

TROUT ANGLERS' PARTICIPATION IN AND OPINIONS ON TROUT FISHING IN NORTH CAROLINA

Conducted for the North Carolina Wildlife Resources Commission

by Responsive Management

2015

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Responsive Management National Office

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EXECUTIVE SUMMARY

INTRODUCTION AND METHODOLOGY

This study was conducted for the North Carolina Wildlife Resources Commission (hereinafter referred to as the Commission) to determine the percentage of all licensed anglers who fish for trout, as well as trout anglers' opinions on trout fishing in North Carolina, the types of waters in which they fish, and other aspects of trout fishing in North Carolina. The study entailed a scientific multi-modal survey of North Carolina anglers.

A multi-modal survey was chosen to allow trout anglers the most convenience in completing the survey and to increase response rates. The survey questionnaire was developed cooperatively by Responsive Management and the Commission and included questions based on previous surveys of trout anglers in North Carolina. Responsive Management conducted pre-tests of the questionnaire to ensure proper wording, flow, and logic in the survey.

The database of licensed resident and nonresident North Carolina freshwater anglers from which the sample was obtained was provided by the Commission. Probability-based random samples of anglers were taken from the database, and each potential respondent was assigned a unique identifying code to track progress in the survey and to ensure that each angler took the survey only once. A full description of the contact methods is included in the body of the report.

The survey was conducted until the target goal of at least 2,000 completed questionnaires by trout anglers was reached; ultimately, 2,113 trout anglers completed the questionnaire (1,727 residents and 386 nonresidents). The survey was administered from early April to mid-May 2015.

The analysis of data was performed using Statistical Package for the Social Sciences as well as proprietary software developed by Responsive Management. Throughout this report, findings of the telephone survey are reported at a 95% confidence interval. For the entire sample of trout anglers, the sampling error is at most plus or minus 2.12 percentage points. The sampling error was calculated based on a sample size of 2,113 and an estimated population size of 143,745 trout anglers. Note that some questions have a lower sample size than 2,113 because some questions

did not apply to everyone and because just a few respondents on the online survey did not respond to all questions to which they should have responded.

FISHING PARTICIPATION

- One of the objectives of the study was to determine the percentage of freshwater fishing license holders who went mountain trout fishing (i.e., not including sea trout). In 2014, 18.5% of freshwater fishing license holders fished for mountain trout. (Note that hereinafter, all references to trout fishing refer to mountain trout fishing and do not include sea trout, even when "mountain" is omitted from the phrase.)
 - The trend comparison shows that a lower percentage of freshwater fishing license holders fished for trout in 2014 (18.5%) than in 2008 (29.3%).
 - It is interesting to compare Responsive Management's results in these two surveys with *National Survey** percentages, which match fairly closely. Responsive Management's rate of fishing for trout among all freshwater fishing license holders drops from 29.3% in 2008 to 18.5% in 2014; meanwhile, the percentage of anglers who fished for trout in North Carolina according to *National Survey* data declined from 29.1% of all anglers in 2006 to 16.1% in 2011.

- ➤ A little more than half of trout anglers (58%) fished for trout all 5 of the past 5 years.
- The percentage of trout anglers (only those who have been fishing for at least 5 years) who say that their fishing has increased in the past 5 years is about the same as the percentage who say it has decreased: 26% say it increased, and 24% say it decreased. Most commonly, trout anglers say it has stayed about the same (49%).
- The survey asked about days of fishing in 2014: the mean is 14.16 days; the median is 8 days. Trips were also asked about: the mean is 10.92 trips; the median is 5 trips.

^{*}North Carolina state reports of the *National Survey or Fishing, Hunting, and Wildlife-Associated Recreation*, 2006 and 2011.

MOTIVATIONS FOR TROUT FISHING

- The top reasons for fishing are for the sport (named by 30% as their single main reason for trout fishing) or for relaxation (24%), of the six possible reasons for fishing that were presented to trout anglers. Nonetheless, family and friends (16%), nature (13%), and food (12%) are motivations for substantial percentages of trout anglers.
 - Family and friends are markedly more important among younger anglers than among older anglers.
 - Another crosstabulation was run of skill level (beginner, intermediate, or advanced).
 Family and friends is of greater importance to beginners than to intermediate or advanced anglers. Meanwhile, for the sport is more important among advanced anglers.

FISHING COMPANIONS

- The most common fishing companions are family members (81% named family in general or a specific family member), particularly sons, fathers, and brothers. Additionally, 48% named friends.
- > Just under half of trout anglers (43%) took a child fishing at some time in 2014.
 - A crosstabulation by age groups shows that anglers in the middle age group (35 to 54 years old) are much more likely to have taken a child fishing in 2014 than are anglers in either of the other age groups (18 to 34 years old or 55 years old and older).

FISHING LOCATIONS AND TRAVEL TO FISH

Of the seven regulation classifications of trout waters in North Carolina, the most commonly fished at all are Hatchery Supported Trout Waters, Delayed Harvest Trout Waters, and Wild Trout Waters (based on fishing it at least once in 2014). Another way to look at this question is to examine the percentage who fished each type of regulation classification *many times* or *a few times* in 2014. In this analysis, the most-used types of regulation classification are Hatchery Supported Trout Waters (46% fish in them many times or a few times), Delayed

Harvest Trout Waters (34%), and Wild Trout Waters (29%). Note that many anglers fished more than one type of regulation classification.

- A follow-up question asked those who fished in more than one type to name their mostfished type of regulation classification, and those who fished only one type were coded into the graph, as well (those who fished only one type were simply assigned that one type as their most-fished type). In this analysis, the top types of regulation classification are Hatchery Supported Trout Waters (38%), Delayed Harvest Trout Waters (21%), and Wild Trout Waters (16%); no other type is the most-fished by more than 6% of trout anglers.
- The overwhelming majority of trout anglers go trout fishing on public land: 90% fish either mostly or about half the time on public land. On the other hand, about a third (32%) fish either mostly or about half the time on private land.
 - Beginner anglers, compared to intermediate and advanced anglers, are more likely to fish either public land mostly or private land mostly rather than both about equally.
 - Very few trout anglers lease land for fishing: only 2% did so in the past 5 years.
- The typical one-way travel distance for trout anglers in North Carolina is 50 miles (the median distance).
- The survey explored decision-making regarding where to go trout fishing. For each of ten items, the survey asked trout anglers to rate its importance in deciding where to fish, either very important, somewhat important, or not at all important. Three of the factors have a majority thinking each to be *very* important: finding access on public land (63% say this is *very* important), finding a place where it is likely that trout will be caught (57%), and finding a place where the regulations are posted on-site (53%).
 - A second tier consists of finding a secluded spot (46%) and finding a location close to home (41%).
 - A crosstabulation graph by age is also included for each question in this series. Two of the factors are more important to younger anglers than to older anglers: finding a spot where it is likely that trout will be caught, and finding a secluded spot. Meanwhile, four

factors are more important to older anglers than to younger ones: having restrooms available, finding access on private land, close parking, and finding access for disabled anglers.

- A crosstabulation by skill level shows that beginners find the following more important than do intermediate or advanced anglers: finding a location close to home, finding a location on public land, having boating access, having restrooms available, and close parking. On the other hand, factors more important to advanced anglers include finding a secluded spot and finding a location on private land.
- Another set of questions further explored decision-making regarding where to fish, asking trout anglers to indicate how often (always, sometimes, occasionally, rarely, or never) they did the actions when deciding where to access the waters for trout fishing in North Carolina.
 - In looking at those actions that are done *always* or *sometimes*, two stand out at the top, both with 60% of trout anglers saying that they always or sometimes do them: researching places on the Internet and scouting/physically looking for places. Two other actions are done by about half: asking a friend or family member (54%) and using paper maps (48%).
 - At the bottom are using GPS (only 27% do this always or sometimes) and knocking on a landowner's door to ask permission (16%).

TYPES OF FISHING EQUIPMENT AND BAIT USED

- The most commonly used types of bait (bait used in the generic sense to mean bait, flies, or lures) for trout fishing in North Carolina are artificial flies (used by 61% of trout anglers at least some of the time) and artificial lures (50%), followed by natural bait (43%).
 - Those who used more than one type of bait were asked to choose their most preferred type of bait, and combining the results with those who used only one type of bait shows that the most popular type of bait is artificial flies (46% prefer this type), followed by natural bait (23%) and artificial lures (22%).

SATISFACTION OR DISSATISFACTION WITH TROUT FISHING IN NORTH CAROLINA

- The most basic satisfaction question asked about trout anglers' satisfaction or dissatisfaction with their trout fishing in North Carolina: 76% are satisfied, while 14% are dissatisfied.
 - The most commonly named reason for being dissatisfied with trout fishing in North Carolina is not related to the fishing resource: a lack of time to go fishing (30% cite this as taking away from satisfaction). However, the next most common reason is a lack of trout (26%), and three other reasons commonly given are not enough *large* trout (19%), access problems (15%), and crowding on the water (15%).
- > The survey asked about satisfaction with various aspects of trout fishing.
 - A large majority of trout anglers in North Carolina are satisfied with public access to trout fishing places: 78% are satisfied (including 51% who are *very* satisfied), while 11% are dissatisfied.
 - The age crosstabulation shows more satisfaction among younger anglers.
 - When asked what would make them more satisfied with trout fishing access (asked of all except those who said that they are *very* satisfied), the most common responses are more streams with access/more access points (29% of these respondents), better information about access/better signage (14%), more access on private lands (10%), and more parking (8%).
 - A large majority of trout anglers are satisfied with current trout fishing regulations in North Carolina: 82% are satisfied, compared to 8% who are dissatisfied.
 - The crosstabulation by skill level shows more dissatisfaction among advanced anglers compared to beginner and intermediate anglers.
 - When asked what would make them more satisfied with the regulations (asked of all except those who said that they are *very* satisfied), the most common responses relate to a change in water designations/type of bait allowed (19% of these respondents), more consistency in regulations/simpler regulations (13%), and changes to creel limits (13%).

- Another question pertaining to satisfaction asked trout anglers to rate how well the Commission does in providing trout fishing opportunities, and the ratings are positive: 80% of trout anglers give a rating of excellent or good. Only 16% give a rating in the bottom half of the scale, with just 2% giving a rating of poor.
 - Ratings of opportunities are more positive among the youngest age group of anglers:
 52% of anglers 18 to 34 years old give a rating of excellent, compared to no more than
 45% of the other age groups.
 - Advanced anglers are more likely than beginner or intermediate anglers to give a negative rating (fair or poor—in the bottom half of the scale).
 - Reasons for *not* giving a higher rating (among those who did not give a rating of excellent) include access problems (26% of these respondents) and lack of fish/the need for more stocking (24%).
- A final question in this section asked trout anglers about their perceived trend in the quality of trout fishing. They are about evenly split: while they most commonly say it has stayed about the same (42%), the percentage saying it has improved (19%) is not greatly different from the percentage saying it has declined (17%).

PROBLEMS ENCOUNTERED AND POSSIBLE SOLUTIONS WITH TROUT FISHING ACCESS

- The survey asked trout anglers to rate each of 14 potential problems as a *major* problem, a *minor* problem, or *not* a problem *at all*.
 - Of the 14 items, 6 are in a top tier, with at least half of trout anglers saying they are *major* or *minor* problems, and these 6 items pertain to either crowding/lack of enough places or lack of information. The potential problems related to crowding/not enough places are crowding on the water (66% say this is a major or minor problem), not enough places to access the water (59%), and having to travel too far to access the water to fish (50%). The ones related to information are not knowing if the access area is on public or private land (57%), not having enough information about where to access the water to fish (54%), and poorly marked access areas (53%).

- Similar to the series of questions about problems is a series of questions that asked about the effectiveness of things in making access easier. For each item, trout anglers rated it as being *very* effective, *somewhat* effective, or *not at all* effective in making access easier.
 - The first overall finding is that trout anglers in general feel that any of the items would be effective: the item at the bottom still has a majority thinking it would be very or somewhat effective in making access easier.
 - In looking at the results by the percentage thinking the items would be *very* effective, the top items relate to having more information: having signs clearly marking access areas as being on public or private lands (73% say this would be *very* effective), having up-to-date information on a website showing public access areas and private areas open to the public (70%), and having maps of fishing access and boat access areas on a website (65%).
- Two questions asked about funding to support a fishing access program; not surprisingly, a reallocation of the existing license fee garnered more support than a new fee. Nonetheless, for both options, there is more support than opposition. For a new fee, support is at 45%, while opposition is not much below that at 37%. For a reallocation of the existing fee, support is at 68%, while opposition is at 12%.
 - The crosstabulation by age shows that younger anglers have more opposition to the general access fee than do older anglers. Regarding the reallocation of the existing fee, older angler have more opposition than do younger anglers.

HATCHERY SUPPORTED TROUT WATERS

- The overwhelming majority of trout anglers (84%) have at some time fished in Hatchery Supported Trout Waters in North Carolina.
 - Among those who had ever fished in Hatchery Supported Trout Waters, 22% typically fish the opening day of the season in Hatchery Supported Trout Waters, 28% typically fish the opening weekend (this includes the 22% who typically fish opening day), and 51% typically fish within the first 7 days of the season (this includes the 28% who do so the opening weekend). Additionally, 73% typically fish at some time *after* the first 7 days of the season.

- When presented with two options for managing Hatchery Supported Trout Waters, the majority of those who have fished in those waters (55%) would prefer the current season structure (with a traditional opening day after the waters have been closed in March); however, 29% say that they would like the waters to be open all year.
- Finally in this section, more trout anglers fish for stocked trout than for wild trout: 35% fish mostly for stocked trout, while 21% fish mostly for wild trout. In the middle, 38% fish for both about equally.

CATCH-AND-RELEASE

One question was asked about catch-and-release, finding that a majority of anglers say that they mostly release the legal trout that they catch (54% do so), while 22% mostly keep them (another 22% say that they do both about equally).

GUIDED FISHING TRIPS

One-fifth of North Carolina trout anglers (20%) have paid for a guided fishing trip at some time in the past 5 years.

INFORMATION SOURCES ABOUT FISHING IN NORTH CAROLINA

- Three questions probed the sources of information about trout fishing in North Carolina that anglers use.
 - In the first, 73% say that they use the Internet, 39% use printed material (books, brochures, etc.), and 36% use on-site signage.
 - In the second question, the overwhelming majority use the Commission as their source (84%). Otherwise, outdoors stores (25%), not-for-profit organizations (13%), and a guide or service (13%) are fairly commonly used.
 - The third question asked specifically about getting information from social media: 18% of trout anglers get trout fishing information from social media such as Facebook or Twitter.

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INTRODUCTION AND METHODOLOGY

This study was conducted for the North Carolina Wildlife Resources Commission (hereinafter referred to as the Commission) to determine the percentage of all licensed anglers with trout fishing privileges who fish for trout, as well as trout anglers' opinions on trout fishing in North Carolina, the types of waters in which they fish, and other aspects of trout fishing in North Carolina. (Note that the survey also explored expenditures on trout fishing in North Carolina, which will be detailed in a separate report.) The results of this study are built upon a probability-based random sample of North Carolina anglers. A multi-modal data collection method was used to allow anglers to complete the survey in the way most convenient to them. Contacts were made by mail, telephone, and email. In this manner, nearly complete coverage was achieved because all licensed anglers in the database had either a postal address, a telephone number, or an email address. Specific aspects of the research methodology are discussed below.

QUESTIONNAIRE DESIGN

The survey questionnaire was developed cooperatively by Responsive Management and the Commission, based on the research team's familiarity with fishing, as well as natural resources in general. Many of the questions were based on previous surveys of trout anglers in North Carolina.

The survey was coded in Questionnaire Programming Language (QPL) for approval from the Commission and for use in the telephone surveys. An online version of the survey was coded in HyperText Markup Language (HTML) based on the QPL version. Both versions produced data that could be exported directly into the data analyses programs.

The survey instruments were programmed to automatically skip questions that did not apply and to substitute phrases in the survey based upon previous responses, as necessary, for the logic and flow of the interview. Responsive Management conducted pre-tests of the questionnaire to ensure proper wording, flow, and logic in the survey.

SURVEY SAMPLE

The database of licensed resident and nonresident North Carolina freshwater anglers from which the sample was obtained was provided by the Commission. A probability-based random sample of anglers was taken from the database. Each potential respondent was assigned a unique identifying code to track progress in the survey and to ensure that each angler took the survey only once, as explained further on.

The goal of this study was to obtain at least 2,000 completed interviews with North Carolina trout anglers, although the sample had to be selected from the entire database of licensed anglers with trout fishing privileges. In North Carolina there is not a single license that identifies the population of trout anglers, rather there are 41 licenses that grant trout fishing privileges. Therefore, all anglers with these license types had to be included in the initial sample and then screened for trout fishing participation. To meet the objectives of the study, Responsive Management determined that approximately 70,000 individuals would need to be selected for the initial sample to ultimately achieve 2,000 completed interviews with trout anglers.

When determining that 70,000 individuals would need to be selected, Responsive Management considered the following factors: anticipated response rate, anticipated trout participation rate, and bad contact information. The anticipated response rate was approximately 20%, given recent response rates for similar studies. In addition, Responsive Management anticipated an approximately 20% trout fishing participation rate because the *2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation* estimated that 16.1% of anglers fished for trout in North Carolina. Finally, bad contact information (i.e., failed mail addresses, bad telephone numbers, and bounced emails addresses) was also assumed for approximately 10% to 20% of the database given typical industry results.

Note that to ensure as complete coverage as possible, Responsive Management had the database checked and corrected for accuracy through a license National Change of Address (NCOA) vendor; this is a process required by the U.S. Postal Service for any bulk mailing but was performed on the entire database prior to sample selection for this study. Following the NCOA corrections, the entire database was also sent to a professional phone match vendor so that new

and corrected telephone numbers could be obtained based on the address information. These two processes ensured that the database would be as accurate as possible. Nonetheless, as predicted, we still experienced a 19.8% rate of failed contacts across mail, email, and telephone.

Based on the assumptions that the database would yield the 20% response rate, 20% trout fishing participation rate, and 10% to 20% bad contact information, Responsive Management pulled a probability-based random sample of 70,000 individuals from the database in an effort to acquire at least 2,000 completed interviews with active North Carolina trout anglers. Please see the assumed calculations below (please note that the calculations below are based on assumptions when designing the sample, they do not represent the actual final results):

70,000 * .80 = 56,000 (20% bad contacts, resulting in 80%, or 56,000, with valid contact information)

56,000 * .20 = 11,200 (20% response rate, resulting in 11,200 who respond to the survey)

11,200 * .20 = 2,240

(20% trout fishing participation rate, resulting in 2,240 trout anglers who respond to the survey)

The initial sample of 70,000 was selected in proportion to the 41 licenses, and a multi-modal data collection method was employed to allow anglers to complete the survey in the way most convenient to them. Complete coverage was achieved because all anglers in the database had either a postal address, a telephone number, or an email address.

Because all anglers who hold a license with trout fishing privileges do not necessarily fish for trout, a screener question was developed to identify those who fished for mountain trout in North Carolina in 2014. Because there is also a sea trout, intentional and specific wording was developed to ensure that respondents understood the question. The screener question wording and logic are shown as follows:

Did you fish for FRESHWATER TROUT in North Carolina in 2014? MOUNTAIN TROUT IS ALSO FRESHWATER TROUT; DO NOT INCLUDE SALTWATER OR SEA TROUT (INELIGIBLE IF DID NOT FISH FOR FRESHWATER TROUT)

Based on the above screener question, 18.5% of license holders with trout privileges actually fished for mountain trout in 2014, and this was the figure used for the results of this study to

calculate the number of mountain trout anglers in North Carolina.

CONTACT PROCEDURES

A multi-modal data collection method was used for this study. Contacts were made by mail (via postcard), telephone, and email. Note that only after a probability-based random sample was selected were attempts made at contacting those who had been selected. The sample was designed to ensure a 95% confidence level and a low sampling error for the total population of license anglers. For this study, Responsive Management offered an incentive (a free lifetime fishing license) to respondents to encourage survey participation. We believe providing this incentive helped boost response rates.

The survey could be completed online or over the telephone, as most convenient or preferred by the respondent. Note that the online survey was available only to those who were selected in the sample. Appropriately designed surveys with an Internet component require that a *closed* group of potential respondents is invited to participate in the survey. Internet surveys are an excellent survey method to use *when the sample consists of a closed population* of respondents (i.e., a person surfing the Internet could not stumble upon the survey and take it), as was the case in this study.

Initial Contact

Postcards were sent to those in the selected random sample who only had a postal address and no telephone number or email address. All those in the sample with an email address were initially sent an email with the link to the online survey. Those with telephone numbers but not email addresses were initially contacted by telephone.

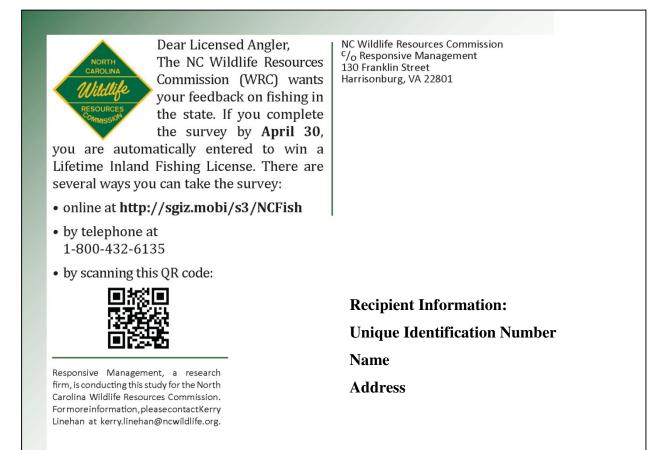
Postcards and emails both provided a link to the survey. The postcards also provided a unique identification number to access the survey; the emails did not need to provide a unique identification number as the number was embedded in the unique link that each email recipient received. All respondents could be accounted for so that no respondent could complete the survey more than once. Postcard recipients could also access the survey online using a Quick Response code (referred to in the industry as a QR code). A toll-free number was made available to postcard recipients and an email address was made available to email recipients for those who needed assistance. The toll-free number and the email address allowed those to contact Responsive Management to take the survey by telephone, schedule another time for the interview, request a link for the online survey, or request a paper copy of the survey (note that no requests were received for a paper copy of the survey). Postcard, telephone, and email recipients were all eligible for the lifetime license incentive.

Specifically, the postcard and emails explained the purpose of the study, included a link to the online survey, provided a deadline for completion, and emphasized the incentive. The templates for the postcards and outgoing emails are shown on the following pages.

Postcard, Side 1



Postcard, Side 2



Template for Email Invitation

Dear [contact("first name")],

The <u>North Carolina Wildlife Resources Commission</u> (Commission) is conducting a study of licensed anglers to learn more about fishing participation in North Carolina. You have been randomly selected to provide valuable information for our fisheries management efforts. Once you have completed and submitted your survey, **you will be entered into a drawing to win a FREE Lifetime Inland Fishing license**.

You can access the survey by clicking <u>here</u>, or by visiting: <u>"[("unique survey link")]"</u>.

Please submit your completed survey by April 30.

You can read more about the study on the Commission's website <u>here</u> (click on "2015 Angler and Landowner Surveys" on the right side of the page).

The Commission has contracted <u>Responsive Management</u>, an independent research firm that specializes in natural resource and outdoor recreation issues, to conduct this study. We need your input to help represent anglers from your area of the state. Please provide the best information your memory allows for your fishing activities, specifically in North Carolina in 2014 only. Your answers will be kept completely confidential and will not be associated with your name or license in any way.

Throughout this survey, an asterisk () indicates a required question that must be answered before proceeding or submitting the completed survey.

Please note that you can only complete the survey once, but at any time during the survey you may click on "Save and continue survey later" at the top center of the survey screen to return and finish completing the survey at a later time on the same device.

If you need technical assistance with the survey, please contact Responsive Management via email at <u>research@responsivemanagement.com</u>.

Thank you for your time and participation. Your responses will help the Commission maintain fishing opportunities across the state.

Follow-Up Contacts and Reminders

Responsive Management carefully tracked participation in the survey through the identification numbers. Approximately 1 to 3 weeks after sending the first contacts, Responsive Management began making follow-up contact with those who had not yet responded. Multiple follow-up contacts were made to encourage participation and obtain completed interviews using the most convenient method for respondents. Responsive Management continued with a total of two to five follow-up contacts. The reminders again provided a link to the online survey, a toll-free number, and information about the incentive.

Contact Round	Approximate Date(s)	Data Collection Tasks
1	March to Early April 2015	Pretest and initial contact: postcards mailed, phone calls made, email invitations sent with link, instructions, and incentive
2	Early to Mid-April 2015	First follow-up (second contact) made; interviewers complete survey at time of call if at all possible; requests from the toll- free number and help email address fulfilled for links and scheduled calls
3	Mid- to Late April 2015	Second follow-up contact made; requests fulfilled
4+	Late April to Mid-May 2015	Third-plus follow-up contacts made; interviewers call back those who agreed to complete the survey online but have not done so, remaining surveys completed by telephone; requests fulfilled

The following table summarizes the contact effort for this study:

SURVEY ADMINISTRATION

As indicated above, the unique identification number that was assigned to each angler in the sample was for tracking progress in the survey and ensured that no anglers completed the survey more than once (in case they thought that doing so would increase their chances of winning the free lifetime license).

To ensure that the data collected were of the highest quality, Responsive Management used interviewers who were trained through lectures, role-playing, and video training, according to the standards established by the Council of American Survey Research Organizations (CASRO). The Survey Center Managers conducted in-depth project briefings with the interviewing staff prior to their work on this study. Interviewers were instructed on survey goals and objectives, the type of study, handling of survey questions, interview length, termination points and qualifiers for participation, reading of interviewer instructions, reading of the survey, reviewing of skip patterns, and probing and clarifying techniques necessary for specific questions on the survey.

Survey administration efforts resulted in 2,113 completed surveys with trout anglers (1,727 residents and 386 nonresidents). The percentage of licensed freshwater anglers who did *not* fish for trout was tracked for determining the rate of fishing for trout among all licensed freshwater anglers.

Response rates are calculated by dividing the number of completed interview by the number of all eligible contacts. An eligible contact is a person in a residence whom we can reach or speak to and who is a licensed angler. Further criteria was then applied after to determine if the respondent was a trout angler. The rate of bad contact information, response rate, and trout fishing participation rate were monitored throughout the data collection phase of the study. The following are the final rates (rounded) from the study, which closely resembled our initial assumptions:

Bad contact information	19.8%
Response rate	20.4%
Trout fishing participation rate	18.5%

Note that percentages are rounded.

SURVEYING DATES AND TIMES

For surveys completed over the web, questionnaires could have been completed at any time—at the convenience of the respondent. For telephone surveys, Responsive Management's surveying times are Monday through Friday from 9:00 a.m. to 9:00 p.m., Saturday from noon to 5:00 p.m., and Sunday from 5:00 p.m. to 9:00 p.m., local time. The survey was administered from March to May 2015.

DATA ANALYSIS AND WEIGHTING

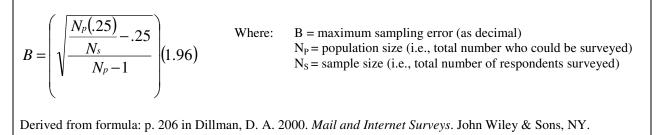
The analysis of data was performed using SPSS as well as proprietary software developed by Responsive Management.

Initial data analyses were first conducted to assess whether there were substantive differences in the two survey formats (online or telephone). This assessment determined that no post-survey weighting was needed on the samples. For example, the mean age of the online survey was 49.0 years, and the mean age of the telephone survey was 51.5 years (recall that this refers to the mean age of anglers, not the mean age of the general population). The data did not differ and therefore weighting was not necessary. This conclusion is not surprising, as this study was conducted of a randomly selected group within a closed population. Furthermore, because respondents were offered the method most convenient to them, the data collected online were not exclusively among email recipients nor were the data collected by telephone exclusively telephone respondents. Online data included responses from postcard (mail) recipients as well as some initial telephone respondents who preferred to be given a link to complete the survey online. Likewise, some postcard recipients preferred to call and take the survey by phone while some email respondents sought assistance or were contacted later by telephone. There was crossover between the modes of initial contact and final completion, and the resulting data was similar between the online and telephone formats.

SAMPLING ERROR

Throughout this report, findings of the telephone survey are reported at a 95% confidence interval. For the entire sample of trout anglers, the sampling error is at most plus or minus 2.12 percentage points. The sampling error was calculated using the formula described on the following page, with a sample size of 2,113 and an estimated population size of 143,745 trout anglers. Note that some questions have a lower sample size than 2,113 because some questions did not apply to everyone and because just a few respondents on the online survey did not respond to all questions to which they should have responded. The population size was based on the total database provided to the research team (776,159 license holders) and the percentage of these license holders who fished for mountain trout (18.5%).

Sampling Error Equation



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

ADDITIONAL INFORMATION ABOUT THE PRESENTATION OF RESULTS IN THE REPORT

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

of questions:

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

Some graphs show an average, either the mean or median (or both). The mean is simply the sum of all numbers divided by the number of respondents. Because outliers (extremely high or low numbers relative to most of the other responses) may skew the mean, the median may be shown. The median is the number at which half the sample is above and the other half is below. In other words, a median of 15 days means that half the sample gave an answer of more than 15 days and the other half gave an answer of less than 15 days.

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

Throughout the report, comparisons were made of these results with two previous surveys (a 2006 trout angler survey and a 2008 economic impact survey). Note that all three surveys had slightly different sampling frames.

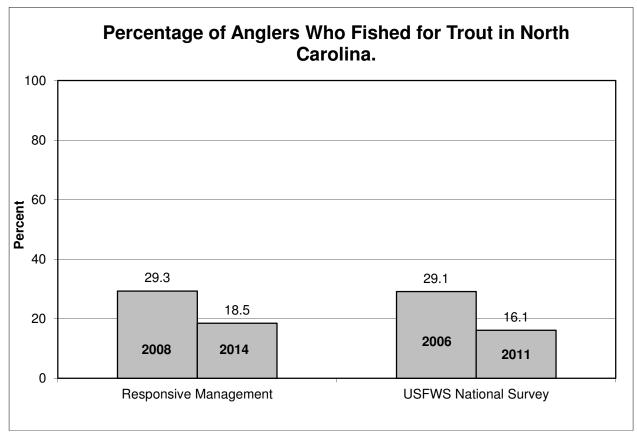
- The 2006 trout angler opinion survey's sampling frame consisted of North Carolina residents only from among 21 license or privilege types that allowed trout fishing.
- The 2008 economic impact of trout fishing survey's sampling frame included 35 license or privilege types that allowed mountain trout fishing representing both residents and nonresidents. Of the 35 licenses or privileges, 5 of them were annual licenses. Anglers who purchased an annual license in 2008 were included in the sampling frame.
- The North Carolina Wildlife Resources Commission changed its license structure after the 2008 study. The current study's frame included 41 license types that allowed mountain trout fishing representing both residents and nonresidents. Of the 41 licenses or privileges, 6 of them were annual licenses. Anglers who held a valid annual license or privilege in 2014 were included in the sampling frame.

FISHING PARTICIPATION

- One of the objectives of the study was to determine the percentage of freshwater fishing license holders who went mountain trout fishing (i.e., not including sea trout); the types of freshwater licenses included in the 2014 sample are listed below.* In 2014, 18.5% of freshwater fishing license holders fished for mountain trout. (Note that hereinafter, all references to trout fishing refer to mountain trout fishing and do not include sea trout, even when "mountain" is omitted from the phrase.)
 - The trend comparison shows that a lower percentage of freshwater fishing license holders fished for trout in 2014 (18.5%) than in 2008 (29.3%).
 - It is interesting to compare Responsive Management's results in these two surveys with *National Survey*** percentages, which match fairly closely. Responsive Management's rate of fishing for trout among all freshwater fishing license holders drops from 29.3% in 2008 to 18.5% in 2014; meanwhile, the percentage of anglers who fished for trout in North Carolina according to *National Survey* data declined from 29.1% of all anglers in 2006 to 16.1% in 2011.

