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A Discrete Choice Experiment Data Collection of U.S. West Coast Saltwater Anglers, 2017: Methodology and Response

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National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Northwest Fisheries Science Center

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Executive Summary

The Northwest and Southwest Fisheries Science Centers recently administered a set of four surveys to saltwater anglers on the U.S. West Coast. The Washington, Oregon, Northern California, and Southern California Sport Fishing Surveys collected data on trip-taking behavior, expenditures, preferences for fishing trip attributes, and demographics of the target population defined to be eligible: adult anglers with a license that allows saltwater use, having taken at least one trip in saltwater off the coasts of Washington, Oregon, or California within the previous 12 months.

The primary purpose of this data collection was to enable the estimation of changes in net economic value associated with changes in biological and management-related attributes, including catch rates, bag limits, and temporal closures among the primary recreational target species groups of the U.S. West Coast. In particular, the data collection included a set of questions referred to as a discrete choice experiment—a form of stated preference method that elicits trade-offs between attributes of the particular economic good being evaluated.

This technical memorandum describes the methodology used to develop and administer the final survey, and a large-scale pilot test. The pilot test was designed as an experiment to inform the protocols and survey design used for the final survey. One of the protocols investigated in the pilot test was the use of incentives in the fielding of the study. The pilot test results provided strong support for using a monetary incentive for the final administration of the survey. The pilot also found a slightly higher response for the mail mode, relative to web mode. Based on consideration of cost and response rates, the final survey included a \$2 incentive at the recruitment phase. The survey was fielded using a sequential mixed-mode approach, with a web survey instrument followed by subsequent mail survey contacts.

For the combined survey effort, a total of 13,500 anglers were sampled. Over all four regions, the estimated effective response rate among the eligible population of saltwater anglers was 44.2%.

The information contained here provides the detail necessary to evaluate the extent to which this data collection followed the best practices in contemporary stated preference research related to survey design, pretesting, the choice of elicitation method, the experimental design, human subjects and peer review, the mode of data collection, and sampling strategy (Johnston et al. 2017).

Introduction

This technical memorandum describes a set of saltwater angler surveys conducted in Washington, Oregon, and California. It is intended both to document the methods of the survey and to help guide future survey research of this type. The Northwest Fisheries Science Center (NWFSC) and the Southwest Fisheries Science Center (SWFSC) conducted all four surveys—the Washington Sport Fishing Survey, the Oregon Sport Fishing Survey, the Northern California Sport Fishing Survey, and the Southern California Sport Fishing Survey—in 2018. The target population for the project was all adult anglers who had taken at least one trip in salt water off the coast of Washington, Oregon, or California in the previous 12 months. The survey effort included the fielding of a pilot test that was used to inform the administration of the final survey. In each of the four regions, 3,375 fishing license holders were sampled—1,000 for the pilot test, and 2,375 for the final survey administration—for a combined total of 13,500 across the four regions.

The primary purpose of the data collection was to provide the basis for characterizing saltwater angler preferences on the U.S. West Coast. In particular, the collected data were designed to build models of economic demand to be used in quantifying the trade-offs anglers are willing to make between fishing trip attributes, including cost, catch rates, bag limits, and temporal closures. These demand models may be utilized to model anglers' choices between different trip types and also angler effort in terms of angling days. The trade-off between trip cost and other attributes forms the basis for estimating economic values, yielding measures of the net welfare change to saltwater anglers resulting from management or environmental changes (Anderson et al. 2013, Anderson and Lee 2013b).

The resulting economic model can also be used to form a behaviorally grounded projection of the number of saltwater fishing trips conditional on changes in species-specific catch rates, bag limits, or temporal closures. These projections, in turn, serve as important inputs to existing input-output models that are used to estimate the economic contribution of recreational fishing on regional economies (Leonard and Watson 2011).

This survey expanded on previous efforts conducted by NWFSC. The last survey was fielded in 2007 and included only Washington and Oregon (Anderson and Lee 2013a). Relative to the 2007 surveys, the current effort expanded the species coverage for Washington and Oregon to include albacore tuna, and included two distinct regions in California that were not part of the previous survey effort: Northern California and Southern California.

For the 2017 calendar year, saltwater fisheries on the U.S. West Coast supported over 5.8 million annual angler trips in U.S. waters, consisting of for-hire boat, private boat, and shorebased trips by over 1.3 million anglers. This report and the corresponding survey focus on for-hire boat and private boat trips. At the state level, Washington saltwater fisheries supported 83,000 for-hire trips, 1,012,000 private boat trips, and 513,000 shorebased trips. Oregon saltwater fisheries supported 65,000 for-hire trips, 395,000 private boat trips, and 233,000 shorebased trips. California saltwater fisheries supported 636,000 for-hire trips, 533,000 private boat trips, and 2,373,000 shorebased trips. For background on the economic contribution of the fishery, we direct the reader to Fisheries Economics of the United States, 2017 (NMFS in preparation).

Survey Design

Survey Instrument Construction and Pretesting

To create and refine the survey instruments, we used a series of focus groups followed by a pilot test. The focus groups were used primarily to develop and refine the initial survey instrument. We used the pilot test to gauge the effects of a number of different factors related to the survey administration on survey response rates.

Focus Groups

We conducted a set of five focus groups with saltwater anglers to help with the initial design of the survey instruments. These focus groups were spread across the four regions of Washington, Oregon, Northern California, and Southern California. Specifically, we held one focus group in each of the following locations: Seattle (Washington), Portland (Oregon), and San Francisco, Los Angeles, and San Diego (California).

Participants for the focus groups were recruited in one of two ways. In Washington and Oregon, participants were selected by sampling from annual license holders in the state fishing license databases. While this excluded anglers who only purchased daily licenses, we decided it would be beneficial to limit participants to a slightly more avid and likely more knowledgeable group of anglers.¹ At the time of the focus groups, it was not possible to use the state license database from California; participants in California were selected through existing lists of potential focus group participants maintained by owners of the focus group facilities.²

To ensure the sampled anglers were eligible, we administered a short telephone-based screening survey. In addition to asking questions about past saltwater fishing participation, the focus group screening survey asked a small number of demographic questions. These questions were used to stratify recruitment by avidity as well as by demographic characteristics such as age and gender.

The primary goal of the focus groups was to provide information to aid the design of the survey instrument, including determining the attributes that are most relevant to fishing trip decision-making, setting an appropriate range for the levels of these attributes, and ensuring the framework used to elicit preferences was thought to be contextually realistic and did not present anglers with an undesirably complex choice task.

We tested a number of alternate preference elicitation frameworks in the focus groups. The two primary approaches in the existing literature are referred to as Discrete Choice Experiment (DCE) and Contingent Behavior (CB). In the context of a recreational fishing survey, a DCE presents anglers with a set of potential fishing trip scenarios and then elicits

¹ We did not exclude these daily licenses from the subsequent data collection.

² We used the California license database to provide the sample for the final data collection.

their most-preferred choice. In contrast, a CB framework presents anglers with a depiction of conditions over a fishing season and elicits the total number of trips they would take under each CB scenario. Through testing the season-long CB scenario in two focus groups, we observed that many anglers reported they had very little confidence in their answers to these questions. More specifically, while focus group participants were able to provide answers to the CB questions, they acknowledged a large uncertainty around their estimate of the number of trips they would take over the full season based on factors external to the CB experiment that affect their availability to fish throughout the season and are inherently difficult to predict. The most common difficulty cited by anglers in focus groups related to these CB scenarios was that it was very challenging to account for other time commitments on a season-long basis. Respondents reported a higher level of confidence in their answers to questions framed on a trip basis, using the DCE preference elicitation framework. Based on these qualitative results, we decided to use the DCE approach in the final survey instrument.

Focus groups were also used to test whether the catch rate attribute could be described in a manner that accounts for the associated variance across actual fishing trips. Previous choice experiments of recreational fishing have generally framed the catch rate attribute using only a measure of central tendency (while not referring to this by any specific name; Lew and Larson 2011, Carter and Liese 2012, Anderson and Lee 2013a). We tested the level of understanding among focus group participants related to a few simple representations of a distribution, and whether framing the attributes describing catch increased the realism associated with the DCE task as stated by participants. We tested a number of different options, including text-only descriptions and some that also included a graphical depiction of the distribution. The graphical depictions received the best initial reaction from participants, but additional moderating found that stated understanding did not match up with actual understanding: many did not know how to read the figure correctly. In contrast, participants uniformly understood the text-only descriptions of the catch distribution, and most found that this sort of representation was more realistic and provided more information than a constant measure of catch. As a result of this testing, we selected a text-only description that provided the individual catch rates of a group of ten anglers to represent the distribution of catch. For illustrative purposes, two example descriptions of rockfish catch presented in the survey included: "...for every 10 anglers... 9 catch 0 rockfish each, 1 catches 12 rockfish" and "for every 10 anglers... 5 catch 12 rockfish each, 5 catch 8 rockfish each."

Paperwork Reduction Act Approval

As part of the survey review process, we submitted the survey to the Office of Management and Budget after the focus groups were completed to request approval to field the survey under the Paperwork Reduction Act. This approval process included a distinct request to use a pilot test to gauge the effect of three factors related to survey administration on survey response rates. We received no public comments in response to our Federal Register Notice.

Pilot Test

We conducted a pilot test after the focus groups were completed and after receiving approval from the Office of Management and Budget. This pilot test served two primary purposes: 1) it provided a general test of the protocols used to administer the survey, and 2) it provided a means to gauge the effect of three factors related to survey administration that were likely to affect response rates among sampled license holders. In particular, we tested the effect of survey response mode (mail or web), survey topic framing (saltwater or general recreation), and incentives (\$0, \$2, or \$5).

Based on the results of this pilot test, the survey protocol primarily used a web response, framed the survey more directly as a saltwater fishing survey, and included a \$2 incentive in the initial mail contact to each sampled angler.

Key results of the pilot test indicate significant differences between the response rates using the mail mode versus the web mode, and a significant increase in response rates for surveys that include a monetary incentive. For a detailed description of the pilot test and the associated results, please see [Appendix A](#). [Appendix B](#) contains all of the contacts.

Survey Instrument

A set of four separate surveys was developed for the four geographic regions covered by the study: Washington, Oregon, Northern California, and Southern California. Although the regional survey instruments maintained a great deal of consistency with one another, there were differences between regional versions. Regional survey instruments varied predominantly by questions related to primary target species, fishing locations, and the attributes of the DCE questions that are discussed in more detail in what follows.

The covers of the four regional surveys were composed of illustrations highlighting the primary saltwater target species of the region, designed to signal that the survey topic is salient to fishing license holders.

