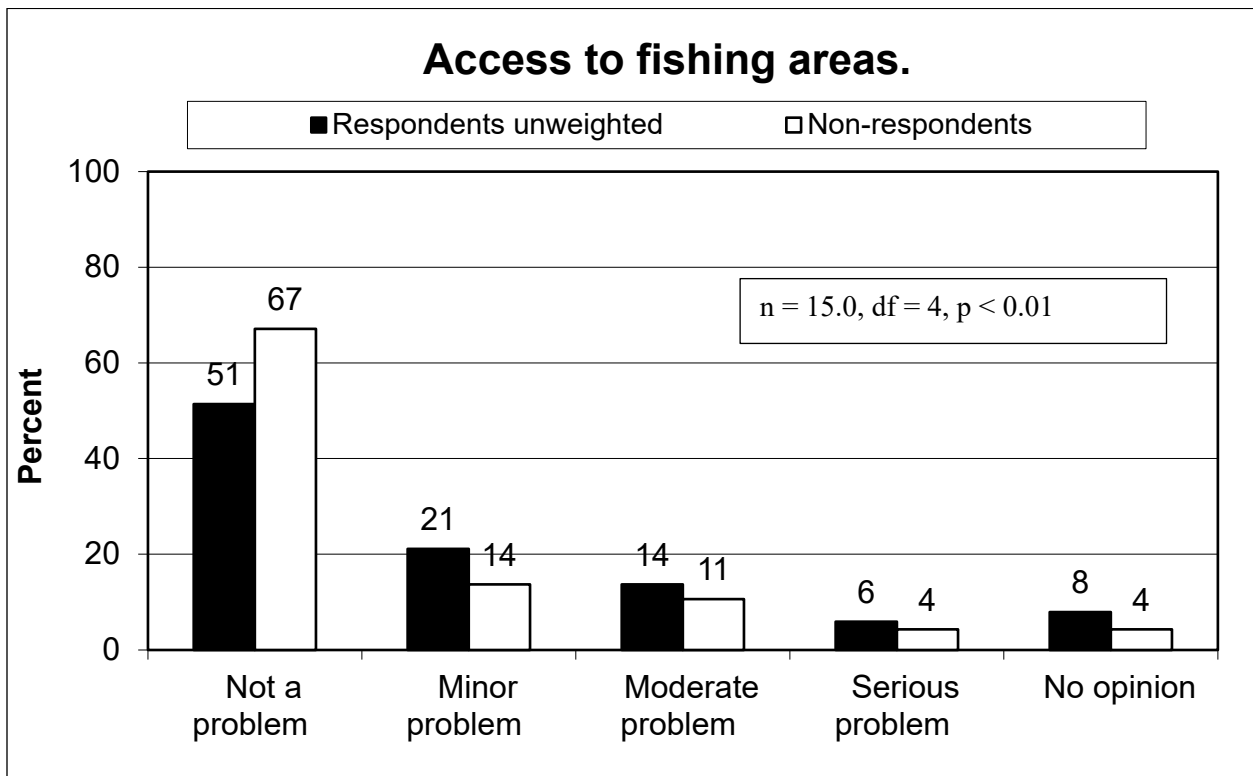
Appendix B Figure 11. Opinion on Stocking Trout in Some Streams and Rivers



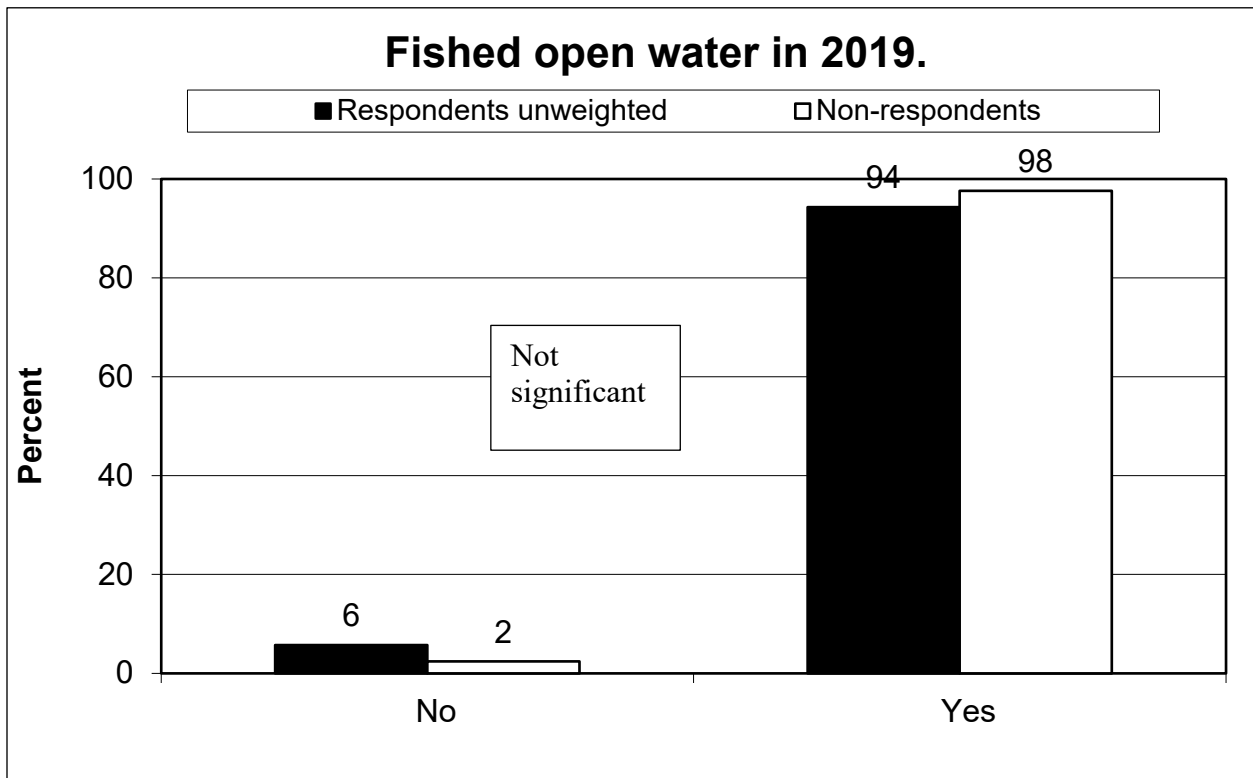
Appendix B Figure 12. Opinion on Stocking Trout in Some Ponds and lakes



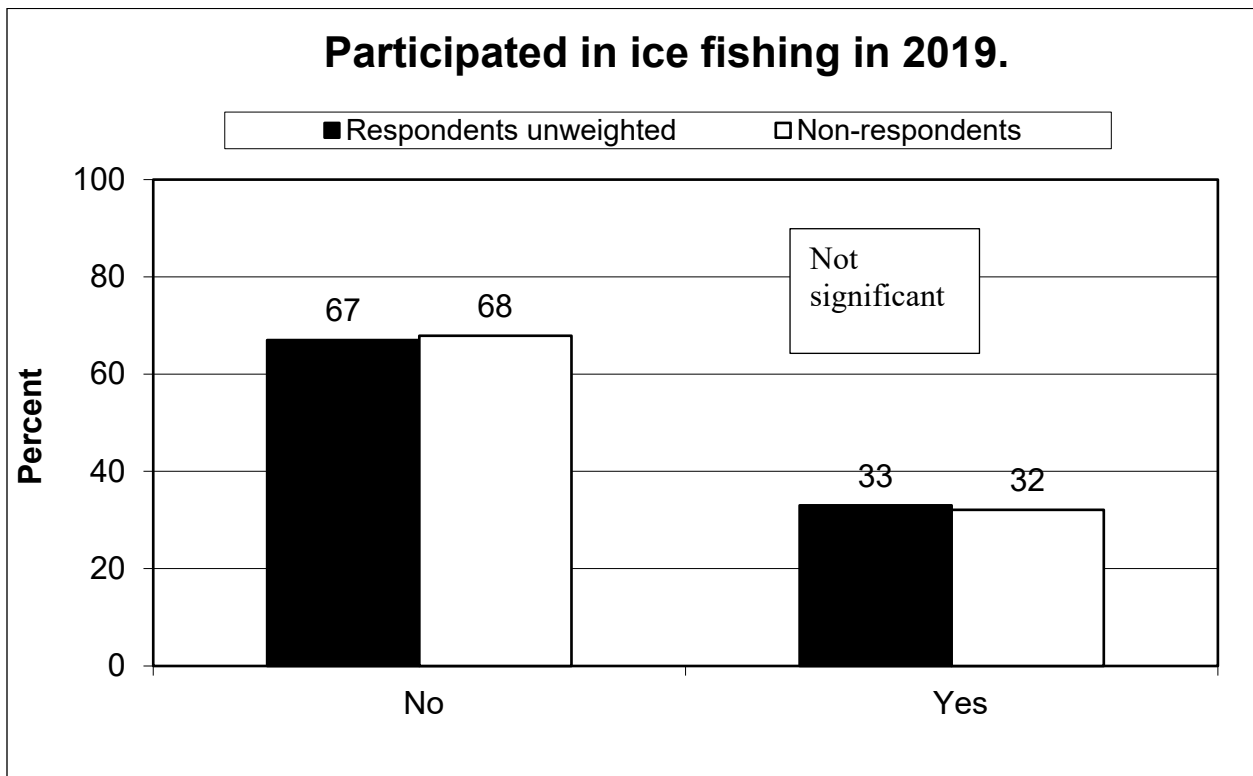
Appendix B Figure 13. Opinion on Ability to Understand Regulations