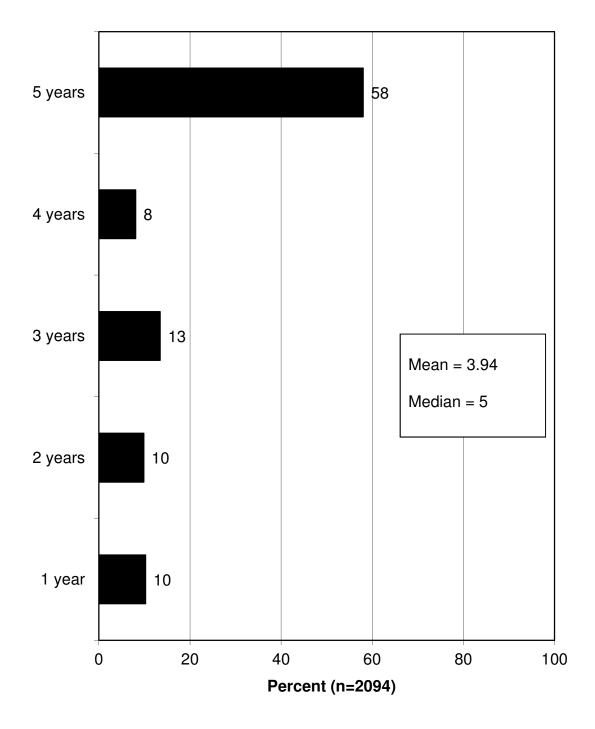
^{*} Includes the following license types listed in the database: Age 65 Sportsman, Comp Inland Fish, Dis Hunt/Inland Fish (Basic), Dis Inland Fish(Basic), Disabled Combo H/F/CRFL Basic, Disabled Sportsman w CRFL, Disabled Sptm, Fish for Legally Blind w/CRFL, Lifetime Comp Over 70 Fish w CRFL, Lifetime Fishing Over age 70, Ltime Age 65 Comp Inland Fish, Ltime Comp Inland Fish, Ltime Comp Inland Fish w/CRFL, Ltime H/F/Trap/CRFL Disabled Vet, Ltime Senior Comp Inland Fish, Ltime Unified Inland/CRFL, Mtn Heritage Trout 3-Day Fish, NonRes Sportsman Adult, NonRes Sportsman Adult w CRFL, NR Uni Sptm/CRFL Adult, Perm Disabled State Fish w CRFL, Res Ltime Over 70 Sportsman, Res Ltime Over 70 Sportsman w CRFL, Res Sportsman Adult, Res Sportsman Adult w CRFL, Adult, Senior Sportsman, Spec Guest Inland Fish, Special Trout Fishing, Sportsman, Sportsman Infant w CRFL, Sportsman Youth, Sportsman Youth w CRFL, Uni Blind Inland/CRFL, Uni Disabled Vet Sptm/CRFL, Uni Totally Disabled Sptm/CRFL, Unified Sptm/CRFL, Unified Inland/CRFL, Unified Senior Sptm/CRFL, Unified Sptm/CRFL,

^{**}North Carolina state reports of the *National Survey or Fishing, Hunting, and Wildlife-Associated Recreation*, 2006 and 2011.

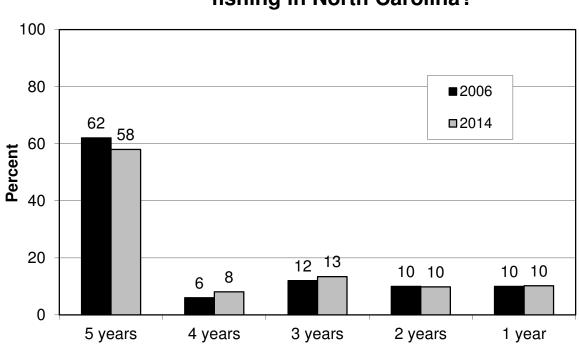


Responsive Management shows the percentage of freshwater fishing license holders who fished for trout; the *National Survey* shows the percentage of anglers (licensed or unlicensed who indicated in the survey that they fished in the preceding year) who fished for trout.

- ➤ A little more than half of trout anglers (58%) fished all 5 of the past 5 years.
 - The trend results are not markedly different between 2006 and the current survey.
- The percentage of trout anglers (only those who have been fishing for at least 5 years) who say that their fishing has increased in the past 5 years is about the same as the percentage who say it has decreased: 26% say it increased, and 24% say it decreased. Most commonly, trout anglers say it has stayed about the same (49%).
 - Compared to 2006 trout anglers, current trout anglers have a higher percentage saying that their fishing is about the same over the past 5 years.
- Days of fishing in 2014 are shown: the mean is 14.16 days; the median is 8 days. A graph also shows the number of trips that trout anglers took to go trout fishing in North Carolina: the mean is 10.92 trips; the median is 5 trips.
 - The trends graph shows slightly lower mean and median numbers of days fished in 2014 compared to previous surveys.

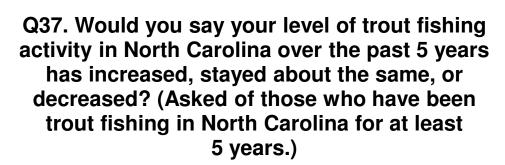


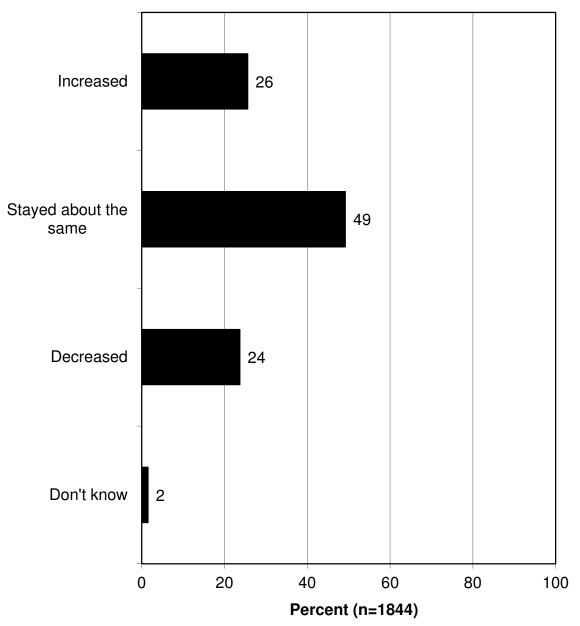
Q36. How many of the past 5 years did you go trout fishing in North Carolina?

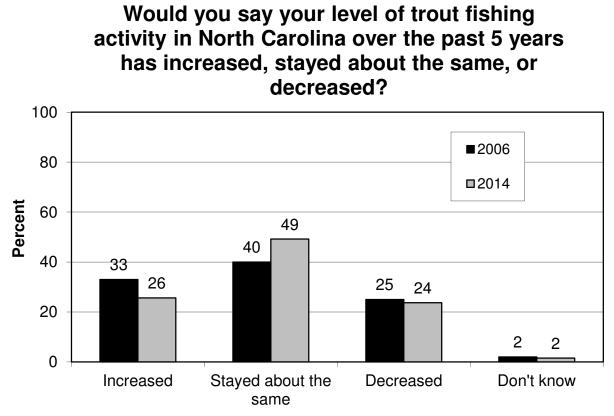


How many of the past 5 years did you go trout fishing in North Carolina?

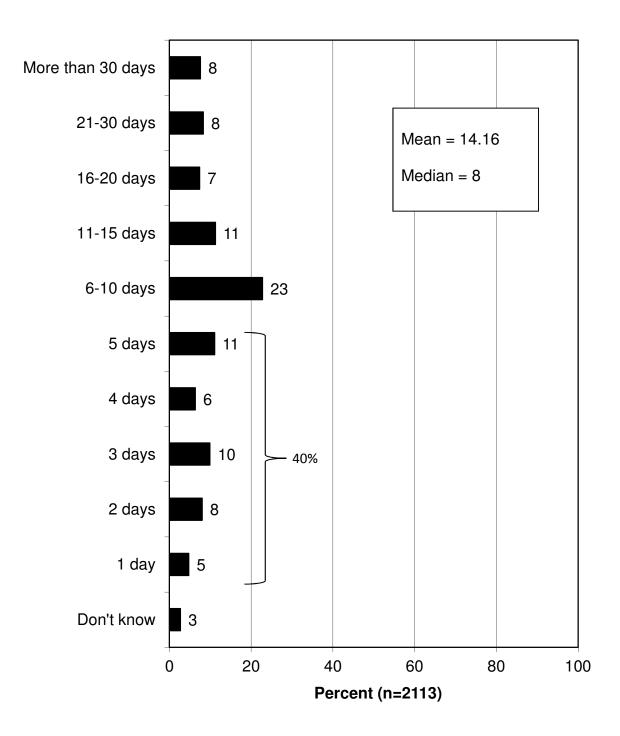
Note: 2006 sample consisted of resident trout anglers; 2014 sample consisted of resident and nonresident trout anglers.



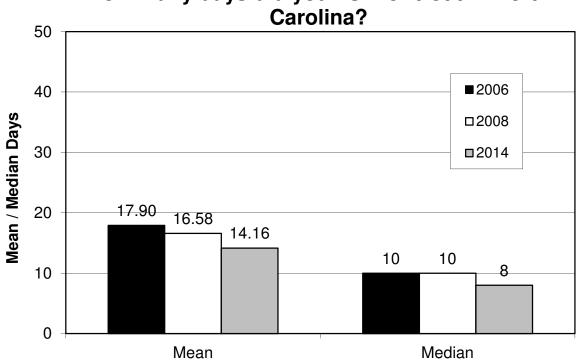




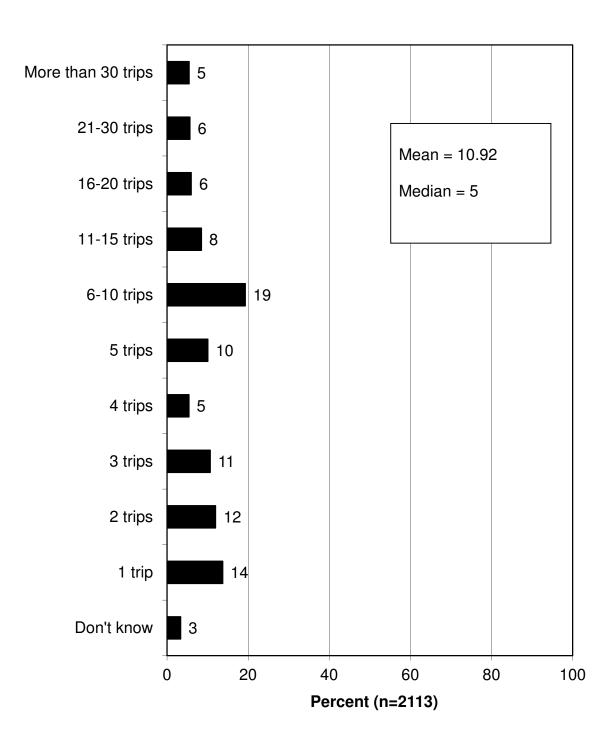
Note: 2006 sample consisted of resident trout anglers; 2014 sample consisted of resident and nonresident trout anglers.



Q38. How many days did you fish for trout in North Carolina in 2014?



Note: 2006 sample consisted of resident trout anglers; 2008 sample consisted of resident and nonresident trout anglers; 2014 sample consisted of resident and nonresident trout anglers.

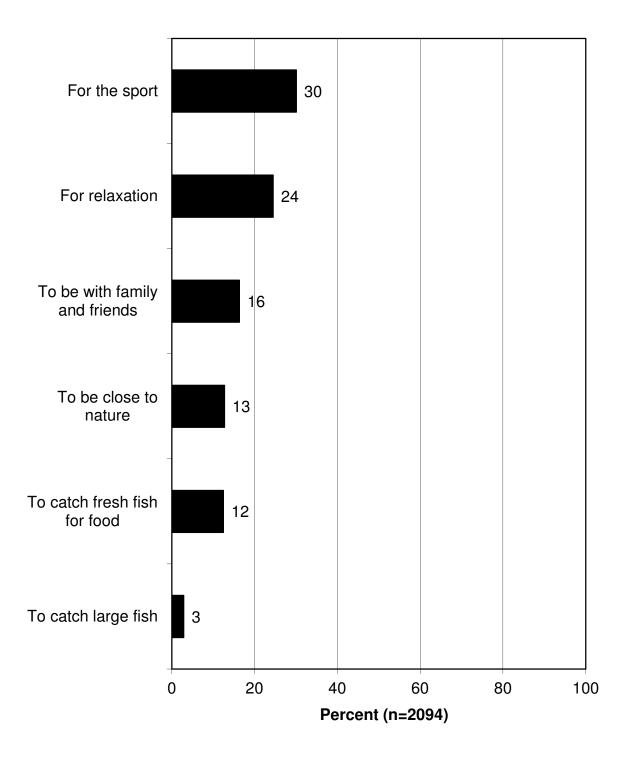


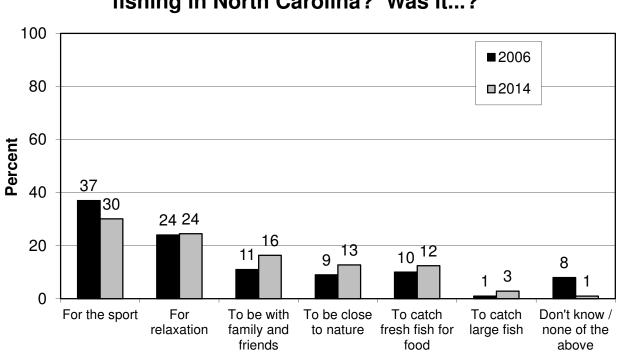
Q40. How many trips or outings did you take to fish for trout in North Carolina in 2014?

MOTIVATIONS FOR TROUT FISHING

- The top reasons for fishing are for the sport (named by 30% as their single main reason for trout fishing) or for relaxation (24%), of the six possible reasons for fishing that were presented to trout anglers. Nonetheless, family and friends (16%), nature (13%), and food (12%) are motivations for substantial percentages of trout anglers.
 - The trends suggest that family/friends and nature have gained in importance relative to "for the sport." However, some of the differences in surveys are because of a higher percentage responding with "don't know/none of the above" in 2006 than in 2014.
 - Family and friends are markedly more important among younger anglers than among older anglers.
 - Another crosstabulation was run of skill level (beginner, intermediate, or advanced).
 Family and friends is of greater importance to beginners than to intermediate or advanced anglers. Meanwhile, for the sport is more important among advanced anglers.



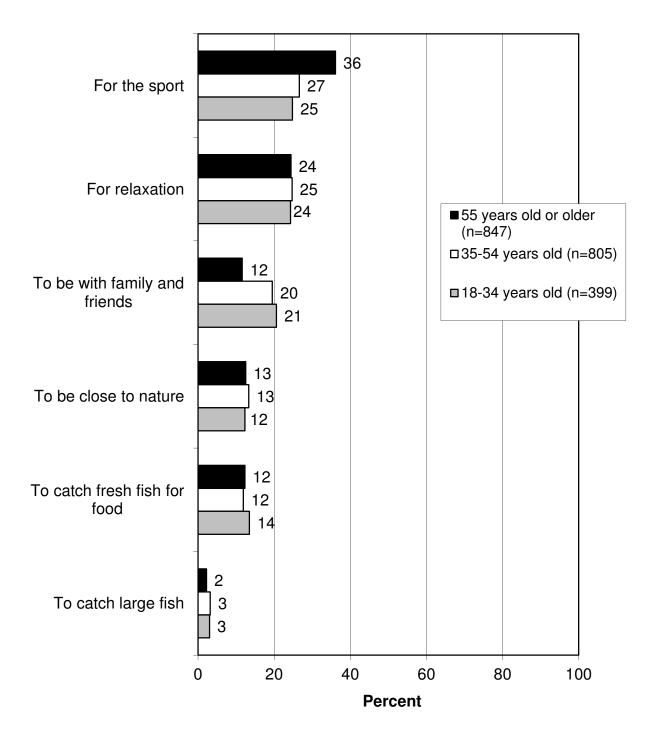




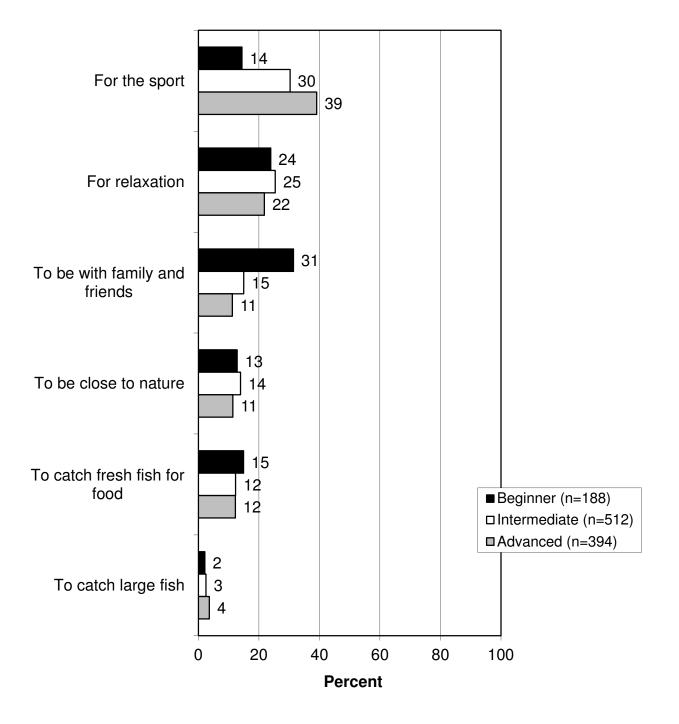
What was your single main reason for trout fishing in North Carolina? Was it...?

Note: 2006 sample consisted of resident trout anglers; 2014 sample consisted of resident and nonresident trout anglers.

Q30. What was your single main reason for trout fishing in North Carolina in 2014? Was it...?

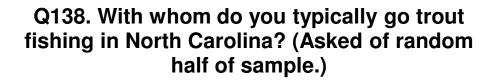


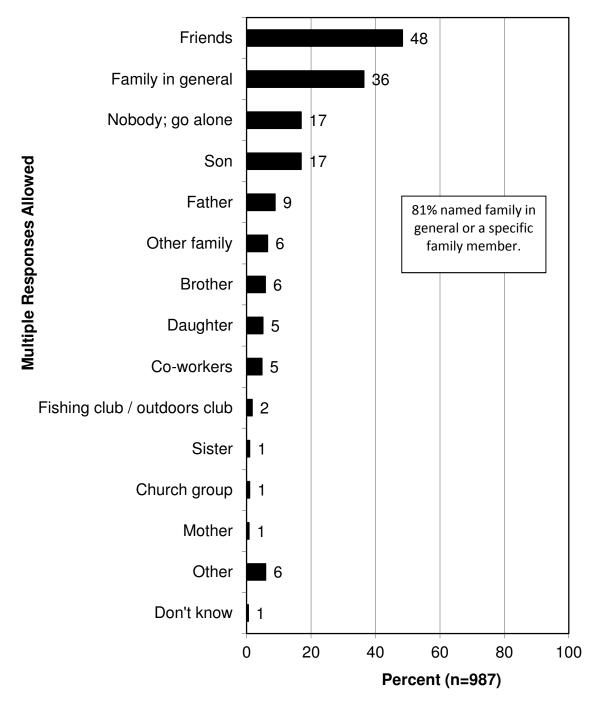


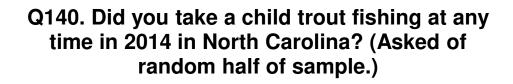


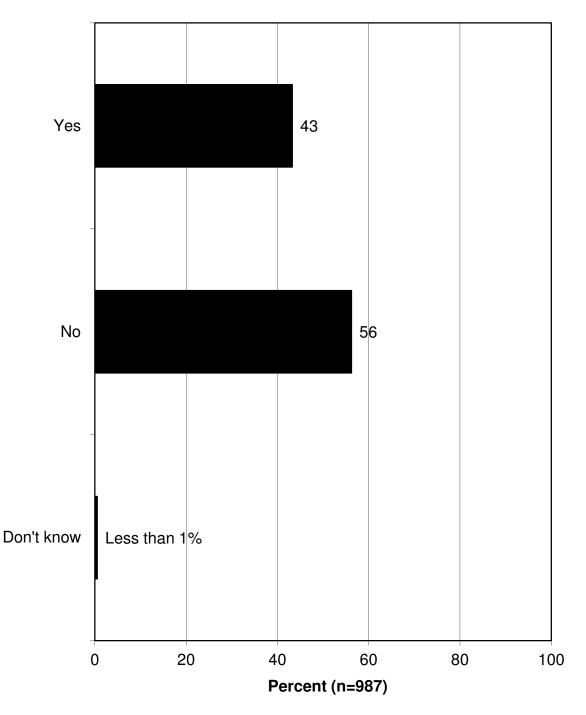
FISHING COMPANIONS

- The most common fishing companions are family members (81% named family in general or a specific family member), particularly sons, fathers, and brothers. Additionally, 48% named friends.
- > Just under half of trout anglers (43%) took a child fishing at some time in 2014.
 - A crosstabulation by age groups shows that anglers in the middle age group (35 to 54 years old) are much more likely to have taken a child fishing in 2014 than are anglers in either of the other age groups (18 to 34 years old or 55 years old and older).

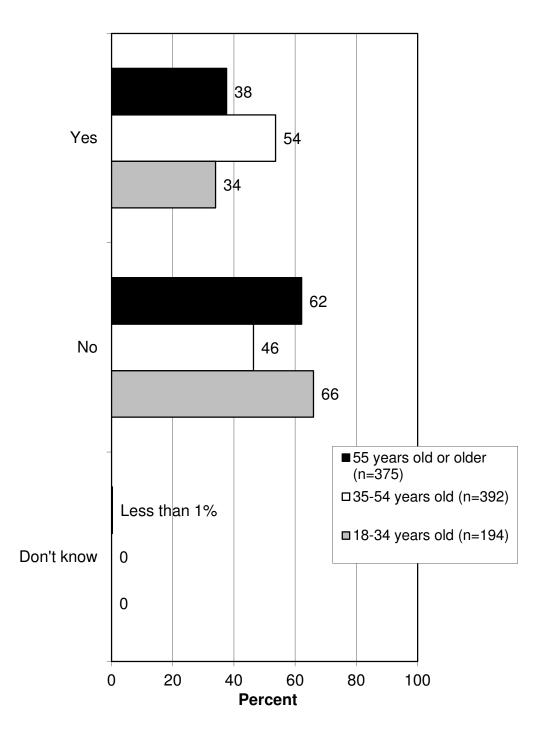








Q140. Did you take a child trout fishing at any time in 2014 in North Carolina? (Asked of random half of sample.)



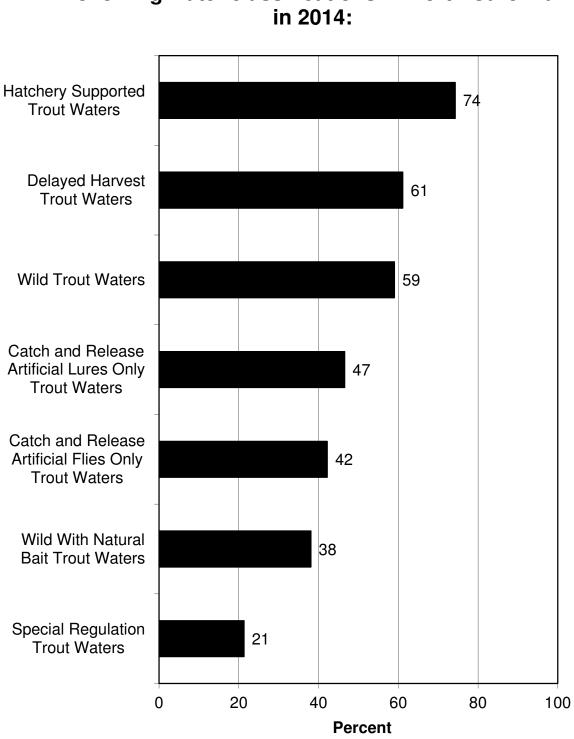
FISHING LOCATIONS AND TRAVEL TO FISH

- Of the seven regulation classifications of trout waters in North Carolina, the most commonly fished at all are Hatchery Supported Trout Waters, Delayed Harvest Trout Waters, and Wild Trout Waters (based on fishing it at least once in 2014). Another way to look at this question is to examine the percentage who fished each type of regulation classification *many times* or *a few times* in 2014. In this analysis, the most-used types of regulation classification are Hatchery Supported Trout Waters (46% fish in them many times or a few times), Delayed Harvest Trout Waters (34%), and Wild Trout Waters (29%). Note that many anglers fished more than one type of regulation classification.
 - A trends graph is shown, with a lower percentage fishing in each regulation classification except for Delayed Harvest Trout Waters between 2006 and 2014.
 - A follow-up question asked those who fished in more than one type to name their mostfished type of regulation classification, and those who fished only one type were coded into the graph, as well (those who fished only one type were simply assigned that one type as their most-fished type). In this analysis, the top types of regulation classification are Hatchery Supported Trout Waters (38%), Delayed Harvest Trout Waters (21%), and Wild Trout Waters (16%); no other type is the most-fished by more than 6% of trout anglers.
 - Crosstabulations of demographic characteristics were run of this question on mostfished classification type for the top three classifications (Hatchery Supported Trout Waters, Delayed Harvest Trout Waters, and Wild Trout Waters) as well as all the remaining respondents combined.

- The overwhelming majority of trout anglers go trout fishing on public land: 90% fish either mostly or about half the time on public land. On the other hand, about a third (32%) fish either mostly or about half the time on private land.
 - The trends graph shows an increase in responses of "public land mostly" at the expense of "both about equally" between 2006 and 2014; "private land mostly" is about the same in the two surveys. Overall, there is less fishing on private land in 2014.
 - There is little difference among age groups in fishing on public or private land.
 - Beginner anglers, compared to intermediate and advanced anglers, are more likely to fish either public land mostly or private land mostly rather than both about equally.
 - Very few trout anglers lease land for fishing: only 2% did so in the past 5 years.
- The typical one-way travel distance for trout anglers in North Carolina is 50 miles (the median distance). The mean is a bit higher, at 85.88 miles, brought up from the median by a few anglers who travel quite far—200 miles or more.
 - Typical travel distances are greater in 2014 compared to 2006.
- The survey explored decision-making regarding where to go trout fishing. For each of ten items, the survey asked trout anglers to rate its importance in deciding where to fish, either very important, somewhat important, or not at all important. Three of the factors have a majority thinking each to be *very* important: finding access on public land (63% say this is *very* important), finding a place where it is likely that trout will be caught (57%), and finding a place where the regulations are posted on-site (53%).
 - A second tier consists of finding a secluded spot (46%) and finding a location close to home (41%).
 - Three graphs are shown of the series: the percentage saying each factor is *very* important, the percentage giving a response of either *very* important or *somewhat* important, and then the percentage saying each factor is *not at all* important.
 - A crosstabulation graph by age is also included for each question in this series. Two of the factors are more important to younger anglers than to older anglers: finding a spot where it is likely that trout will be caught, and finding a secluded spot. Meanwhile, four factors are more important to older anglers than to younger ones: having restrooms

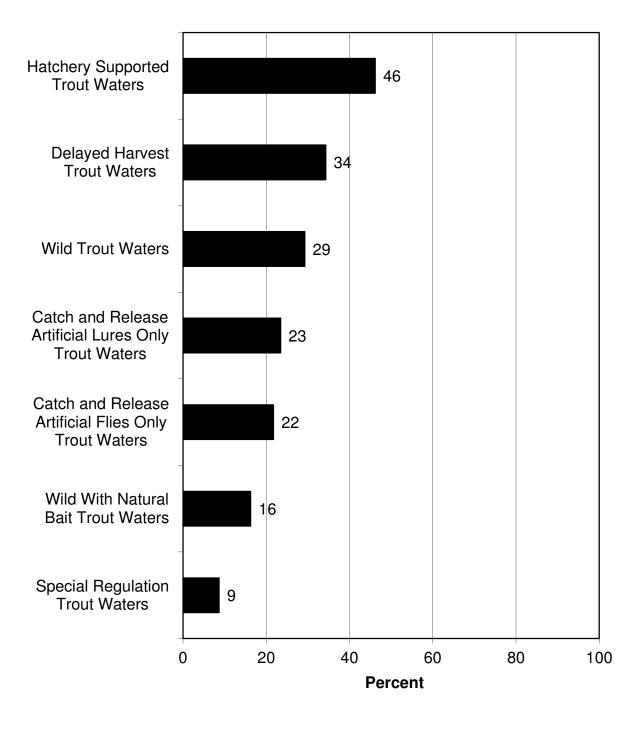
available, finding access on private land, close parking, and finding access for disabled anglers.

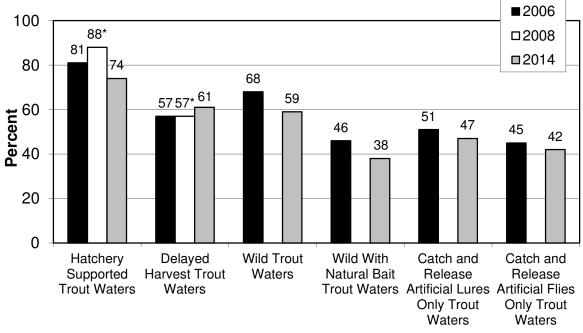
- A crosstabulation by skill level shows that beginners find the following more important than do intermediate or advanced anglers: finding a location close to home, finding a location on public land, having boating access, having restrooms available, and close parking. On the other hand, factors more important to advanced anglers include finding a secluded spot and finding a location on private land.
- Another set of questions further explored decision-making regarding where to fish, asking trout anglers to indicate how often (always, sometimes, occasionally, rarely, or never) they did the actions when deciding where to access the waters for trout fishing in North Carolina.
 - In looking at those actions that are done *always* or *sometimes*, two stand out at the top, both with 60% of trout anglers saying that they always or sometimes do them: researching places on the Internet and scouting/physically looking for places. Two other actions are done by about half: asking a friend or family member (54%) and using paper maps (48%).
 - At the bottom are using GPS (only 27% do this always or sometimes) and knocking on a landowner's door to ask permission (16%).
 - Four graphs are shown: the percentages saying *always*, the percentages saying *always* or *sometimes*, the percentages saying *rarely* or *never*, and the percentages saying *never*.



Q106-112. Percent who fished in each of the following water classifications in North Carolina in 2014:

Q106-112. Percent who fished many times or a few times in each of the following water classifications in North Carolina in 2014:



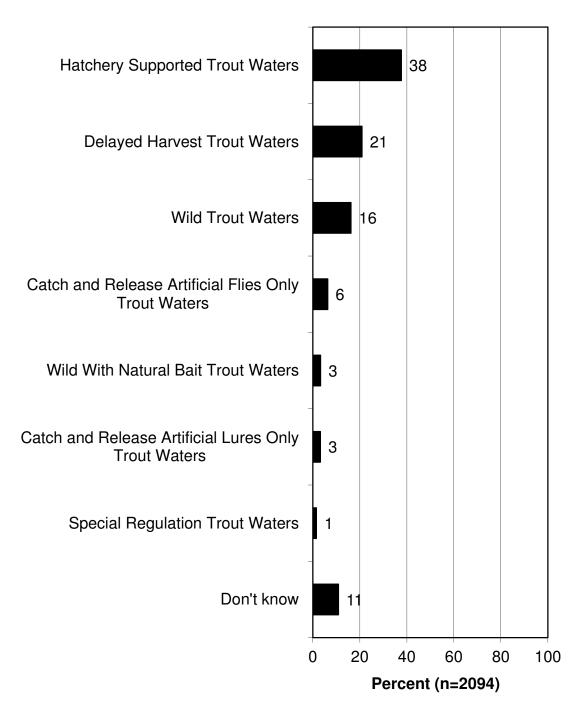


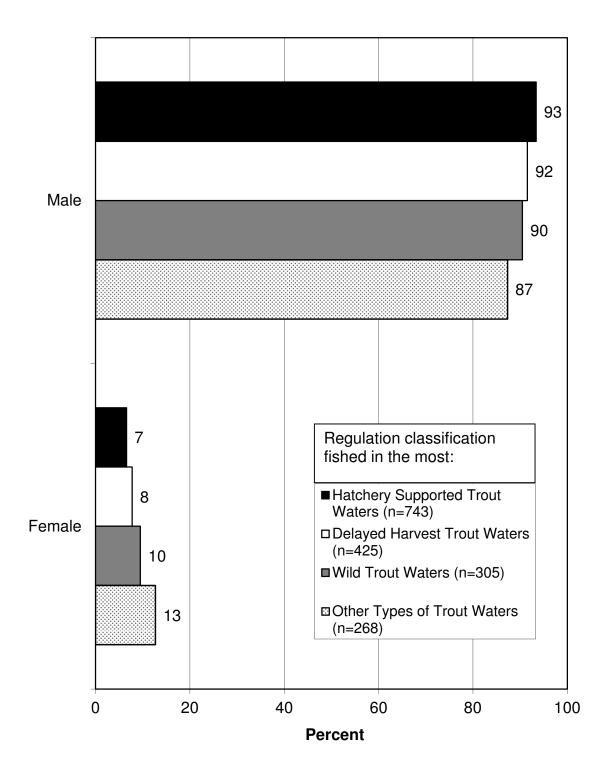
Percent who fished in each of the following water classifications in North Carolina:

*Data for other water classifications in 2008 are not available.

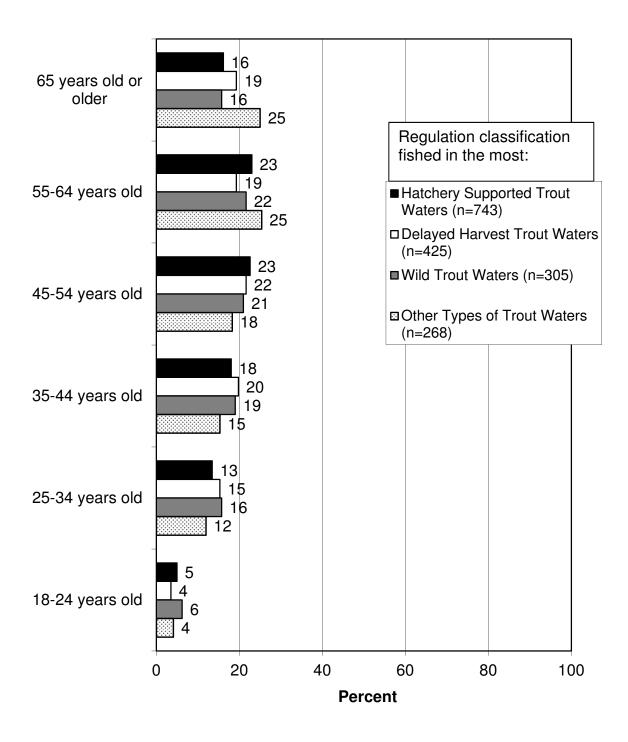
Note: 2006 sample consisted of resident trout anglers; 2008 sample consisted of resident and nonresident trout anglers; 2014 sample consisted of resident and nonresident trout anglers.