The first section of the survey, Section A, asked a series of general questions about fishing preferences and trip-related behavior. We asked respondents whether they prefer fishing or other types of recreation, and whether they prefer saltwater or freshwater fishing. Next, we asked the number of trips that had been taken in freshwater and saltwater, separately, within the last 12 months. This provided our screening question for eligibility; respondents were asked to skip ahead to the final demographic section of the survey if they responded that no saltwater trips had been taken in the past 12 months. Respondents who stated taking at least one saltwater trip were presented with a series of questions collecting more detail on trip-taking behavior, broken out by species group. In Washington and Oregon, there were three species groups: the *bottomfish* group comprised rockfish (not broken out by individual species; *Sebastes* spp.³), lingcod (*Ophiodon elongatus*), and Pacific halibut (*Hippoglossus stenolepis*); the *salmon* group included coho (*Oncorhynchus kisutch*) and Chinook (*O. tshawytscha*) salmon; and the *tuna* group contained albacore tuna (*Thunnus alalunga*). The species groups for Northern California matched that of Oregon and Washington. However, Northern California differed from Oregon and Washington in that California halibut (*Paralichthys californicus*) replaced Pacific halibut and coho salmon was excluded. Southern California also had three species groups, although there were significant differences between this region and the other three. In Southern California, the *bottomfish* group contained rockfish, lingcod, and California halibut; the *nearshore* group contained yellowtail tuna (*Seriola lalandi*), kelp bass (*Paralabrax clathratus*), and barred sandbass (*P. nebulifer*); and the *offshore* group included bluefin (*Thunnus orientalis*) and yellowfin (*T. albacares*) tuna, and dorado (*Coryphaenidae hippurus*).

For each species group, we asked respondents to provide the number of trips that had been taken in the past 12 months, the number of trips intended to be taken in the next 12 months, the location and fishing mode used most often for these trips, and the type of lodging that was used for overnight trips.

³ We refer to rockfish as a “species” throughout this document, for convenience.

It is common in recreational demand models to either exclude respondents who state that the recreational activity was not the primary purpose of the trip or model their behavior in a different manner (Parsons and Wilson 1997, Loomis et al. 2000, Parsons 2003). To allow for this, we asked respondents if saltwater fishing is usually the primary purpose of their trips.

The remainder of the first section on the survey asked the general motivations anglers have for saltwater fishing and to provide the number of trips they would take under ideal conditions. The reason for asking the latter question was to provide an individual number of choice occasions that can be used to expand economic welfare measures (calculated on a choice occasion basis) to annual measures.

The second section of the survey, Section B, collected trip expenditure data. Respondents were first asked a series of questions to characterize their most common type of fishing trip by both target species and mode of fishing (private boat or charter boat). Next, we asked for the trip-related expenditures, broken out by a number of different categories, for the type of fishing they do most often. These detailed expenditures were intended to help produce individual estimates of costs for the analysis of the DCE questions, as well as to provide the necessary inputs to generate estimates of economic contributions.

The next section, Section C, was composed of a set of four DCE questions. Each DCE question was composed of three saltwater boat fishing trip options and one option that represented doing anything other than saltwater boat fishing in the state, the latter often referred to as an opt-out in DCE research. The three saltwater boat fishing trip options, in turn, were composed of at least one species from each of the three species groups represented in each of the four regions. Respondents in either Washington, Oregon, or Northern California were presented with a set that included:

1. A bottomfish trip: rockfish, lingcod, or halibut (*Pacific* for Washington and Oregon, *California* for Northern California).
2. A salmon trip: coho or Chinook salmon for Washington and Oregon, Chinook salmon for Northern California.
3. A tuna trip: albacore tuna.

Respondents in Southern California were presented with:

1. A bottomfish trip: rockfish, lingcod, or California halibut.
2. A nearshore trip: yellowtail, kelp bass, or barred sandbass.
3. An offshore trip: yellowfin tuna, bluefin tuna, or dorado.

The general attributes in the DCE questions included a stochastic description of catch rates, bag limits, and species group closures. The full list of attributes and levels is presented by region in the Experimental Design section (Tables 1–3). The DCE questions elicited respondents' choices in a fully ranked manner; each question asked for the most preferred option and then followed up by asking for the second and third most preferred options.

The last section of the survey instrument, Section D, was a set of demographic questions. A standard set of questions asked respondents to provide their age, sex, and education level. Travel cost demand modeling typically relies on placing a price on travel time using some measure of the wage rate, whether fixed or variable (Cesario 1976, Layman et al. 1996, Larson and Lew 2014). To allow these calculations, we elicited household income and personal wage rate, and asked whether respondents took paid or unpaid time off work for saltwater fishing trips.

Both web and paper versions of the full set of surveys were developed. The web survey permitted the automation of the survey instrument and direct entry into the survey response database. The paper survey was formatted to allow machine scanning of the survey, to facilitate data entry.

Experimental Design

As mentioned above, we used focus groups to help determine which attributes to include in the DCE questions as well as to help set the overall range of the levels and the support points. These provided the foundation of the design, but are not sufficient to determine which combinations of choice profiles (in our context, trips) respondents were presented with in the DCE questions. The final design must characterize each of the three choice profiles per question—species targets, catch rates, bag limits, and any closures—for every DCE question on the survey. We next describe the process used to select choice profiles and the methods used to group these together to form the resulting DCE questions.

To begin, note that the full set of attributes and levels was described by catch rates, bag limits, and temporal closures, all by species, as well as fishing costs. The full set of levels of each attribute in the candidate set varied by species, and was determined with the help of focus groups, state fishing regulations, historic catch, and discussions with constituent groups and management agency staff.

There were essentially three distinct designs across the four regions, as the similarities between Washington and Oregon allowed for a shared design. The attributes of the Washington and Oregon design described catch for six species (rockfish, lingcod, Pacific halibut, Chinook salmon, coho salmon, and albacore tuna), bag limits for each of these species, three species group-level closures (bottomfish, salmon, and tuna), and fishing cost (Table 1).

The Northern California design attributes were very similar to those used in the Washington and Oregon design, the primary difference being the replacement of Pacific halibut with California halibut and the omission of coho salmon (Table 2).

The design for Southern California was notably different from the other regions, owing to major differences in species targets among anglers. The Southern California design attributes include catch levels of nine species (rockfish, lingcod, California halibut, yellowtail tuna, barred sandbass, kelp bass, bluefin tuna, yellowfin tuna, and dorado), bag limits for each of these, three species group-level closures (bottomfish, nearshore, and offshore), and fishing cost (Table 3).

Table 1. Washington and Oregon survey attributes and levels.

Species Group	Species	Catch Levels	Bag Limit Levels	Closure Levels	Private Boat Cost Levels	Charter Boat Cost Levels
Bottomfish	rockfish	0, 1, 3, 8, 12	1, 5, 10			
	lingcod	0, 1, 2, 3, 5	1, 2	0, 1	50, 75, 125	75, 125, 175
	Pacific halibut	0, 1, 2, 3	1, 2			
Salmon	Chinook salmon	0, 1, 2, 3, 6	1, 2			
	coho salmon	0, 1, 2, 3, 6	1, 2	0, 1	50, 75, 125	75, 125, 175
Tuna	albacore tuna	0, 2, 5, 10, 20	15, 25	0, 1	125, 175, 250	175, 300, 450

Table 2. Northern California survey attributes and levels.

Species Group	Species	Catch Levels	Bag Limit Levels	Closure Levels	Private Boat Cost Levels	Charter Boat Cost Levels
Bottomfish	rockfish	0, 1, 3, 8, 12	1, 5, 10			
	lingcod	0, 1, 2, 3, 5	1, 2	0, 1	50, 75, 125	75, 125, 175
	California halibut	0, 1, 3, 4	2, 3			
Salmon	Chinook salmon	0, 1, 2, 3, 6	1, 2	0, 1	50, 75, 125	75, 125, 175
Tuna	albacore tuna	0, 2, 5, 10, 20	15, 25	0, 1	125, 175, 250	175, 300, 450

Table 3. Southern California survey attributes and levels.

Species Group	Species	Catch Levels	Bag Limit Levels	Closure Levels	Private Boat Cost Levels	Charter Boat Cost Levels
Bottomfish	rockfish	0, 2, 7, 10, 15	5, 10			
	lingcod	0, 1, 3, 4	1, 2	0, 1	50, 75, 125	75, 125, 175
	California halibut	0, 1, 3, 5	2, 5			
Nearshore	yellowtail tuna	0, 3, 5, 7	5, 10			
	barred sandbass	0, 1, 3, 5, 7	3, 5	0, 1	50, 75, 125	75, 125, 175
	kelp bass	0, 1, 3, 5, 7	3, 5			
Offshore	bluefin tuna	0, 1, 2, 3	1, 2			
	dorado	0, 1, 2, 3	2, 10	0, 1	125, 175, 250	175, 300, 450
	yellowfin tuna	0, 3, 5, 7	5, 10			

The levels of the catch attributes in Tables 1–3 were described as the number of fish that were expected to be caught by an individual angler. As outlined above, the full depiction of catch on the survey instrument provided implicit probabilities associated with each of these levels for a given DCE trip by including the number of anglers who would receive each level of catch out of a representative group of 10 anglers. We used two or three points to support these catch distributions. As an illustrative example, a two-point description comprised numbers of anglers denoted by A1 and A2 ($A1 + A2 = 10$), and catch levels of C1 and C2 would describe a case where A1 anglers catch C1 fish, and A2 anglers catch C2 fish. For trips described by two points, we used the following angler combinations: 9 and 1; 8 and 2; 7 and 3; and 5 and 5. For three-point descriptions, we used the following combinations: 8, 1, and 1; 7, 2, and 1; and 5, 3, and 2.

As is common in DCE surveys, the full factorial design was too large to administer all possible combinations to a single respondent, necessitating the use of fractional design methods and blocking. We used these methods to select a subset of potential combinations while still allowing efficient estimation of the parameters on the attributes of the utility function.

The first step of this process is to create a candidate set. We accomplish this by first creating the full factorial of the attributes and their levels and then eliminating any combinations of attribute levels that would provide an unrealistic or otherwise problematic trip to present to respondents. For example, trips with average catch greater than the bag limit were dropped for each species in the design. Note that this exclusion does not preclude the measurement of the effect from a binding bag limit. Given the framing of catch rates that acknowledged uncertainty, the bag limit was still binding with some probability on a number of trips.