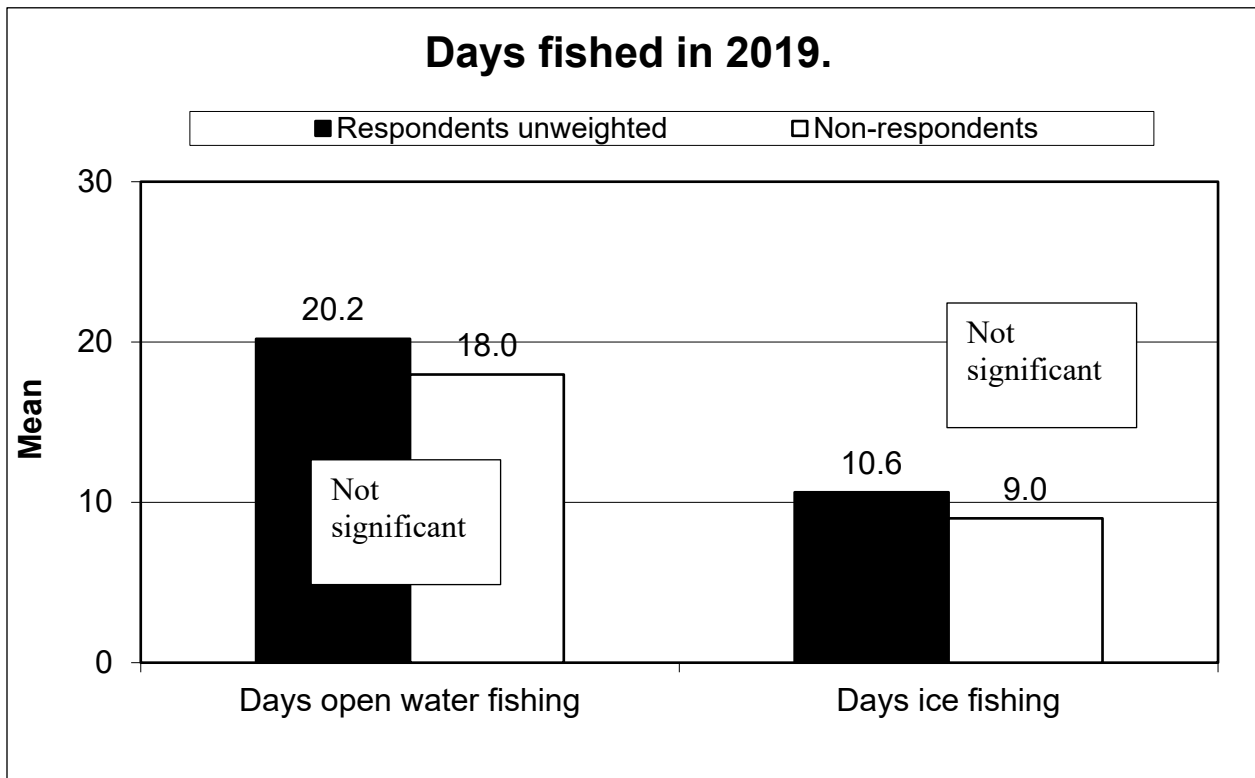
Appendix B Figure 14. Opinions on Access to Fishing Areas as a Problem



Appendix B Figure 15. Participation in Fishing Open Water in 2019



Appendix B Figure 16. Participation in Ice Fishing in 2019



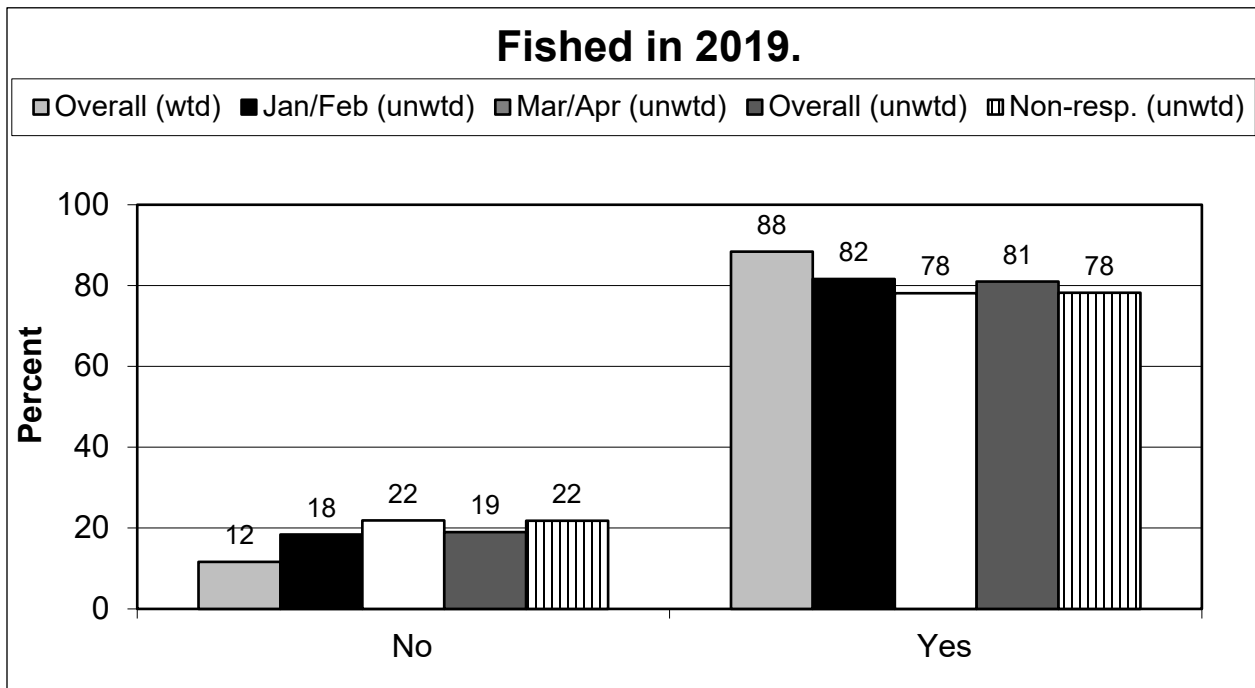
Appendix B Figure 17. Days Fished in 2019