Q121. Which one of those classification types of trout waters did you fish in most, or do you not know?

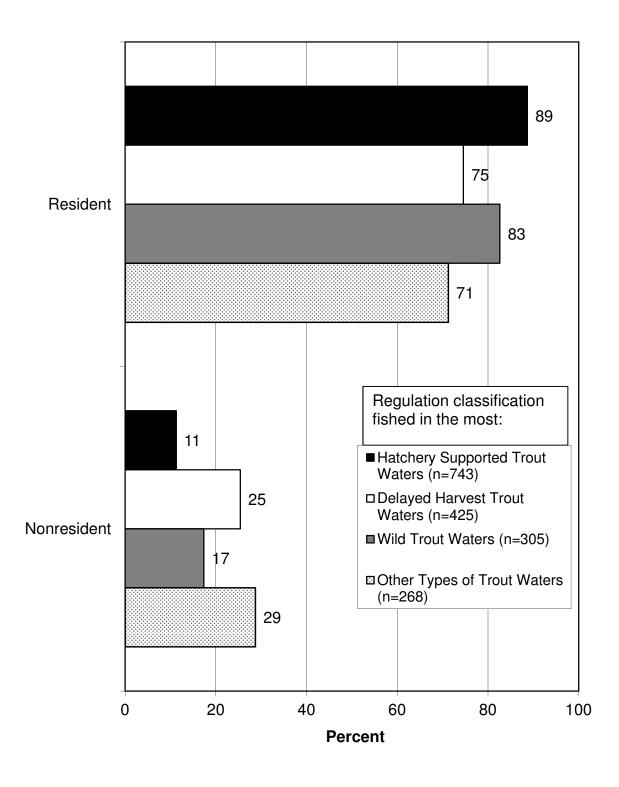




Q216. Respondent's gender.

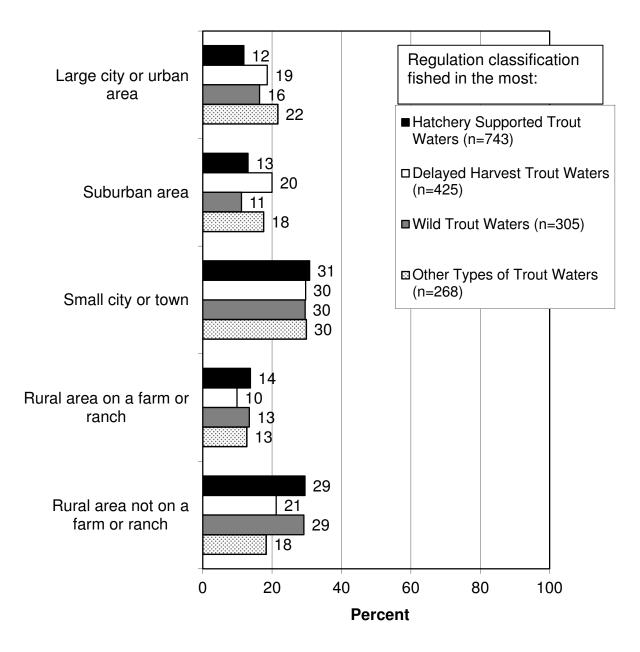


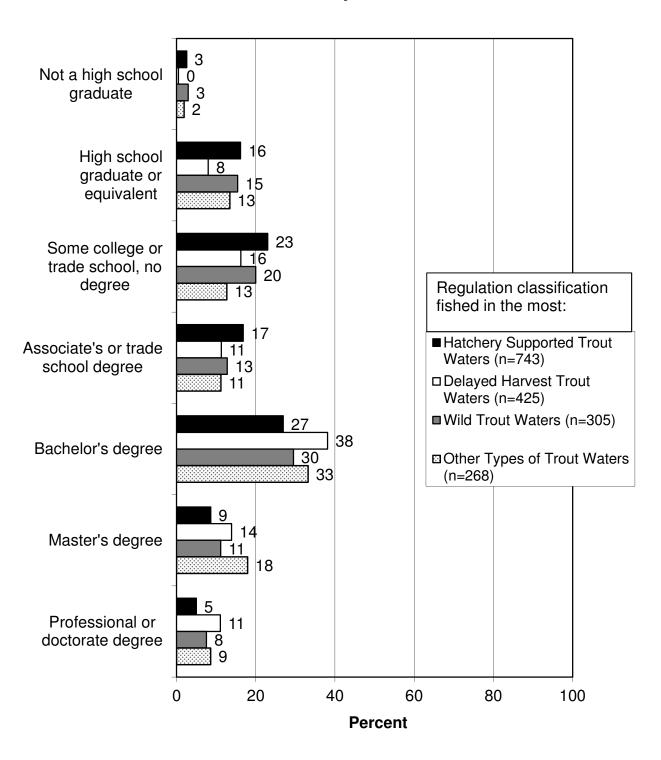
Q209. Respondent's age.



North Carolina residency.

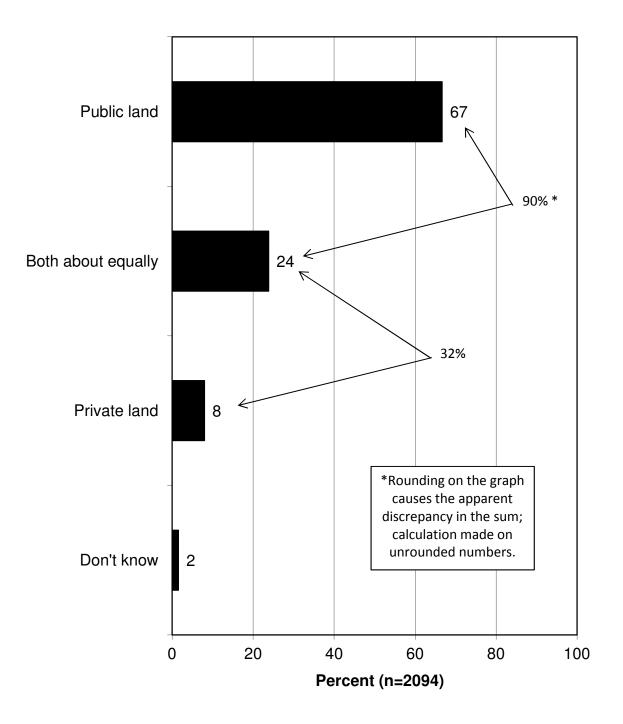
Q207. Do you consider your place of residence to be a large city or urban area, a suburban area, a small city or town, a rural area on a farm or ranch, or a rural area not on a farm or ranch?

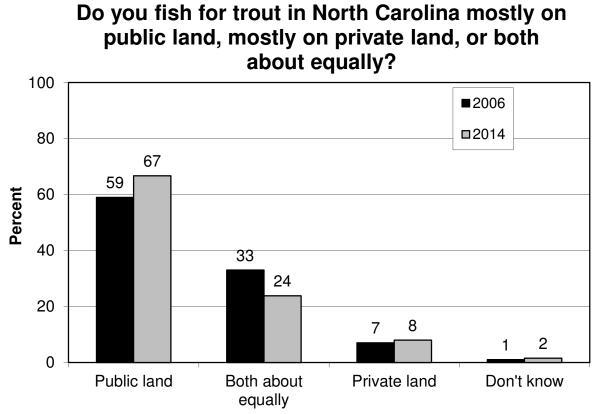




Q208. What is the highest level of education you have completed?

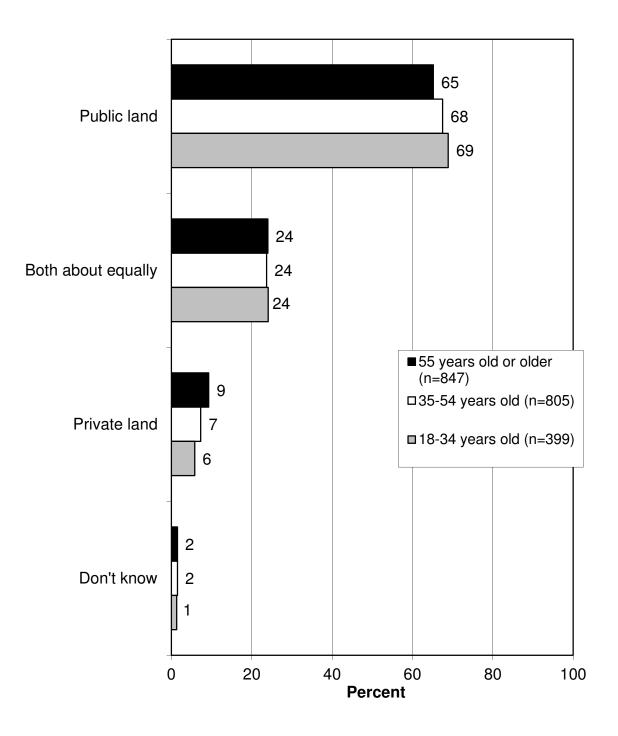


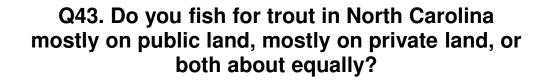


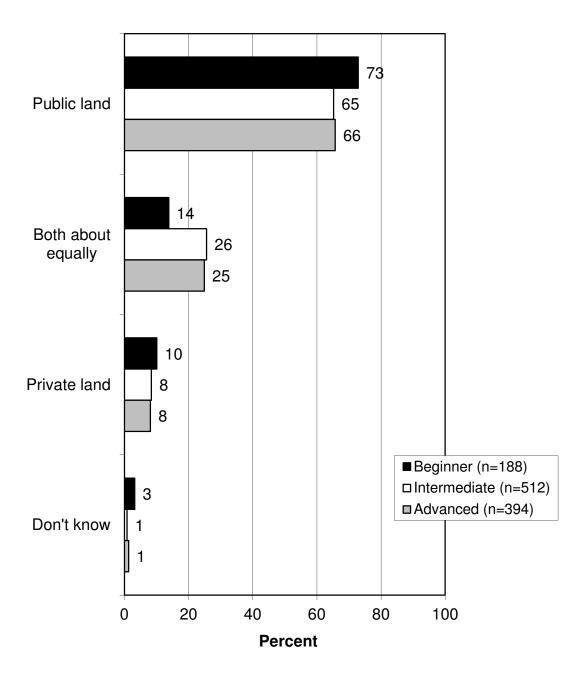


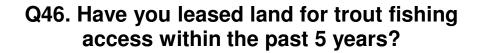
Note: 2006 sample consisted of resident trout anglers; 2014 sample consisted of resident and nonresident trout anglers.

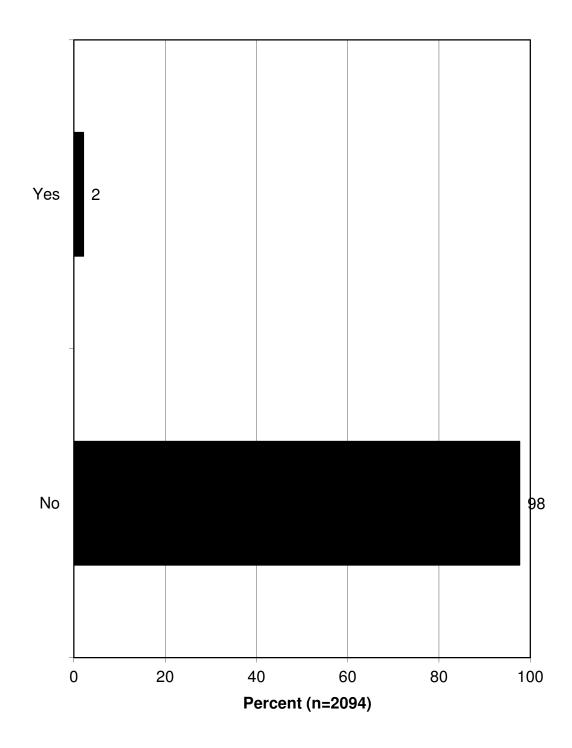
Q43. Do you fish for trout in North Carolina mostly on public land, mostly on private land, or both about equally?

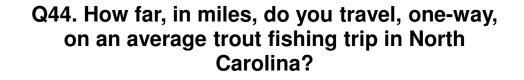


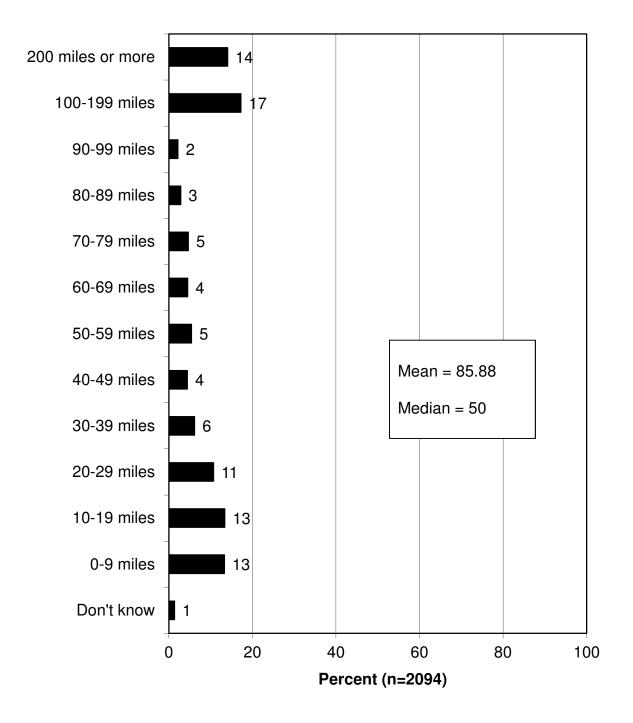


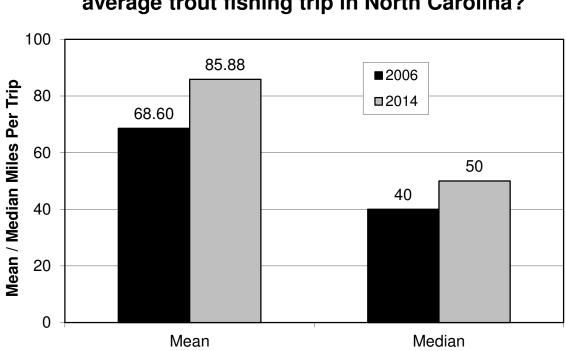






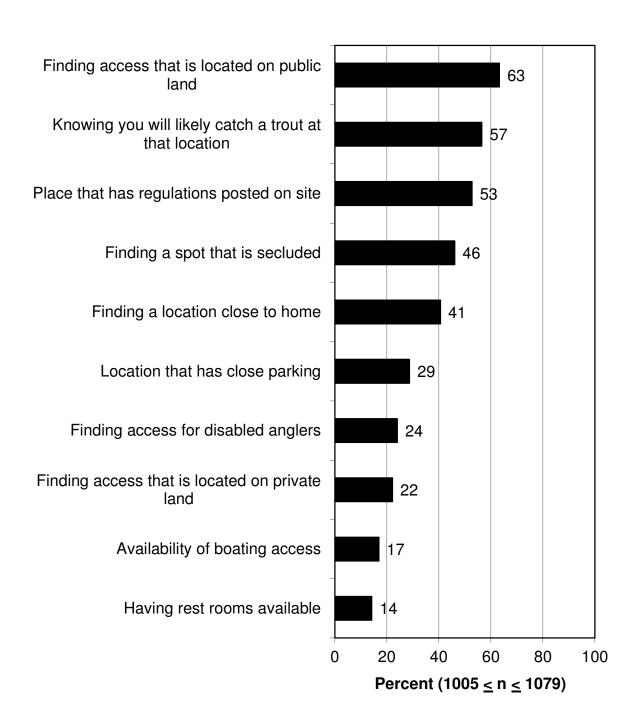




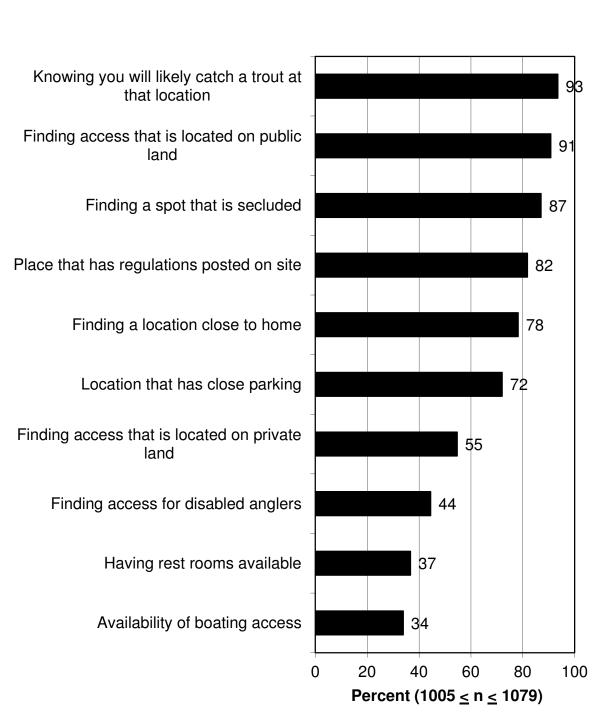


How far, in miles, do you travel, one-way, on an average trout fishing trip in North Carolina?

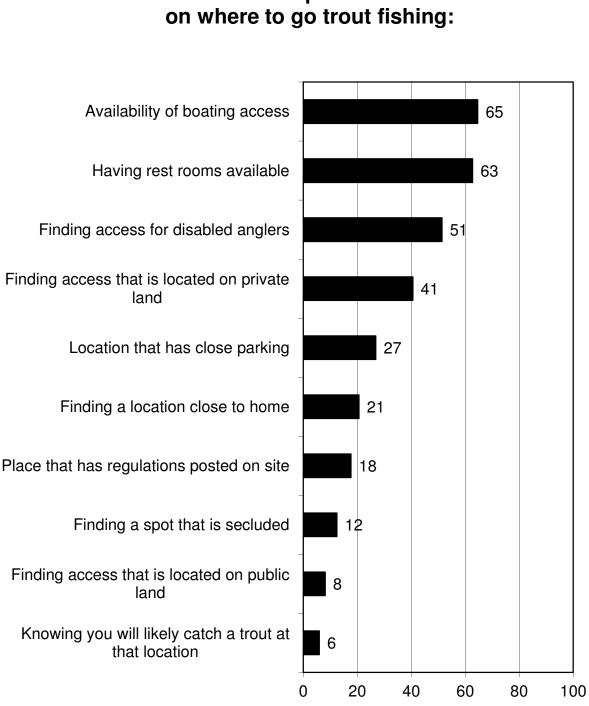
Note: 2006 sample consisted of resident trout anglers; 2014 sample consisted of resident and nonresident trout anglers.



Q50-59. Percent who indicated the following factors are very important in their decision on where to go trout fishing:



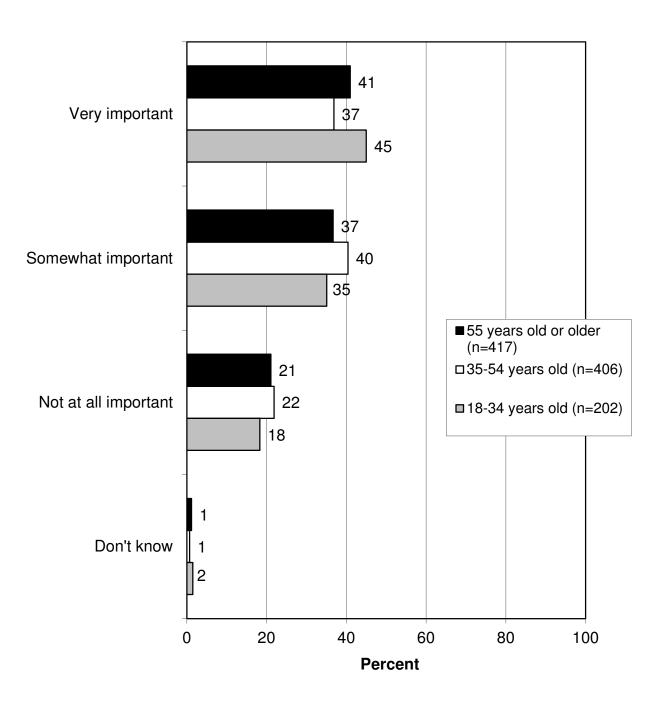
Q50-59. Percent who indicated the following factors are very or somewhat important in their decision on where to go trout fishing:



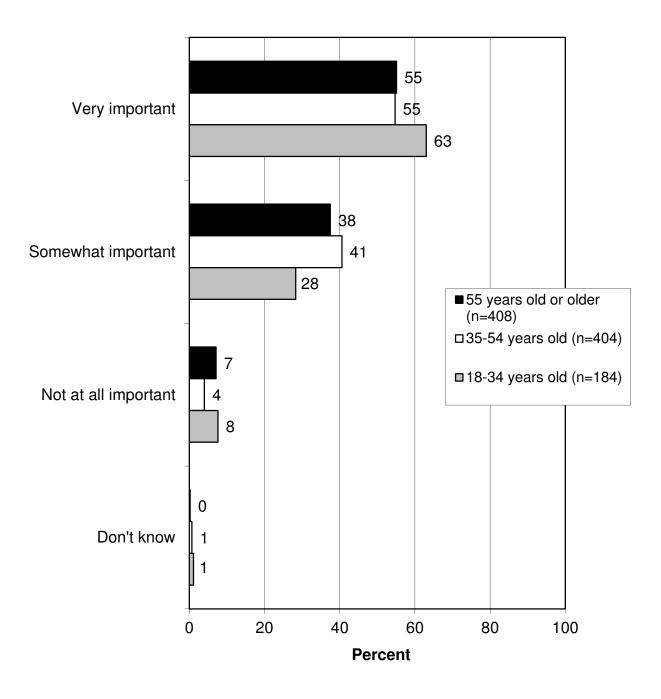
Q50-59. Percent who indicated the following factors are not at all important in their decision on where to go trout fishing:

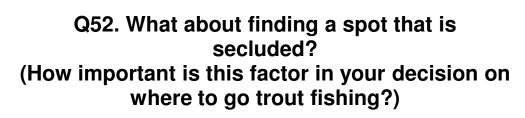
Percent (1005 < n < 1079)

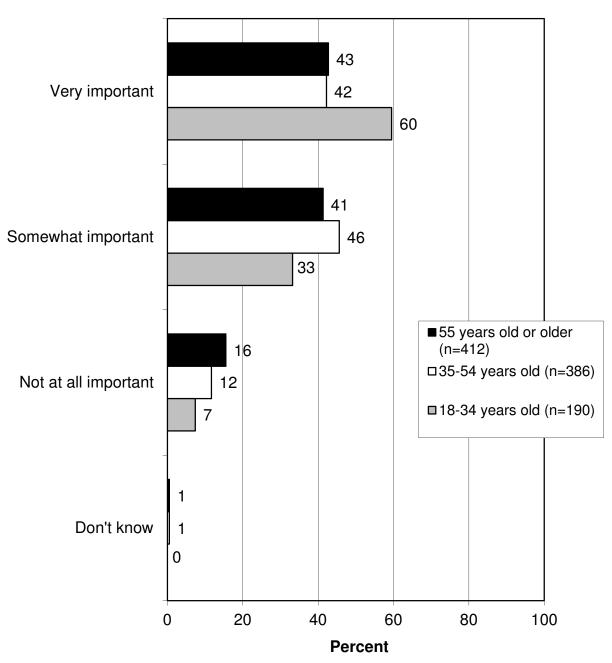
Q50. What about finding a location close to home? (How important is this factor in your decision on where to go trout fishing?)



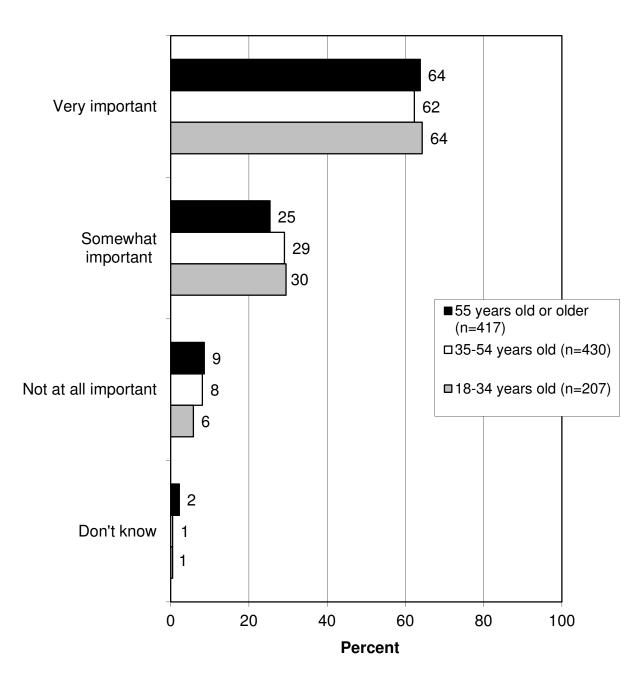
Q51. What about knowing that you will likely catch a trout at that location? (How important is this factor in your decision on where to go trout fishing?)



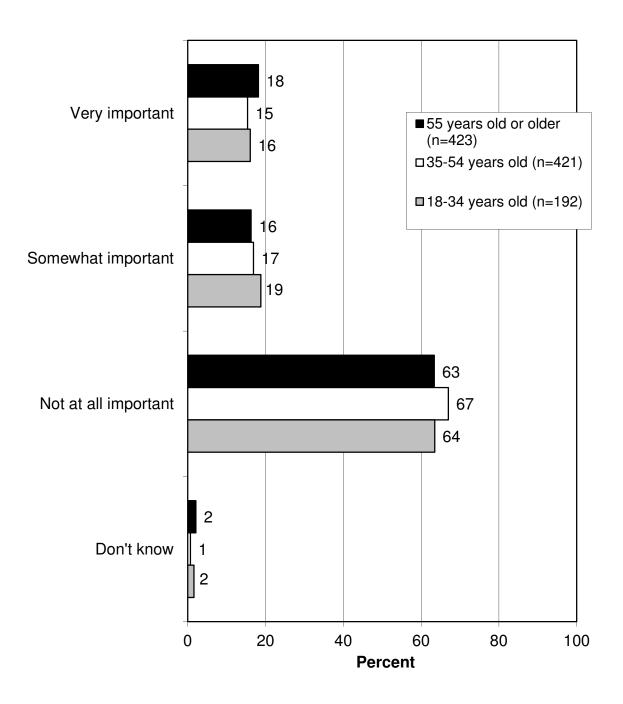




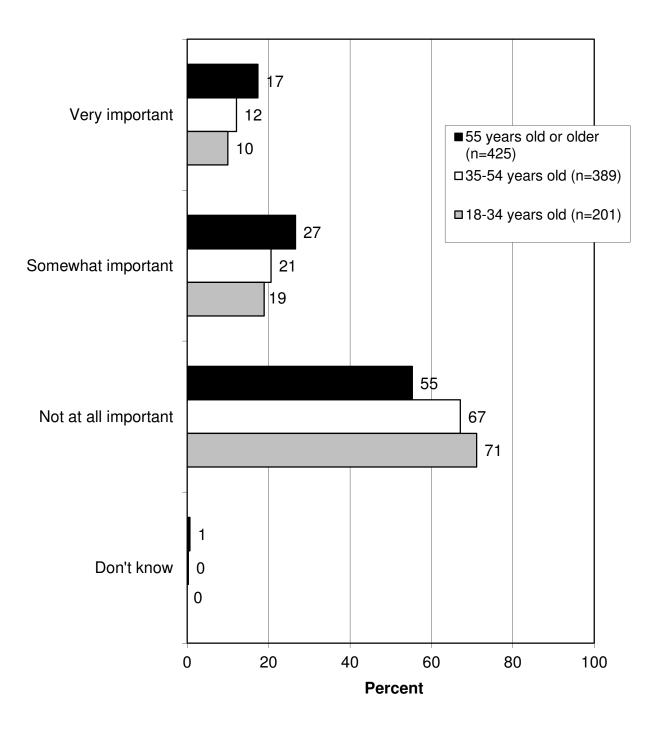
Q53. What about finding access that is located on public land? (How important is this factor in your decision on where to go trout fishing?)



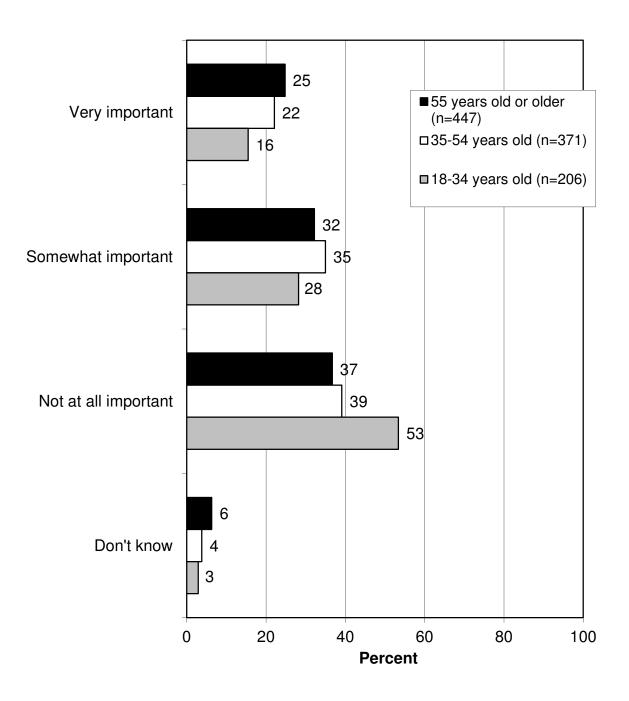
Q54. What about the availability of boating access? (How important is this factor in your decision on where to go trout fishing?)



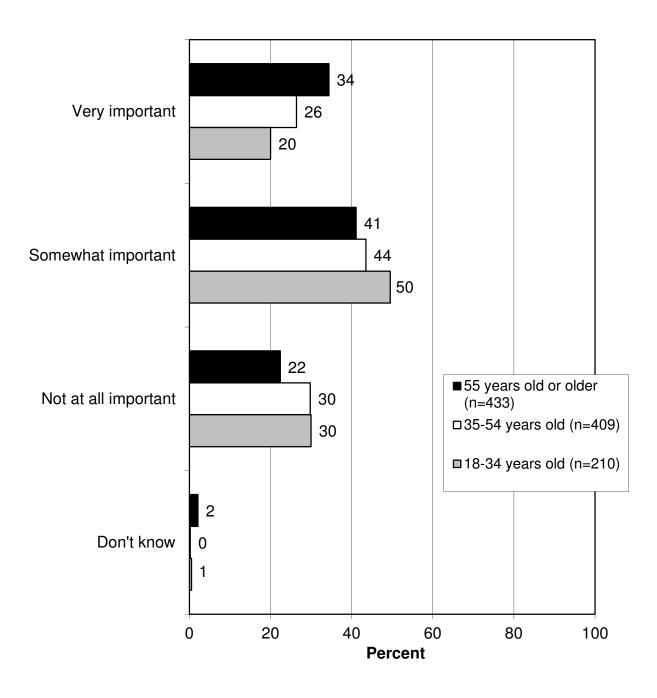
Q55. What about having restrooms available? (How important is this factor in your decision on where to go trout fishing?)



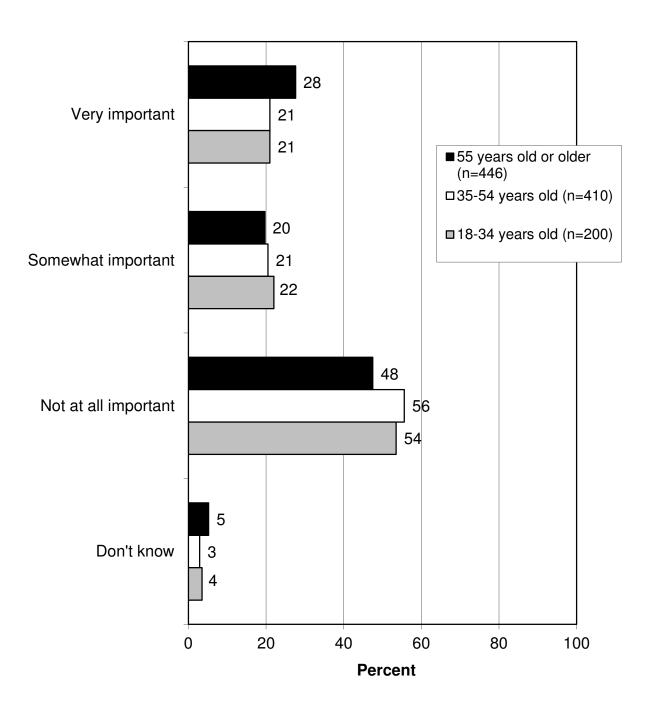
Q56. What about finding access that is located on private land? (How important is this factor in your decision on where to go trout fishing?)