We used a computerized search algorithm to determine the fraction of the full factorial design to include on the survey. Specifically, we used a modified Federov iterative search algorithm to optimally pair members of this candidate set based on maximizing the D-efficiency of a choice model (Zwerina et al. 2010). In practice, this was accomplished using the SAS software macro %choiceff.

D-efficiency is a metric commonly used to quantify an experimental design in terms of the size of the covariance matrix, with larger variances resulting in lower scores. Specifically,

$$\text{D-efficiency} = [|\Omega|^{1/K}]^{-1},$$

where K is the number of parameters and the covariance matrix, Ω , is given by

$$\Omega = \sigma^2(X'X)^{-1}.$$

Standard discrete choice models, such as the conditional logit, require knowledge of parameter values to assess the efficiency of a design. This can be seen by noting that maximum likelihood methods for the conditional logit model result in a covariance matrix given by

$$\Omega = (Z'PZ)^{-1} = \left[\sum_{n=1}^N \sum_{j=1}^{J_n} (z'_{jn} P_{jn} z_{jn}) \right]^{-1},$$

where

$$z_{jn} = x_{jn} - \sum_{i=1}^{J_n} (x_{in} P_{in}),$$

J_n is the number of alternatives in the choice set, and N is the number of choice sets (McFadden 1974). The covariance matrix, Ω , is a function of the choice probabilities for each individual i for alternative n , P_{in} , which in turn are a function of the (unknown) utility parameters, β . To see this relation more clearly, note that in the conditional logit model, choice probabilities are given by

$$P_{in}(Y_n|\beta) = \frac{e^{\beta'x_{in}}}{\sum_{j=1}^{J_n} e^{\beta'x_{jn}}}.$$

The algorithm therefore requires an explicit specification of utility, as well as a set of expected values for the parameters of the utility function that vary in the design. We used input from anglers (collected during focus groups) and consultations with fishery managers to inform the relative magnitudes of parameter values in the utility function we specified for this algorithm. Note that the functional form of utility we used for the purposes of this design algorithm serves as a baseline model and does not fully exploit the complete set of design variables. While this model will be estimated for evaluation of the data and design, it is likely more simplistic than the final model that we will use to provide estimates of economic values. Nonetheless, the functional form used here should provide a fairly robust baseline, capable of estimating many different functional forms of utility.

During this phase of the design, we imposed a constraint on the algorithm to ensure that no choice profile in the final design consisted of three closed fisheries. In practice, this was achieved by incorporating a function in the search algorithm that added a sufficiently large penalty when a profile consisted of a set of fully closed fisheries.

We used 25 different versions of the survey instrument per region (Washington, Oregon, Northern California, and Southern California) to provide sufficient variation across attributes. As each survey version had four DCE questions, the result was 100 total DCE questions per region, each composed of three choice profiles per question.

Randomized blocking was then used to combine these 100 DCE questions into 25 sets of four per region. We selected four as the number of questions to include per survey version based on input from focus groups, our experience with past DCE survey efforts, and a target survey length of 16 pages based on paper survey page layout, printing and mailing budgets, and respondent completion rate concerns. This size also allows preference heterogeneity to be modeled while not imposing potentially excessive survey fatigue on the respondents.

To ensure each respondent was presented with trips representing as many trade-offs as possible in the four DCE questions they were presented, we created a blocking factor that is orthogonal to the design variables describing trip type, closures, and catch rates. In practice, this was accomplished using the SAS software macro %mktblock.

Administration of the Survey

ICF International, Inc. (ICF),⁴ the research and analysis firm, was contracted for the administration of the survey. A summary of the survey implementation contact protocol, advance letter, reminder postcard, email reminder, first survey mailing, second survey mailing, and response rates is presented below.

Survey Implementation Contact Protocol

The final survey implementation protocol consisted of five distinct contacts: an advance letter, a reminder postcard, an email reminder, and two mail survey packets. In total, 9,500 records were sampled over the period of 76 days (Table 4), not including the pilot test. The sample was distributed evenly across the four regions. Here we provide descriptions of the contacts as well as the timing of their administration. In addition, [Appendix C](#) contains all of the contacts.

Table 4. Quantity and timing of survey contacts.

Contact Name	Sampled Records	Time Between Contacts
Advance Letter	9,500	n/a
Reminder Postcard	9,160	11 days
Email Invitation	2,217 ^a	2 days
First Survey Mailing	6,593	3 weeks
Second Survey Mailing	6,276	4 weeks

^a Sent only to records with email addresses in sample.

Contact 1: Advance letter

The advance letter served to introduce the survey. The letter explained how the data would be used and encouraged respondent participation. The advance letters were sent through first class mail, using an envelope addressed to the license holder and customized with the NOAA logo. To further encourage participation in the study, this contact included a small cash incentive of \$2 for each respondent.⁵ The letter also included the web address of the survey and a unique passcode for respondents to access the survey. Email and telephone contact information for both NMFS researchers and ICF, provided in the letter, allowed respondents to ask questions directly, and signatures of the NMFS researchers printed in contrasting ink were included to provide a sense of personalization.

Contact 2: Reminder postcard

A reminder postcard was mailed to all nonrespondents to the advance letter approximately 11 days after the advance letters were mailed. Respondents who had completed the survey, refused the survey, or had completed the screening portion of the survey and were determined to not fish in saltwater (ineligible) were removed from the mailing. The reminder postcard described the purpose of the survey, how the data would be used,

⁴ <https://www.icf.com/>

⁵ A \$2 cash incentive was chosen after testing the effect of different incentive amounts in the pilot test of the survey. See [Appendix A](#) for a description of the pilot test and the results of this experiment.

reinforced the importance of participation, and “pushed” respondents to the web survey by including a web address and a unique passcode to access the survey. The postcards included a NOAA logo, a signature in contrasting ink, and contact information for both NMFS and ICF.

Contact 3: Email reminder

Two days after the reminder postcard was sent, an email reminder was sent to all nonrespondents who had an email address in the licensing databases. The email invitation again explained the purpose of the survey, how the data would be used, and encouraged participation in the survey. An embedded link to the online survey provided direct access to the survey, without the need for respondents to enter a unique passcode.

Contact 4: First survey mailing

Approximately three weeks after the email reminder was sent, all nonrespondents were sent the first survey packet in the mail. The survey packet consisted of a cover letter, a survey questionnaire, and a business reply envelope with the survey contractor’s return address. The cover letters introduced and explained the purpose of the survey, explained how the data would be used, and encouraged respondent participation. The letters were printed on NOAA letterhead and included contact information for NMFS and ICF, as well as a signature printed in contrasting ink.

There were 25 different survey versions in each of the four regions: Washington, Oregon, Northern California, and Southern California. Each survey version was formatted as a sixteen-page, black-and-white, 8.5 × 11-inch booklet, created by printing four 11 × 16-inch pages and stapling them along the spine. Within each region, each of the 25 different versions differed only in the section of four DCE questions.

Contact 5: Second survey mailing

Four weeks after the first survey packet was sent, all nonrespondents were mailed a second survey packet. Respondents who had completed a survey, had asked to be removed from future contacts, or had an undeliverable address were not sent a second survey packet. The second survey packet consisted of the same elements as the first survey packet. The only difference was in the wording of the cover letter, where a further appeal was made to those who had not yet responded, reinforcing the importance of returning a completed survey.

Response Rates

Response rate is the metric most commonly used to provide a broad assessment of the quality of a data collection. However, response rates are at best a blunt measure of the potential for data quality issues, such as nonresponse bias. Low response rates can be a signal of a higher potential for nonresponse bias, but do not, by themselves, provide evidence of any bias (Groves 2006, Meterko et al. 2015).

The magnitude of any nonresponse bias depends on the degree of correlation between the response variable of interest and the propensity to respond. The importance of response rates (and therefore nonresponse) depends on the specific variable of interest; nonresponse bias can vary substantially across different questions within the same data collection (Groves 2006). In the context of recreational surveys such as this, there is concern that respondents are more avid anglers than nonrespondents. This would likely result in biased measures of expenditures and net economic values without the proper corrections (Thomson 1991).

Placed within this context, the effects of including incentives are twofold: 1) they serve to decrease the unit nonresponse overall, and 2) they also serve to decrease the correlation between the propensity to respond and measures like willingness-to-pay for saltwater fishing trip characteristics by increasing the response rates among less-avid anglers. The former effect was shown to be statistically and practically significant, as assessed directly through the pilot test ([Appendix A](#)). The latter is an important reduction in avidity bias that we expect results from the incentives that were included in the survey protocols, albeit one that we cannot easily measure with available data. Although this discussion suggests that response rates are an imperfect measure of the quality of a data collection, they remain a customary output among survey researchers.

The components of all response rate calculations are the recorded dispositions associated with each sampled respondent: sampled (*S*), delivered (*D*), completed (*C*), refused (*R*), ineligible (*I*), and web partial (*W*); see Table 5. Sampled records are the number of license holders that were contacted in any manner attempted to be contacted. Delivered records are the number of sampled records minus those that resulted in an undeliverable status after using the email and mail addresses in the license frame. Completed records are defined as the number of respondents who completed the entire web questionnaire or completed the mail questionnaire further than the introductory section establishing eligibility. Refused records represent cases where respondents contacted the survey team and asked to be removed from future contacts. Ineligible records are respondents who reached the eligibility question and answered that they had not fished in saltwater within the last 12 months within the state. Web partial respondents filled out the web version of the survey past the confirmation of eligibility, but did not complete one or more of the remaining questions.

Since there are multiple ways to calculate response rates from the data collection, we provide multiple response rates to highlight the influence of different factors in these calculations. Specifically, we provide a set of eight response rates that vary three different two-level factors: whether undeliverable surveys are counted, whether partially completed web surveys are counted, and whether the response rate is calculated only among the eligible population.

Table 5. Survey disposition by region. Key: *S* = sampled, *D* = delivered, *C* = completed, *R* = refused, *I* = ineligible, *W* = web partial.

Region	S	D	C	R	I	W
Washington	2,375	1,933	478	4	388	73
Oregon	2,375	1,923	299	7	554	39
Northern California	2,375	2,049	224	15	372	50
Southern California	2,375	1,745	322	10	442	140
Total	9,500	7,650	1,323	36	1,756	302

Table 6. Response rates by factor.