APPENDIX C: SECOND NON-RESPONSE BIAS TEST RESULTS

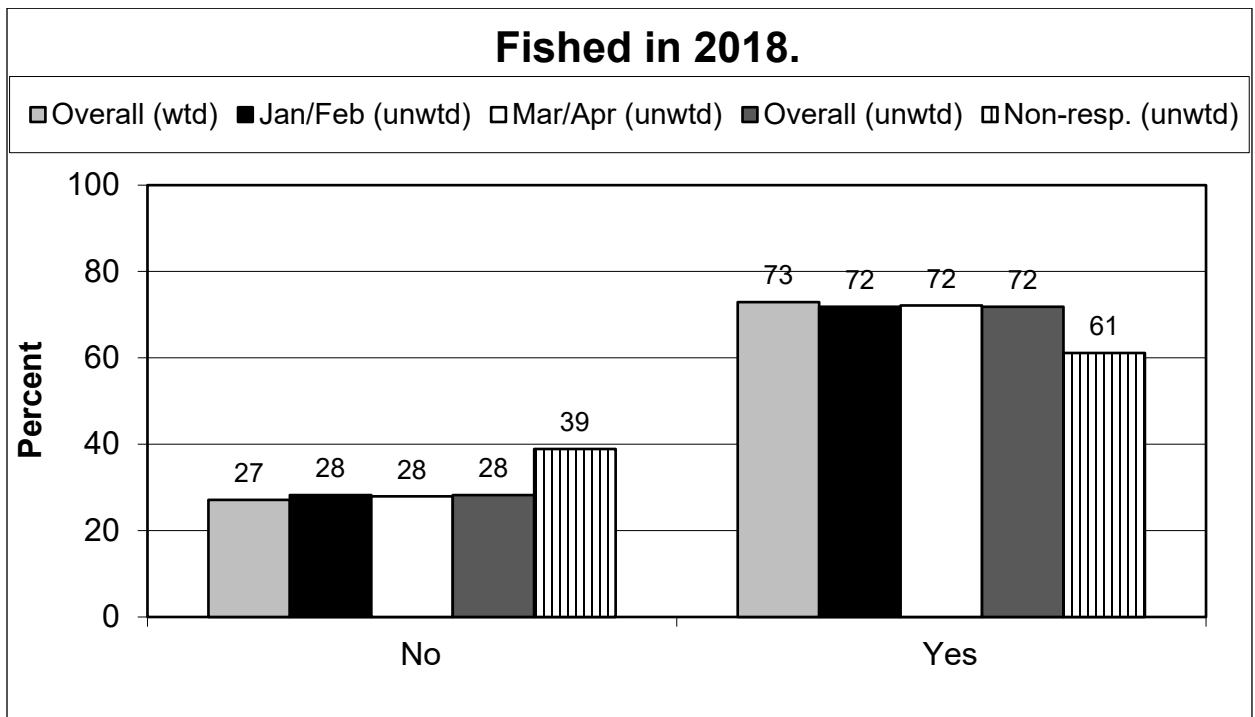
The graphs that follow in Appendix C Figures 1 through 17 are five-bar graphs that show the analysis based on the timing of the completion of the questionnaires. No clear pattern emerged that would override the weighting that was applied based on the two-bar graphs in Appendix B.

In the five-bar graphs, the order of the bars is as follows:

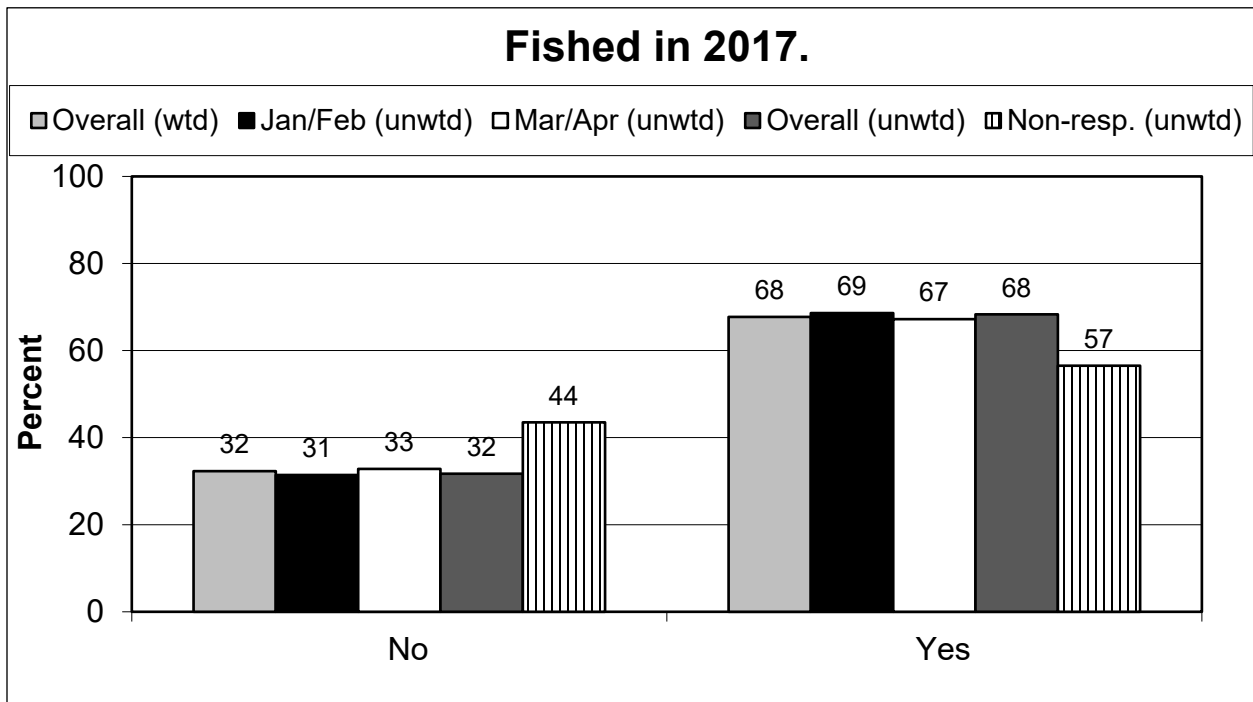
- Overall results, weighted to age, gender, license type, and region.
- Results of respondents who completed the survey in January or February, unweighted.
- Results of respondents who completed the survey in March or April, unweighted.
- Overall results, unweighted.
- Non-respondents, which are not weighted for age, gender, license type, or region.



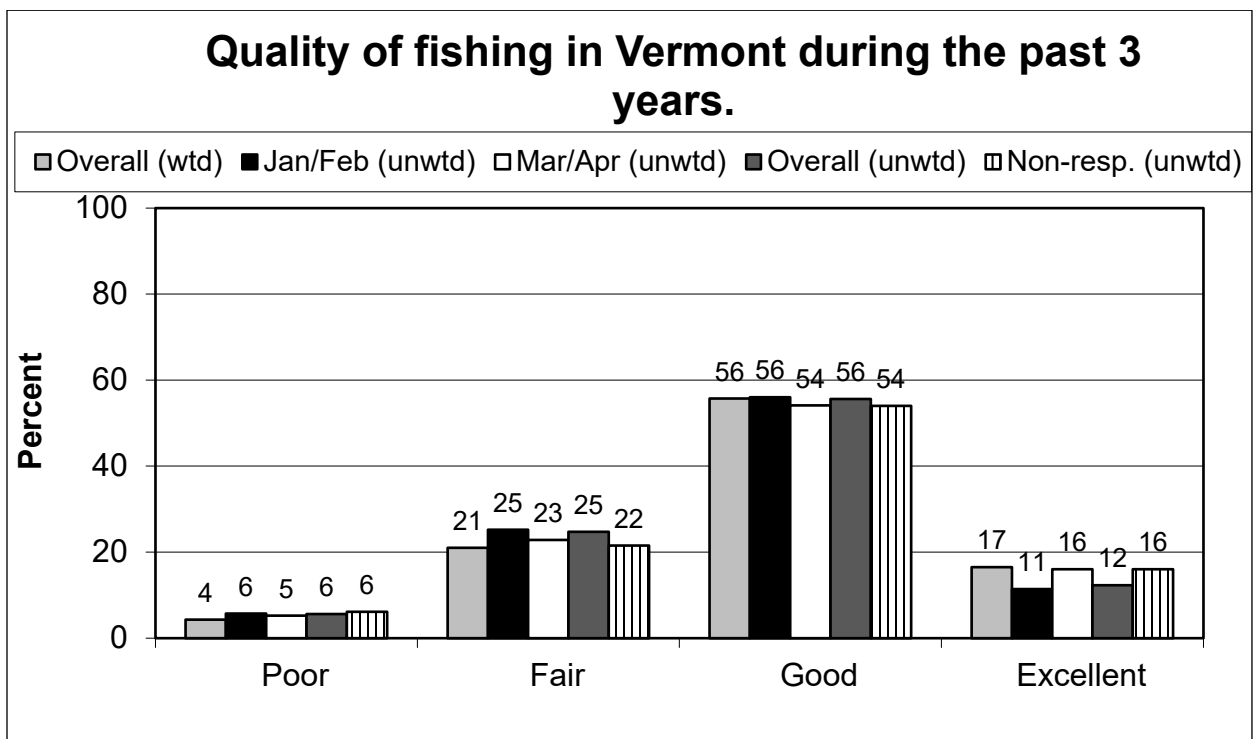
Appendix C Figure 1. Fishing Participation in 2019, Analyzed by Time of Survey Completion