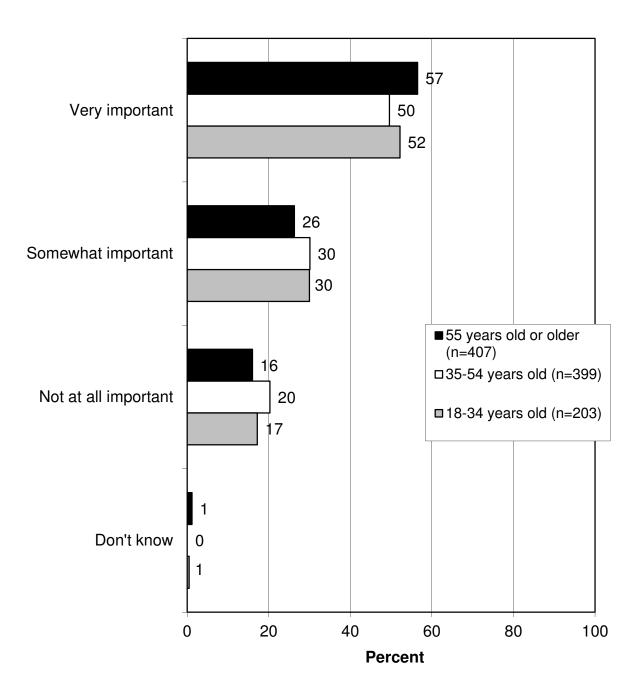
Q57. What about a location that has close parking? (How important is this factor in your decision on where to go trout fishing?)



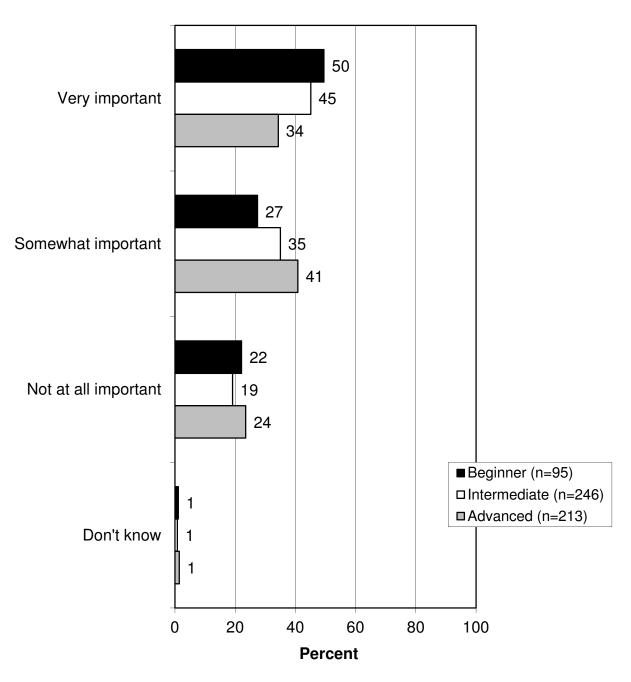
Q58. What about finding access for disabled anglers? (How important is this factor in your decision on where to go trout fishing?)

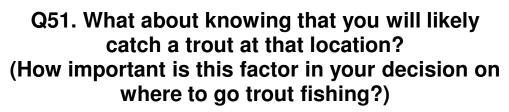


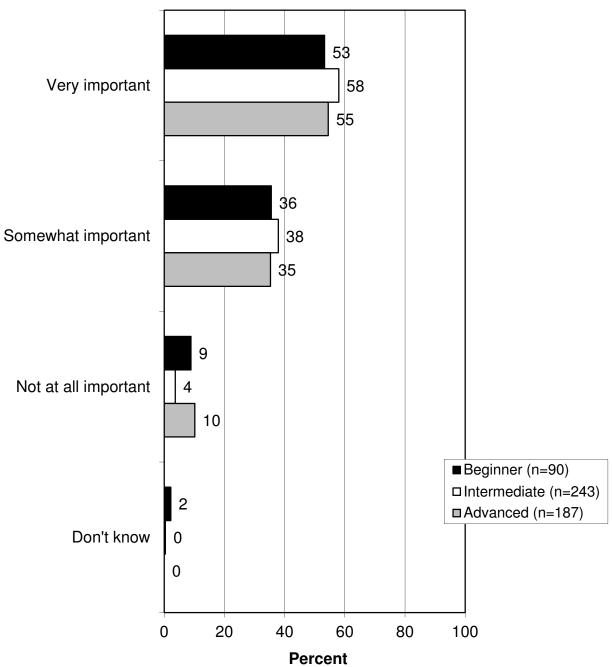
Q59. What about a place that has regulations posted on site? (How important is this factor in your decision on where to go trout fishing?)

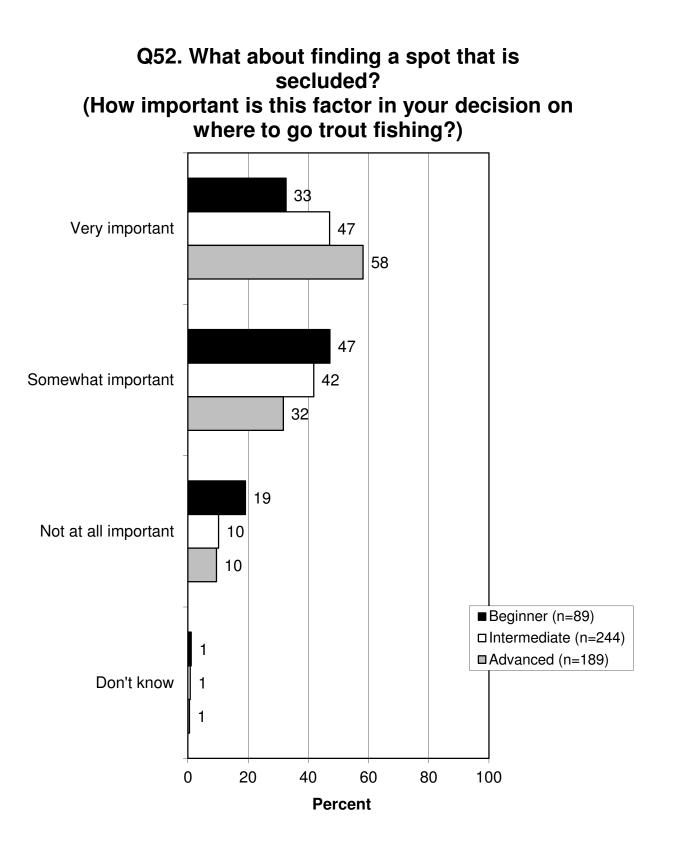


Q50. What about finding a location close to home? (How important is this factor in your decision on where to go trout fishing?)

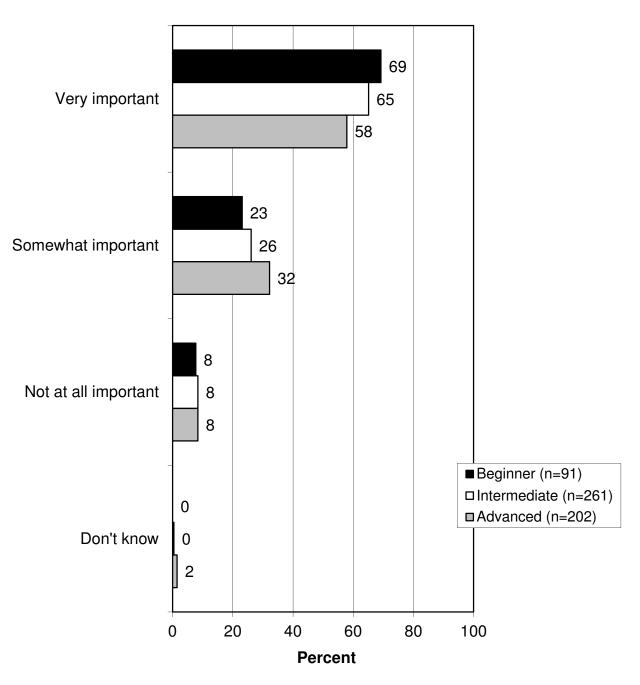




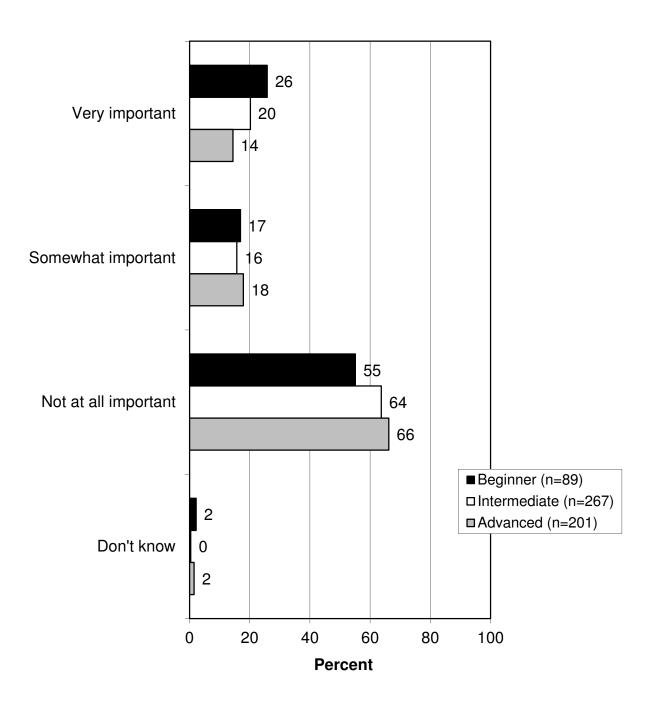




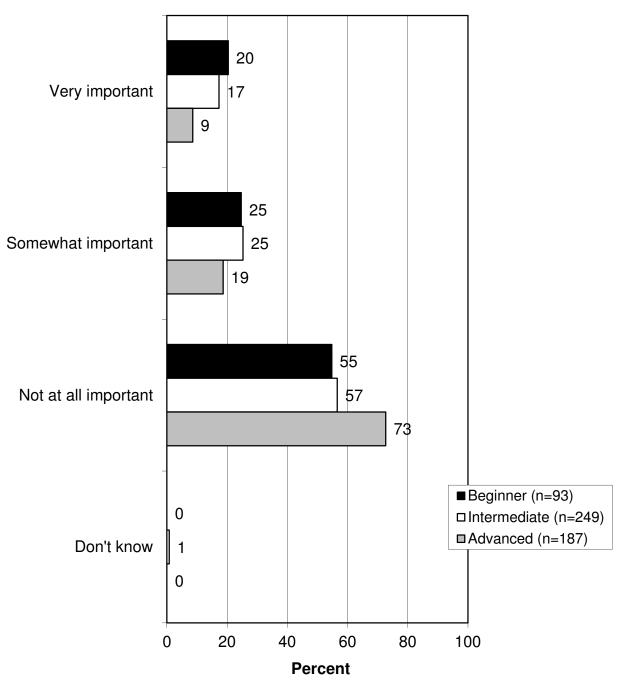
Q53. What about finding access that is located on public land? (How important is this factor in your decision on where to go trout fishing?)

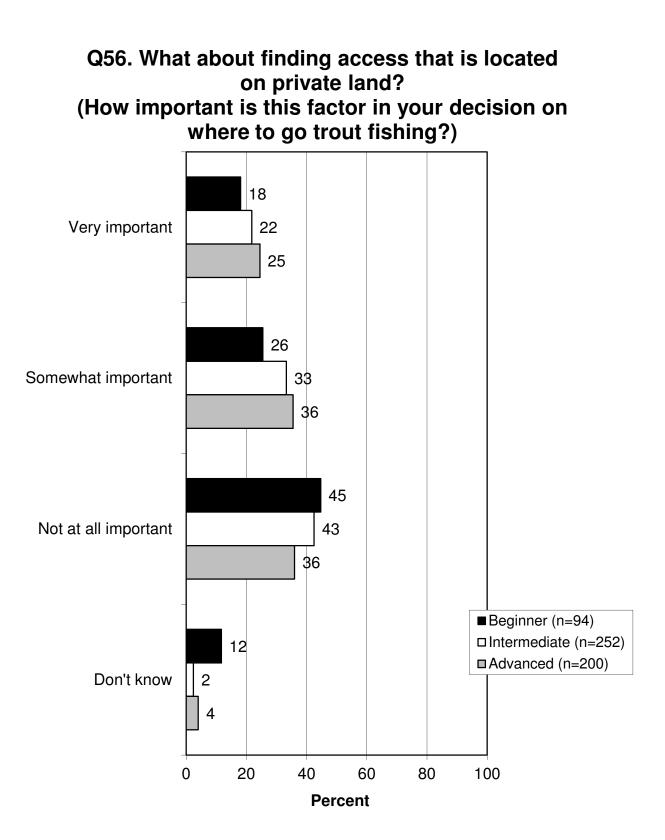


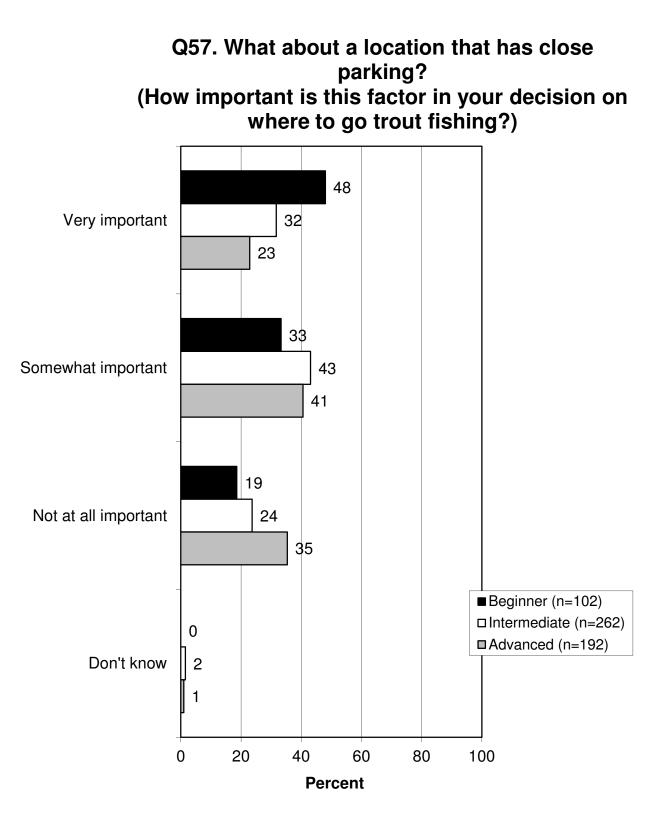
Q54. What about the availability of boating access? (How important is this factor in your decision on where to go trout fishing?)

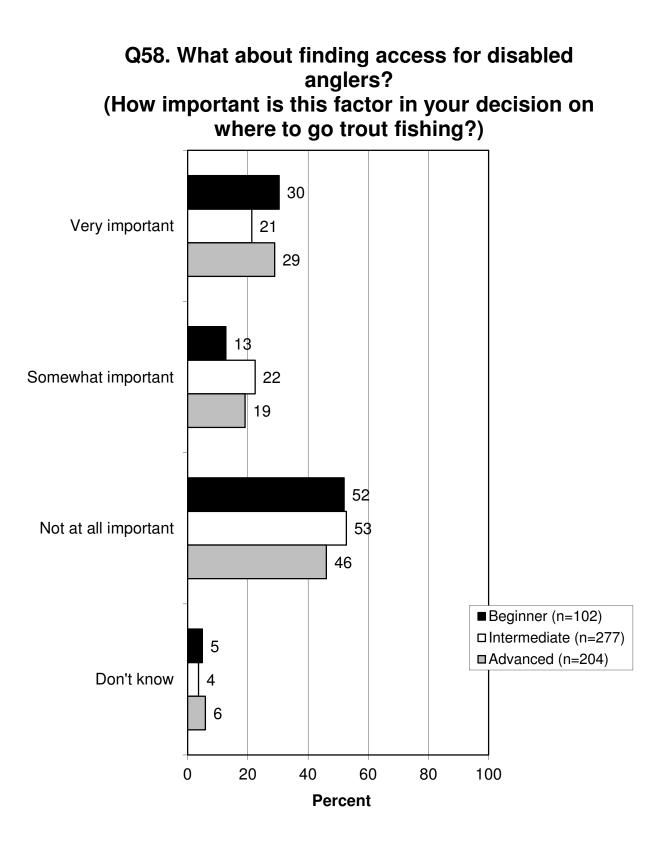


Q55. What about having restrooms available? (How important is this factor in your decision on where to go trout fishing?)

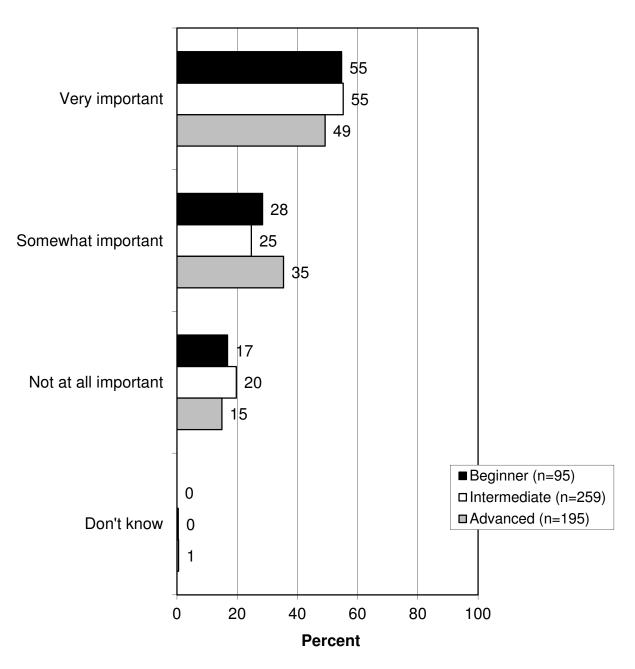




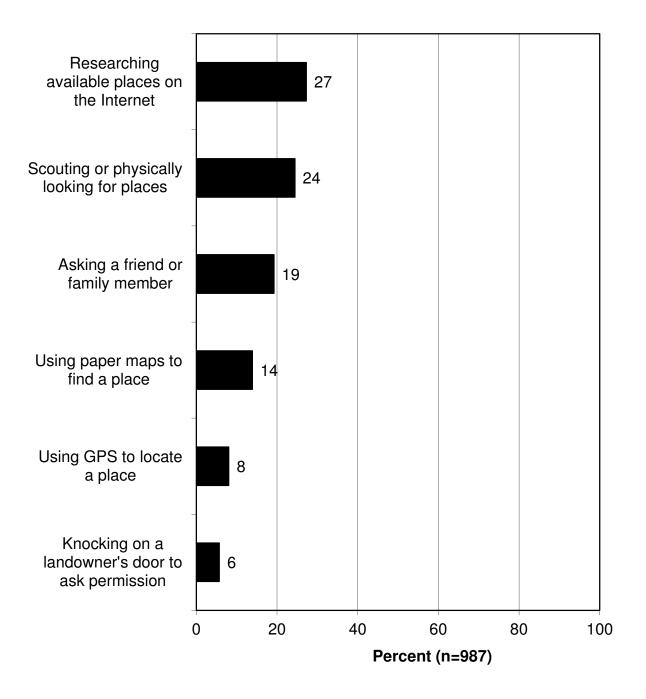




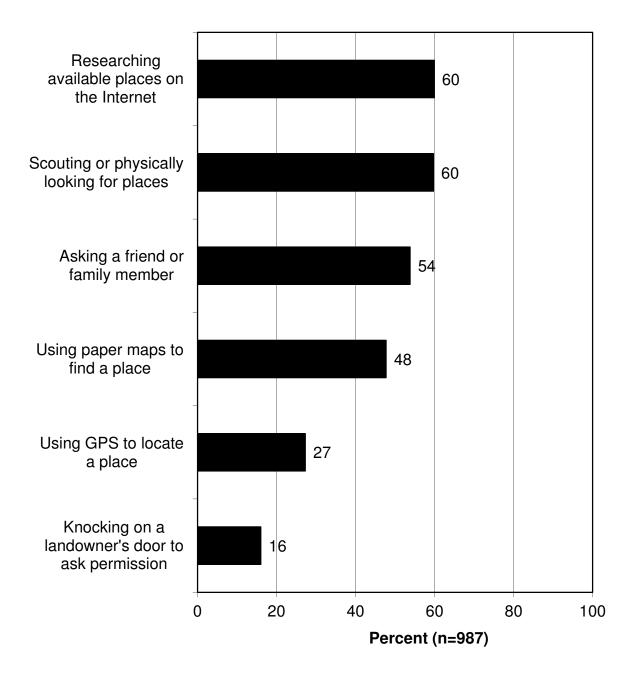
Q59. What about a place that has regulations posted on site? (How important is this factor in your decision on where to go trout fishing?)



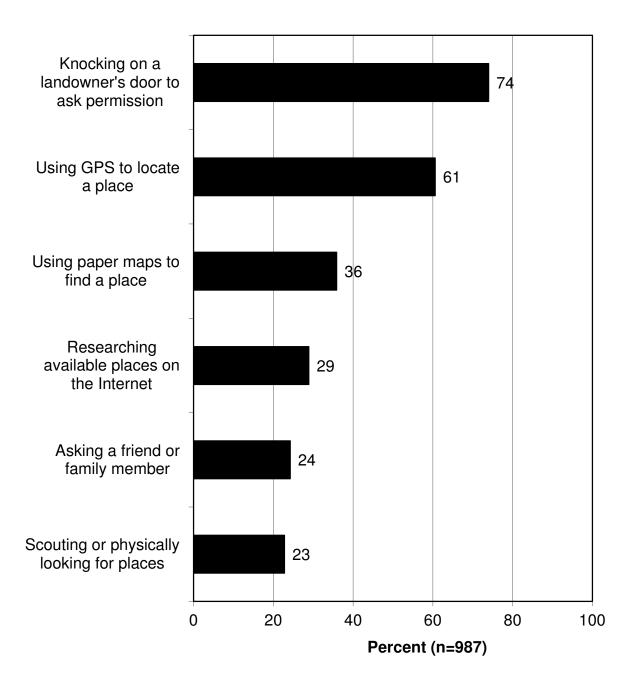
Q63-68. Percent who indicated they always do the following when deciding where to access the waters to fish for trout in North Carolina:



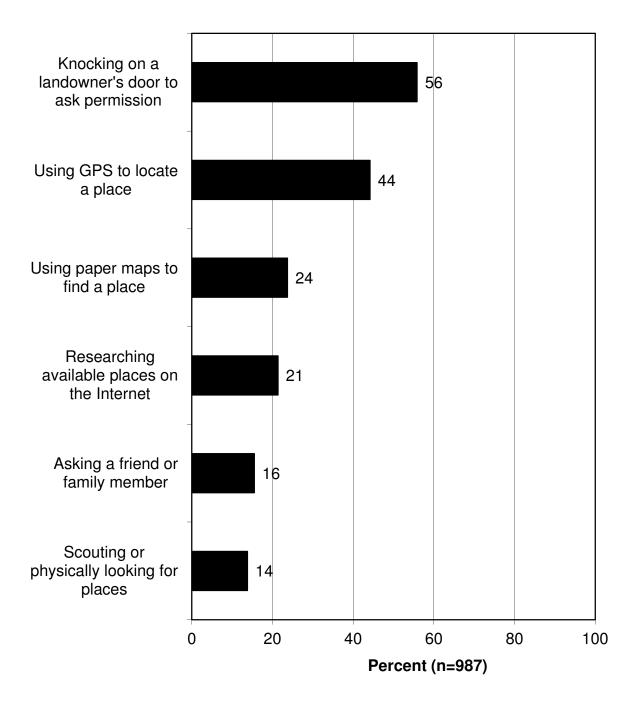
Q63-68. Percent who indicated they always or sometimes do the following when deciding where to access the waters to fish for trout in North Carolina:



Q63-68. Percent who indicated they rarely or never do the following when deciding where to access the waters to fish for trout in North Carolina:

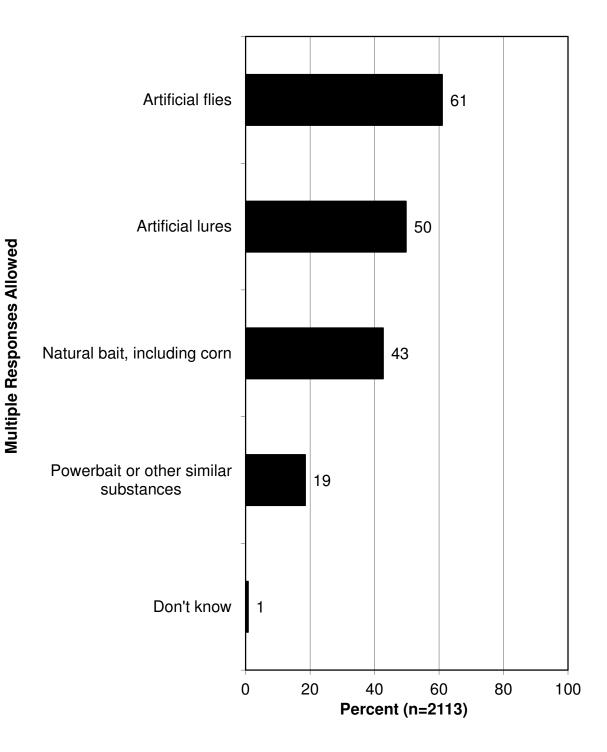


Q63-68. Percent who indicated they never do the following when deciding where to access the waters to fish for trout in North Carolina:

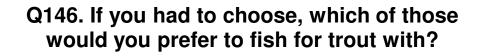


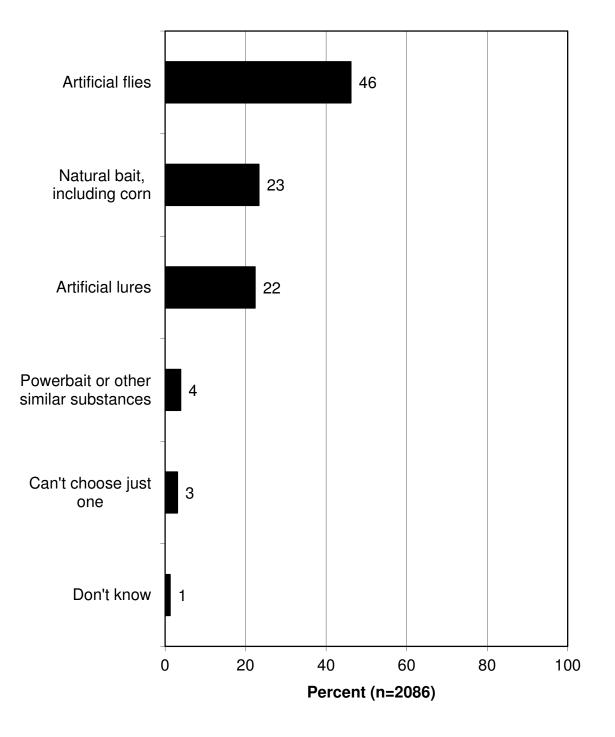
TYPES OF FISHING EQUIPMENT AND BAIT USED

- The most commonly used types of bait (bait used in the generic sense to mean bait, flies, or lures) for trout fishing in North Carolina are artificial flies (used by 61% of trout anglers at least some of the time) and artificial lures (50%), followed by natural bait (43%). Note that more than one type of bait can be used.
 - Those who used more than one type of bait were asked to choose their most preferred type of bait, and combining the results with those who used only one type of bait shows that the most popular type of bait is artificial flies (46% prefer this type), followed by natural bait (23%) and artificial lures (22%).



Q144. When you go trout fishing in North Carolina, do you fish with...?



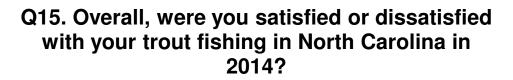


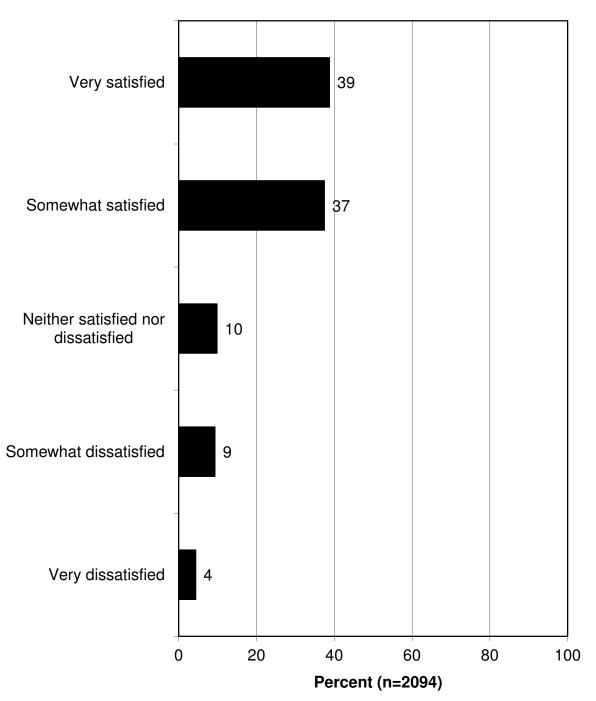
SATISFACTION OR DISSATISFACTION WITH TROUT FISHING IN NORTH CAROLINA

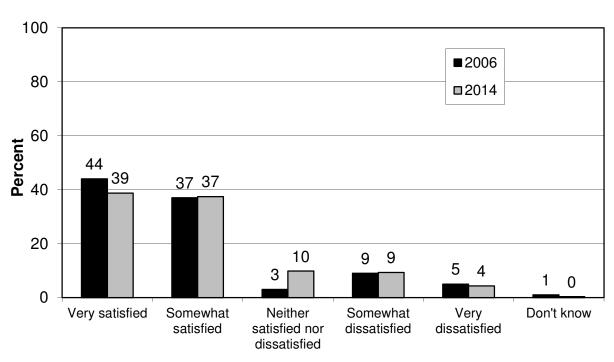
- The most basic satisfaction question asked about trout anglers' satisfaction or dissatisfaction with their trout fishing in North Carolina: 76% are satisfied, while 14% are dissatisfied.
 - The trends graph shows just slightly less satisfaction in 2014 compared to 2006, although dissatisfaction remains about the same (the increase in 2014 is in the "neither satisfied nor dissatisfied" responses).
 - A crosstabulation by age shows that anglers who are 55 years old or older have slightly more dissatisfaction compared to younger anglers; nonetheless, large majorities of all age groups are satisfied.
 - Although satisfaction is not greatly different among skill level groups, there is slightly more dissatisfaction among advanced anglers, relative to beginner and intermediate anglers.
 - The most commonly named reason for being dissatisfied with trout fishing in North Carolina is not related to the fishing resource: a lack of time to go fishing (30% cite this as taking away from satisfaction). However, the next most common reason is a lack of trout (26%), and three other reasons commonly given are not enough *large* trout (19%), access problems (15%), and crowding on the water (15%)—all items over which the Commission has some influence.

- > The survey asked about satisfaction with various aspects of trout fishing.
 - A large majority of trout anglers in North Carolina are satisfied with public access to trout fishing places: 78% are satisfied (including 51% who are *very* satisfied), while 11% are dissatisfied.
 - The age crosstabulation shows more satisfaction among younger anglers.
 - The crosstabulation by skill level shows no marked differences.
 - When asked what would make them more satisfied with trout fishing access (asked of all except those who said that they are *very* satisfied), the most common responses are more streams with access/more access points (29% of these respondents), better information about access/better signage (14%), more access on private lands (10%), and more parking (8%).
 - A large majority of trout anglers are satisfied with current trout fishing regulations in North Carolina: 82% are satisfied, compared to 8% who are dissatisfied.
 - The trends show a higher percentage being *very* satisfied in 2014, relative to 2006.
 Overall satisfaction, however, is slightly lower in 2014.
 - Unlike the other questions in this section, there is little difference in satisfaction or dissatisfaction by age on the question about trout fishing regulations.
 - The crosstabulation by skill level shows more dissatisfaction among advanced anglers compared to beginner and intermediate anglers.
 - When asked what would make them more satisfied with the regulations (asked of all except those who said that they are *very* satisfied), the most common responses relate to a change in water designations/type of bait allowed (19% of these respondents), more consistency in regulations/simpler regulations (13%), and changes to creel limits (13%).

- Another question pertaining to satisfaction asked trout anglers to rate how well the Commission does in providing trout fishing opportunities, and the ratings are positive: 80% of trout anglers give a rating of excellent or good. Only 16% give a rating in the bottom half of the scale, with just 2% giving a rating of poor.
 - The trends graph shows an improvement in ratings from 2006 to 2014.
 - Ratings of opportunities are more positive among the youngest age group of anglers: 52% of anglers 18 to 34 years old give a rating of excellent, compared to no more than 45% of the other age groups.
 - Advanced anglers are more likely than beginner or intermediate anglers to give a negative rating (fair or poor—in the bottom half of the scale).
 - Reasons for *not* giving a higher rating (among those who did not give a rating of excellent) include access problems (26% of these respondents) and lack of fish/the need for more stocking (24%).
- A final question in this section asked trout anglers about their perceived trend in the quality of trout fishing. They are about evenly split: while they most commonly say it has stayed about the same (42%), the percentage saying it has improved (19%) is not greatly different from the percentage saying it has declined (17%).
 - The trends graph shows a higher percentage saying that trout fishing has remained about the same in 2014 compared to 2006.