Name	Drop Undeliverable	Include Web Partial	Eligible Only	Formula	Response Rate
RR1	No	No	No	$C / (S - I)$	17.1%
RR2	No	Yes	No	$(C + W) / (S - I)$	21.0%
RR3	Yes	No	No	$C / (D - I)$	22.4%
RR4	Yes	Yes	No	$(C + W) / (D - I)$	27.6%
RR5	No	No	Yes	$C / (C + e(S - C - I))$	30.0%
RR6	No	Yes	Yes	$(C + W) / (C + W + e(S - C - W - I))$	35.6%
RR7	Yes	No	Yes	$C / (C + e(D - C - I))$	37.6%
RR8	Yes	Yes	Yes	$(C + W) / (C + W + e(D - C - W - I))$	44.2%

We first calculated the eligibility rate (e) as the proportion of respondents who confirmed fishing in saltwater on either the web screener or the first few questions of the mail survey instrument ($1 - I / (I + C + W)$). The license frame cannot be used to determine eligibility; many license types that allow saltwater use are purchased with no intention of fishing in saltwater.

Note that, as expected, there are large differences across the different definitions of response rates (Table 6), varying from a low of 17.1% for RR1 to a high of 44.2% for RR8, as averaged over the four regions.

Although all of the response rates calculated here are informative in some regard, those that drop undeliverable records seem to convey more information about the quality of the data and could be seen as more relevant: undeliverable surveys likely reflect more on the quality of the sample frame itself, rather than measuring an individual's willingness to respond to the data collection after being contacted. Similarly, limiting the calculation to the estimated portion of the population that meets the eligibility conditions of the data collection seems to more closely match the purpose of the survey: extrapolating the sample characteristics to the population of saltwater anglers. The decision to include or exclude partially completed web surveys is less clear. Including partially completed web surveys imposes some parity relative to the mail surveys; mail surveys are classified as completed if the respondent proceeds past the introductory questions on general fishing avidity and eligibility. Including partial completes is a somewhat liberal definition of a completed survey, albeit one that is easy to describe and measure. For the reasons above, we focus on RR8 in what follows.

Estimated response rates using RR8 varied from a low of 31.5% in Northern California to a high of 51.8% in Southern California. Over all four regions, the average response rate RR8 was 44.2% (Table 7).

Previous surveys have estimated lower eligibility rates among the same population. In particular, a mail survey administered in 2007 estimated eligibility rates of 22.6% and 48.5% for Oregon and Washington, respectively (Anderson and Lee 2013a).

Table 7. Eligibility and response rates by region.

Region	Eligibility Rate	Response Rate (RR8)
Washington	58.7%	48.6%
Oregon	37.9%	46.4%
Northern California	42.4%	31.5%
Southern California	51.1%	51.8%
Total	48.1%	44.2%

Conclusion

This data collection provides the necessary first step to evaluate the preferences and characteristics of anglers who fish in saltwater off the U.S. West Coast. Using survey protocols that were refined through an extended pilot test, an estimated response rate of 44.2% was achieved among the eligible population. Future research will use these data to estimate discrete choice models characterizing the trade-offs that anglers on the U.S. West Coast make between different types of trips characterized by biological and regulatory attributes. These behavioral models can help evaluate the effects of changes in catch rates, fishery management policies, or other environmental changes on angler effort and net economic values.

This technical memorandum provides detail on the methodology used to design and administer the survey in order to allow other researchers to evaluate the extent to which best practices in stated preference survey research were followed, responding in part to recent calls for further transparency in stated preference research (Johnston et al. 2017).



References

- Anderson, L. E., and S. T. Lee. 2013a. Untangling the Recreational Value of Wild and Hatchery Salmon. *Marine Resource Economics* 28(2):175–197.
- Anderson, L. E., and S. T. Lee. 2013b. Washington and Oregon Saltwater Sportfishing Surveys: Methodology and Results. U.S. Department of Commerce, NOAA Technical Memorandum NMFS-NWFSC-124.
- Anderson, L. E., S. T. Lee, and P. S. Levin. 2013. Costs of Delaying Conservation: Regulations and the Recreational Values of Exploited and Co-occurring Species. *Land Economics* 89(2):371–385.
- Carter, D. W., and C. Liese. 2012. The Economic Value of Catching and Keeping or Releasing Saltwater Sport Fish in the Southeast USA. *North American Journal of Fisheries Management* 32(4):613–625.
- Cesario, F. J. 1976. Value of Time in Recreation Benefit Studies. *Land Economics* 52(1):32.
- Converse, P. D., E. W. Wolfe, Xiaoting Huang, and F. L. Oswald. 2008. Response Rates for Mixed-Mode Surveys Using Mail and E-mail/Web. *American Journal of Evaluation* 29(1):99–107.
- Dillman, D. A., G. Phelps, R. Tortora, K. Swift, J. Kohrell, J. Berck, and B. L. Messer. 2009. Response rate and measurement differences in mixed-mode surveys using mail, telephone, interactive voice response (IVR) and the Internet. *Social Science Research* 38(1):1–18.
- Edwards, P. 2005. Meta-analysis of randomised trials of monetary incentives and response to mailed questionnaires. *Journal of Epidemiology & Community Health* 59(11):987–999.
- Goyder, J. 1987. *The silent minority: Nonrespondents on sample surveys*. Polity Press, Cambridge, UK.
- Groves, R. M. 2006. Nonresponse Rates and Nonresponse Bias in Household Surveys. *Public Opinion Quarterly* 70(5):646–675.
- Groves, R. M., M. P. Couper, S. Presser, E. Singer, R. Tourangeau, G. P. Acosta, and L. Nelson. 2006. Experiments in Producing Nonresponse Bias. *Public Opinion Quarterly* 70(5):720–736.
- Groves, R. M., S. Presser, and S. Dipko. 2004. The Role of Topic Interest in Survey Participation Decisions. *Public Opinion Quarterly* 68(1):2–31.
- Groves, R. M., E. Singer, and A. Corning. 2000. Leverage-Saliency Theory of Survey Participation. *Public Opinion Quarterly* 64(3):299–308.
- Jobber, D., J. Saunders, and V.-W. Mitchell. 2004. Prepaid monetary incentive effects on mail survey response. *Journal of Business Research* 57(4):347–350.
- Johnston, R. J., K. J. Boyle, W. (Vic) Adamowicz, J. Bennett, R. Brouwer, T. A. Cameron, W. M. Hanemann, N. Hanley, M. Ryan, R. Scarpa, R. Tourangeau, and C. A. Vossler. 2017. Contemporary Guidance for Stated Preference Studies. *Journal of the Association of Environmental and Resource Economists* 4(2):319–405.
- Larson, D. M., and D. K. Lew. 2014. The Opportunity Cost of Travel Time as a Noisy Wage Fraction. *American Journal of Agricultural Economics* 96(2):420–437.
- Layman, R. C., J. R. Boyce, and K. R. Criddle. 1996. Economic Valuation of the Chinook Salmon Sport Fishery of the Gulkana River, Alaska, under Current and Alternate Management Plans. *Land Economics* 72(1):113.
- Leonard, J., and P. Watson. 2011. Description of the Input-Output Model for Pacific Coast Fisheries. U.S. Department of Commerce, NOAA Technical Memorandum NMFS-NWFSC-111.
- Lew, D. K., and D. M. Larson. 2011. A Repeated Mixed Logit Approach to Valuing a Local Sport Fishery: The Case of Southeast Alaska Salmon. *Land Economics* 87(4):712–729.

- Loomis, J., S. Yorizane, and D. Larson. 2000. Testing Significance of Multi-Destination and Multi-Purpose Trip Effects in a Travel Cost Method Demand Model for Whale Watching Trips. *Agricultural and Resource Economics Review* 29(02):183–191.
- Marcus, B., M. Bosnjak, S. Lindner, S. Pilischenko, and A. Schütz. 2007. Compensating for Low Topic Interest and Long Surveys: A Field Experiment on Nonresponse in Web Surveys. *Social Science Computer Review* 25(3):372–383.
- McFadden, D. 1974. Conditional Logit Analysis of Qualitative Choice Behavior. Pages 105–142 *in* P. Zarembka, editor. *Frontiers in Econometrics*. Academic Press, New York.
- Meterko, M., J. D. Restuccia, K. Stolzmann, D. Mohr, C. Brennan, J. Glasgow, and P. Kaboli. 2015. Response Rates, Nonresponse Bias, and Data Quality. *Public Opinion Quarterly* 79(1):130–144.
- Millar, M. M., and D. A. Dillman. 2011. Improving Response to Web and Mixed-Mode Surveys. *Public Opinion Quarterly* 75(2):249–269.
- Parsons, G. R. 2003. The Travel Cost Model. Pages 269–329 *in* P. A. Champ, K. J. Boyle, and T. C. Brown, editors. *A Primer on Nonmarket Valuation*. Springer Netherlands, Dordrecht.
- Parsons, G. R., and A. J. Wilson. 1997. Incidental and Joint Consumption in Recreation Demand. *Agricultural and Resource Economics Review* 26(01):1–6.
- Shannon, D. M., and C. C. Bradshaw. 2002. A Comparison of Response Rate, Response Time, and Costs of Mail and Electronic Surveys. *The Journal of Experimental Education* 70(2):179–192.
- Smyth, J. D., D. A. Dillman, L. M. Christian, and A. C. O’Neill. 2010. Using the Internet to Survey Small Towns and Communities: Limitations and Possibilities in the Early 21st Century. *American Behavioral Scientist* 53(9):1423–1448.
- Thomson, C. 1991. Effects of the Avidity Bias on Survey Estimates of Fishing Effort and Economic Value. *American Fisheries Society Symposium* 12.
- Zwerina, K., J. Huber, and W. F. Kuhfeld. 2010. A general method for constructing efficient choice designs. Pages 265–283 *in* W. F. Kuhfeld, editor. *Marketing Research Methods in SAS: Experimental Design, Choice, Conjoint, and Graphical Techniques*. SAS Institute, Inc., Cary, North Carolina.

Appendix A: Pilot Test

Overview

The pilot test of the survey served two main purposes: it provided the means to test the general protocols used to administer the survey, while also testing the effect of three factors that could influence response rates, as proxied by screener return rates, among both the eligible and ineligible population: survey topic framing, survey response mode, and incentives. By using this initial pilot of the survey, we were able to determine the most efficient way to determine eligibility among the sampled population, as well as to increase the number of completed responses from eligible saltwater anglers.

For survey topic, we tested whether framing using the context of a general recreation survey resulted in different screener return rates than framing more directly as a saltwater fishing survey. It was not possible to use the license database to determine whether a sampled individual was a saltwater angler, due to a number of combination licenses that allow both fresh- and saltwater use. In this context, it is possible that framing more generally about recreation could increase returns from license holders who are not saltwater anglers. In addition, if ineligible anglers are more likely to respond early with a more general recreation focus, this could eliminate them from future contacts and therefore save on the corresponding expense of those contacts.