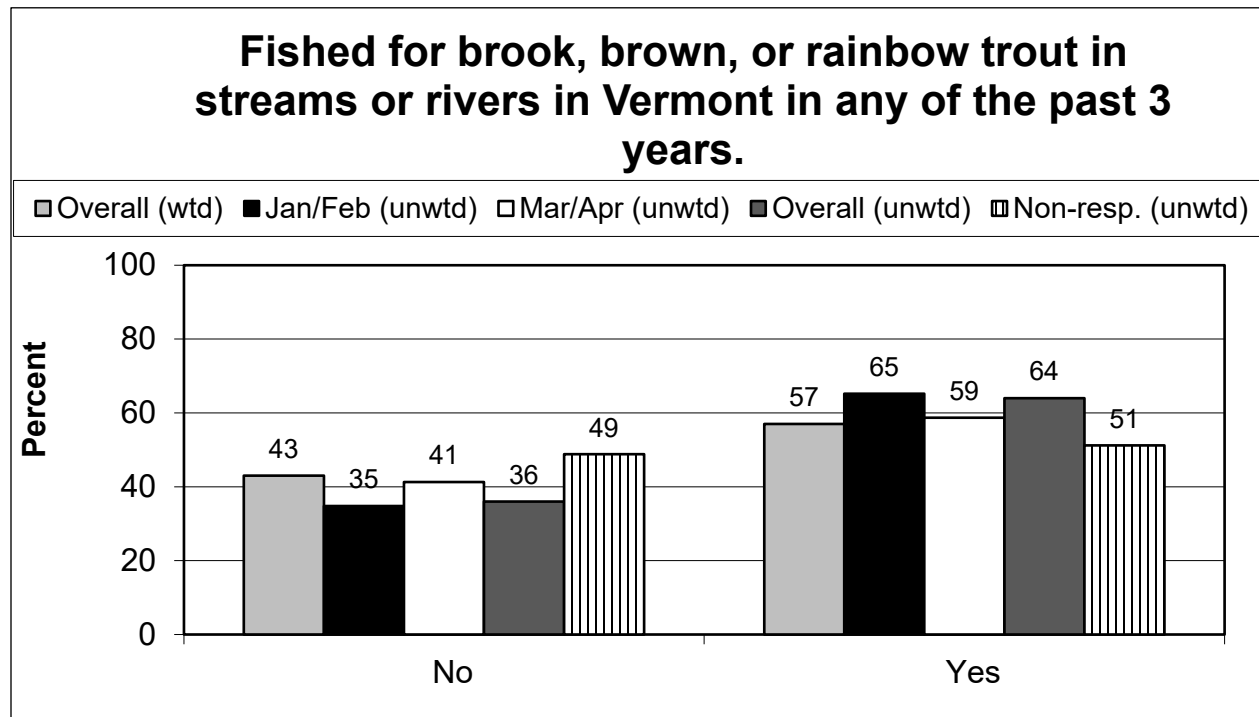
Appendix C Figure 2. Fishing Participation in 2018, Analyzed by Time of Survey Completion



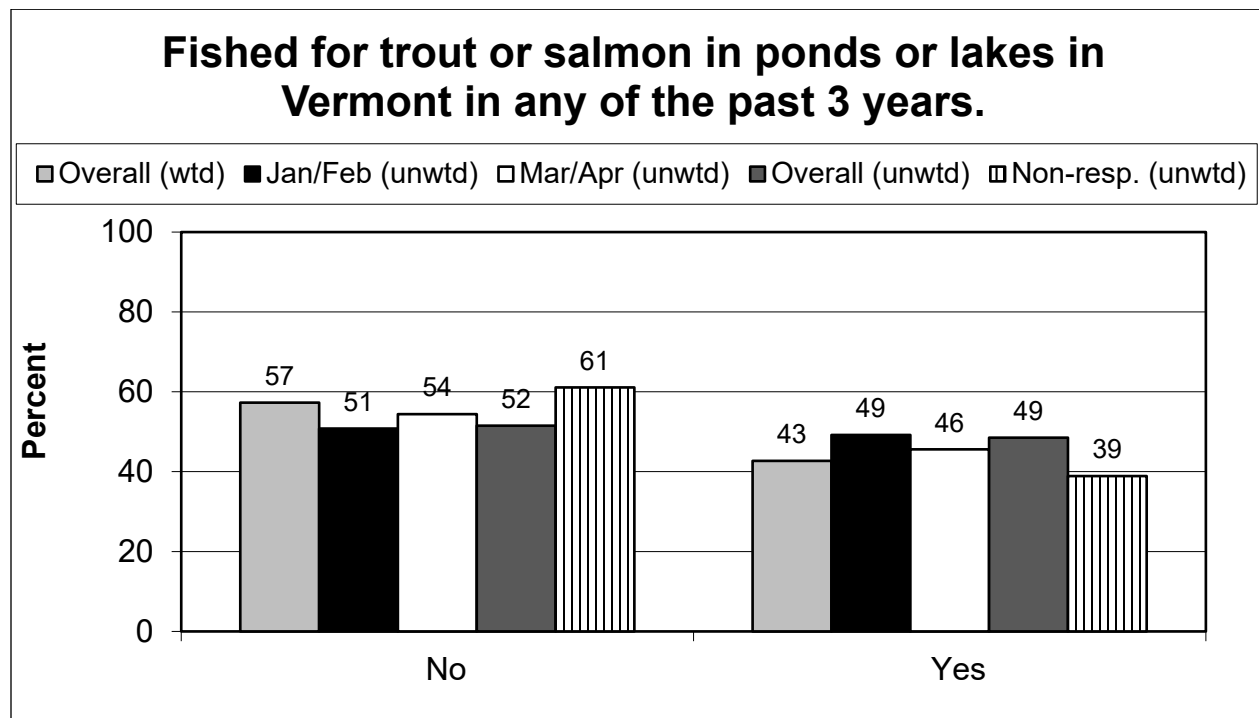
Appendix C Figure 3. Fishing Participation in 2017, Analyzed by Time of Survey Completion



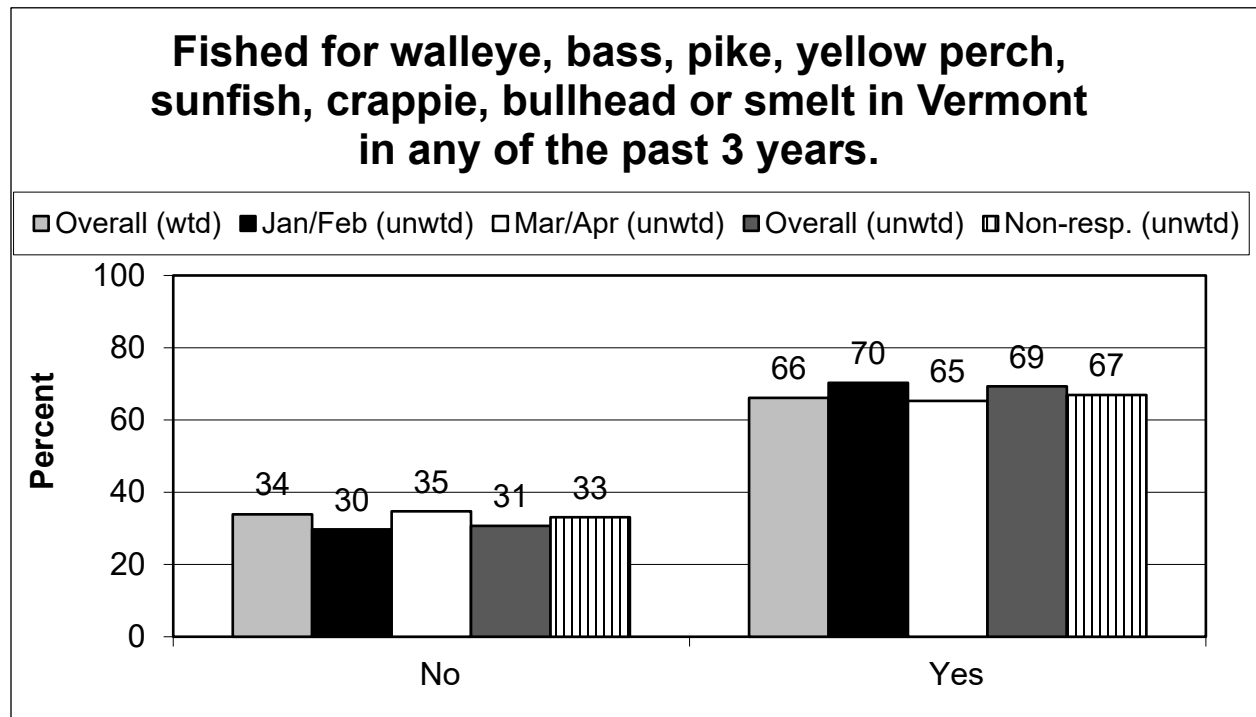
Appendix C Figure 4. Rating of the Quality of Fishing, Analyzed by Time of Survey Completion