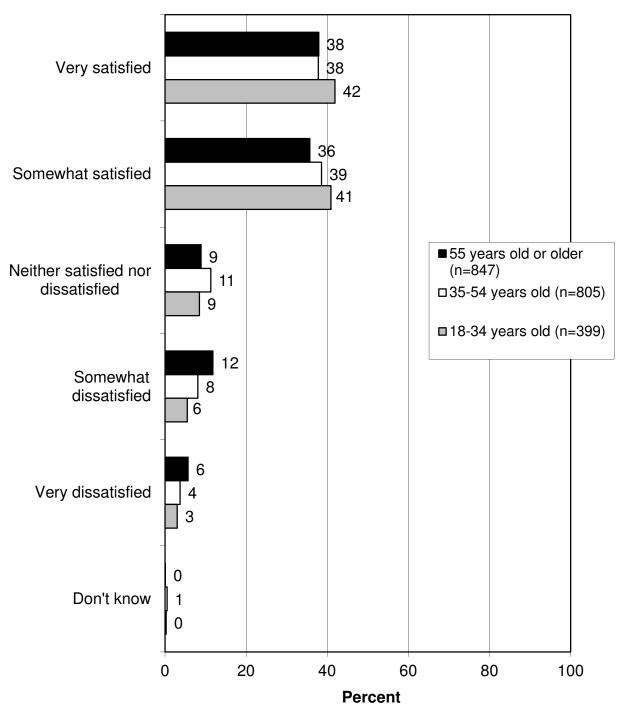




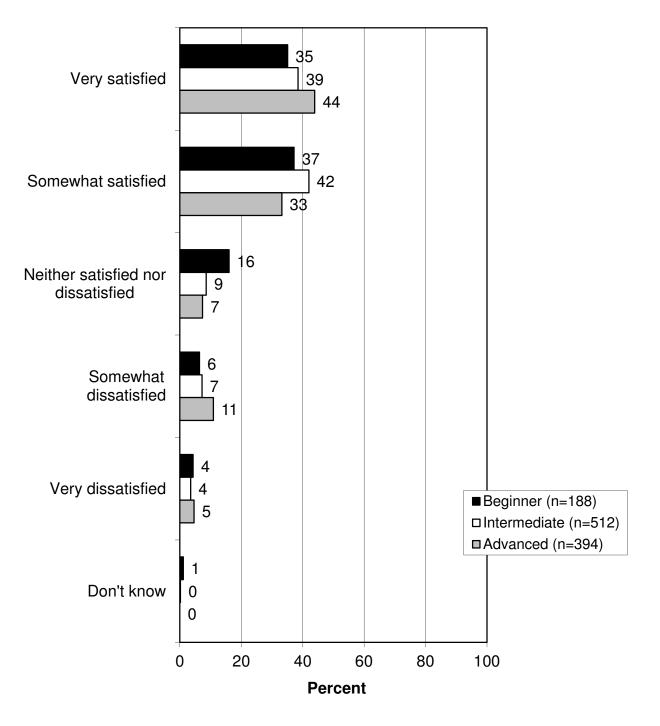
Overall, were you satisfied or dissatisfied with your trout fishing in North Carolina?

Note: 2006 sample consisted of resident trout anglers; 2014 sample consisted of resident and nonresident trout anglers.

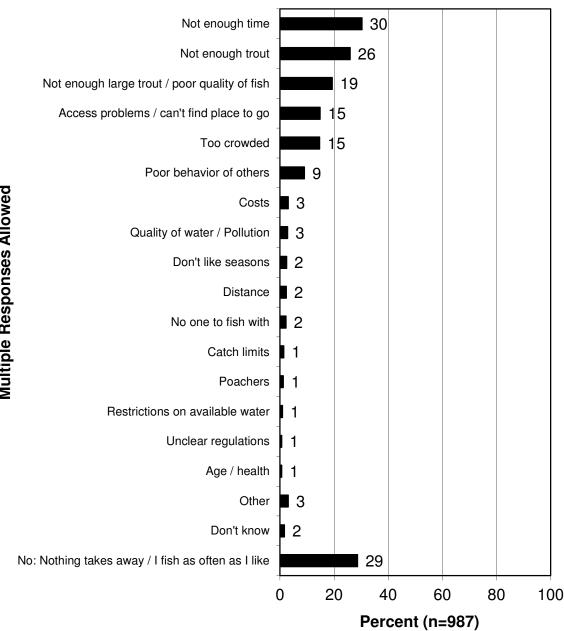


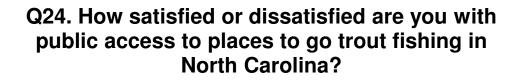


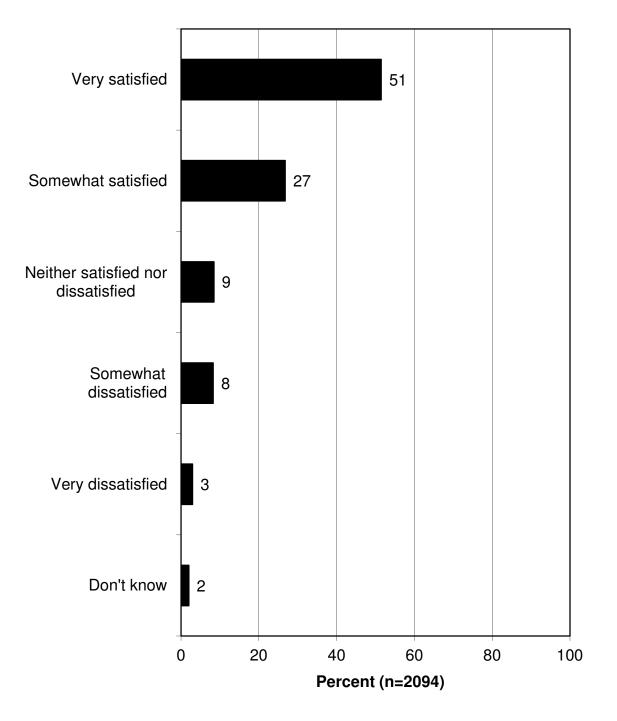
Q15. Overall, were you satisfied or dissatisfied with your trout fishing in North Carolina in 2014?



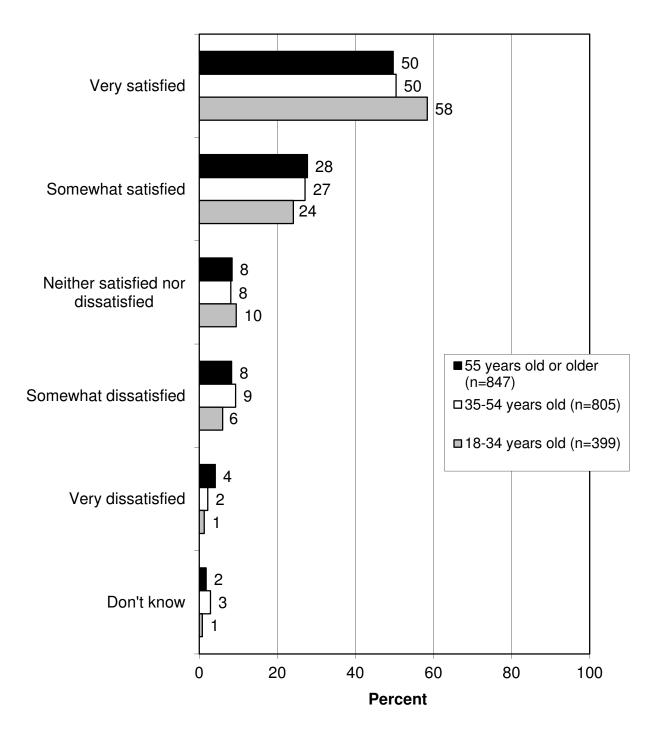
Q19. In general, are there any things that take away from your trout fishing satisfaction or cause you not to participate in trout fishing as much as you would like in North Carolina? (Asked of random half of sample.)



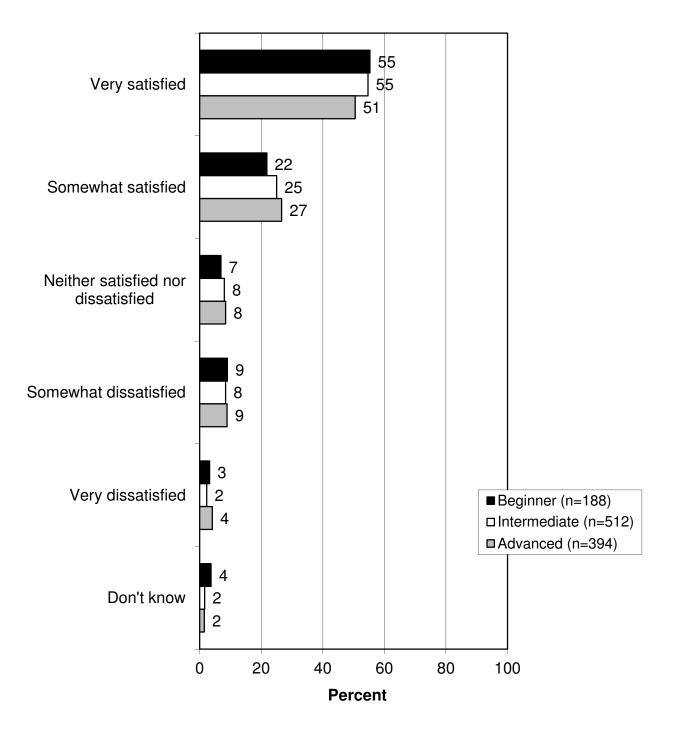




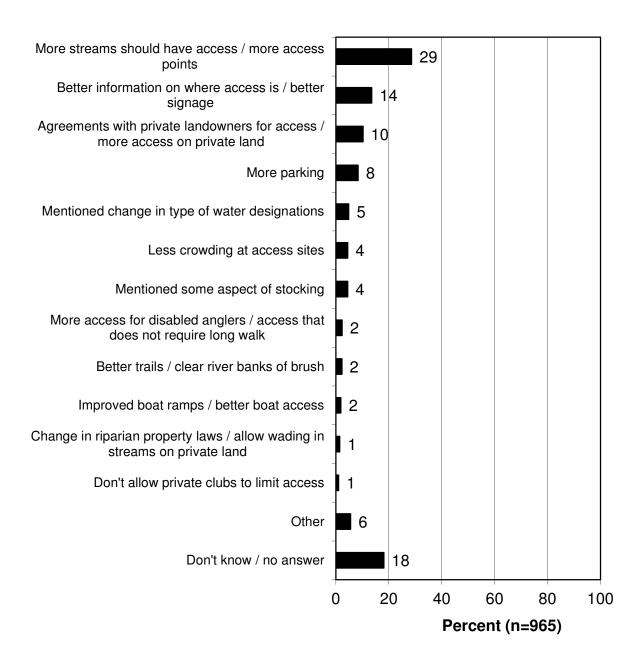
Q24. How satisfied or dissatisfied are you with public access to places to go trout fishing in North Carolina?



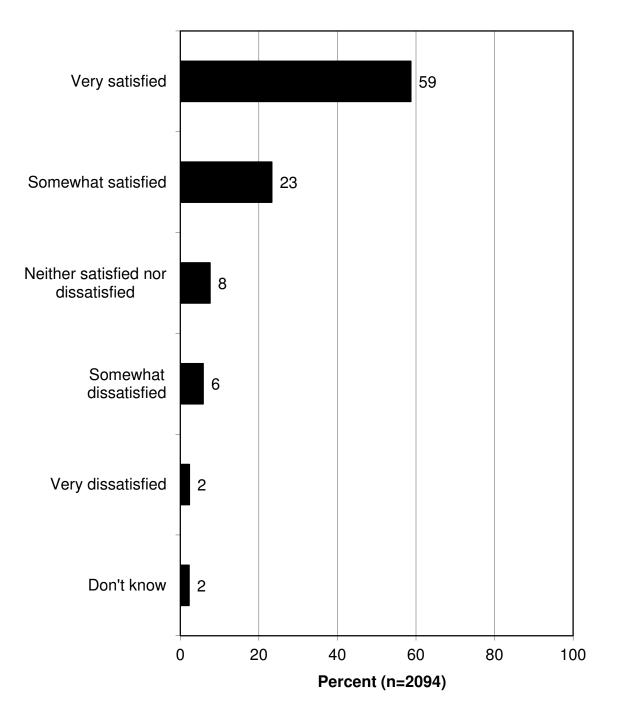
Q24. How satisfied or dissatisfied are you with public acces to places to go trout fishing in North Carolina?

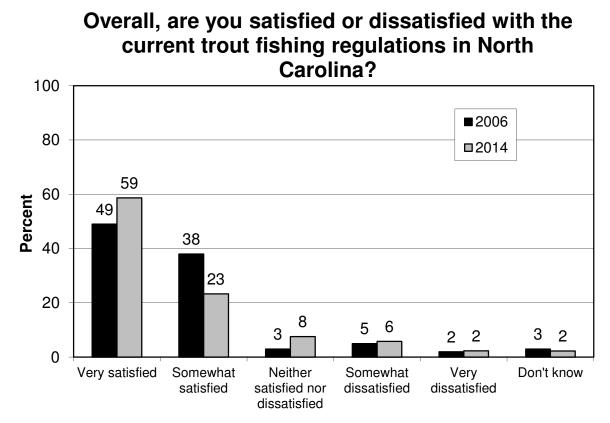


Q25. In just a few words, what would make you more satisfied with trout fishing access in North Carolina? (Asked of those who were not very satisfied with public access to places to go trout fishing in North Carolina.)



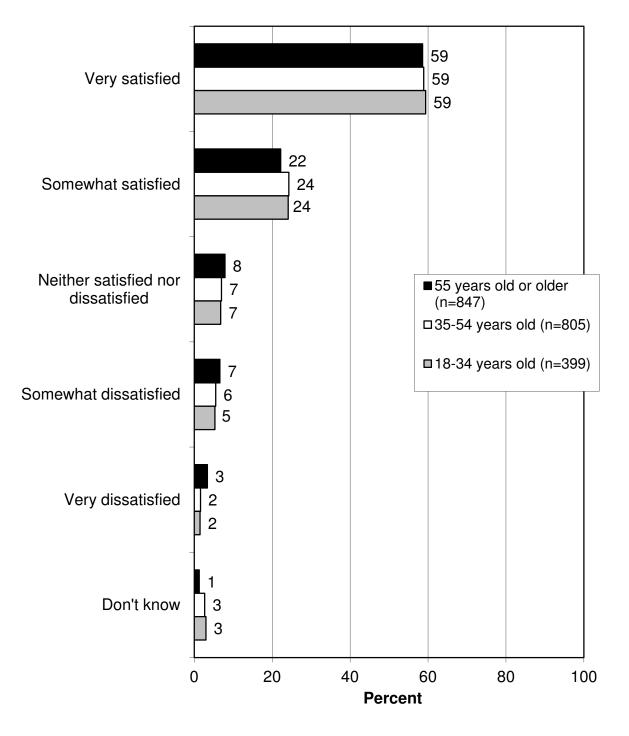
Q26. Overall, are you satisfied or dissatisfied with the current trout fishing regulations in North Carolina?



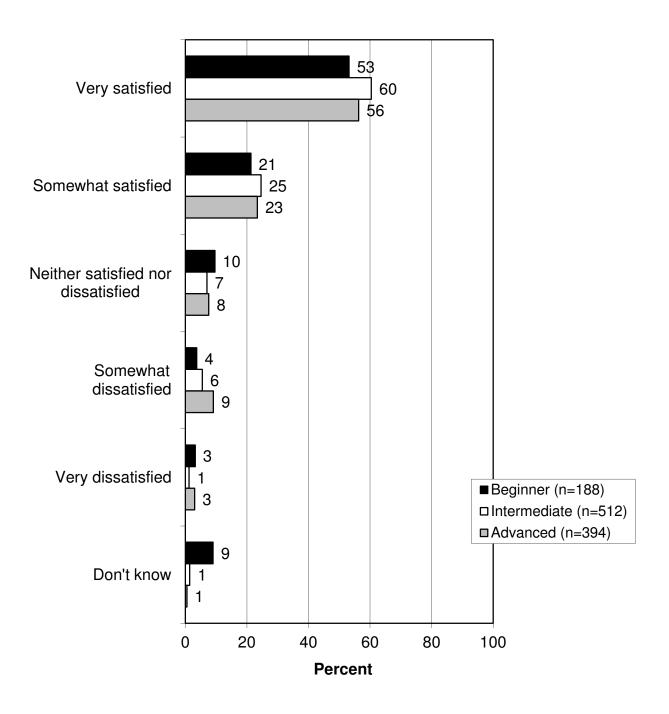


Note: 2006 sample consisted of resident trout anglers; 2014 sample consisted of resident and nonresident trout anglers.

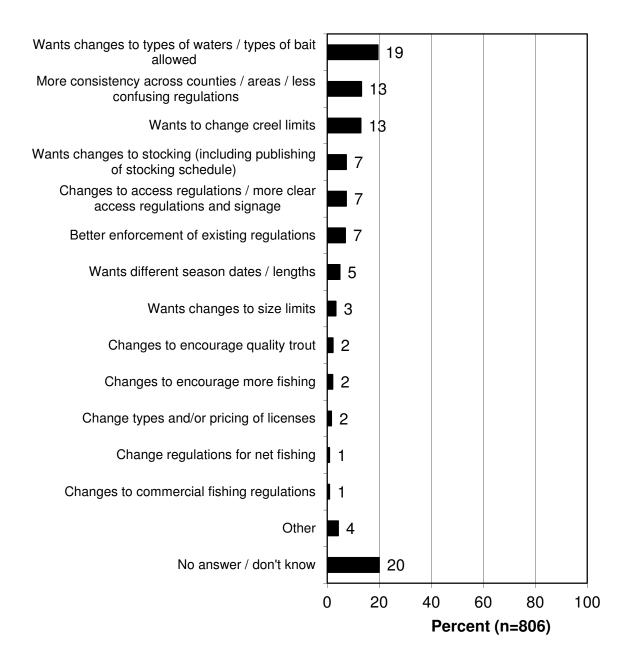
Q26. Overall, are you satisfied or dissatisfied with the current trout fishing regulations in North Carolina?



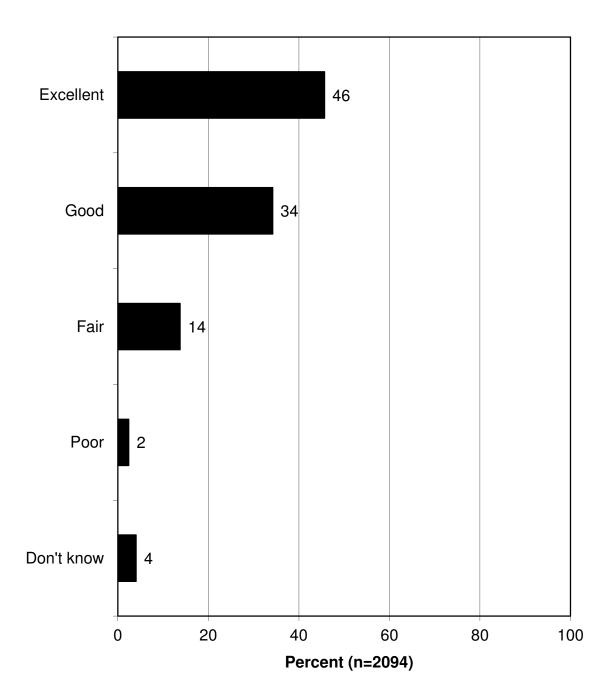
Q26. Overall, are you satisfied or dissatisfied with the current trout fishing regulations in North Carolina?

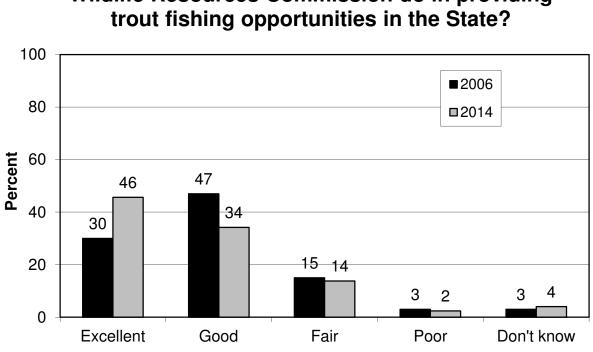


Q27. In just a few words, what would make you more satisfied with trout fishing regulations in North Carolina? (Asked of those who were not very satisfied with current trout fishing regulations in North Carolina.)





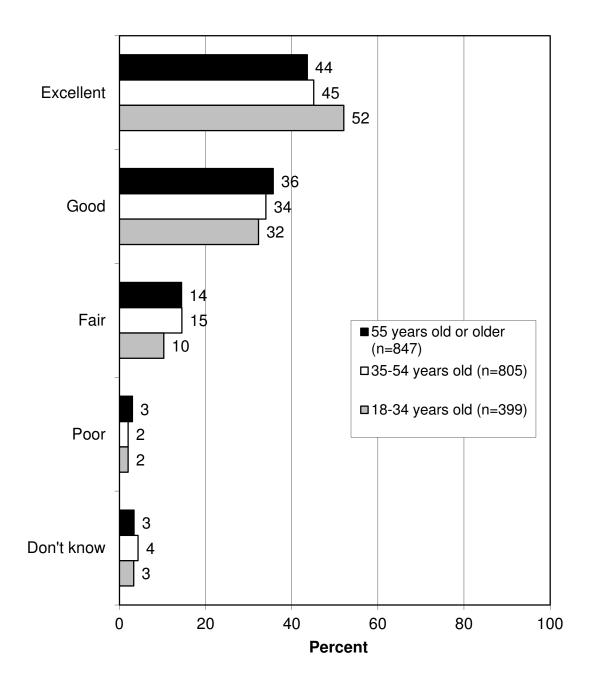




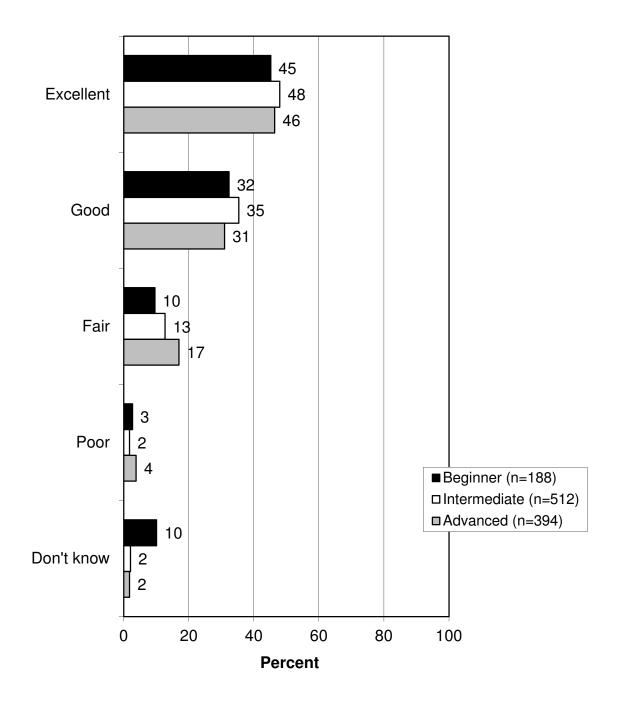
Overall, how well does the North Carolina Wildlife Resources Commission do in providing trout fishing opportunities in the State?

Note: 2006 sample consisted of resident trout anglers; 2014 sample consisted of resident and nonresident trout anglers.

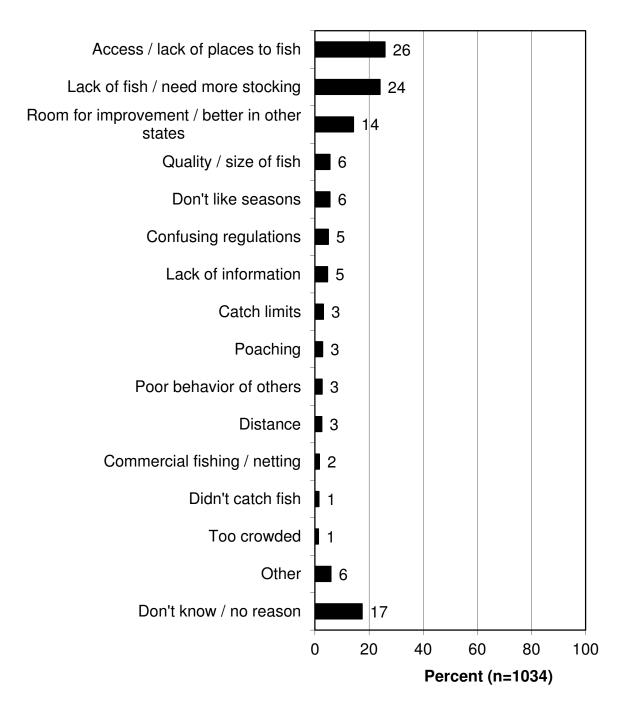
Q22. Overall, how well does the North Carolina Wildlife Resources Commission do in providing trout fishing opportunities in the State?



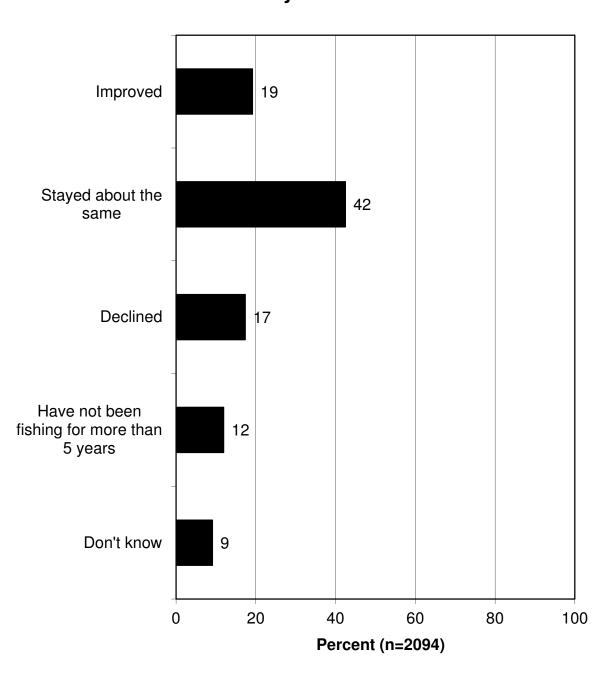
Q22. Overall, how well does the North Carolina Wildlife Resources Commission do in providing trout fishing opportunities in the State?

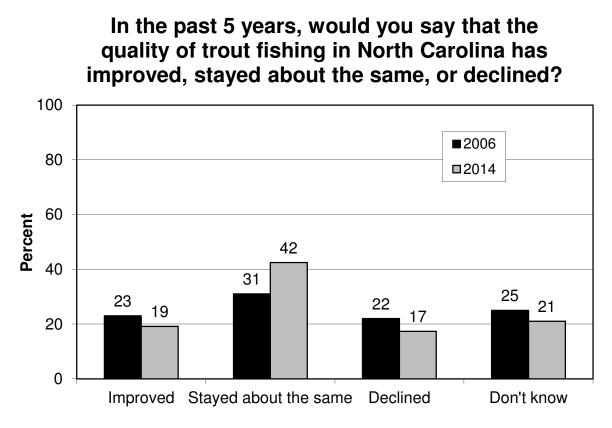


Q23. How come you did not rate the job performance higher? (Asked of those who rated trout fishing opportunities good, fair, or poor.)



Q28. In the past 5 years, would you say that the quality of trout fishing in North Carolina has improved, stayed about the same, or declined, or have you not been fishing for more than 5 years?



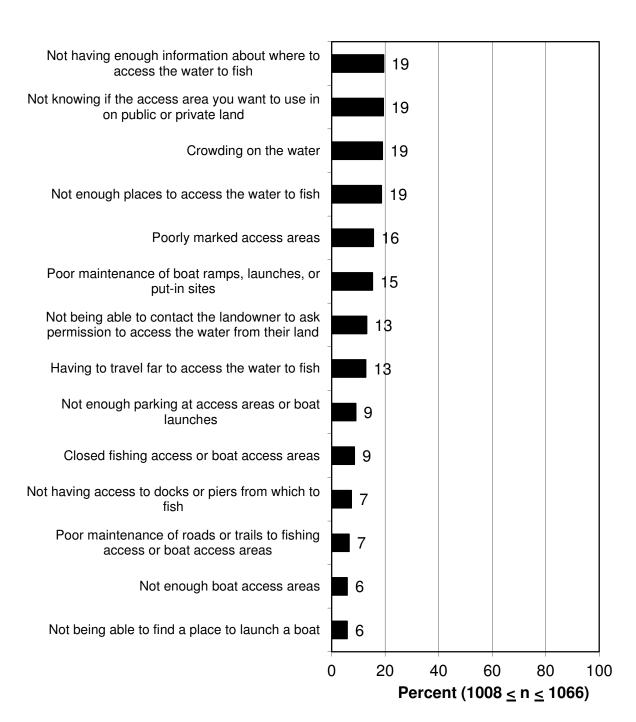


Note: 2006 sample consisted of resident trout anglers; 2014 sample consisted of resident and nonresident trout anglers.

PROBLEMS ENCOUNTERED AND POSSIBLE SOLUTIONS WITH TROUT FISHING ACCESS

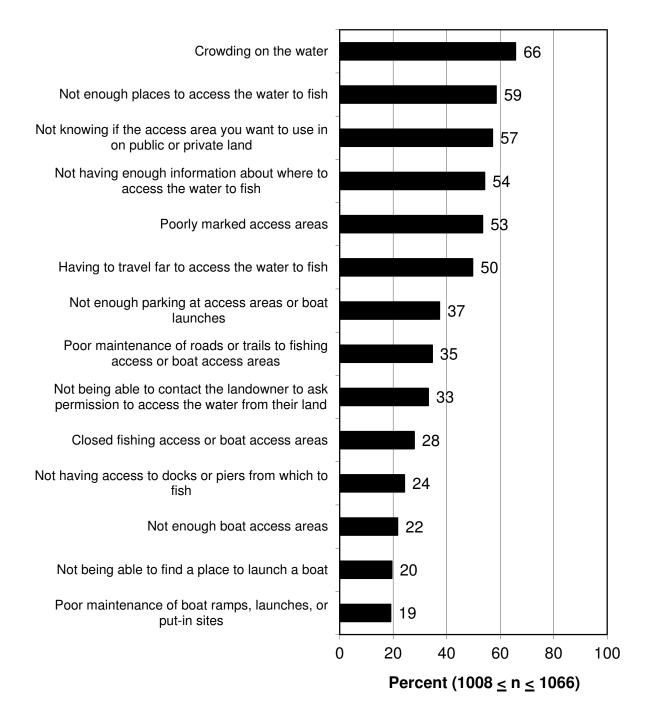
- The survey asked trout anglers to rate each of 14 potential problems as a *major* problem, a *minor* problem, or *not* a problem *at all*.
 - Of the 14 items, 6 are in a top tier, with at least half of trout anglers saying they are *major* or *minor* problems, and these 6 items pertain to either crowding/lack of enough places or lack of information. The potential problems related to crowding/not enough places are crowding on the water (66% say this is a major or minor problem), not enough places to access the water (59%), and having to travel too far to access the water to fish (50%). The ones related to information are not knowing if the access area is on public or private land (57%), not having enough information about where to access the water to fish (54%), and poorly marked access areas (53%).
 - Three graphs are shown: *major* problems, *major* or *minor* problems, and *not* problems *at all*.
 - Crosstabulations are included by age, and there are few marked differences among age groups on any of the problems except for two, both appearing to be more of a problem for younger anglers compared to older anglers: crowding and not knowing if the fishing location is on public or private land.
 - There are also crosstabulations by skill level group. Beginner anglers, compared to intermediate and advanced anglers, are more troubled by not having close parking, having to travel too far, having access to docks and piers from which to fish, and the poor maintenance of roads. Advanced anglers, on the other hand, are more troubled by crowding and not being able to contact the landowner to ask permission.

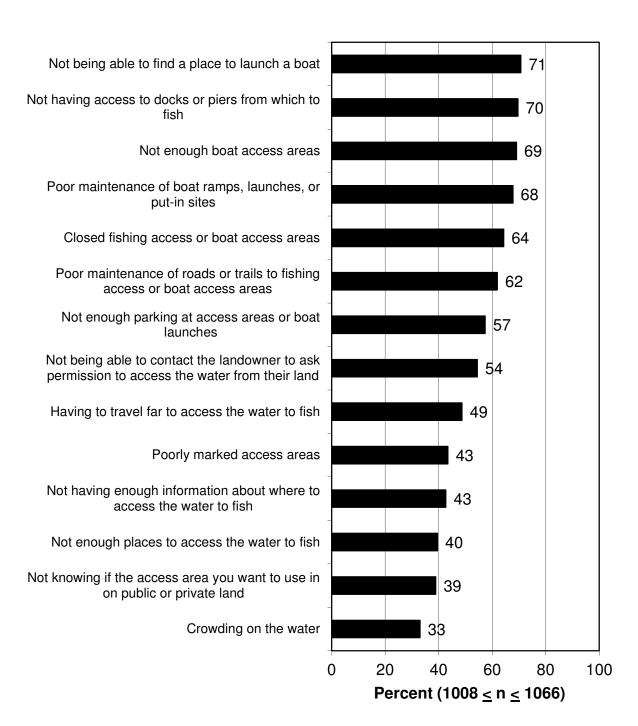
- Similar to the series of questions about problems is a series of questions that asked about the effectiveness of things in making access easier. For each item, trout anglers rated it as being *very* effective, *somewhat* effective, or *not at all* effective in making access easier.
 - The first overall finding is that trout anglers in general feel that any of the items would be effective: the item at the bottom still has a majority thinking it would be very or somewhat effective in making access easier.
 - In looking at the results by the percentage thinking the items would be *very* effective, the top items relate to having more information: having signs clearly marking access areas as being on public or private lands (73% say this would be *very* effective), having up-to-date information on a website showing public access areas and private areas open to the public (70%), and having maps of fishing access and boat access areas on a website (65%).
- Two questions asked about funding to support a fishing access program; not surprisingly, a reallocation of the existing license fee garnered more support than a new fee. Nonetheless, for both options, there is more support than opposition. For a new fee, support is at 45%, while opposition is not much below that at 37%. For a reallocation of the existing fee, support is at 68%, while opposition is at 12%.
 - The crosstabulation by age shows that younger anglers have more opposition to the general access fee than do older anglers. Regarding the reallocation of the existing fee, older angler have more opposition than do younger anglers.