We tested the effect of response mode by varying the primary mode used to respond to the two contacts for the pilot test: mail or web. Both mode treatments included a mailed advance letter. Remaining contacts for the mail mode treatment encouraged participation in a mail survey, whereas the web mode contacts encouraged respondents to access the online version of the survey. As mail and web contacts had different associated costs and were expected to have different response rates, it was important to quantify this prior to deciding on the protocol to administer the final survey.

The effect of incentives was quantified by testing the effect of two different pre-incentive amounts—\$2 and \$5—relative to a baseline where no incentives were included with the original contact. The decision to include incentives as part of the subsequent final survey administration depended on whether the cost per completed survey was lower with or without an incentive.

These three factors—of survey topic, mode, and incentive—were tested using a simple $2 \times 2 \times 3$ factorial design, resulting in 12 design profiles (Table A-1). These treatment profiles were administered randomly among the 4,000 license holders sampled for the pilot test.¹

¹ Note, for clarification, that this experimental design was only used to determine the effect of these three factors to inform the final survey administration, and is distinct from the design that was used to determine the choice profiles for the DCE questions.

In what follows, we describe all of the survey materials used to conduct the pilot test, the sampling plan, and the survey protocol used to administer the survey. We conclude with a presentation of the results and a discussion of how the results informed the administration of the final survey.

Pilot Test Materials

In general, the pilot test included the same materials as the final survey, described in the main report. The primary differences are in the framing of the initial contacts, when testing for the effect of survey topic.

Pretest materials included cover letters, a screener questionnaire to establish eligibility, and a full questionnaire to gather information about saltwater fishing behavior and preferences. Each of these contacts is described below. In addition, copies of advance letters, screeners, and an example of each mail survey topic used in the pilot test are presented in [Appendix B](#).

Advance letter: Initial contact

Eight different versions of the advance letter that provided the initial contact were used in each region, based on the experimental factors of survey topic, response mode, and incentive amount. However, the cover letters for respondents receiving \$2 and \$5 were not differentiated; both simply stated that a small token of appreciation was included as a thank you for completing the survey. This resulted in 8 ($2 \times 2 \times 2$) unique cover letters, rather than the full 12 combinations represented by the pilot test treatment profiles.

Screening survey to determine eligibility

Screening questions were developed to determine eligibility for the study, defined as having saltwater fished in the region within the past 12 months. As part of the test of survey topic and response mode, screener questionnaires emphasized either recreation or saltwater fishing, and were completed either on paper or online.

The paper screener included questions about how many fishing trips the respondent had taken in the specified region, species groups they had targeted, and some demographic information. The recreational survey topic version of the screener began with two questions about general outdoor recreational activities before asking about fishing activity, whereas the saltwater fishing version of the screener began more directly with questions about fishing activity.

Table A-1. Pilot test experimental design profiles.

Profile	Survey Topic	Response Mode	Incentive
1	Recreation	Mail	\$0
2	Recreation	Mail	\$2
3	Recreation	Mail	\$5
4	Recreation	Web	\$0
5	Recreation	Web	\$2
6	Recreation	Web	\$5
7	SW Fishing	Mail	\$0
8	SW Fishing	Mail	\$2
9	SW Fishing	Mail	\$5
10	SW Fishing	Web	\$0
11	SW Fishing	Web	\$2
12	SW Fishing	Web	\$5

Respondents to the web response mode were presented with web-based questions after a brief introductory screening question to determine eligibility. Ineligible respondents were thanked for their time and no further questions were asked. Respondents who were determined to be eligible after completing the web mode screener were transitioned directly into the full questionnaire. To avoid asking duplicative questions within the same overall survey experience (screener and full survey for the respondents who were eligible), some of the screener questions for the web-based group were dropped if they had also been asked on the full survey. Therefore, the paper screener was somewhat different from the web screener.

Survey instrument

The survey instrument contained four sections: fishing activities, typical trip expenses, fishing trip preferences, and demographics. As mentioned earlier, there were 25 survey versions within each of the four geographic regions to provide the DCE questions used to estimate trade-offs between fishing trip attributes. Regional differences within the questionnaire items included references to the region, fishing locations, and species of fish. In the trip preference section (Section C), each of the 25 versions presented different types of saltwater fishing trips, and anglers were asked to rank the presented trips. The trip attributes varied by target species availability/closures, catch rates, bag limits, and fishing costs.

Two different covers were used as part of the test of survey topic framing described above. The saltwater fishing topic group received a survey with a cover that showed only pictures of fish common to the region, whereas the recreational topic group was shown pictures of other recreational activities in addition to pictures of fish common to the region ([Appendix B](#)). Accounting for this difference in covers, 200 different survey questionnaire versions were included in the pilot test: two different survey covers on each of the 25 versions used for the DCE design within each of four regions.

Cover letter: Reminder contact

The reminder contact also included multiple versions of the cover letter, based on the factors of the pilot test and whether a response had been received from the screening questionnaire. Six total versions were sent in each region. The two versions for the web response mode only differed in the survey topic. The four versions for the mail response mode differed in survey topic and used different language to thank those who had already responded to the screening questionnaire.

Sampling

The target population for the survey was composed of anglers who had fished in saltwater within the previous 12 months in Washington, Oregon, or California. However, the state license databases have multiple types of combination licenses that allow for both freshwater and saltwater fishing, and therefore cannot be used alone to determine eligibility. A random sample of 4,000 records was drawn for the pretest, stratified by the

four regions: Washington, Oregon, Northern California, and Southern California. The 4,000 sampled records were randomly assigned to one of the 12 experimental treatment profiles from the $2 \times 2 \times 3$ factorial design of the pilot test discussed above.

In addition to allocating the sample across the design profiles of the pilot test, sampled records were also assigned evenly across each of the 25 survey versions in each region. We used these 25 survey versions to block the experimental design for the DCE questions into blocks of four questions per survey version.

Pilot test protocol

The pilot test protocol consisted of two contacts: an initial contact and a reminder contact. The included materials varied by survey type, response mode, and incentive amount.

Respondents included in the web response mode received letters for both the initial and reminder contacts containing a web address and unique passcode to access the survey online. Respondents in the mail group received a letter and a paper version of the screening survey for the initial contact, and a letter with the survey booklet as the reminder contact.

Initial contact

The initial contact included only an advance letter in the web response mode. In the mail response mode, the initial contact included an advance letter, screening survey, and business reply envelope. In all conditions, the advance letter introduced the survey, explained how the data would be used, and encouraged respondent participation. The advance letter for the web response mode also included the web address and a unique passcode for respondents to access the survey online. All of the advance letters were printed on NOAA letterhead, included contact information for NMFS researchers and ICF project managers, and were signed with contrasting ink. The advance letters were sent by first class mail, using an envelope customized with the NOAA logo addressed to the license holder.

Approximately two-thirds of the sample were chosen to receive an incentive. Half of this group received two one-dollar bills and the other half received a five-dollar bill.

The wording contained in the advance letters varied slightly depending on the survey topic condition. The saltwater fishing letter explained that the purpose of the survey was to help NMFS better understand and manage fish stocks and determine the economic impact of saltwater fishing, whereas the recreational letter described the research more broadly as a survey conducted by NOAA about recreational activities.

Reminder contact

A reminder contact was mailed to all sampled individuals who had not responded to the initial contact. Individuals who contacted the project team to refuse the survey and respondents who were determined to be ineligible after completing the screening survey were removed from the reminder contact.

The contents of the reminder contact were different between mail and web response modes. Individuals selected for the web mode received a reminder letter similar to the advance letter, which described the purpose of the survey, how the data would be used, reinforced the importance of participation, and “pushed” respondents to the web survey by including a web address and unique passcode for every sampled individual in this treatment group. The reminder letters for both the mail response and web response treatments were printed on NOAA letterhead, included contact information for both NMFS and ICF project managers, and were signed in contrasting ink.

Individuals selected for the mail mode received a reminder letter, the 16-page full survey booklet, and a business reply envelope. Similar to the initial contact, the reminder letter for the saltwater letter reminded individuals that the purpose of the survey was to help NMFS better understand and manage fish stocks and determine the economic impact of saltwater fishing, whereas the recreational version of the reminder letter more broadly described the research as a survey conducted by NOAA about recreational activities. Respondents who returned a completed mail screener and met eligibility criteria received a cover letter thanking them for their participation and asking them to participate in a follow-up mail survey. Respondents who returned a completed mail screener but were not eligible were removed from the reminder contact mailing.

Individuals in the recreational and saltwater survey type treatments received different versions of the cover letter, similar to the first contact. This same differentiation followed through to the cover page of the mail survey instrument, where illustrations of outdoor recreational activities were included in addition to fish for those assigned to the recreational survey topic treatment.

Results of the Pilot Test

The metric of primary interest for the pilot test was the response rate to the screening survey. We used statistically significant differences across the three factors to select which treatment to apply for the final survey administration. We examined the treatment effects averaged across all four regions, as the results were meant to inform the final survey administration and there was a desire to keep the protocol consistent across the regions.

Breaking out the results at the factor level (Table A-2), screener return rates varied from a low of 10.7% for no incentive to a high of 28.7% with a \$5 incentive. Examining the results one factor at a time can obscure differences that result from a combination of multiple factors. Therefore, all results are also presented by experimental profile for further detail (Table A-3). However, exploring differences in screener return rates at the profile level resulted in the same qualitative conclusions about the effects of different treatments, so we do not present them further.

We used a z-test, under a pooled estimate of the common standard deviation, to test for significant differences between treatments in the pilot test. This test is calculated as

$$z = \frac{\hat{p}_1 - \hat{p}_2}{\hat{\sigma}_D},$$

where \hat{p}_1 and \hat{p}_2 are the estimated proportions (screener return rate or eligibility rate, in the context of this study), the pooled estimate of the standard deviation, $\hat{\sigma}_D$, is given by

$$\hat{\sigma}_D = \sqrt{\hat{p}(1 - \hat{p}) \left(\frac{1}{n_1} + \frac{1}{n_2} \right)},$$

and \hat{p} is a weighted average of the two proportions,

$$\hat{p} = \frac{n_1\hat{p}_1 + n_2\hat{p}_2}{n_1 + n_2}.$$

The two-level factor of survey topic did not have a statistically significant effect on the screener return rate. The group that received the materials framed as a general recreation survey had an almost identical response rate to the group that received the materials framed as a saltwater fishing survey: completion rates were 21.8% for the general recreation framing and 21.1% for the saltwater fishing survey framing ($z = 0.5393$, $P = 0.5897$). In general, the literature suggests that people with more involvement or interest in a topic have higher response rates (Goyder 1987, Groves et al. 2004, 2006, Marcus et al. 2007). In our context, one might assume that the topic of saltwater fishing is more salient to the eligible population and the general recreation topic is relatively more salient to the ineligible population, which would have led to differential response rates based on the factor of survey topic. However, the ineligible population is still composed of anglers, and might have participated in saltwater fishing in the past, perhaps moderating some of these potential effects. In addition, the literature suggests that the differential effect of interest is moderated with the use of incentives (Groves et al. 2000, 2004).