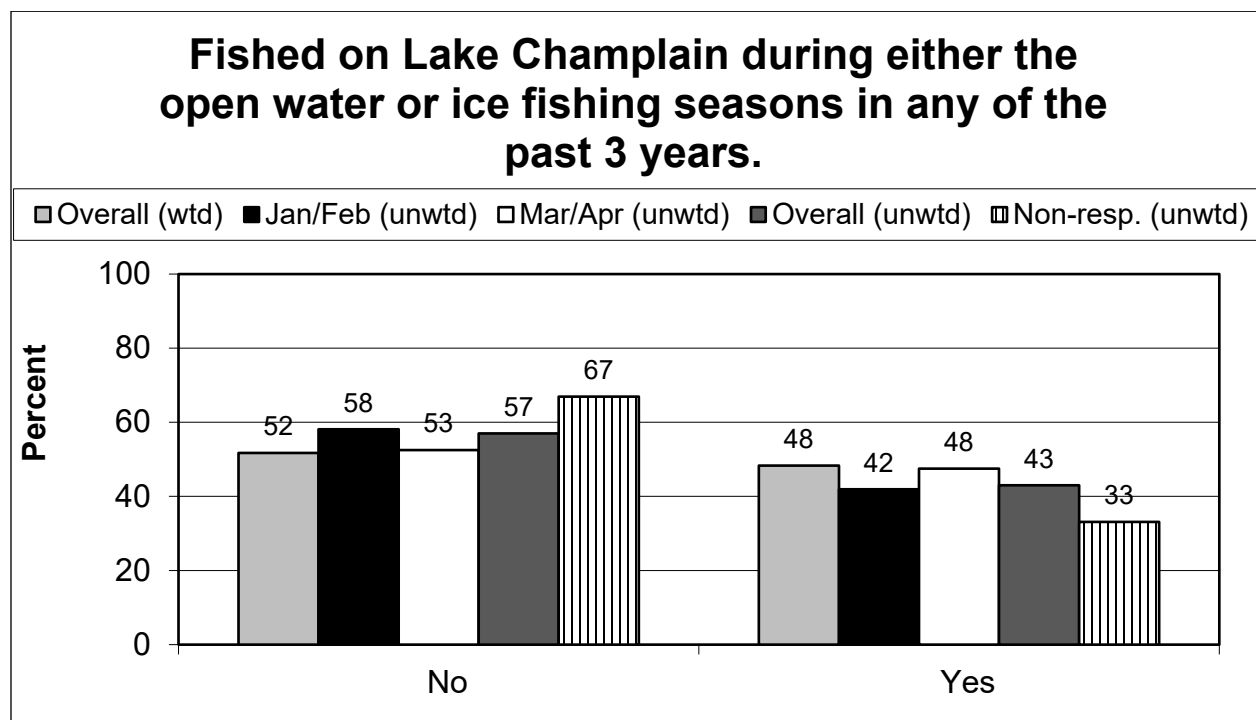
Appendix C Figure 5. Participation in Fishing for Trout in Streams or Rivers, Analyzed by Time of Survey Completion



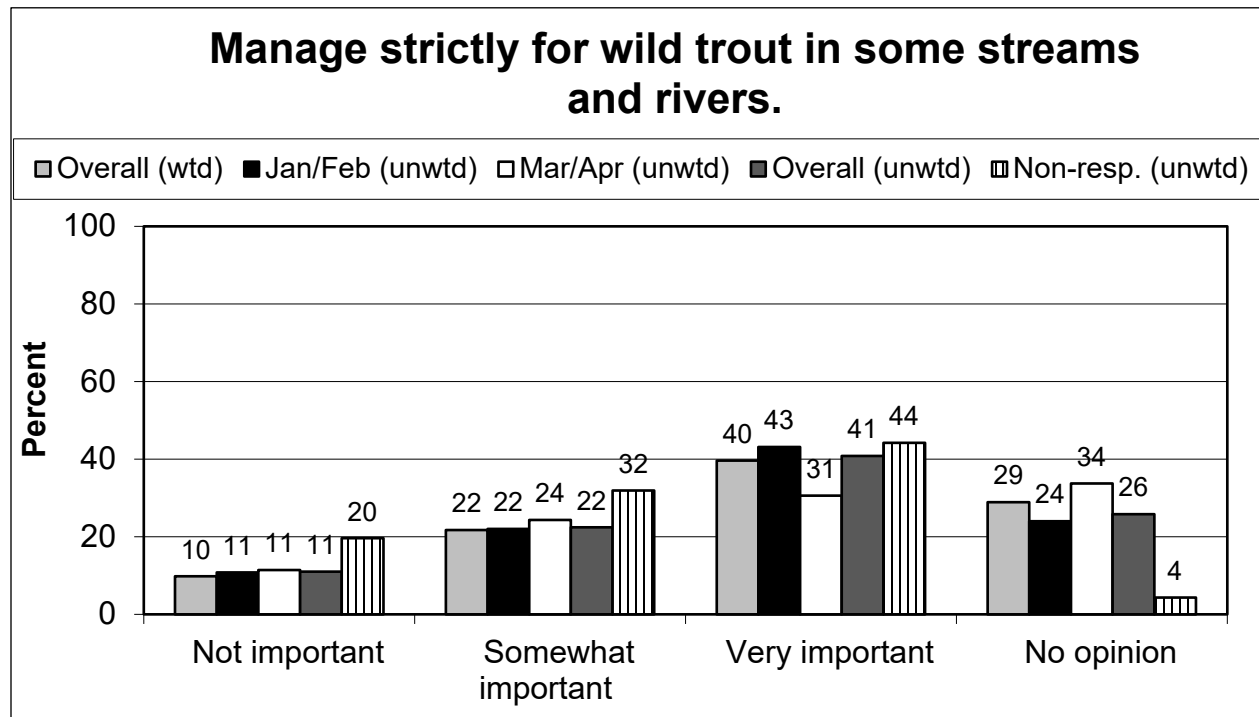
Appendix C Figure 6. Participation in Fishing for Trout and Salmon in Ponds or lakes, Analyzed by Time of Survey Completion



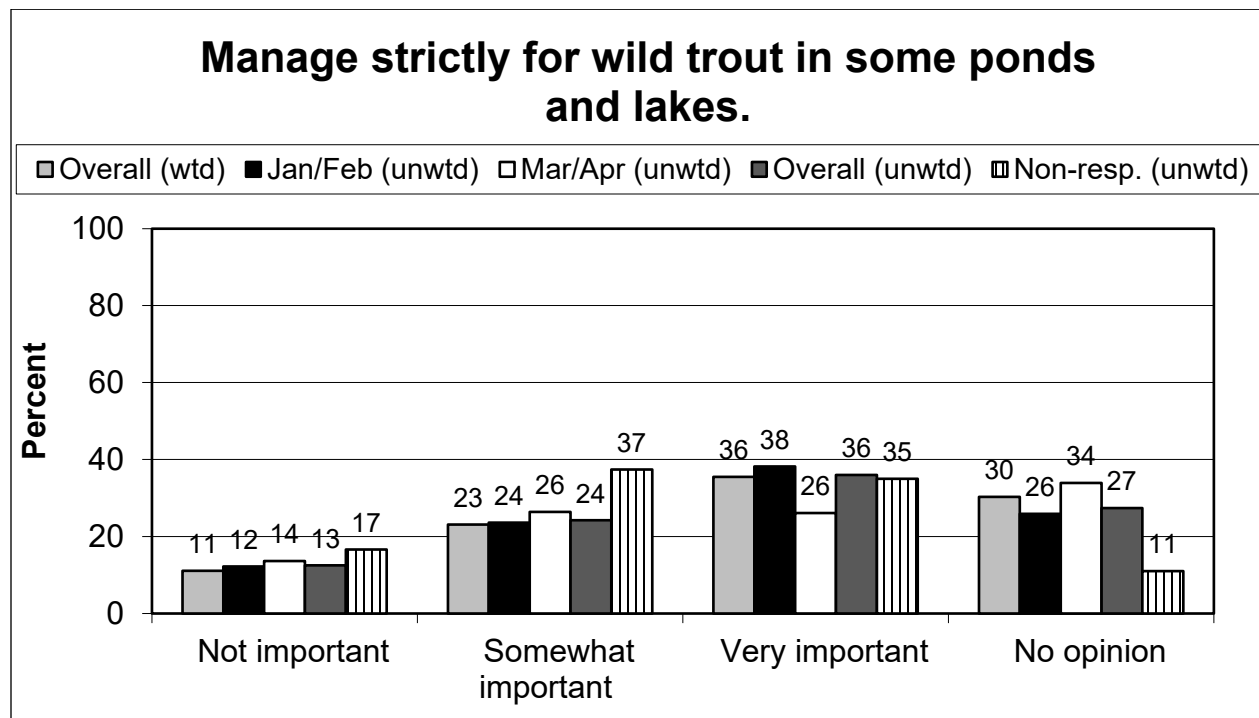
Appendix C Figure 7. Participation in Fishing for Non-Trout, Non-Salmon Species, Analyzed by Time of Survey Completion