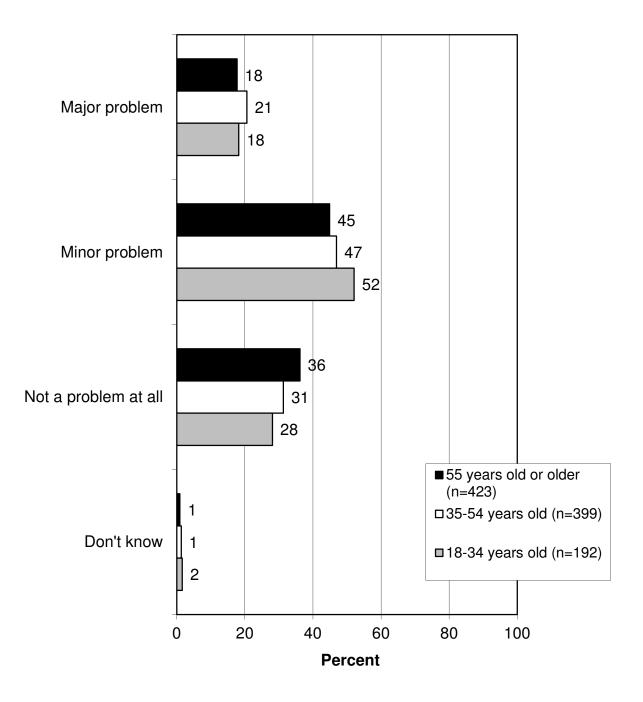
Q71-84. Percent who indicated each of the following was a major problem when trout fishing in North Carolina:

Q71-84. Percent who indicated each of the following was a major or minor problem when trout fishing in North Carolina:

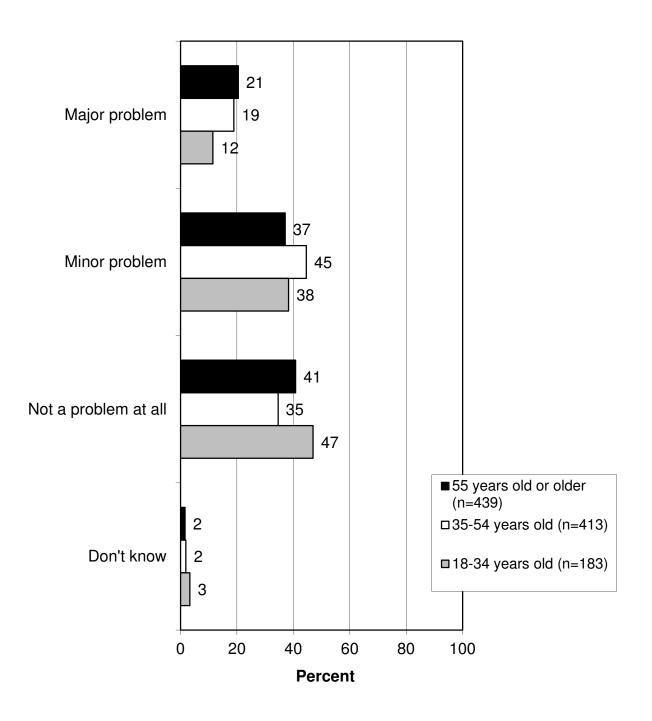




Q71-84. Percent who indicated each of the following was not a problem at all when trout fishing in North Carolina:

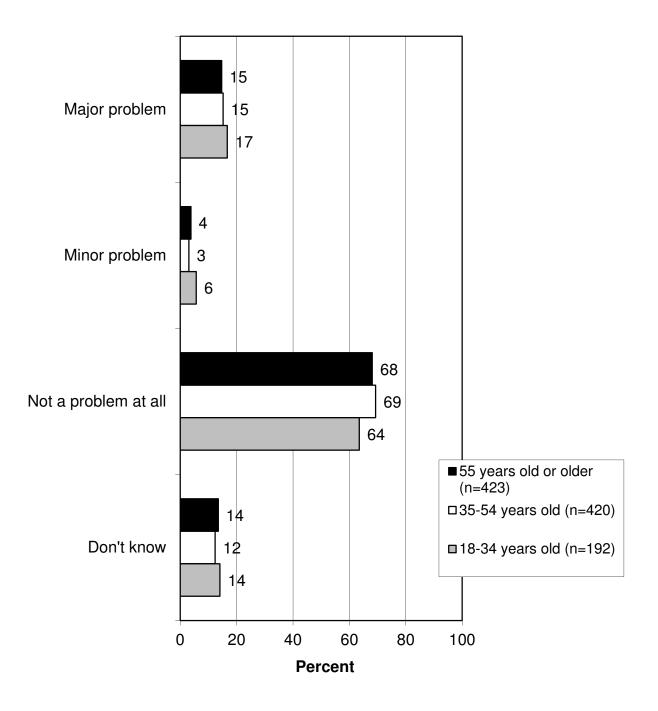


Q71. What about crowding on the water?

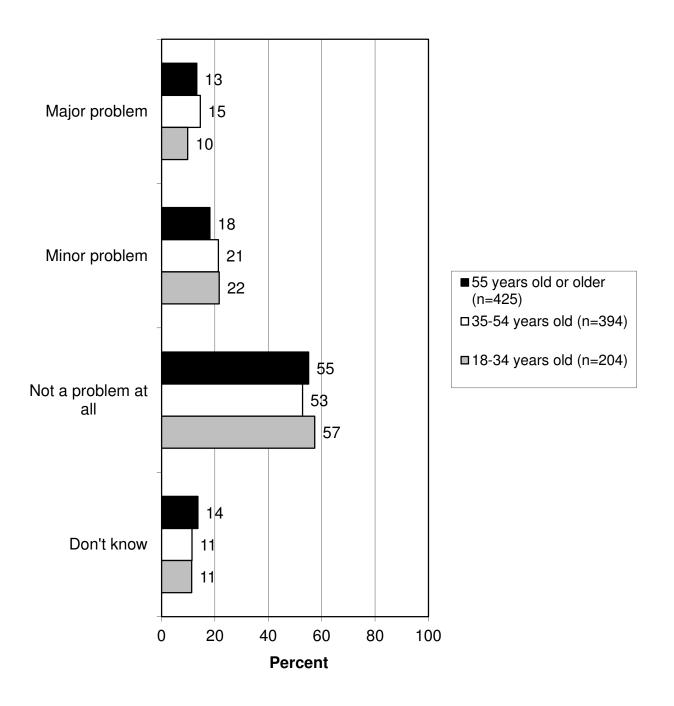


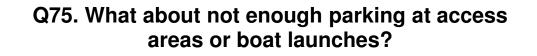
Q72. What about not enough places to access the water to fish?

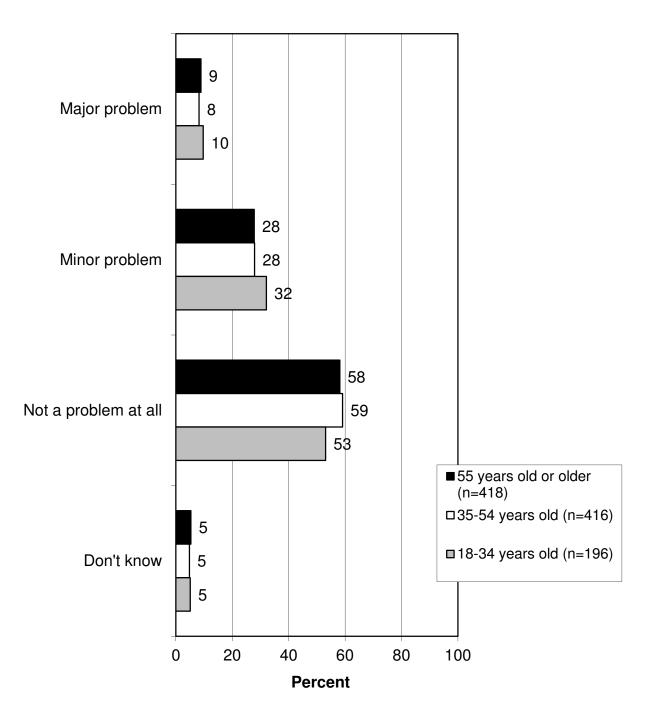
Q73. What about poor maintenance of boat ramps, launches, or put-in sites?

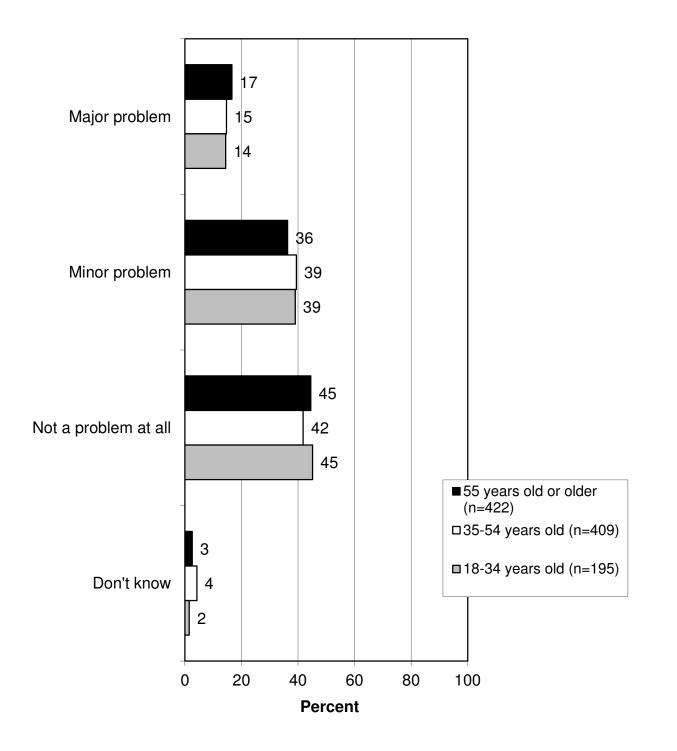


Q74. What about not being able to contact the landowner to ask permission to access the water from their land?



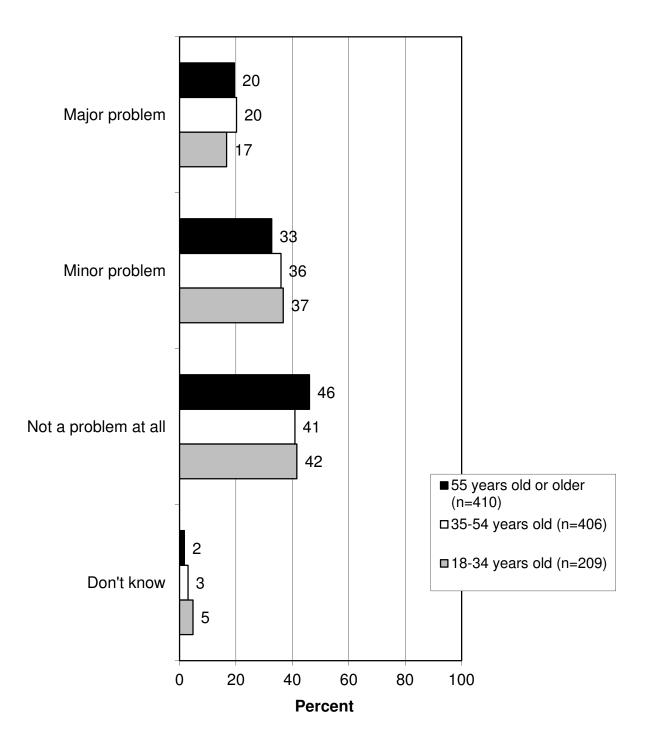


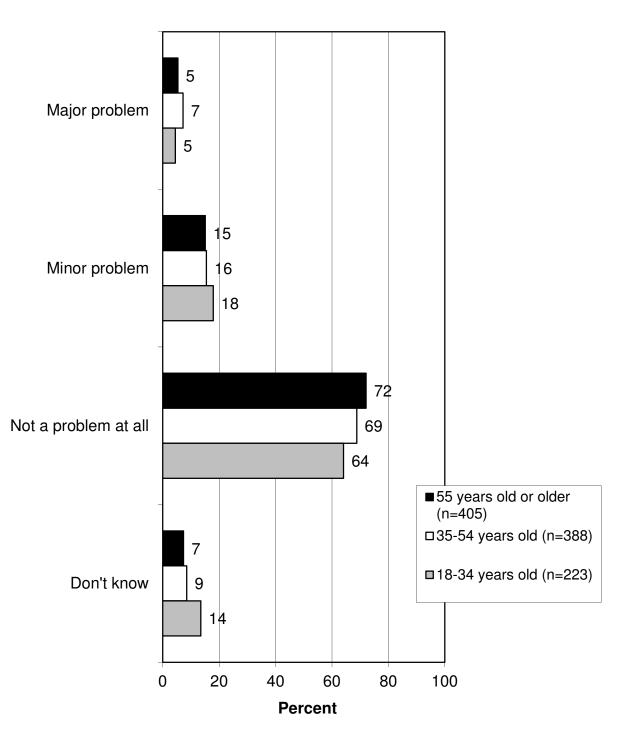




Q76. What about poorly marked public access areas?

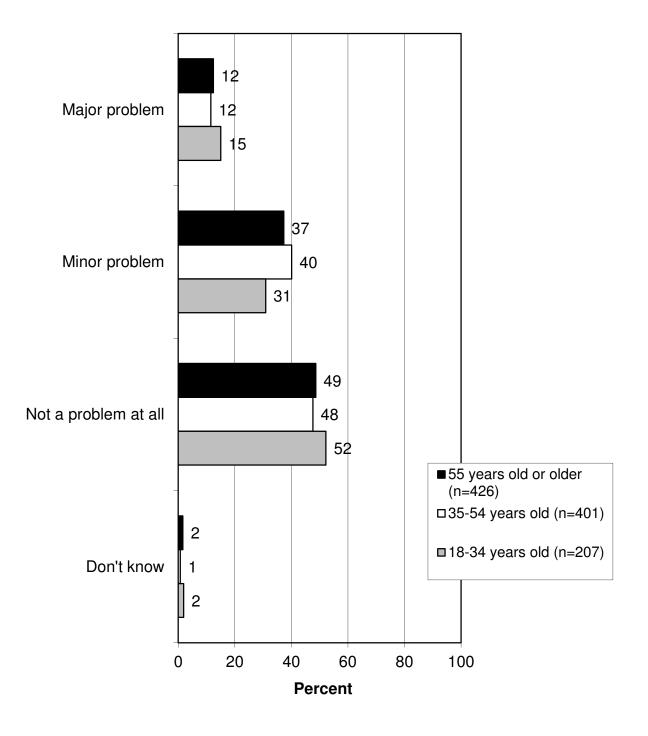
Q77. What about not having enough information about where to access the water to fish?

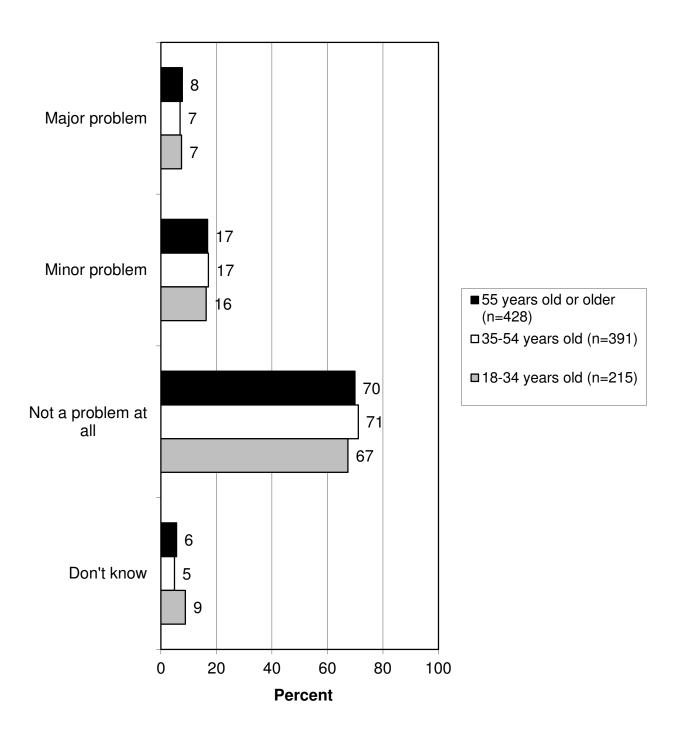




Q78. What about not enough boat access areas?

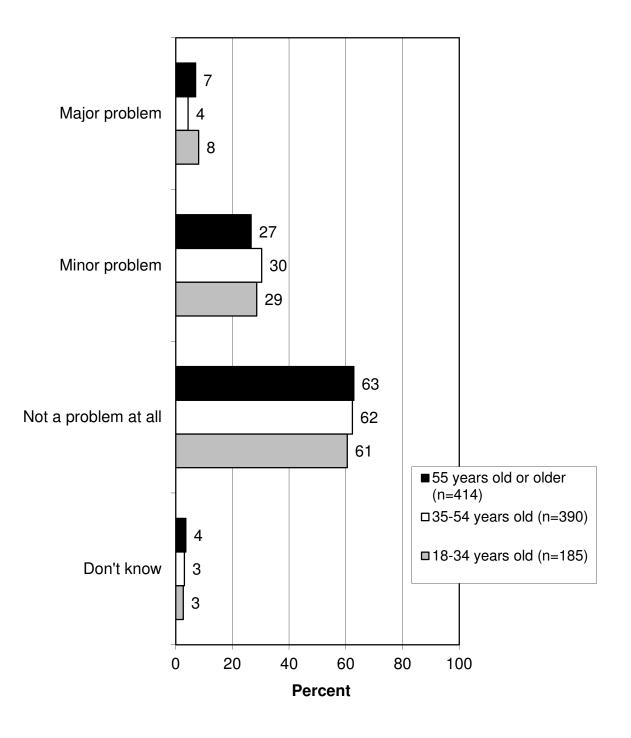
Q79. What about having to travel far to access the water to fish?

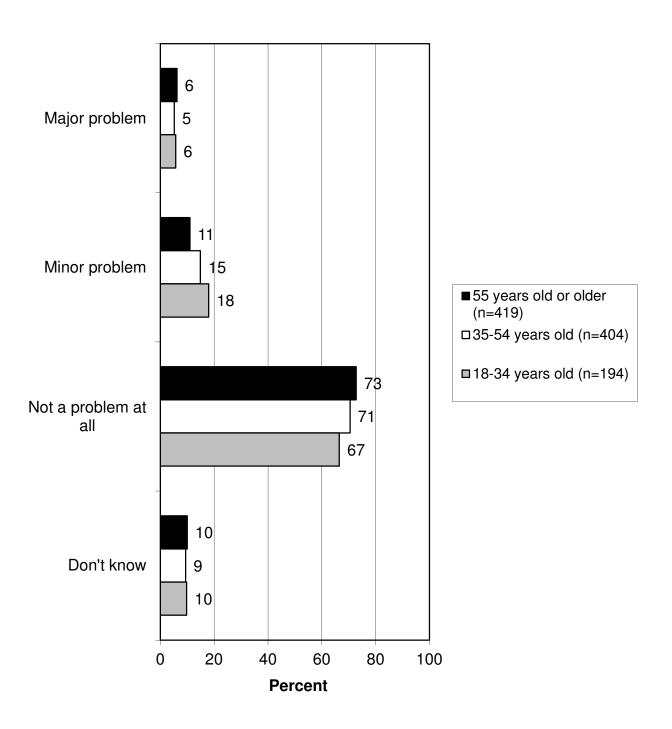




Q80. What about not having access to docks or piers from which to fish?

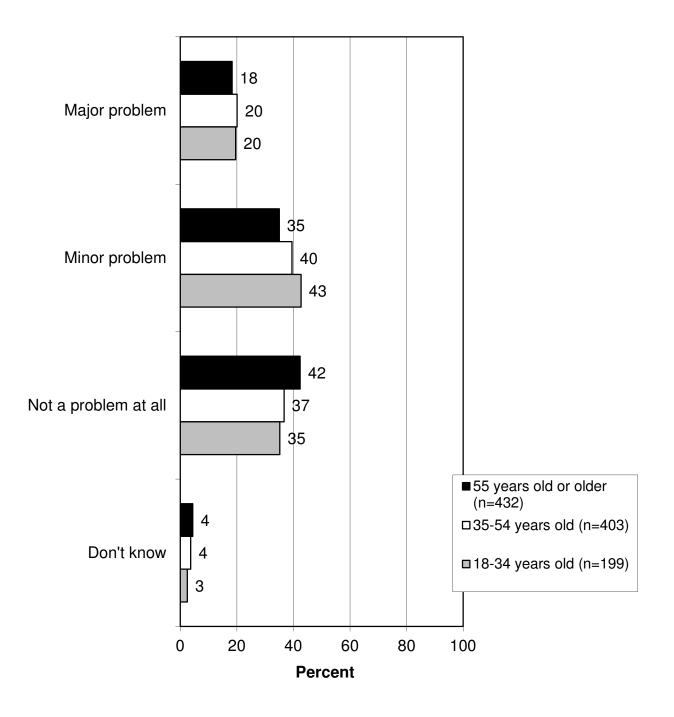
Q81. What about poor maintenance of roads or trails to fishing access or boat access areas?

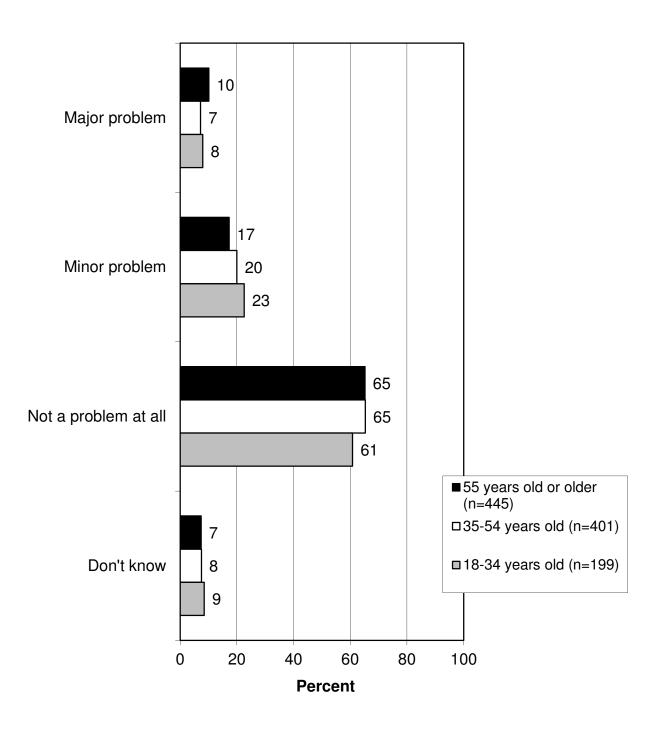




Q82. What about not being able to find a place to launch a boat?

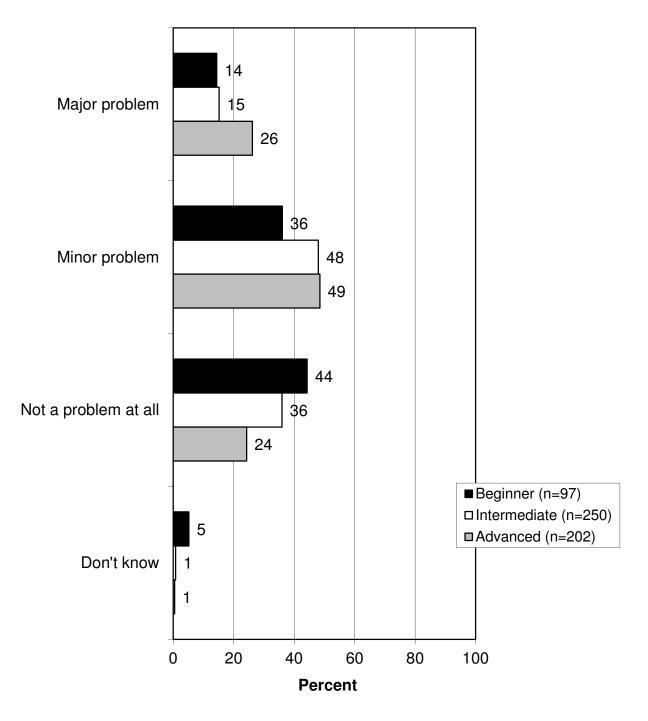
Q83. What about not knowing if the access area you want to use is on public or private land?



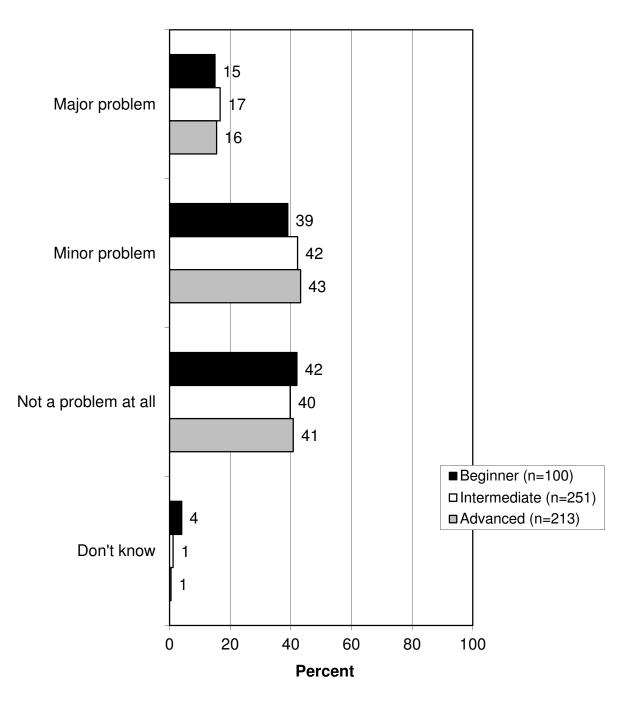


Q84. What about closed fishing access or boat access areas?

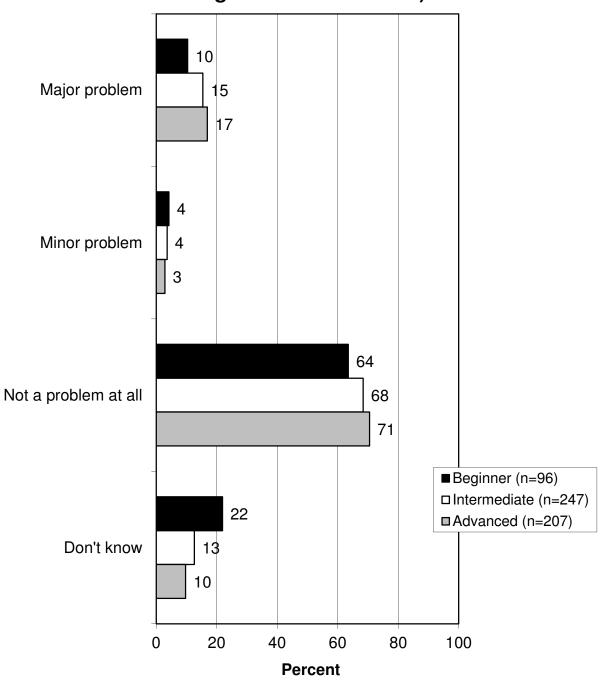
Q71. What about crowding on the water? (How much of a problem is this when trout fishing in North Carolina?)



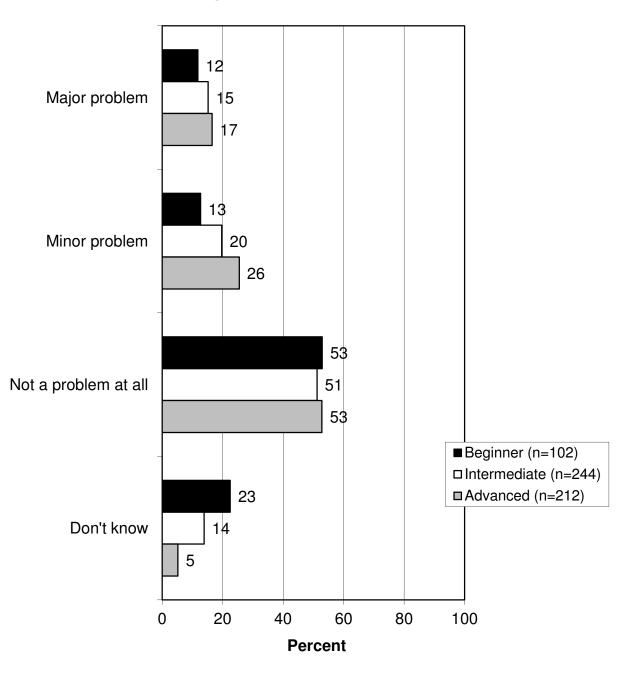
Q72. What about not enough places to access the water to fish? (How much of a problem is this when trout fishing in North Carolina?)



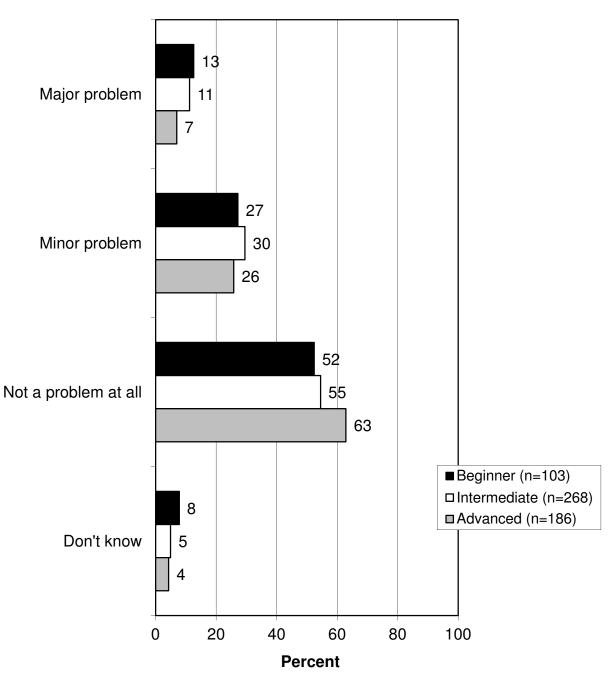
Q73. What about poor maintenance of boat ramps, launches, or put-in sites?(How much of a problem is this when trout fishing in North Carolina?)



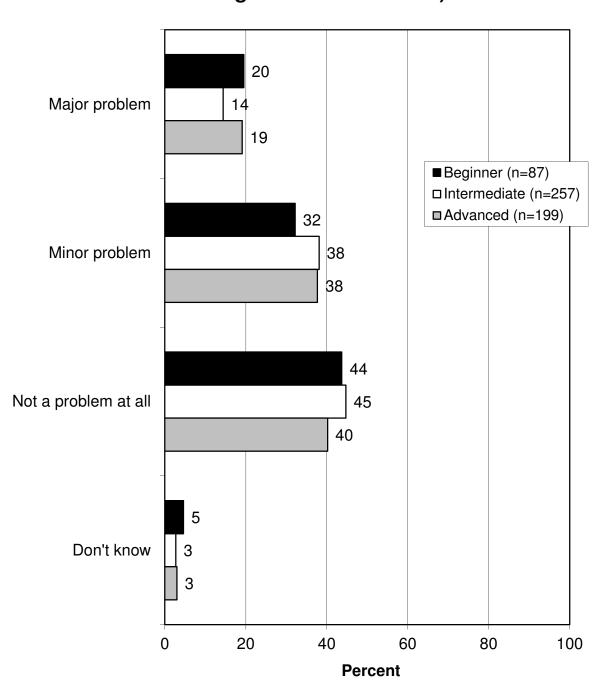
Q74. What about not being able to contact the landowner to ask permission to access the water from their land? (How much of a problem is this when trout fishing in North Carolina?)



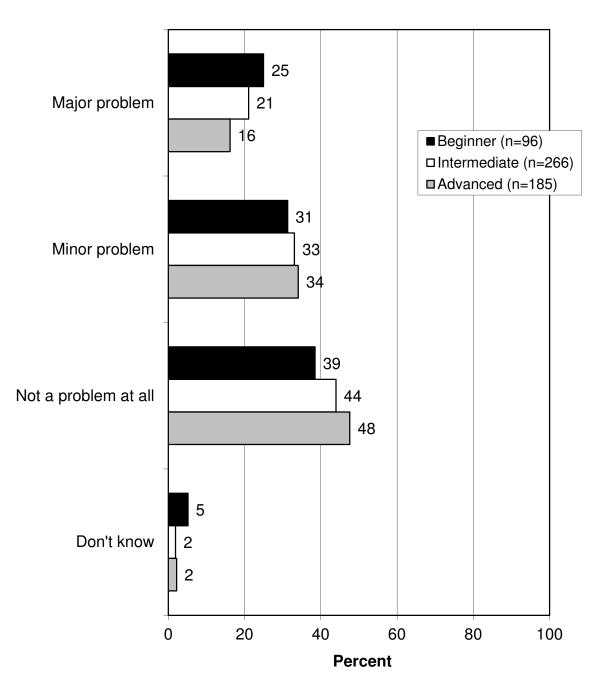
Q75. What about not enough parking at access areas or boat launches? (How much of a problem is this when trout fishing in North Carolina?)