The results from the two-level factor of response mode showed a statistically significant effect: screener return rates through the mail mode (25.1%) were higher than response rates from the web mode (17.9%; $z = 5.5468$, $P < 0.001$). This differential mirrors the findings from comparisons of mail and web response modes in the literature (Shannon and Bradshaw 2002,

Table A-2. Pilot test return rates and eligibility by experimental factor.

Experimental Factor	Sample	Eligible	Ineligible	Screener Response	Unknown Eligibility	Screener Return Rate	Eligible Rate
Survey Topic							
Recreation	2,000	211	225	436	1,564	22%	48%
SW Fishing	2,000	209	213	422	1,578	21%	50%
Response Mode							
Mail	2,000	253	248	501	1,499	25%	50%
Web	2,000	167	190	357	1,643	18%	47%
Incentive Amount							
\$0	1,344	67	77	144	1,200	11%	47%
\$2	1,328	154	179	333	995	25%	46%
\$5	1,328	199	182	381	947	29%	52%

Table A-3. Pilot test return rates and eligibility by experimental profile.

Experimental Profile: Topic, Mode, Incentive			Sample	Eligible	Ineligible	Screener Response	Unknown Eligibility	Screener Return Rate	Eligible Rate
Recreation	Mail	\$0	336	22	9	31	305	9%	71%
Recreation	Mail	\$2	332	49	61	110	222	33%	45%
Recreation	Mail	\$5	332	53	61	114	218	34%	46%
Recreation	Web	\$0	336	14	22	36	300	11%	39%
Recreation	Web	\$2	332	27	32	59	273	18%	46%
Recreation	Web	\$5	332	46	40	86	246	26%	53%
SW Fishing	Mail	\$0	336	17	16	33	303	10%	52%
SW Fishing	Mail	\$2	332	41	56	97	235	29%	42%
SW Fishing	Mail	\$5	332	71	45	116	216	35%	61%
SW Fishing	Web	\$0	336	14	30	44	292	13%	32%
SW Fishing	Web	\$2	332	37	30	67	265	20%	55%
SW Fishing	Web	\$5	332	29	36	65	267	20%	45%

Converse et al. 2008). Many researchers suggest using a sequential mixed-mode approach to achieve higher response rates associated with the mail mode while also benefitting from the relatively lower cost of the web-based mode (Dillman et al. 2009, Smyth et al. 2010, Millar and Dillman 2011). We did not test the sequential mixed-mode approach directly in the pilot test.

The three-level factor of incentive allowed us to test for two differences: the effect of a \$2 incentive relative to no incentive, and the effect of a \$5 incentive relative to a \$2 incentive. First, we see that including a \$2 incentive in the first mailed contact had a statistically significant effect on screener return rates. Furthermore, this difference was also practically significant, as the return rate with a \$2 incentive was more than double the rate without any incentive (25.1% versus 10.7%; $z = 9.6923$, $P < 0.001$). Second, we see that although increasing the incentive to \$5 had a statistically significant effect on screener return rates (28.7% versus 25.1%; $z = 2.1008$, $P = 0.0357$), there was a diminishing marginal effect: the difference in response rate between \$2 and \$5 was much lower than the difference between \$2 and \$0. Our results are in line with the existing literature, which has shown that prepaid incentives boost response rates (Groves et al. 2000, Jobber et al. 2004, Edwards 2005, Millar and Dillman 2011) but that this effect does not necessarily increase linearly with the incentive amount (Edwards 2005).

Although the primary focus in evaluating the pilot test treatments was the effect on response rates, the pilot test also generated information on the proportion of eligible anglers in the sample that may be affected by the tested treatments. Differences in estimated eligibility would result from differences in response rates between eligible and ineligible individuals across different treatments. We did not find significantly different eligibility rates for mail and web modes (50.5% versus 46.8%; $z = 1.0745$, $P = 0.2826$). Similarly, there was no effect on eligibility of a \$2 incentive relative to no incentive (46.5% versus 46.2%; $z = -0.0566$, $P = 0.9549$). The difference between a \$5 incentive and a \$2 incentive approached standard significance levels (46.2% versus 52.2%; $z = 1.5956$, $P = 0.1106$), although the direction of this difference was counterintuitive. Survey topic framing also had an insignificant effect, with estimated eligibility rates of 48.4% and 49.5% for the recreation and saltwater fishing framings, respectively ($z = -0.3315$, $P = 0.7403$).

We used the results from this pilot test to inform the final survey administration. In particular, we used the results related to incentive amount to select a \$2 incentive. Based on costs of administering different survey materials, a \$2 incentive was estimated to have a lower cost per completed response than either a \$5 incentive or no incentive. As there was no statistically significant difference between the two survey topic treatments, we selected the more direct framing of saltwater fishing to avoid confusion. With respect to the response mode, we decided to use a sequential mixed-mode approach. Specifically, we chose the (lower cost) web-based response as the initial response mode with follow-up contacts encouraging a mail response after that point.

Appendix B: Pilot Test Materials

This appendix provides a sample of the pilot test materials. The pilot test was an experiment to inform the protocols and design of the final survey. Several variants of the survey and related contacts were tested in this phase of the project. This section provides the interested reader a sample of these materials.

While the pilot test was administered in all four study regions—Oregon, Washington, Northern California, and Southern California—most of the contacts differed only in the region name. Therefore, in the interest of brevity, we provide materials for only one region: Oregon. Although there were regional differences in terms of fishing locations and species presented in the survey instruments, these differences are consistent with the final survey versions and can be seen in the final survey materials provided in [Appendix C](#).

[Section B-1](#) provides several versions of the advance invite letter. Within each region, the advance invite letter varied by three attributes: survey response mode (mail or web), survey topic framing (saltwater or general recreational fishing), and incentives (\$0, \$2, or \$5).

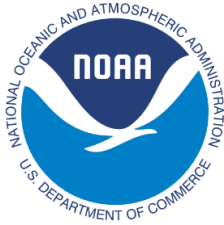
[Section B-2](#) provides several versions of the screening survey. Within each region, the screener survey varied by two attributes: survey response mode (mail or web) and survey topic framing (saltwater or general recreational fishing).

[Section B-3](#) provides several versions of the reminder letter. Within each region, the reminder letter varied by three attributes: survey response mode (mail or web), survey topic framing (saltwater or general recreational fishing), and whether the mail survey respondents had completed the screening survey.

[Section B-4](#) provides several versions of the full survey instrument. Within each region, the survey varied by two attributes: survey response mode (mail or web) and survey topic framing (saltwater or general recreational fishing).

B-1. Advance Letter/Invitation, Pilot Test

B-1a. Recreation; No incentive; Mail survey



Current Resident  12345678A

980 Beaver Creek Drive
Martinsville, VA 24054



*****AUTO**3-DIGIT 980

OR MR1 1 1

Dear John Smith:

We are asking for your help to understand recreational experiences in Oregon. The National Oceanic and Atmospheric Administration (NOAA) studies climate, weather, oceans, and coasts, and is responsible for conserving and managing coastal and marine ecosystems and resources. NOAA is conducting a short survey about recreational activities in Oregon. The survey includes questions your recreational activities and also questions about your fishing activities.

Participation is quick and easy. Please take a few minutes to complete the questionnaire and return it in the enclosed stamped envelope.

Participation in the survey is voluntary. Survey responses are confidential and only aggregate data will be reported. This research is for scientific purposes. We may contact you again in the future for your help with this survey but you will **not** be contacted to purchase any products or services. If you have any questions about the survey please call me at 1-206-302-2403. If you need assistance completing the survey please contact ICF, an independent research firm hired to conduct this study, at 855-276-3395 or via email at noaasurvey@icfsurveysupport.com.

Thank you in advance for your participation.

Sincerely,

A handwritten signature in blue ink that reads "Leif Anderson".

Leif Anderson
Project Director
NOAA Fisheries | Northwest Fisheries Science Center

B-1b. Recreation; Incentive; Mail survey



Current Resident  12345678A

980 Beaver Creek Drive
Martinsville, VA 24054



*****AUTO**3-DIGIT 980

OR MR2 1 1

Dear John Smith:

We are asking for your help to understand recreational experiences in Oregon. The National Oceanic and Atmospheric Administration (NOAA) studies climate, weather, oceans, and coasts, and is responsible for conserving and managing coastal and marine ecosystems and resources. NOAA is conducting a short survey about recreational activities in Oregon. The survey includes questions your recreational activities and also questions about your fishing activities.

Participation is quick and easy. Please take a few minutes to complete the questionnaire and return it in the enclosed stamped envelope.

Participation in the survey is voluntary. Survey responses are confidential and only aggregate data will be reported. This research is for scientific purposes. We may contact you again in the future for your help with this survey but you will **not** be contacted to purchase any products or services. If you have any questions about the survey please call me at 1-206-302-2403. If you need assistance completing the survey please contact ICF, an independent research firm hired to conduct this study, at 855-276-3395 or via email at noaasurvey@icfsurveysupport.com.

Thank you in advance for your participation.

Sincerely,

A handwritten signature in blue ink that reads "Leif Anderson".

Leif Anderson
Project Director
NOAA Fisheries | Northwest Fisheries Science Center

P.S. We have enclosed a small token of our appreciation as a way of saying thanks for completing the survey.

B-1c. Saltwater fishing; No incentive; Mail survey



Current Resident  12345678A

980 Beaver Creek Drive
Martinsville, VA 24054



*****AUTO**3-DIGIT 980

OR MS1 1 1

Dear John Smith:

The National Marine Fisheries Service (NMFS), often referred to as “NOAA Fisheries,” is an agency within the National Oceanic and Atmospheric Administration responsible for management, conservation, and protection of the nation's marine resources. I am asking you for your help so NMFS can better manage and understand fish stocks and the economic impact, especially from saltwater fishing, in Oregon. NMFS is conducting a short survey about fishing activities in Oregon. The survey seeks to identify anglers who may be contacted for a follow-up survey about their fishing preferences and choices.

Participation is quick and easy. Please take a few minutes to complete the questionnaire and return it in the enclosed stamped envelope.