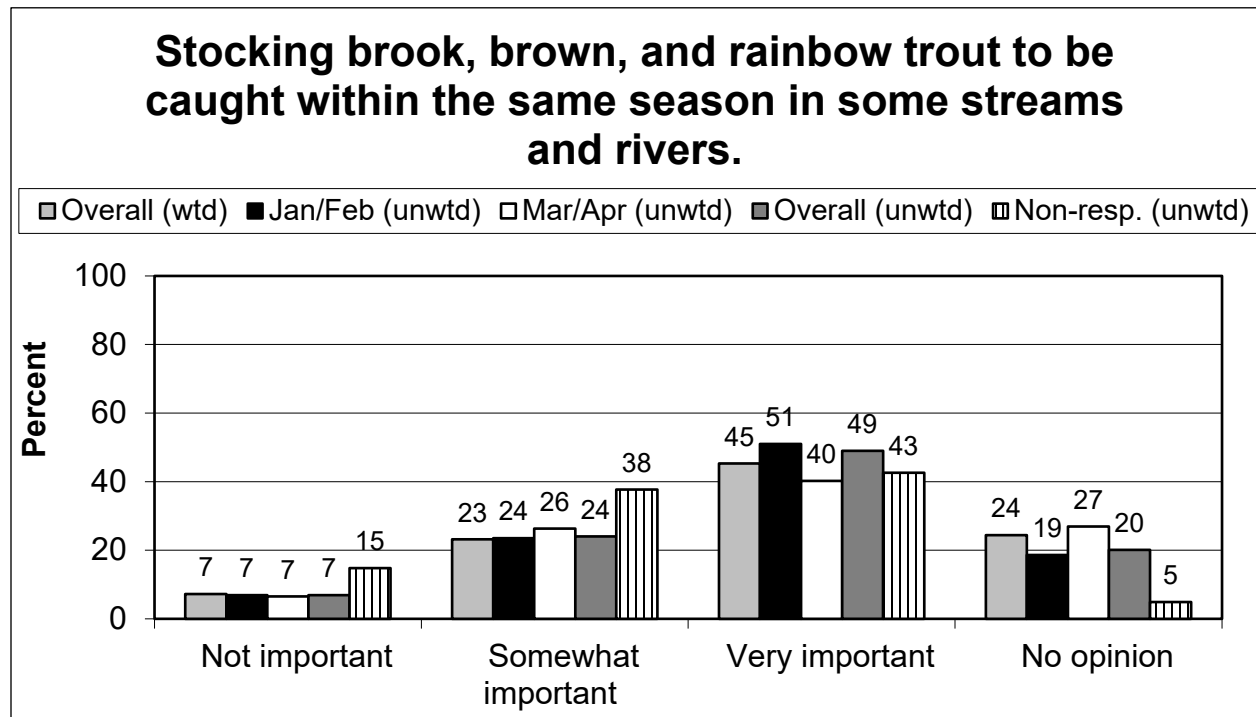
Appendix C Figure 8. Participation in Fishing on Lake Champlain, Analyzed by Time of Survey Completion



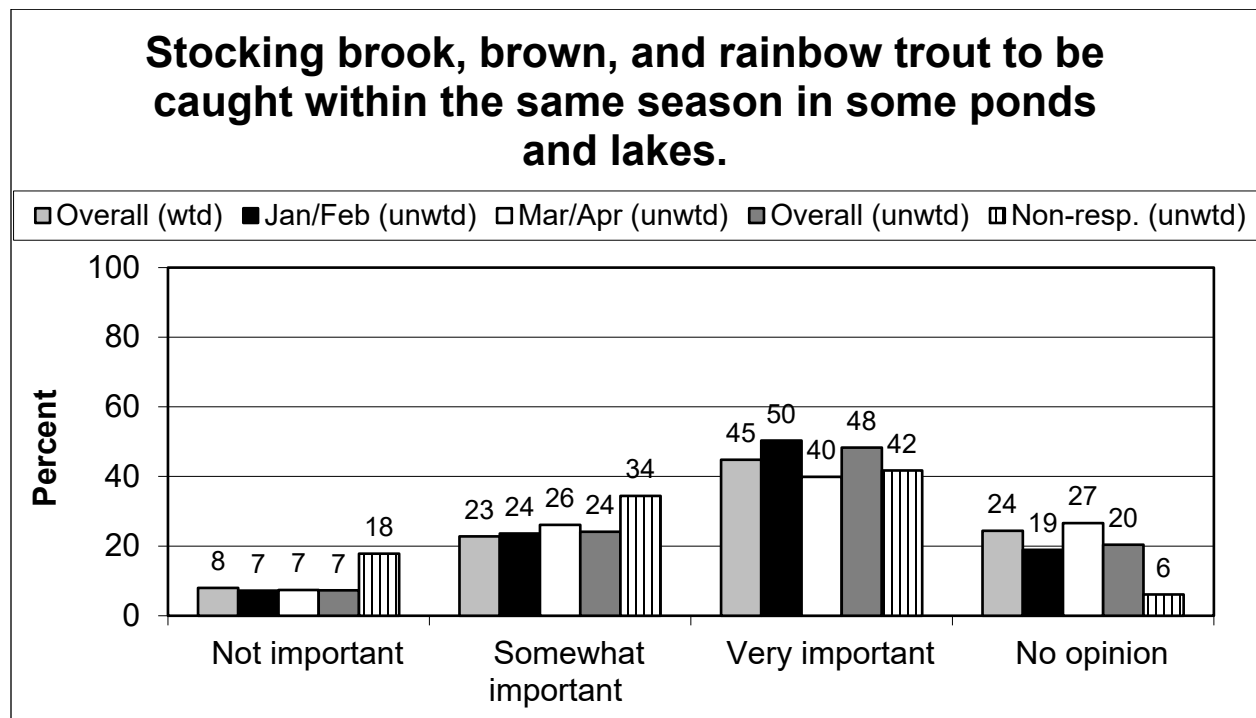
Appendix C Figure 9. Opinion on Managing Strictly for Wild Trout in Some Streams/Rivers, Analyzed by Time of Survey Completion