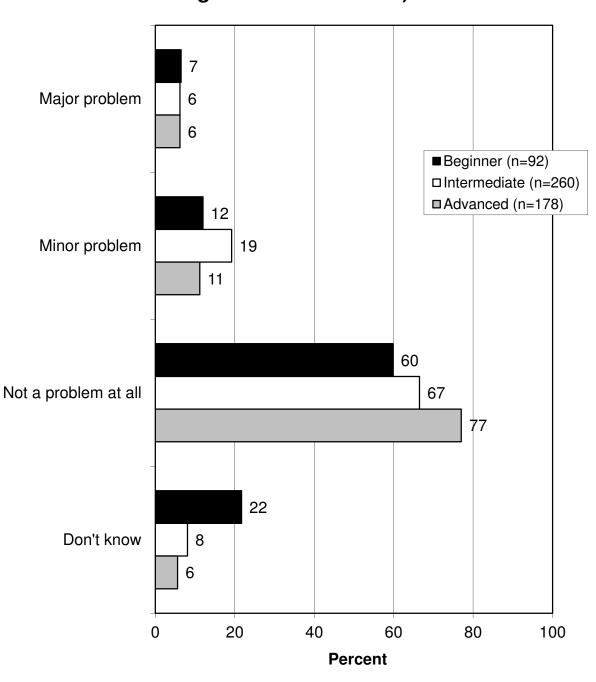
Q76. What about poorly marked public access areas? (How much of a problem is this when trout fishing in North Carolina?)



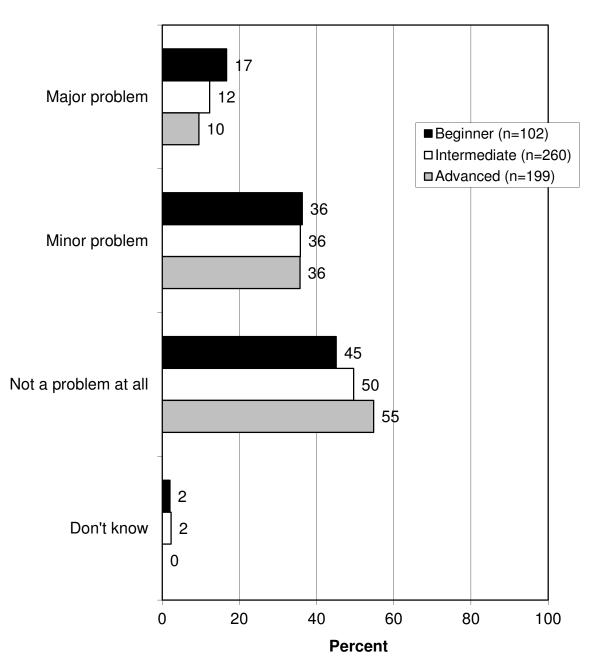
Q77. What about not having enough information about where to access the water to fish? (How much of a problem is this when trout fishing in North Carolina?)



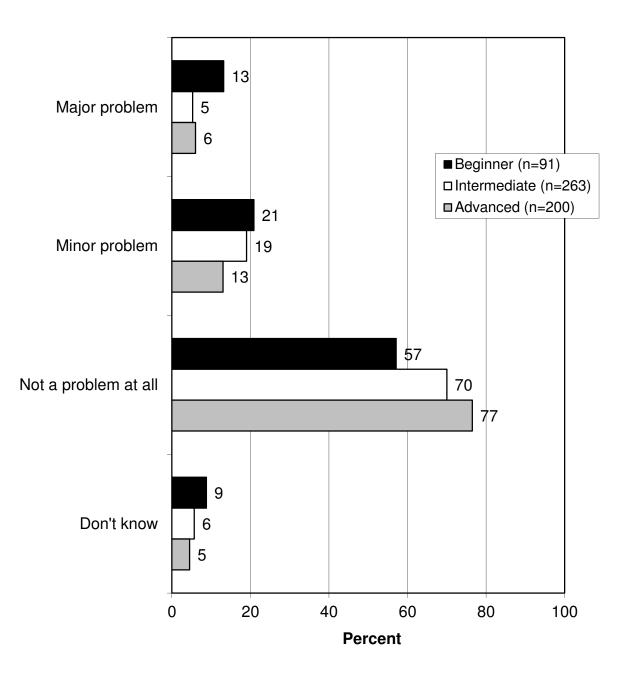
Q78. What about not enough boat access areas? (How much of a problem is this when trout fishing in North Carolina?)



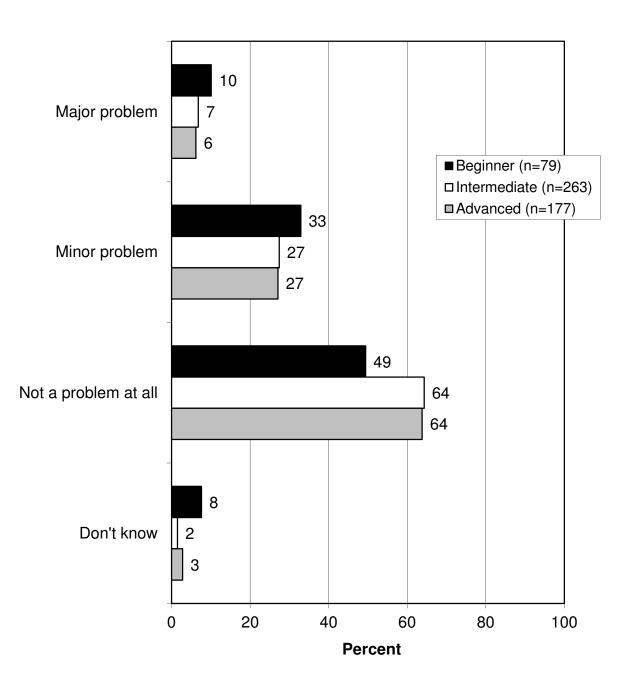
Q79. What about having to travel far to access the water to fish? (How much of a problem is this when trout fishing in North Carolina?)



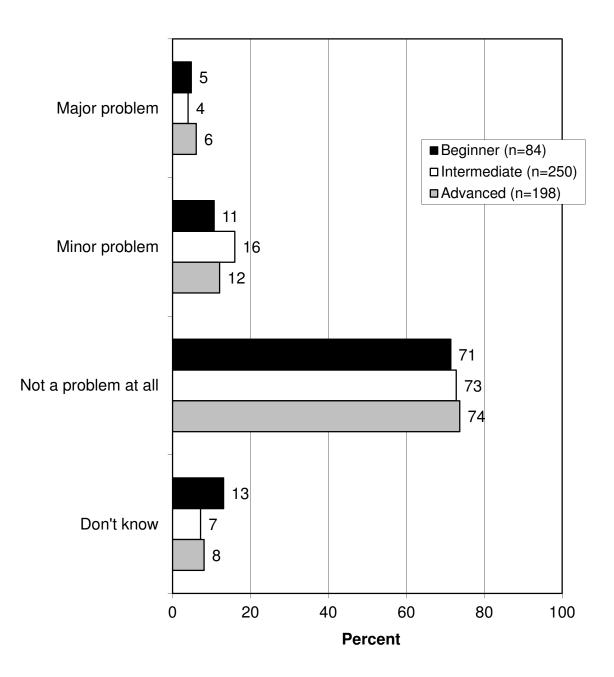
Q80. What about not having access to docks or piers from which to fish? (How much of a problem is this when trout fishing in North Carolina?)



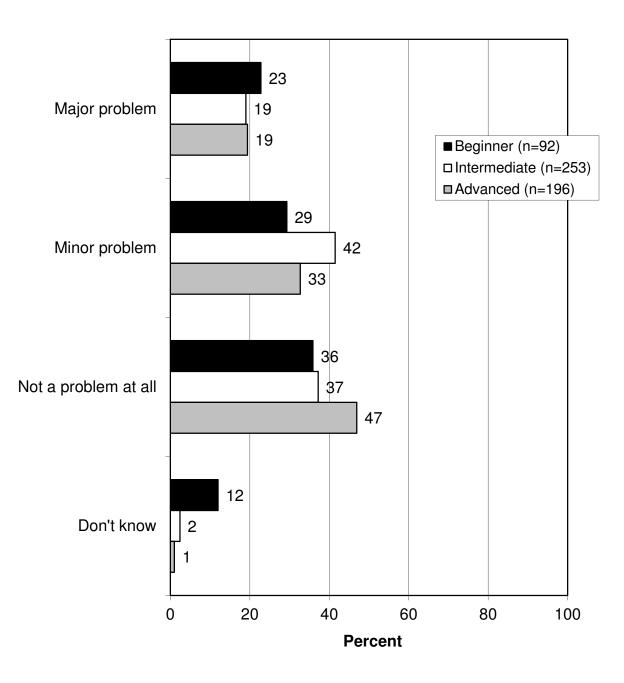
Q81. What about poor maintenance of roads or trails to fishing access or boat access areas? (How much of a problem is this when trout fishing in North Carolina?)



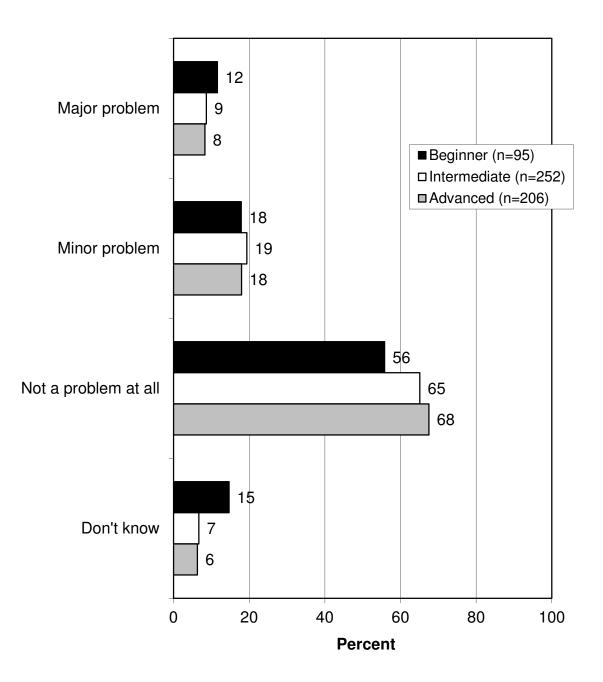
Q82. What about not being able to find a place to launch a boat? (How much of a problem is this when trout fishing in North Carolina?)



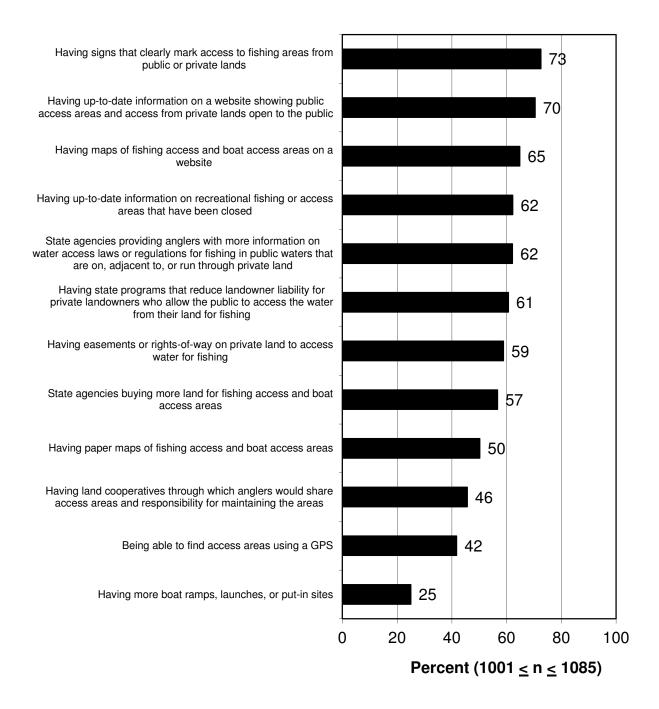
Q83. What about not knowing if the access area you want to use is on public or private land? (How much of a problem is this when trout fishing in North Carolina?)



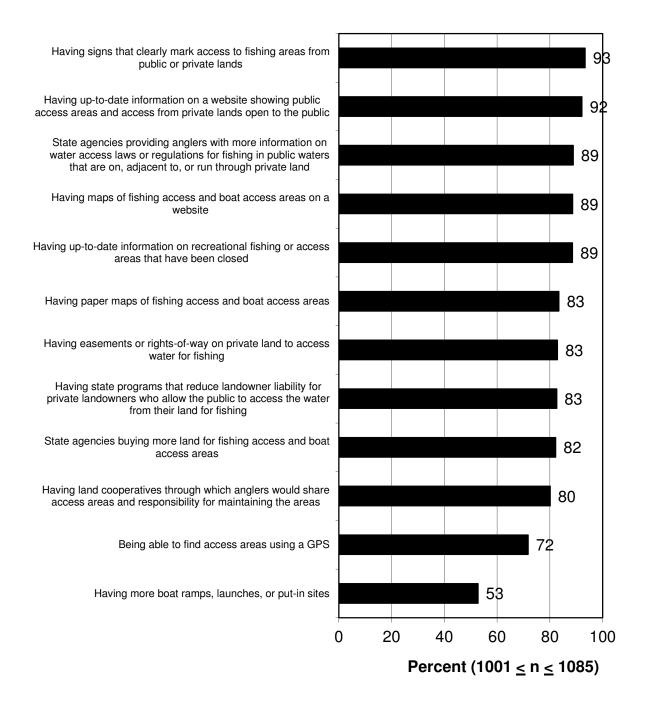
Q84. What about closed fishing access or boat access areas? (How much of a problem is this when trout fishing in North Carolina?)



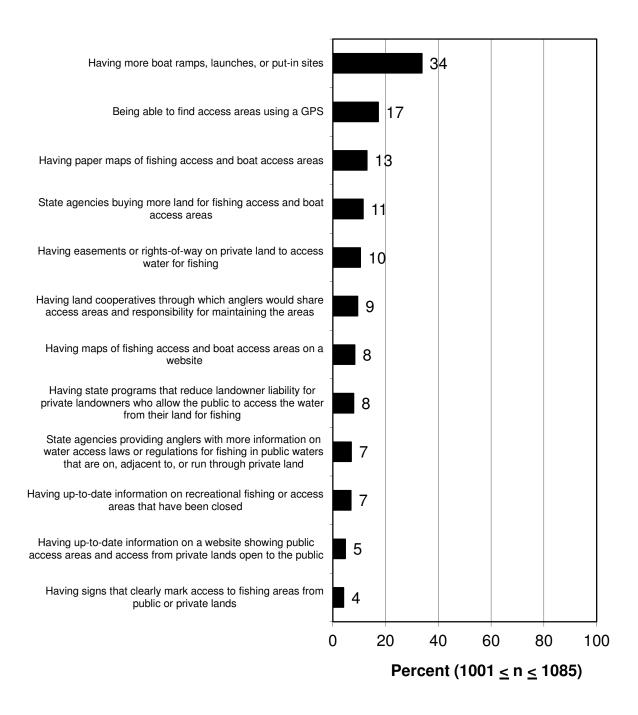
Q87-98. Percent who indicated each of the following would be very effective in making it easier to access the water for trout fishing in North Carolina:



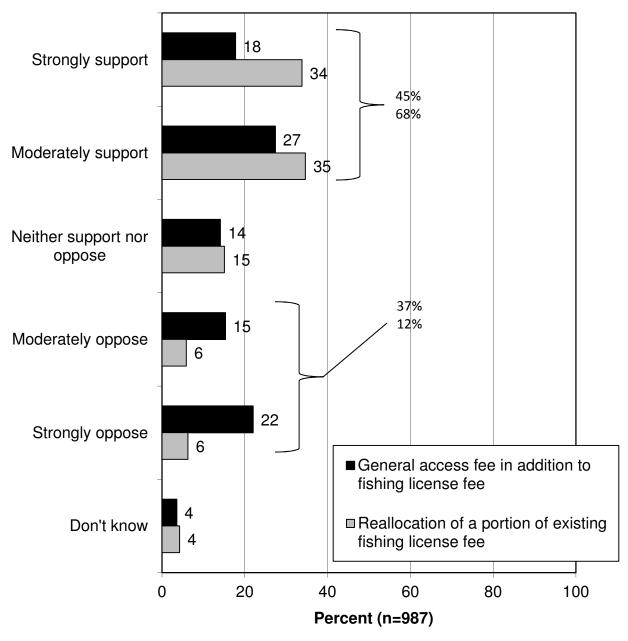
Q87-98. Percent who indicated each of the following would be very or somewhat effective in making it easier to access the water for trout fishing in North Carolina:



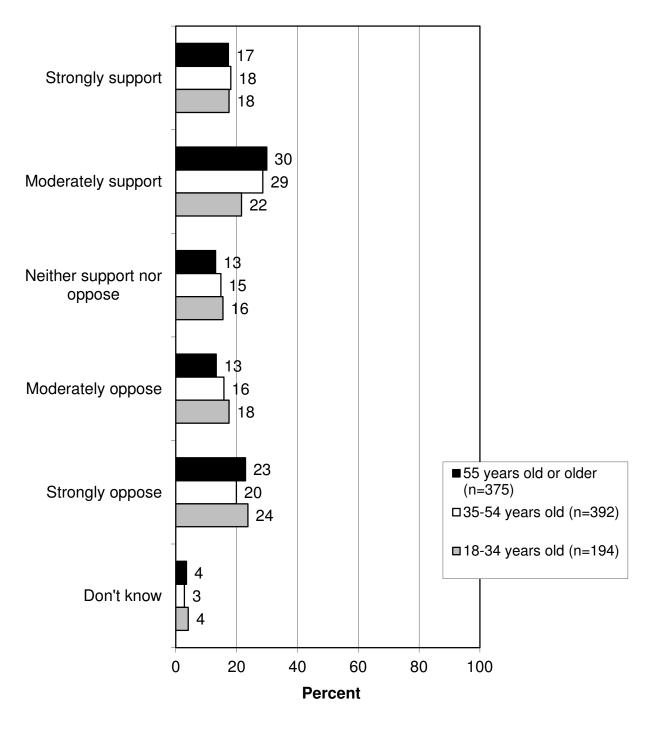
Q87-98. Percent who indicated each of the following would be not effective at all in making it easier to access the water for trout fishing in North Carolina:

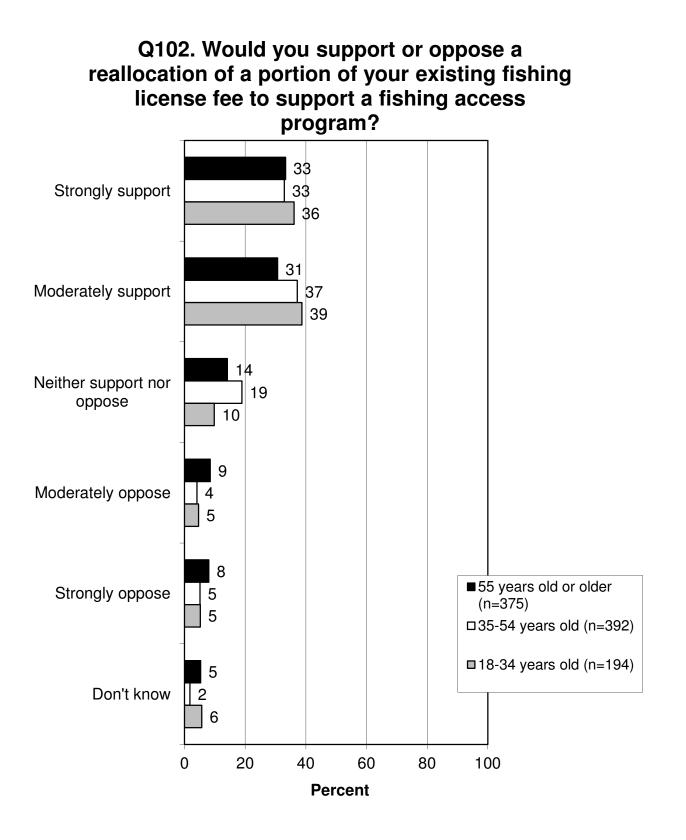


Q101-102. Would you support or oppose [a general access fee in addition to your fishing license fee / a reallocation of a portion of your existing fishing license fee] to support a fishing access program? (Asked of random half of sample.)



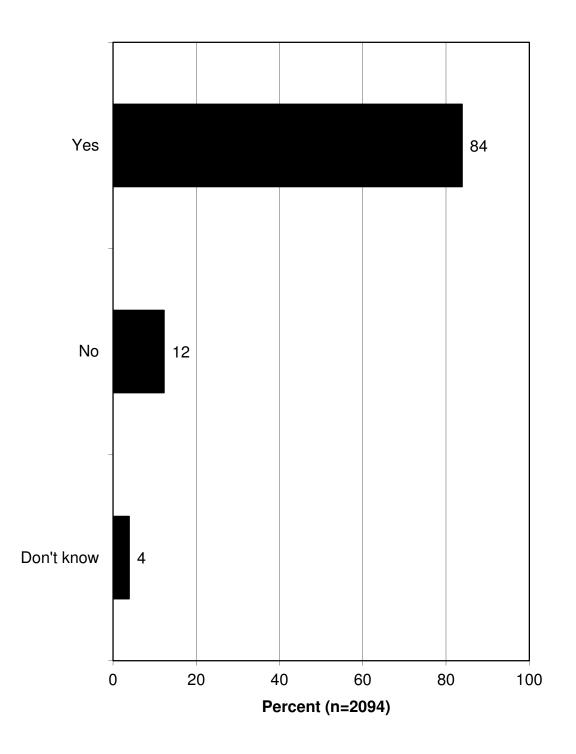
Q101. Would you support or oppose a general access fee in addition to your fishing license fee to support fishing access programs?





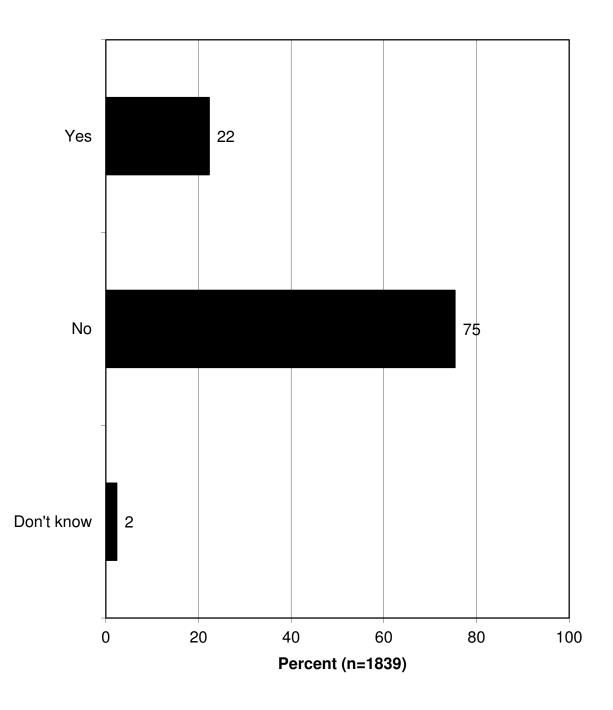
HATCHERY SUPPORTED TROUT WATERS

- The overwhelming majority of trout anglers (84%) have at some time fished in Hatchery Supported Trout Waters in North Carolina.
 - Among those who had ever fished in Hatchery Supported Trout Waters, 22% typically fish the opening day of the season in Hatchery Supported Trout Waters, 28% typically fish the opening weekend (this includes the 22% who typically fish opening day), and 51% typically fish within the first 7 days of the season (this includes the 28% who do so the opening weekend). Additionally, 73% typically fish at some time *after* the first 7 days of the season.
- When presented with two options for managing Hatchery Supported Trout Waters, the majority of those who have fished in those waters (55%) would prefer the current season structure (with a traditional opening day after the waters have been closed in March); however, 29% say that they would like the waters to be open all year.
- Finally in this section, more trout anglers fish for stocked trout than for wild trout: 35% fish mostly for stocked trout, while 21% fish mostly for wild trout. In the middle, 38% fish for both about equally.
 - Most of the change from 2006 to 2014 is because a greater percentage in 2014 responded that they do not know.

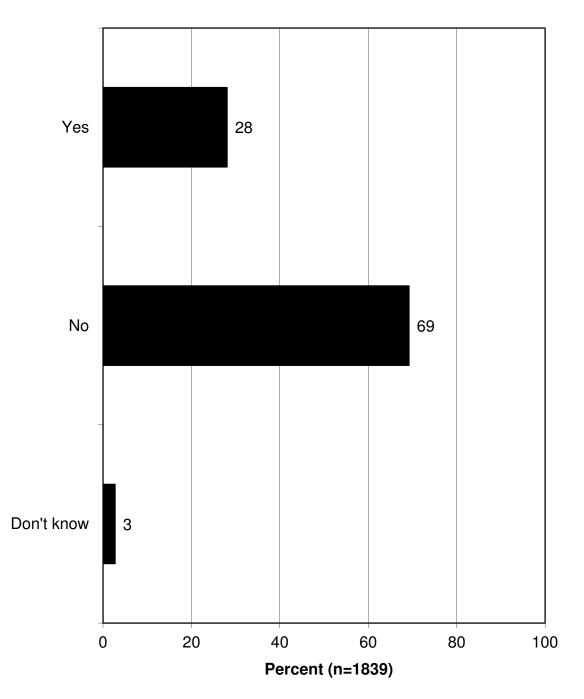


Q123. Have you ever fished Hatchery Supported Waters in North Carolina?

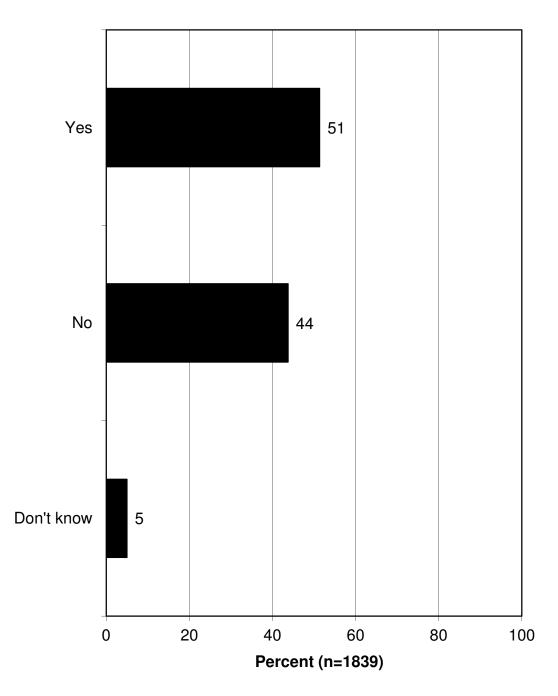
Q125. Do you typically fish opening day of Hatchery Supported Trout Waters? (Asked of those who ever fished Hatchery Supported Trout Waters in North Carolina.)

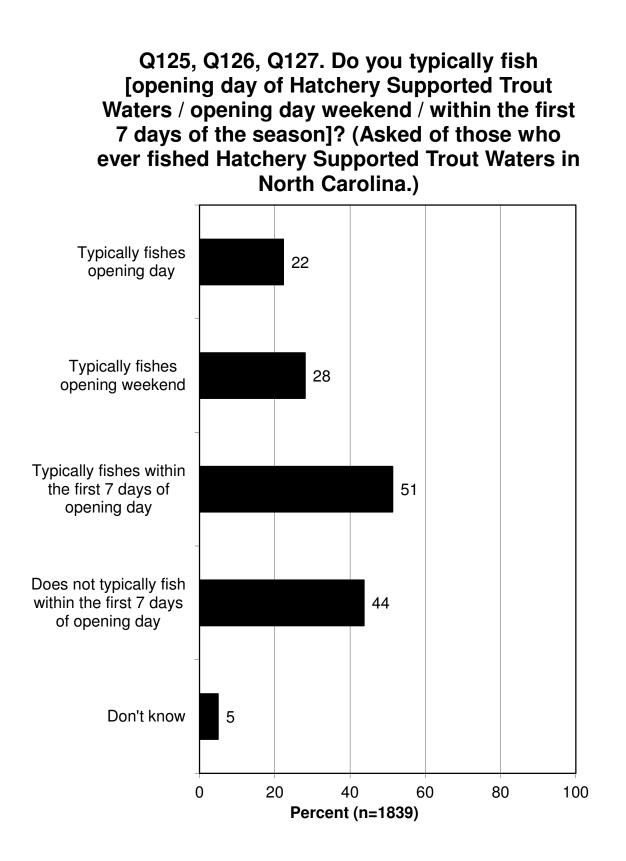


Q126. Do you typically fish opening day weekend of Hatchery Supported Trout Waters? (Asked of those who ever fished Hatchery Supported Trout Waters in North Carolina.)

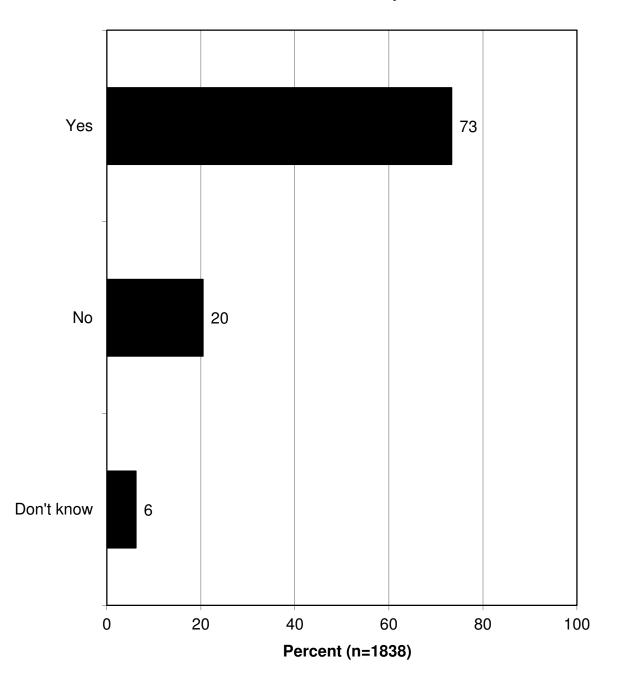


Q127. Do you typically fish within the first 7 days of the season? (Asked of those who ever fished Hatchery Supported Trout Waters in North Carolina.)

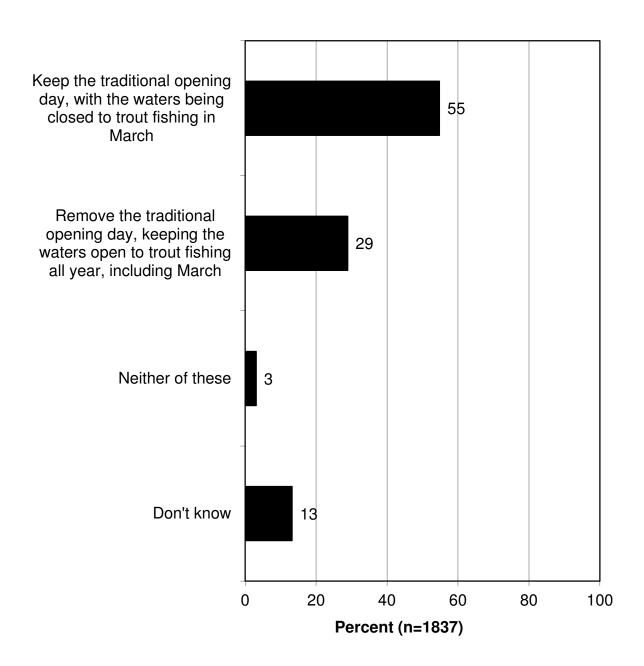




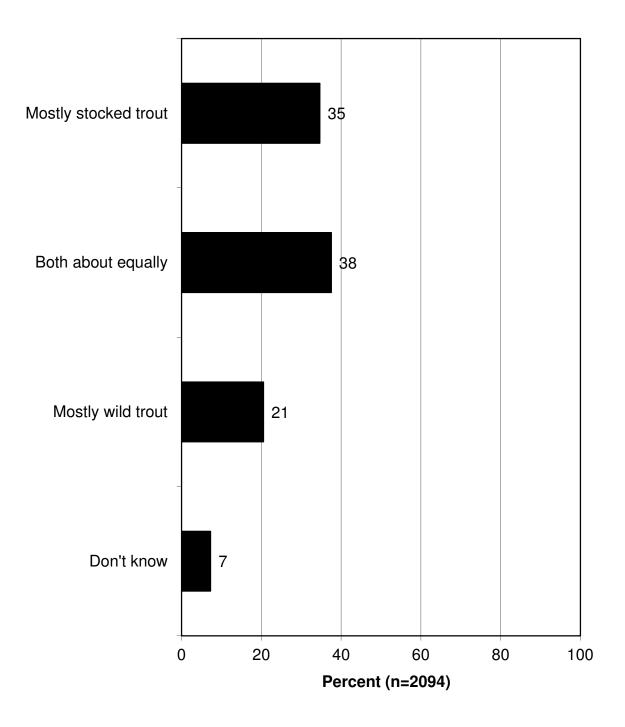
Q128. Do you typically fish for trout in Hatchery Supported Trout Waters at any time after the first 7 days of the season? (Asked of those who ever fished Hatchery Supported Trout Waters in North Carolina.)