Responding to the survey is voluntary, but important. We want to hear from you – **even if you have not fished.**

This research is for scientific purposes, and your responses are confidential. We may contact you again in the future for your help with this survey but you will **not** be contacted to purchase any products or services. If you have any questions about the survey please call me at 1-206-302-2403. If you need assistance completing the survey please contact ICF, an independent research firm hired to conduct this study, at 855-276-3395 or via email at noaasurvey@icfsurveysupport.com.

Thank you in advance for your participation.

Sincerely,

A handwritten signature in blue ink that reads "Leif Anderson".

Leif Anderson
Project Director
NOAA Fisheries | Northwest Fisheries Science Center

B-1d. Saltwater fishing; Incentive; Mail survey



Current Resident  12345678A

980 Beaver Creek Drive
Martinsville, VA 24054



*****AUTO**3-DIGIT 980

OR MS2 1 1

Dear John Smith:

The National Marine Fisheries Service (NMFS), often referred to as “NOAA Fisheries,” is an agency within the National Oceanic and Atmospheric Administration responsible for management, conservation, and protection of the nation's marine resources. I am asking you for your help so NMFS can better manage and understand fish stocks and the economic impact, especially from saltwater fishing, in Oregon. NMFS is conducting a short survey about fishing activities in Oregon. The survey seeks to identify anglers who may be contacted for a follow-up survey about their fishing preferences and choices.

Participation is quick and easy. Please take a few minutes to complete the questionnaire and return it in the enclosed stamped envelope.

Responding to the survey is voluntary, but important. We want to hear from you – **even if you have not fished.**

This research is for scientific purposes, and your responses are confidential. We may contact you again in the future for your help with this survey but you will **not** be contacted to purchase any products or services. If you have any questions about the survey please call me at 1-206-302-2403. If you need assistance completing the survey please contact ICF, an independent research firm hired to conduct this study, at 855-276-3395 or via email at noaasurvey@icfsurveysupport.com.

Thank you in advance for your participation.

Sincerely,

A handwritten signature in blue ink that reads "Leif Anderson".

Leif Anderson
Project Director
NOAA Fisheries | Northwest Fisheries Science Center

P.S. We have enclosed a small token of our appreciation as a way of saying thanks for completing the survey.

B-1e. Recreation; No incentive; Push to web



Current Resident  12345678A
980 Beaver Creek Drive
Martinsville, VA 24054

*****AUTO**3-DIGIT 980
OR WR1 1 1

Dear John Smith:

We are asking for your help to understand recreational experiences in Oregon. The National Oceanic and Atmospheric Administration (NOAA) studies climate, weather, oceans, and coasts, and is responsible for conserving and managing coastal and marine ecosystems and resources. NOAA is conducting a survey about recreational activities in Oregon. The survey includes questions about your recreational activities and also questions about your fishing activities.

Participation is quick and easy. You can access the survey online by going to:

www.NOAASurvey.com

You will need to enter the following passcode to complete the survey: 12345678A

Participation in the survey is voluntary. Survey responses are confidential and only aggregate data will be reported. This research is for scientific purposes, and you will **not** be contacted to purchase any products or services. If you have any questions about the survey please call me at 1-206-302-2403. If you need assistance completing the survey please contact ICF, an independent research firm hired to conduct this study, at 855-276-3395 or via email at noaasurvey@icfsurveysupport.com.

Thank you in advance for your participation.

Sincerely,

A handwritten signature in blue ink that reads "Leif Anderson".

Leif Anderson
Project Director
NOAA Fisheries | Northwest Fisheries Science Center

B-1f. Recreation; Incentive; Push to web



Current Resident  12345678A
980 Beaver Creek Drive
Martinsville, VA 24054

*****AUTO**3-DIGIT 980
OR WR2 1 1

Dear John Smith:

We are asking for your help to understand recreational experiences in Oregon. The National Oceanic and Atmospheric Administration (NOAA) studies climate, weather, oceans, and coasts, and is responsible for conserving and managing coastal and marine ecosystems and resources. NOAA is conducting a survey about recreational activities in Oregon. The survey includes questions about your recreational activities and also questions about your fishing activities.

Participation is quick and easy. You can access the survey online by going to:

www.NOAASurvey.com

You will need to enter the following passcode to complete the survey: 12345678A

Participation in the survey is voluntary. Survey responses are confidential and only aggregate data will be reported. This research is for scientific purposes, and you will **not** be contacted to purchase any products or services. If you have any questions about the survey please call me at 1-206-302-2403. If you need assistance completing the survey please contact ICF, an independent research firm hired to conduct this study, at 855-276-3395 or via email at noaasurvey@icfsurveysupport.com.

Thank you in advance for your participation.

Sincerely,

A handwritten signature in blue ink that reads "Leif Anderson".

Leif Anderson
Project Director
NOAA Fisheries | Northwest Fisheries Science Center

P.S. We have enclosed a small token of our appreciation as a way of saying thanks for completing the survey.

B-1g. Saltwater fishing; No incentive; Push to web



Current Resident  12345678A
980 Beaver Creek Drive
Martinsville, VA 24054

*****AUTO**3-DIGIT 980
OR WS1 1 1

Dear John Smith:

The National Marine Fisheries Service (NMFS), often referred to as “NOAA Fisheries Service,” is an agency within the National Oceanic and Atmospheric Administration responsible for management, conservation, and protection of the nation's marine resources. I am asking you for your help so NMFS can better manage and understand fish stocks and the economic impact, especially from saltwater fishing, in Oregon. NMFS is conducting a short survey about fishing activities in Oregon. The survey seeks to identify anglers who may be contacted for a follow-up survey about their fishing preferences and choices.

Participation is quick and easy. You can access the survey online by going to:

www.NOAASurvey.com

You will need to enter the following passcode to complete the survey: 12345678A

Participation in the survey is voluntary. Survey responses are confidential and only aggregate data will be reported. This research is for scientific purposes, and you will **not** be contacted to purchase any products or services. If you have any questions about the survey please call me at 1-206-302-2403. If you need assistance completing the survey please contact ICF, an independent research firm hired to conduct this study, at 855-276-3395 or via email at noaasurvey@icfsurveysupport.com.

Thank you in advance for your participation.

Sincerely,

A handwritten signature in blue ink that reads "Leif Anderson".

Leif Anderson
Project Director
NOAA Fisheries | Northwest Fisheries Science Center

B-1h. Saltwater fishing; Incentive; Push to web



Current Resident  12345678A

980 Beaver Creek Drive
Martinsville, VA 24054



*****AUTO**3-DIGIT 980

OR WS2 1 1

Dear John Smith:

The National Marine Fisheries Service (NMFS), often referred to as “NOAA Fisheries Service,” is an agency within the National Oceanic and Atmospheric Administration responsible for management, conservation, and protection of the nation's marine resources. I am asking you for your help so NMFS can better manage and understand fish stocks and the economic impact, especially from saltwater fishing, in Oregon. NMFS is conducting a short survey about fishing activities in Oregon. The survey seeks to identify anglers who may be contacted for a follow-up survey about their fishing preferences and choices.

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www.NOAASurvey.com

You will need to enter the following passcode to complete the survey: 12345678A

Participation in the survey is voluntary. Survey responses are confidential and only aggregate data will be reported. This research is for scientific purposes, and you will **not** be contacted to purchase any products or services. If you have any questions about the survey please call me at 1-206-302-2403. If you need assistance completing the survey please contact ICF, an independent research firm hired to conduct this study, at 855-276-3395 or via email at noaasurvey@icfsurveysupport.com.

Thank you in advance for your participation.

Sincerely,

A handwritten signature in blue ink that reads "Leif Anderson".

Leif Anderson
Project Director
NOAA Fisheries | Northwest Fisheries Science Center

P.S. We have enclosed a small token of our appreciation as a way of saying thanks for completing the survey.

B-2. Screening Survey, Pilot Test

B-2a. Saltwater fishing screener



Oregon Fishing Survey

1. How many *freshwater* fishing trips have you taken in Oregon in the last twelve months?
TRIPS _____
 Don't Know/Not Sure
2. How many *saltwater* fishing trips have you taken in Oregon in the last twelve months? *We're defining saltwater as all waters seaward of river or stream mouths, including estuaries.*
TRIPS _____
 Don't Know/Not Sure

If you have **taken at least one** saltwater fishing trip in Oregon in the last 12 months, please **CONTINUE** to Question 3.
If you have **not taken ANY** saltwater fishing trips in Oregon in the last 12 months, please **SKIP** to Question 7.

3. How many of your Oregon saltwater fishing trips within the last 12 months targeted **salmon**?
TRIPS _____
 Don't Know/Not Sure
4. How many of your Oregon saltwater fishing trips within the last 12 months targeted **bottomfish** (like halibut, rockfish, or lingcod)?
TRIPS _____
 Don't Know/Not Sure
5. How many of your Oregon saltwater fishing trips within the last 12 months targeted **tuna**?
TRIPS _____
 Don't Know/Not Sure
6. When you saltwater fish in Oregon, do you usually fish from ...
 A private boat
 A charter boat
 A pier or the shore
 Don't Know/Not Sure
7. During the next 12 months, how likely is it that you will take a trip where you will saltwater sport fish in Oregon?
 Certain to fish
 Very likely
 Somewhat likely
 Very unlikely
 Definitely will not fish

The following demographic questions will let us compare your activities with those of other people.
Your answers will be kept *completely* confidential.

8. In what year were you born?

Year _____

9. Which income category best describes your household's total annual income before taxes in 2016?

- Less than \$20,000
- More than \$20,000 but less than \$40,000
- More than \$40,000 but less than \$60,000
- More than \$60,000 but less than \$80,000
- More than \$80,000 but less than \$100,000
- More than \$100,000 but less than \$125,000
- More than \$125,000 but less than \$150,000
- More than \$150,000

We may be contacting survey respondents for additional research to help managers learn more about the likes and dislikes of saltwater anglers. Please provide your email address below so that we may send you an invitation to the online survey.

Email Address: _____

Thank You for completing the survey! Remember, please return the survey even if you have not participated in any of the activities we asked about.