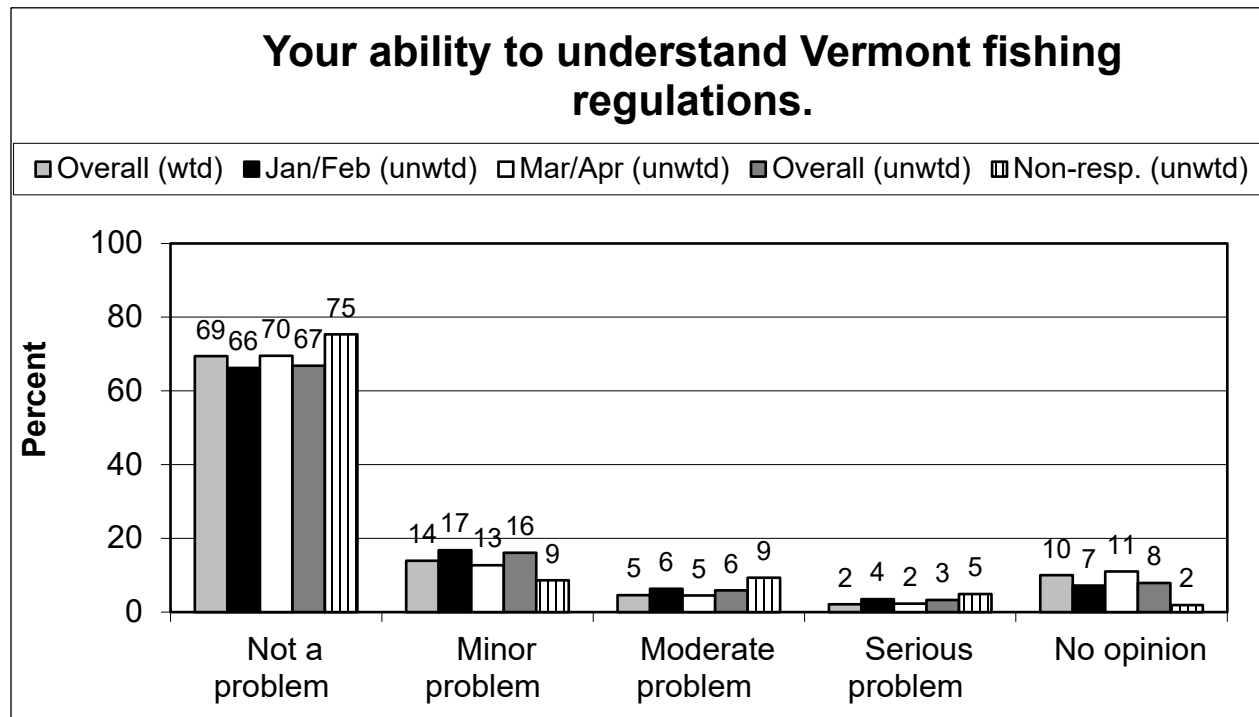
Appendix C Figure 10. Opinion on Managing Strictly for Wild Trout in Some Lakes/Ponds, Analyzed by Time of Survey Completion



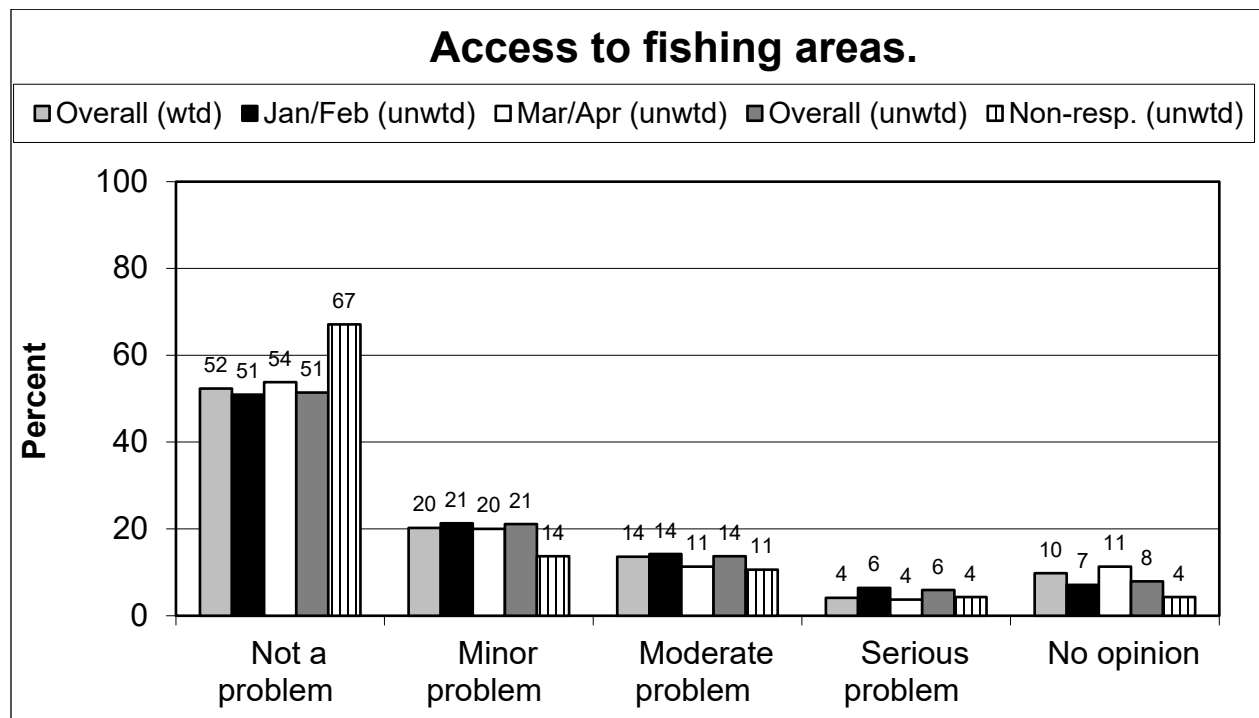
Appendix C Figure 11. Opinion on Stocking Trout in Some Streams and Rivers, Analyzed by Time of Survey Completion



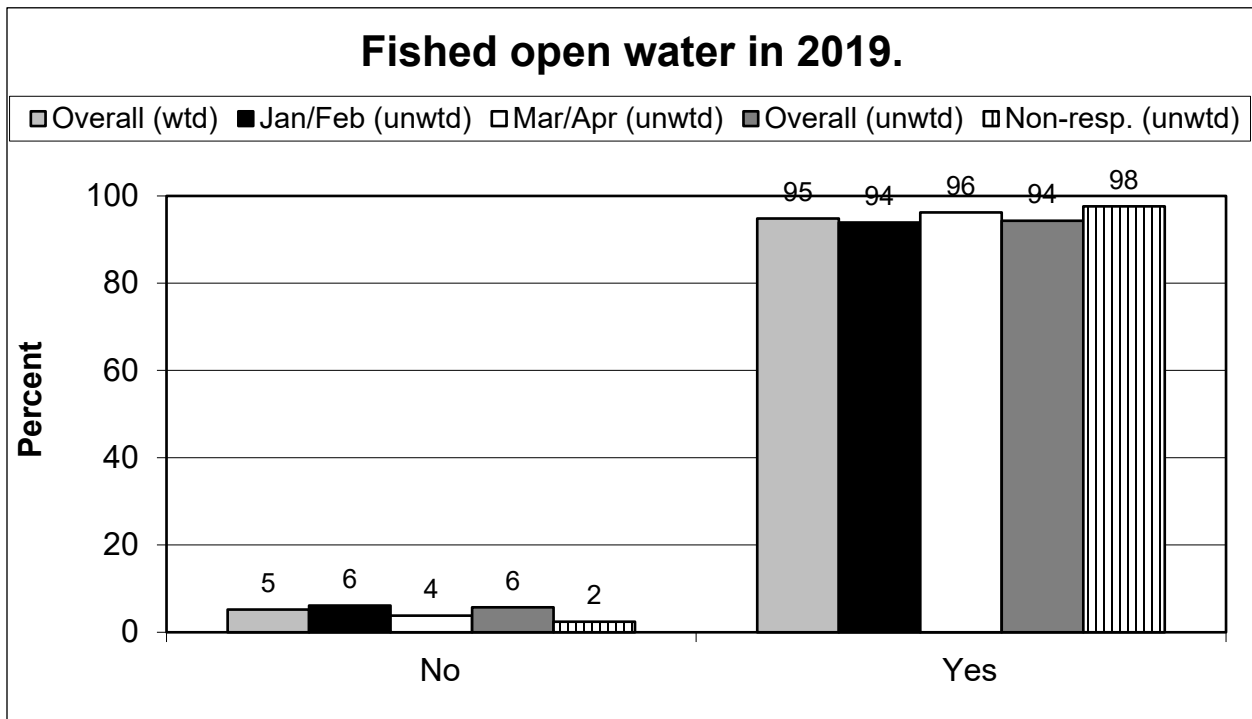
Appendix C Figure 12. Opinion on Stocking Trout in Some Ponds and lakes, Analyzed by Time of Survey Completion