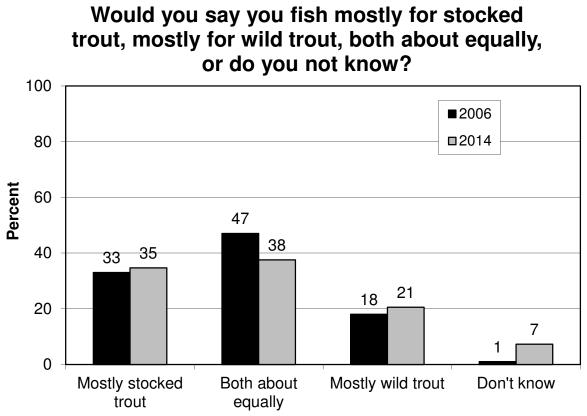


Q133. Which of the following management options would you most prefer for Hatchery Supported Trout Waters? (Asked of those who ever fished Hatchery Supported Trout Waters in North Carolina.)



Q134. Would you say you fish mostly for stocked trout, mostly for wild trout, both about equally, or do you not know?

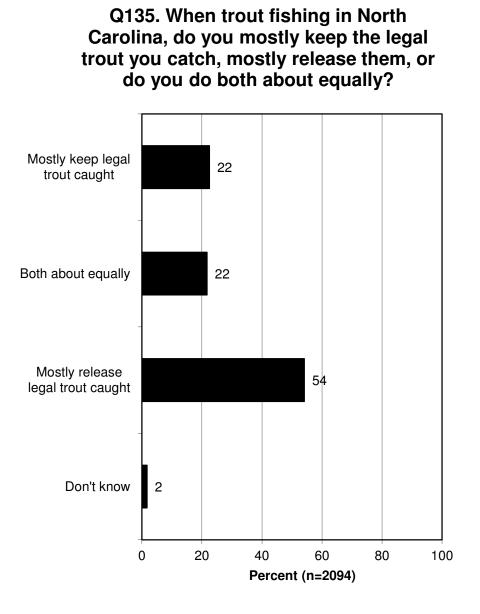


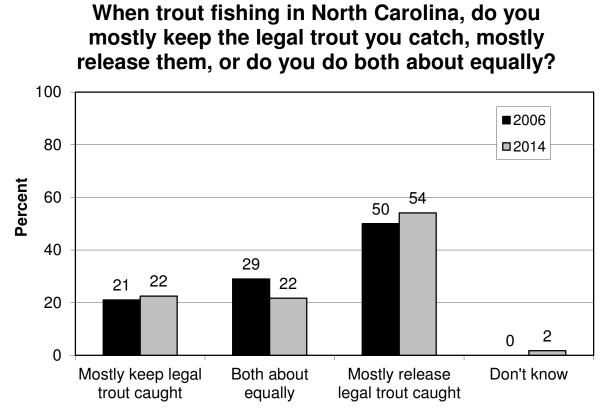


Note: 2006 sample consisted of resident trout anglers; 2014 sample consisted of resident and nonresident trout anglers.

CATCH-AND-RELEASE

- One question was asked about catch-and-release, finding that a majority of anglers say that they mostly release the legal trout that they catch (54% do so), while 22% mostly keep them (another 22% say that they do both about equally).
 - The trends suggest that more anglers are releasing their trout in 2014, compared to 2006.

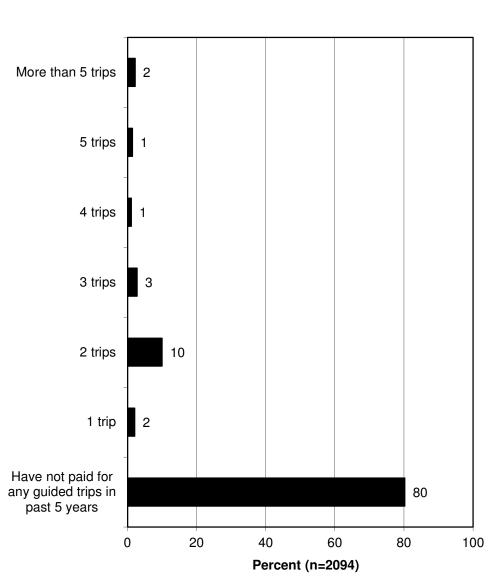




Note: 2006 sample consisted of resident trout anglers; 2014 sample consisted of resident and nonresident trout anglers.

GUIDED FISHING TRIPS

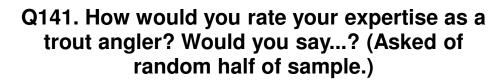
One-fifth of North Carolina trout anglers (20%) have paid for a guided fishing trip at some time in the past 5 years. Most commonly, those who paid for any guided trips had done so twice.

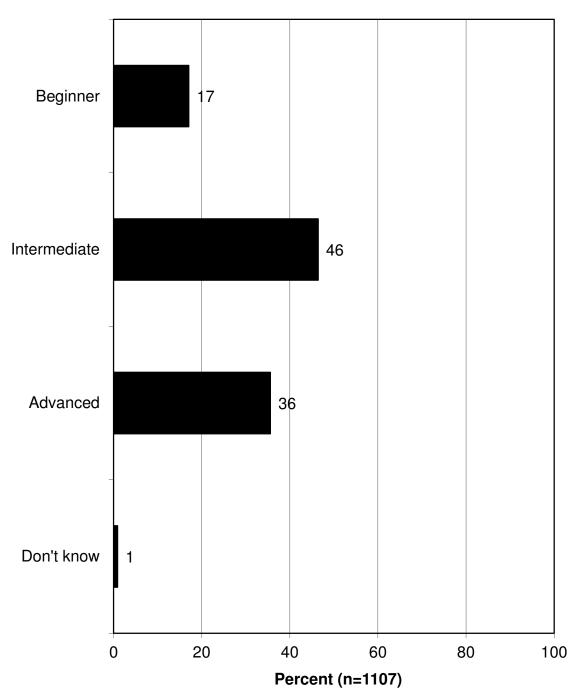


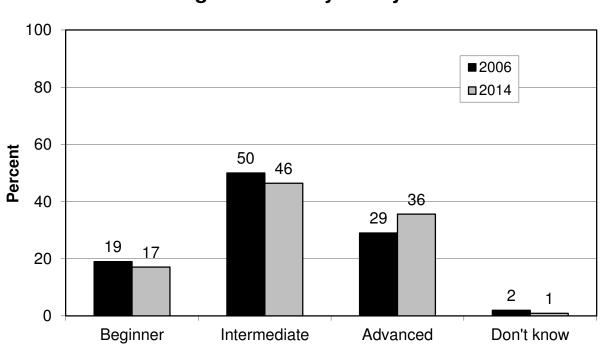
Q47. Have you paid for guided fishing trips at any time in the past 5 years? If yes, about how many guided trips have you paid for?

SELF-RATING OF SKILLS

- Although the question was asked primarily for use in crosstabulations, the results are of interest on their own: 17% of trout anglers in the survey consider themselves beginners, 46% consider themselves intermediate, and 36% consider themselves advanced.
 - The trends shows a slightly higher percentage of trout anglers claiming to be advanced in 2014, relative to 2006.







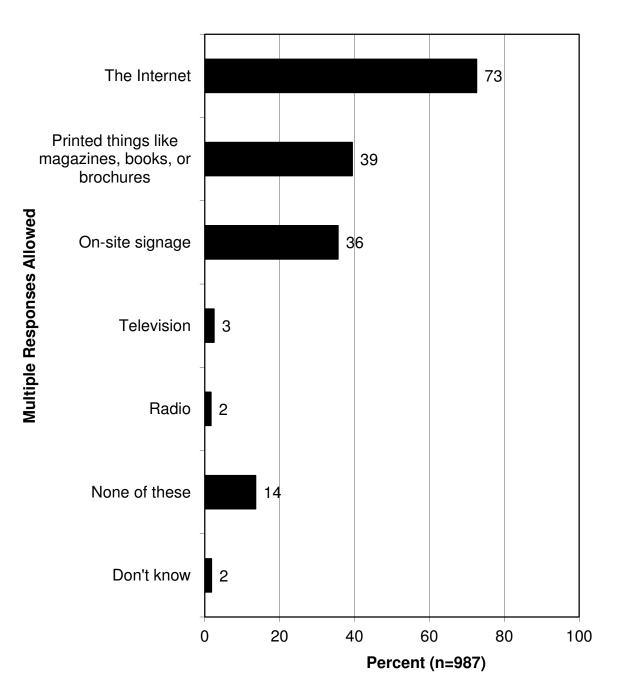
How would you rate your expertise as a trout angler? Would you say...?

Note: 2006 sample consisted of resident trout anglers; 2014 sample consisted of resident and nonresident trout anglers.

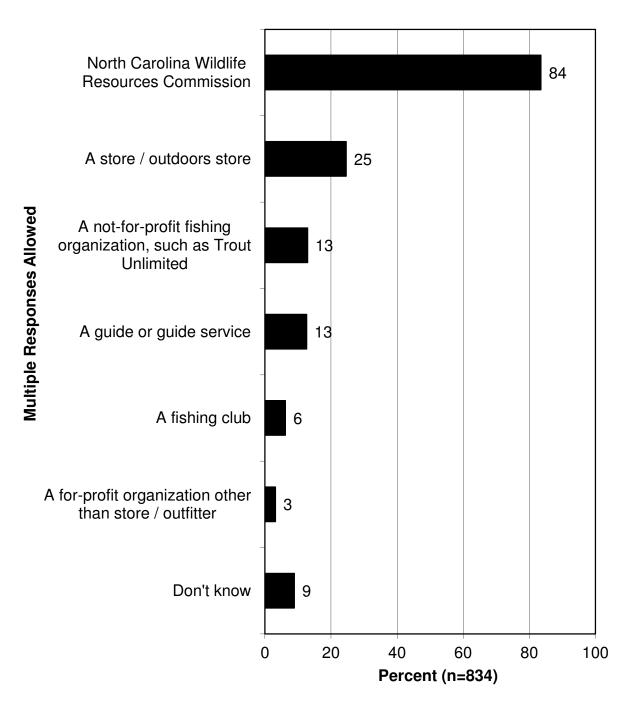
INFORMATION SOURCES ABOUT FISHING IN NORTH CAROLINA

- Three questions probed the sources of information about trout fishing in North Carolina that anglers use.
 - In the first, 73% say that they use the Internet, 39% use printed material (books, brochures, etc.), and 36% use on-site signage.
 - In the second question, the overwhelming majority use the Commission as their source (84%). Otherwise, outdoors stores (25%), not-for-profit organizations (13%), and a guide or service (13%) are fairly commonly used.
 - The third question asked specifically about getting information from social media: 18% of trout anglers get trout fishing information from social media such as Facebook or Twitter.

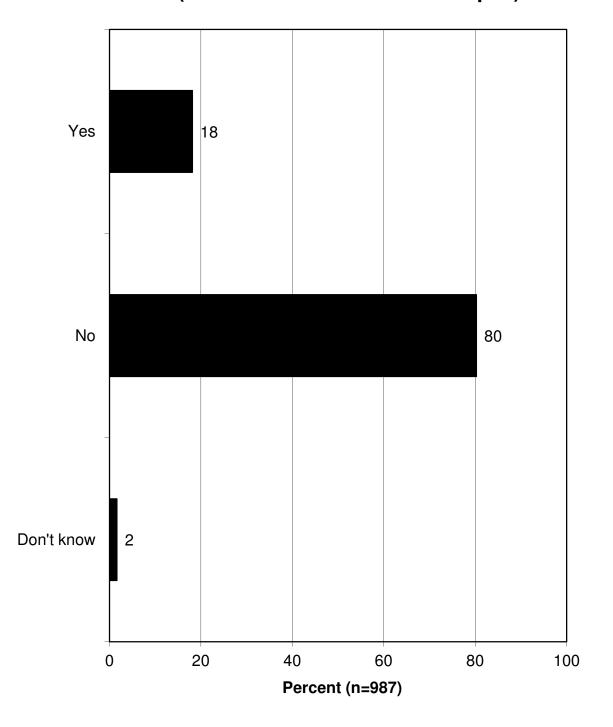
Q197. When you look for information about trout fishing in North Carolina, what formats do you use? Please tell me all that apply. Do you use...? (Asked of random half of sample.)



Q200. Who produces the information about trout fishing that you use? (Asked of random half of sample who named an information format in the previous question.)

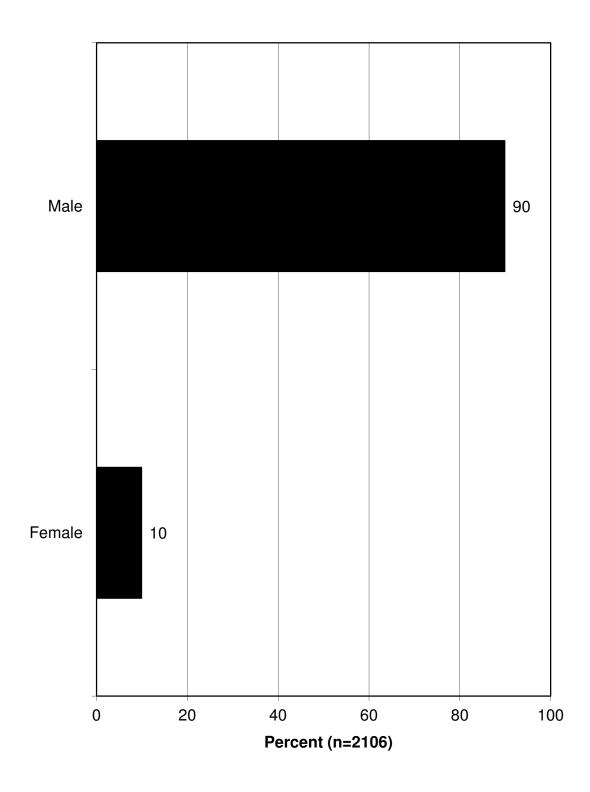


Q201. Do you ever get trout fishing information from social media, such as Facebook or Twitter? (Asked of random half of sample.)

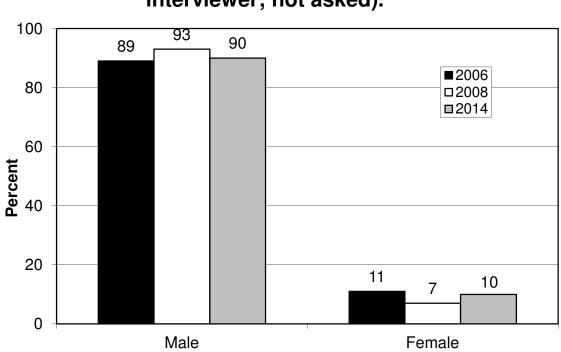


DEMOGRAPHIC DATA

- The demographic data obtained in the survey, which is primarily for crosstabulations, include gender, age, county of residence (among state residents), years lived in North Carolina (among state residents), level of education, and the residential character where they live.
 - Most trout anglers are male: 90% are men, while 10% are women.
 - A trend graph is included of this.
 - The graph of anglers' ages is shown: the median age of adult trout anglers is 50 years.
 - A trend graph is included of this.
 - The number of years lived in North Carolina (among residents) is shown.
 - Graphs showing counties of residence of trout anglers are also included; the top counties for trout anglers are Wake, Buncombe, and Mecklenburg (the graph shows the percentage of trout anglers residing in each county, not the percentage of county residents who fish for trout). Graphs are shown with the counties in alphabetical order as well as ranked by the percentage of trout anglers who reside in each county. Finally, a map is also provided.
 - Educational attainment is shown: 83% of trout anglers have some college or trade school experience (with or without a degree), while 45% have a Bachelor's degree (with or without a higher degree).
 - A trend graph is included of this.
 - Small cities/towns and rural areas predominate among trout anglers: 69% live in such an area, while 30% come from a large city/urban area or a suburban area.
 - A trend graph is included of this.

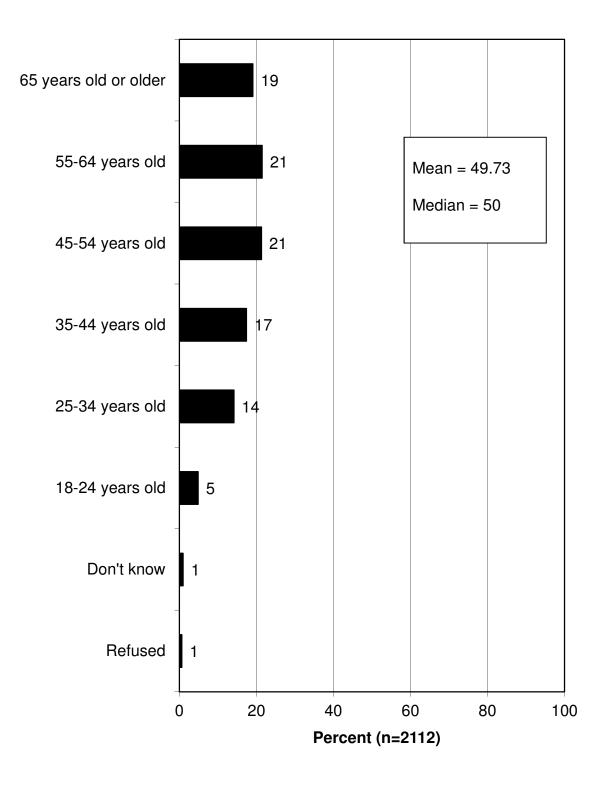


Q216. Respondent's gender.

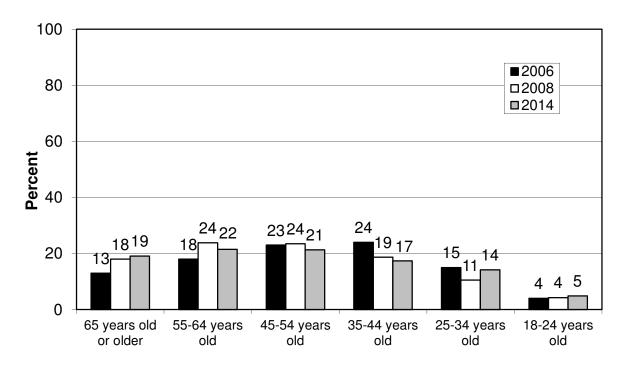


Q216. Respondent's gender (observed by interviewer; not asked).

Note: 2006 sample consisted of resident trout anglers; 2008 sample consisted of resident and nonresident trout anglers; 2014 sample consisted of resident and nonresident trout anglers.

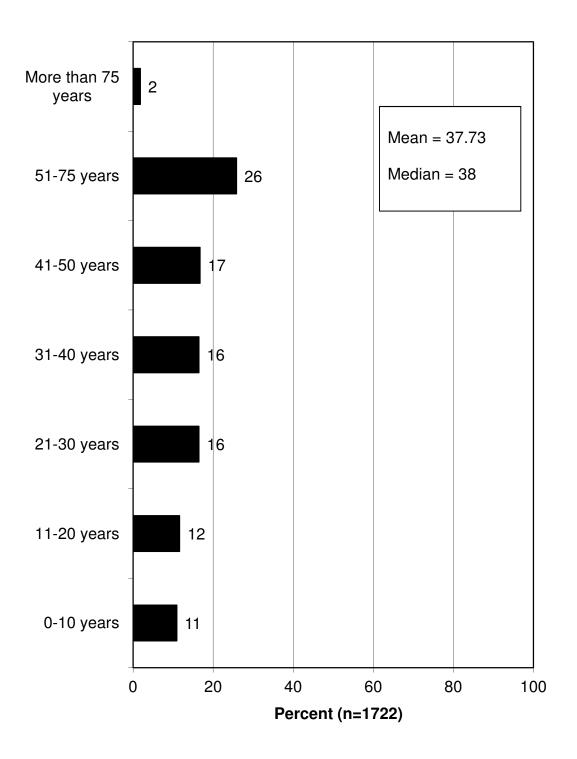


Q209. Respondent's age.



Q209. Respondent's age.

Note: 2006 sample consisted of resident trout anglers; 2008 sample consisted of resident and nonresident trout anglers; 2014 sample consisted of resident and nonresident trout anglers.



Q203. How many years have you lived in North Carolina? (Asked of North Carolina residents.)

Q206. In what county do you live? (Asked of North Carolina residents.) (Graph 1 of 3, alphabetically.)

Alamance	1 .1				
Alexander	0.3				
Alleghany	0.7				
Ashe	∎ 1.8				
Avery	■ 1.0				
Beaufort	1 .7				
Bladen	0.2				
Brunswick	0.6				
Buncombe	5 .9				
Burke	3 .0				
Cabarrus	0.8				
Caldwell	■ 2.1				
Camden	0.2				
Carteret	0.9				
Caswell	0.2				
Catawba	4 .1				
Chatham	0.3				
Cherokee	1 .6				
Chowan	0.2				
Clay	0.5				
Cleveland	0.8				
Columbus	0.2				
Craven	1.1				
Cumberland	0.3				
Currituck	0.2				
Dare	0.9				
Davidson	1 .4				
Davie	0.9				
Duplin	0.3				
Durham	1.5				
Edgecombe	0.2				
Forsyth	2 .8				
Franklin	0.2				
	0 2	20 4	0 6	0 8	0 100
			ercent (n=1)		
				,	

Q206. In what county do you live? (Asked of North Carolina residents.) (Graph 2 of 3, alphabetically.)

Gaston	■ 1.7					
Gates	0.1					
Graham	0.6					
Granville	0.3					
Greene	0.2					
Guilford	2.3					
Halifax	0.2					
Harnett	0.3					
Haywood	■ 2.5					
Henderson	3 .0					
Hertford	0.1					
Hoke	0.1					
Hyde	0.2					
Iredell	2 .3					
Jackson	■ 1.7					
Johnston	0.7					
Jones	0.1					
Lee	0.2					
Lenoir	■ 1.2					
Lincoln	∎ 1.4					
Macon	1 .4					
Madison	■ 1.4					
McDowell	■ 2.2					
Mecklenburg	5 .6					
Mitchell	0.5					
Montgomery	0.1					
Moore	0.4					
Nash	0.5					
New Hanover	1.0					
Northampton	0.2					
Onslow	0.7					
Orange	0.5					
	0 2	20 4	06	8 03	0 100)
	Percent (n=1727)					

Q206. In what county do you live? (Asked of North Carolina residents.) (Graph 3 of 3, alphabetically.)

Pamlico	0.1					
Pasquotank	0.1					
Pender	0.6					
Perquimans	0.2					
Person	0.2					
Pitt	∎ 1.5					
Polk	1.1					
Randolph	0.9					
Richmond	0.1					
Robeson	0.2					
Rockingham	0.6					
Rowan	∎ 1.4					
Rutherford	0.9					
Sampson	0.1					
Scotland	0.1					
Stanly	0.4					
Stokes	∮ 1.1					
Surry	∎ 1.9					
Swain	0.6					
Transylvania	∎ 1.7					
Tyrrell	0.1					
Union	∎ 1.2					
Vance	0.1					
Wake	6.2					
Warren	0.1					
Washington	0.3					
Watauga	■ 1.7					
Wayne	0.3					
Wilkes	■ 2.0					
Wilson	0.6					
Yadkin	0.7					
Yancey Don't know / refused	0.9					
DOLL KHOW / TEIUSED	0.6					
	0 2	20 4	40	60 8	30 100	
	Percent (n=1727)					

Q206. In what county do you live? (Asked of North Carolina residents.) (Graph 1 of 3, ranked.)

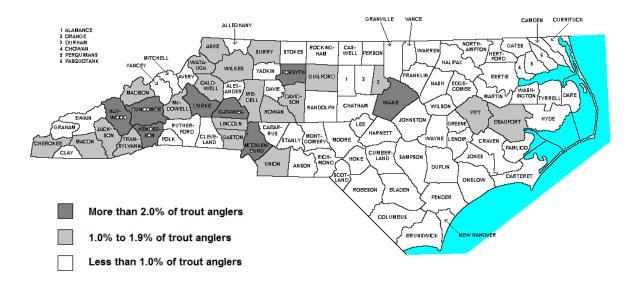
Wake					
Buncombe	6.2				
	5.9				
Mecklenburg	5.6				
Catawba	4.1				
Henderson	3.0				
Burke	3.0				
Forsyth	2.8				
Haywood	_■ 2.5				
Iredell	■ 2.3				
Guilford	■ 2.3				
McDowell	■ 2.2				
Caldwell	_■ 2.1				
Wilkes	_■ 2.0				
Surry	_ ■ 1.9				
Ashe	_■ 1.8				
Gaston	_■ 1.7				
Jackson	_■ 1.7				
Transylvania	_■ 1.7				
Watauga	_■ 1.7				
Beaufort	1 .7				
Cherokee	■ 1.6				
Durham	1 .5				
Pitt	1 .5				
Lincoln	∎ 1.4				
Macon	∎ 1.4				
Rowan	∎ 1.4				
Davidson	∎ 1.4				
Madison	∎ 1.4				
Union	∎ 1.2				
Lenoir	∎ 1.2				
Alamance	∎ 1.1				
Craven	∎ 1.1				
Polk	1.1				
			0 0	· · · · · · · · · · · · · · · · · · ·	
	0	20 4	0 6	30 8	30 100
		Ре	ercent (n=1	727)	

Q206. In what county do you live? (Asked of North Carolina residents.) (Graph 2 of 3, ranked.)

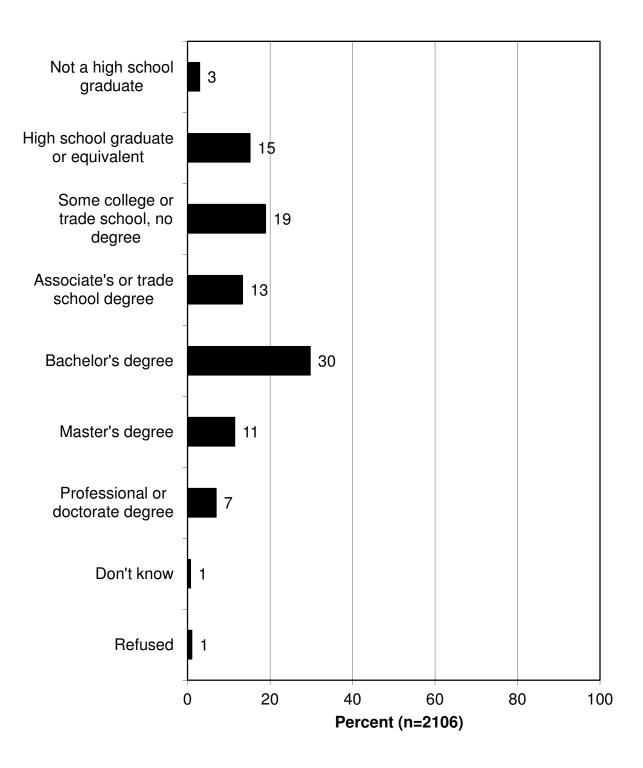
Stokes	∎ 1.1					
Avery	∎ 1.0					
New Hanover	1 .0					
Carteret	0.9					
Dare	0.9					
Yancey	0.9					
Davie	0.9					
Randolph	0.9					
Rutherford	0.9					
Cabarrus	0.8					
Cleveland	0.8					
Alleghany	0.7					
Johnston	0.7					
Onslow	0.7					
Yadkin	0.7					
Brunswick	0.6					
Graham	0.6					
Pender	0.6					
Rockingham	0.6					
Swain	0.6					
Wilson	0.6					
Clay	0.5					
Orange	0.5					
Mitchell	0.5					
Nash	0.5					
Moore	0.4					
Stanly	0.4					
Chatham	0.3					
Cumberland	0.3					
Granville	0.3					
Wayne	0.3					
Alexander	0.3					
Duplin	0.3			1		
(0 2	20 4	0 6	8 0	0 100	
	Percent (n=1727)					

Q206. In what county do you live? (Asked of North Carolina residents.) (Graph 3 of 3, ranked.)

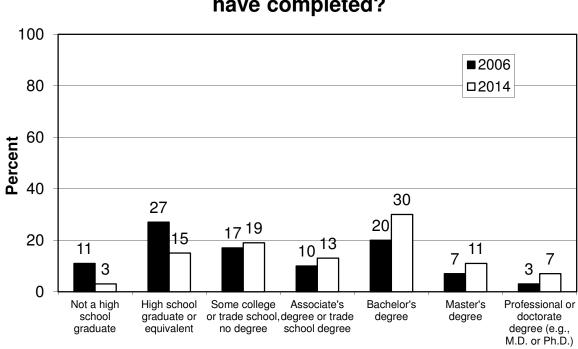
Harnett	0.3				
Washington	0.3				
Bladen	0.2				
Edgecombe	0.2				
Franklin	0.2				
Greene	0.2				
Halifax	0.2				
Northampton	0.2				
Person	0.2				
Camden	0.2				
Caswell	0.2				
Chowan	0.2				
Columbus	0.2				
Currituck	0.2				
Hyde	0.2				
Lee	0.2				
Perquimans	0.2				
Robeson	0.2				
Pamlico	0.1				
Pasquotank	0.1				
Vance	0.1				
Gates	0.1				
Hertford	0.1				
Hoke	0.1				
Jones	0.1				
Montgomery	0.1				
Richmond	0.1				
Sampson	0.1				
Scotland	0.1				
Tyrrell	0.1				
Warren	0.1				
Don't know / refused	0.6				
-	1	0 4	0 6	0 8	0 100
			rcent (n=1		
				,	



Counties of Residence of Trout Anglers



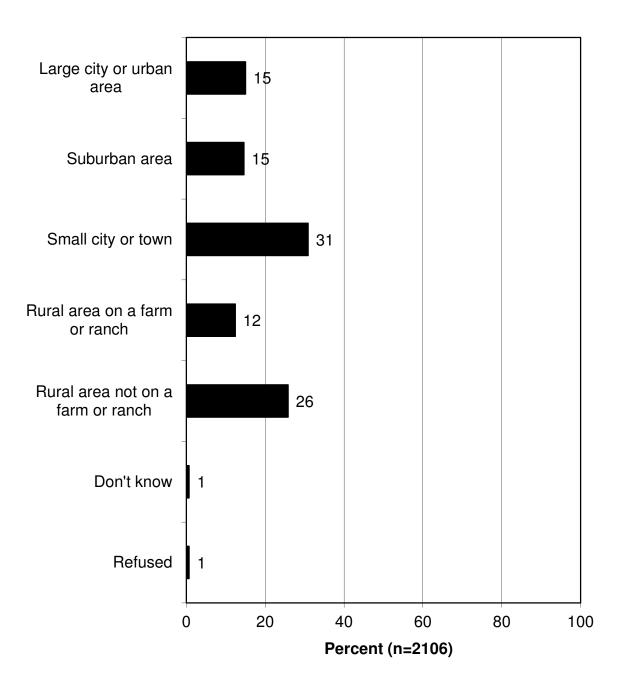
Q208. What is the highest level of education you have completed?

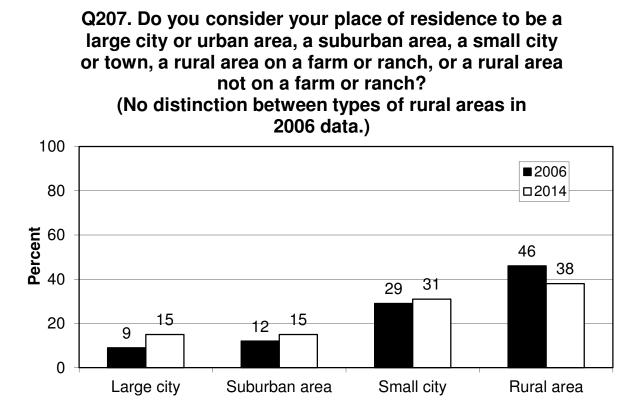


Q208. What is the highest level of education you have completed?

Note: 2006 sample consisted of resident trout anglers; 2014 sample consisted of resident and nonresident trout anglers.

Q207. Do you consider your place of residence to be a large city or urban area, a suburban area, a small city or town, a rural area on a farm or ranch, or a rural area not on a farm or ranch?





Note: 2006 sample consisted of resident trout anglers; 2014 sample consisted of resident and nonresident trout anglers.

ABOUT RESPONSIVE MANAGEMENT

Responsive Management is an internationally recognized public opinion and attitude survey research firm specializing in natural resource and outdoor recreation issues. Our mission is to help natural resource and outdoor recreation agencies and organizations better understand and work with their constituents, customers, and the public.

Utilizing our in-house, full-service telephone, mail, and web-based survey facilities with 50 professional interviewers, we have conducted more than 1,000 telephone surveys, mail surveys, personal interviews, and focus groups, as well as numerous marketing and communication plans, needs assessments, and program evaluations.

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

Specializing in research on public attitudes toward natural resource and outdoor recreation issues, Responsive Management has completed a wide range of projects during the past 25 years, including dozens of studies of hunters, anglers, wildlife viewers, boaters, park visitors, historic site visitors, hikers, birdwatchers, campers, and rock climbers. Responsive Management has conducted studies on endangered species; waterfowl and wetlands; and the reintroduction of large predators such as wolves, grizzly bears, and the Florida panther.

Responsive Management has assisted with research on numerous natural resource ballot initiatives and referenda and has helped agencies and organizations find alternative funding and increase their membership and donations. Additionally, Responsive Management has conducted major organizational and programmatic needs assessments to assist natural resource agencies and organizations in developing more effective programs based on a solid foundation of fact. Responsive Management has conducted research on public attitudes toward natural resources and outdoor recreation in almost every state in the United States, as well as in Canada, Australia, the United Kingdom, France, Germany, and Japan. Responsive Management has also conducted focus groups and personal interviews with residents of the African countries of Algeria, Cameroon, Mauritius, Namibia, South Africa, Tanzania, Zambia, and Zimbabwe.

Responsive Management routinely conducts surveys in Spanish and has conducted surveys in Chinese, Korean, Japanese and Vietnamese and has completed numerous studies with specific target audiences, including Hispanics; African-Americans; Asians; women; children; senior citizens; urban, suburban, and rural residents; large landowners; and farmers.

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

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