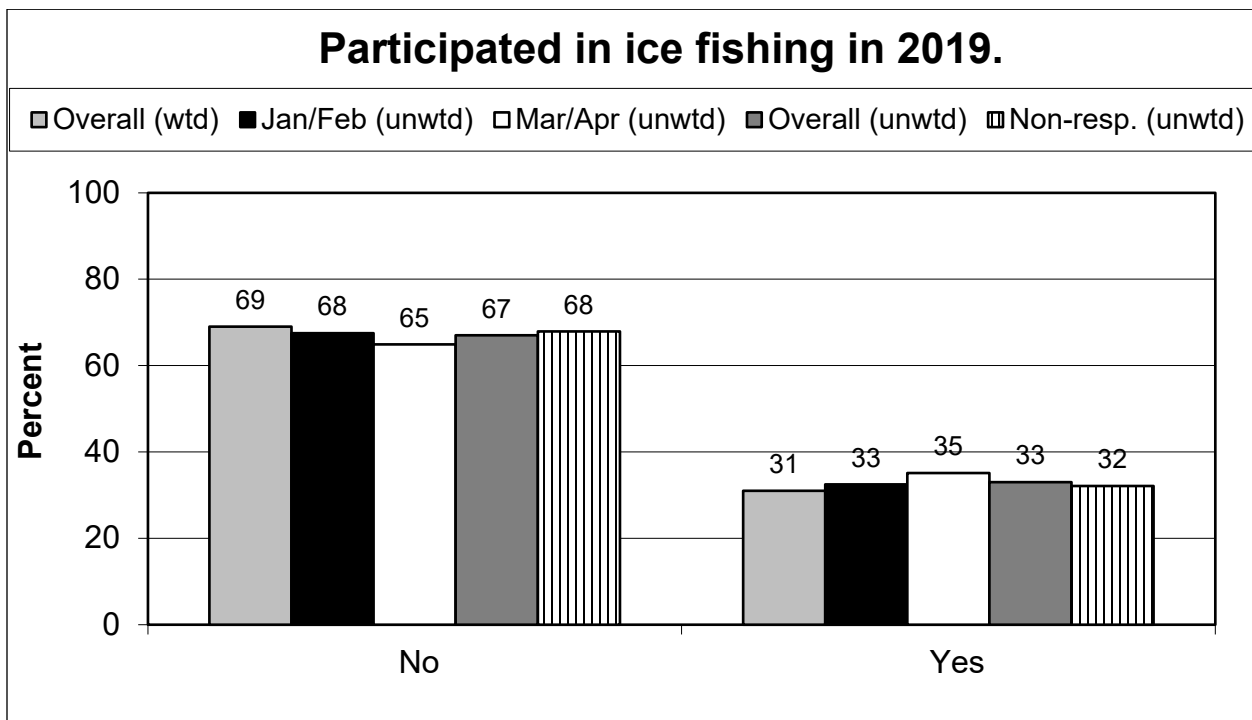
Appendix C Figure 13. Opinion on Ability to Understand Regulations, Analyzed by Time of Survey Completion



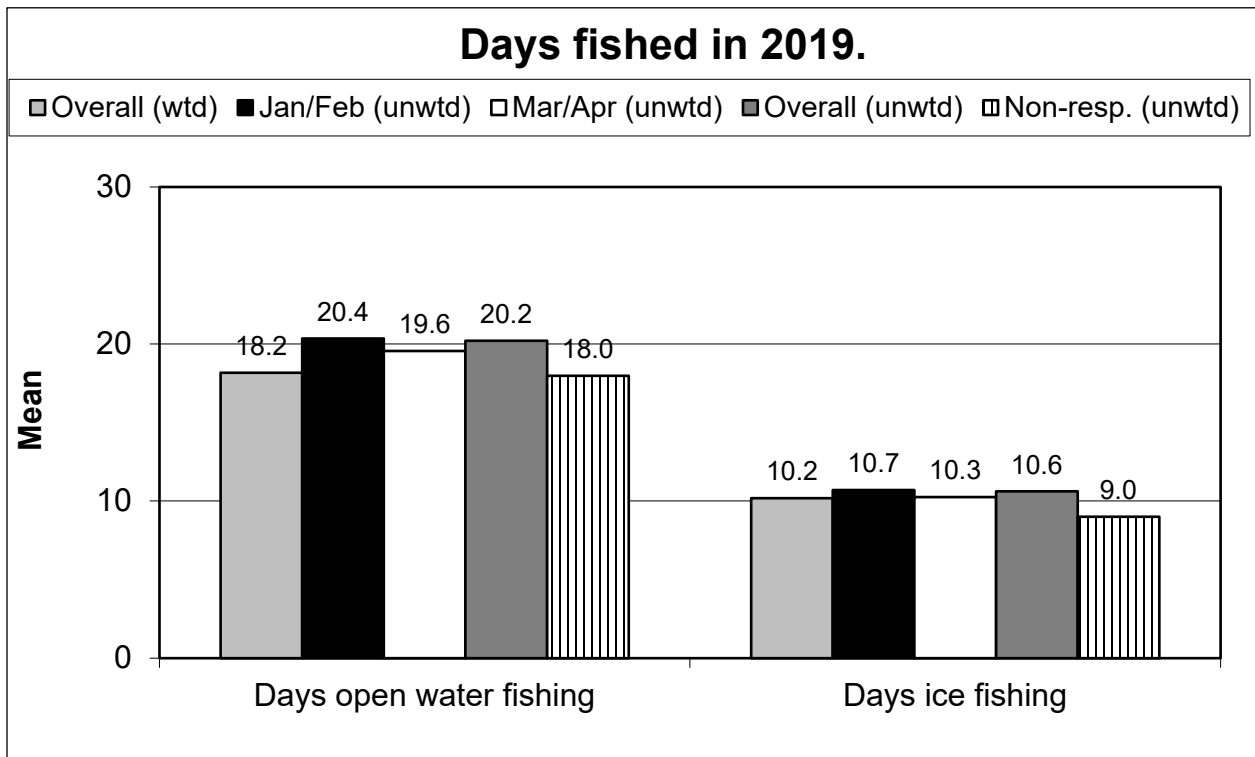
Appendix C Figure 14. Opinions on Access to Fishing Areas as a Problem, Analyzed by Time of Survey Completion



Appendix C Figure 15. Participation in Fishing Open Water in 2019, Analyzed by Time of Survey Completion



Appendix C Figure 16. Participation in Ice Fishing in 2019, Analyzed by Time of Survey Completion



Appendix C Figure 17. Days Fished in 2019, Analyzed by Time of Survey Completion

ABOUT RESPONSIVE MANAGEMENT

Responsive Management is an internationally recognized survey research firm specializing in natural resource and outdoor recreation issues. Our mission is to help natural resource and outdoor recreation agencies, businesses, and organizations better understand and work with their constituents, customers, and the public. Focusing only on natural resource and outdoor recreation issues, Responsive Management has conducted telephone, mail, and online surveys, as well as multi-modal surveys, on-site intercepts, focus groups, public meetings, personal interviews, needs assessments, program evaluations, marketing and communication plans, and other forms of human dimensions research measuring how people relate to the natural world for more than 30 years. Utilizing our in-house, full-service survey facilities with 75 professional interviewers, we have conducted studies in all 50 states and 15 countries worldwide, totaling more than 1,000 human dimensions projects *only* on natural resource and outdoor recreation issues.

Responsive Management has conducted research for every state fish and wildlife agency and every federal natural resource agency, including the U.S. Fish and Wildlife Service, the National Park Service, the U.S. Forest Service, Bureau of Land Management, U.S. Coast Guard, and the National Marine Fisheries Service. Additionally, we have also provided research for all the major conservation NGOs including the Archery Trade Association, the American Sportfishing Association, the Association of Fish and Wildlife Agencies, Dallas Safari Club, Ducks Unlimited, Environmental Defense Fund, the Izaak Walton League of America, the National Rifle Association, the National Shooting Sports Foundation, the National Wildlife Federation, the Recreational Boating and Fishing Foundation, the Rocky Mountain Elk Foundation, Safari Club International, the Sierra Club, Trout Unlimited, and the Wildlife Management Institute.

Other nonprofit and NGO clients include the American Museum of Natural History, the BoatUS Foundation, the National Association of Conservation Law Enforcement Chiefs, the National Association of State Boating Law Administrators, and the Ocean Conservancy. As well, Responsive Management conducts market research and product testing for numerous outdoor recreation manufacturers and industry leaders, such as Winchester Ammunition, Vista Outdoor (whose brands include Federal Premium, CamelBak, Bushnell, Primos, and more), Trijicon, Yamaha, and others. Responsive Management also provides data collection for the nation's top universities, including Auburn University, Clemson University, Colorado State University, Duke University, George Mason University, Michigan State University, Mississippi State University, North Carolina State University, Oregon State University, Penn State University, Rutgers University, Stanford University, Texas Tech, University of California-Davis, University of Florida, University of Montana, University of New Hampshire, University of Southern California, Virginia Tech, West Virginia University, Yale University, and many more.

Our research has been upheld in U.S. Courts, used in peer-reviewed journals, and presented at major wildlife and natural resource conferences around the world. Responsive Management's research has also been featured in many of the nation's top media, including *Newsweek*, *The Wall Street Journal*, *The New York Times*, CNN, National Public Radio, and on the front pages of *The Washington Post* and *USA Today*.

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