12345678A

B-2b. Recreation screener



Oregon Recreational Activities Survey

1. During the past 12 months, have you visited a public beach, campground, national park, coastal state park or coastal nature reserve or protected area?
 - Yes
 - No
 - Don't Know/Not Sure

2. Which of the following activities have you participated in during the past 12 months? *Check all that apply.*
 - Swimming
 - Motor Boating
 - Sailing (sailboard, sailboat)
 - Paddling (stand-up paddleboard, kayak, canoe)
 - Fishing
 - Hunting
 - Birding (watching, monitoring, photographing, filming and/or feeding wild birds)
 - Hiking, walking in natural areas, or backpacking
 - Cycling, mountain-biking
 - Motorized recreational vehicle use on land (ATV, snowmobile, etc.)
 - None of the above

3. How many *freshwater* fishing trips have you taken in Oregon in the last twelve months?
TRIPS _____
 - Don't Know/Not Sure

4. How many *saltwater* fishing trips have you taken in Oregon in the last twelve months? *We're defining saltwater as all waters seaward of river or stream mouths, including estuaries.*
TRIPS _____
 - Don't Know/Not Sure

If you have taken at least one saltwater fishing trip in Oregon in the last 12 months, please CONTINUE to Question 5.

If you have not taken ANY saltwater fishing trips in Oregon in the last 12 months, please SKIP to Question 9.

5. How many of your Oregon saltwater fishing trips within the last 12 months targeted **salmon**?
TRIPS _____
 - Don't Know/Not Sure

6. How many of your Oregon saltwater fishing trips within the last 12 months targeted **bottomfish** (like halibut, rockfish, or lingcod)?
TRIPS _____
 - Don't Know/Not Sure

7. How many of your Oregon saltwater fishing trips within the last 12 months targeted **tuna**?

TRIPS _____

Don't Know/Not Sure

8. When you saltwater fish in Oregon, do you usually fish from ...

- A private boat
- A charter boat
- A pier or the shore
- Don't Know/Not Sure

9. During the next 12 months, how likely is it that you will take a trip where you will saltwater sport fish in Oregon?

- Certain to fish
- Very likely
- Somewhat likely
- Very unlikely
- Definitely will not fish

The following demographic questions will let us compare your activities with those of other people.

Your answers will be kept *completely* confidential.

10. In what year were you born?

Year _____

11. Which income category best describes your household's total annual income before taxes in 2016?

- Less than \$20,000
- More than \$20,000 but less than \$40,000
- More than \$40,000 but less than \$60,000
- More than \$60,000 but less than \$80,000
- More than \$80,000 but less than \$100,000
- More than \$100,000 but less than \$125,000
- More than \$125,000 but less than \$150,000
- More than \$150,000

We may be contacting survey respondents for additional research to help managers learn more about the likes and dislikes of saltwater anglers. Please provide your email address below so that we may send you an invitation to the online survey.

Email Address: _____

Thank You for completing the survey! Remember, please return the survey even if you have not participated in any of the activities we asked about.




12345678A

B-3. Reminder Letter, Pilot Test

B-3a. Recreation; Mail survey; No screener



John Smith  12345678A
980 Beaver Creek Drive
Martinsville, VA 24054
OR MR2

Dear John Smith:

About a month ago, we sent you a survey in the mail asking about your recreational activities in Oregon. As of March 8th, 2018, we have not yet received your completed survey.

Participation is quick and easy. Please take a few minutes now to complete the survey and return it in the enclosed stamped envelope. Your answers will represent others who enjoy recreation in Oregon, and will help policy makers understand the preferences of people like you.

The survey is sponsored by the National Oceanic and Atmospheric Administration (NOAA), which studies fisheries, oceans, coasts, weather, and climate, and is responsible for conserving and managing coastal and marine ecosystems and resources. The survey includes questions about your recreational activities and also questions about your fishing activities. It is important that you complete the survey even if you do not participate in the activities listed.

Participation in the survey is voluntary. Survey responses are confidential and only aggregate data will be reported. This research is for scientific purposes, and you will **not** be contacted to purchase any products or services. If you have any questions about the survey please call me at 1-206-302-2403. If you need assistance completing the survey please contact ICF, an independent research firm hired to conduct this study, at 855-276-3395 or via email at noaasurvey@icfsurveysupport.com.

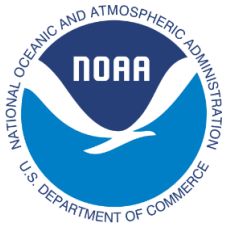
Thank you in advance for your participation.


Sincerely,

A handwritten signature in blue ink that reads "Leif Anderson".

Leif Anderson
Project Director
NOAA Fisheries | Northwest Fisheries Science Center

B-3b. Saltwater fishing; Mail survey; No screener



John Smith  12345678A
980 Beaver Creek Drive
Martinsville, VA 24054
OR MS2

Dear John Smith:

About a month ago, we sent you a letter in the mail asking for your participation in a survey about your fishing activities in Oregon. As of March 8th, 2018 we have not received your completed survey.

The survey is sponsored by the National Marine Fisheries Service (NMFS), often referred to as "NOAA Fisheries," an agency within the National Oceanic and Atmospheric Administration responsible for management, conservation, and protection of the nation's marine resources. Your answers will represent others who fish in Oregon and will help NMFS better manage fish stocks and the economic impact of saltwater fishing in Oregon. It is important you complete the survey even if you do not participate in the activities listed.

Participation is quick and easy. Please take a few minutes to complete the survey and return it in the enclosed stamped envelope.

Participation in the survey is voluntary. Survey responses are confidential and only aggregate data will be reported. This research is for scientific purposes and you will **not** be contacted to purchase any products or services. If you have any questions about the survey please call me at 1-206-302-2403. If you need assistance completing the survey please contact ICF, an independent research firm hired to conduct this study, at 855-276-3395 or via email at noaasurvey@icfsurveysupport.com.

Thank you in advance for your participation.


Sincerely,

A handwritten signature in blue ink that reads "Leif Anderson".

Leif Anderson
Project Director
NOAA Fisheries | Northwest Fisheries Science Center

B-3c. Recreation; Web survey; No screener



John Smith  12345678A
980 Beaver Creek Drive
Martinsville, VA 24054
OR WR

Dear John Smith:

About a month ago, we sent you a letter in the mail asking for your participation in a survey about your recreational experiences in Oregon. As of March 8th, 2018 we have not received a response. Please take a few minutes now to visit the website below and record your responses. Your answers will represent others who enjoy recreation in Oregon, and will help policy makers understand the preferences of people like you.

The survey is sponsored by the National Oceanic and Atmospheric Administration (NOAA), which studies fisheries, oceans, coasts, weather, and climate, and is responsible for the conservation and management of coastal and marine resources. The survey includes questions about your recreational activities and also questions about your fishing activities. It is important that you complete the survey even if you do not participate in the activities listed.

Participation is quick and easy. You can access the survey online by going to:

www.NOAASurvey.com

You will need to enter the following passcode to complete the survey: 12345678A

Participation in the survey is voluntary. Survey responses are confidential and only aggregate data will be reported. This research is for scientific purposes, and you will **not** be contacted to purchase any products or services. If you have any questions about the survey please call me at 1-206-302-2403. If you need assistance completing the survey please contact ICF, an independent research firm hired to conduct this study, at 855-276-3395 or via email at noaasurvey@icfsurveysupport.com.

Thank you in advance for your participation.


Sincerely,

A handwritten signature in blue ink that reads "Leif Anderson".

Leif Anderson
Project Director
NOAA Fisheries | Northwest Fisheries Science Center

B-3d. Saltwater fishing; Web survey; No screener



John Smith  12345678A
980 Beaver Creek Drive
Martinsville, VA 24054
OR WS

Dear John Smith:

About a month ago, we sent you a letter in the mail asking for your participation in a survey about your fishing activities in Oregon. As of March 8th, 2018 we have not received a response. Please take a few minutes now to visit the website below and record your responses.

You have been selected to represent others who fish in Oregon and your answers will help policy makers better manage fish stocks and the economic impact of saltwater fishing in Oregon. It is important that you complete a few short questions even if you do not participate in the activities listed.

The survey is sponsored by the National Marine Fisheries Service (NMFS), often referred to as "NOAA Fisheries," an agency within the National Oceanic and Atmospheric Administration responsible for management, conservation, and protection of the nation's marine resources. The survey seeks to identify anglers who may be asked to complete additional questions about their fishing preferences and choices.

Participation is quick and easy. You can access the survey online by going to:

www.NOAASurvey.com

You will need to enter the following passcode to complete the survey: 12345678A

Participation in the survey is voluntary. Survey responses are confidential and only aggregate data will be reported. This research is for scientific purposes, and you will **not** be contacted to purchase any products or services. If you have any questions about the survey please call me at 1-206-302-2403. If you need assistance completing the survey please contact ICF, an independent research firm hired to conduct this study, at 855-276-3395 or via email at noaasurvey@icfsurveysupport.com.

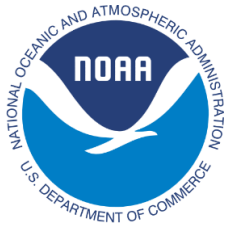
Thank you in advance for your participation.


Sincerely,

A handwritten signature in blue ink that reads "Leif Anderson".

Leif Anderson
Project Director
NOAA Fisheries | Northwest Fisheries Science Center

B-3e. Recreation; Mail survey; Screener



John Smith  12345678A
980 Beaver Creek Drive
Martinsville, VA 24054
OR MR1

Dear John Smith:

About a month ago, we sent you a survey in the mail asking about your recreational activities in Oregon. We received your completed survey – thank you!

We are writing to ask for your continued participation in a follow-up survey. The follow-up survey, also sponsored by the National Oceanic and Atmospheric Administration (NOAA), includes questions about your recreational activities and also questions about your fishing activities. NOAA studies fisheries, oceans, weather, and climate, and is responsible for conserving and managing coastal and marine ecosystems and resources.

Your answers will represent others who enjoy recreation in Oregon, and your participation in this follow-up survey will help policy makers understand the preferences of people like you. It is important that you complete the survey even if you do not participate in the activities listed.

Participation is quick and easy. Please take a few minutes to complete the follow-up survey and return it in the enclosed stamped envelope.

Participation in the survey is voluntary. Survey responses are confidential and only aggregate data will be reported. This research is for scientific purposes. We may contact you again in the future for your help with this survey but you will **not** be contacted to purchase any products or services. If you have any questions about the survey please call me at 1-206-302-2403. If you need assistance completing the survey please contact ICF, an independent research firm hired to conduct this study, at 855-276-3395 or via email at noaasurvey@icfsurveysupport.com.

Thank you in advance for your participation.


Sincerely,

A handwritten signature in blue ink that reads "Leif Anderson".

Leif Anderson
Project Director
NOAA Fisheries | Northwest Fisheries Science Center

B-3f. Saltwater fishing; Mail survey; Screener



John Smith  12345678A
980 Beaver Creek Drive
Martinsville, VA 24054
OR MS1

Dear John Smith:

About a month ago, we sent you a survey in the mail asking about your fishing activities in Oregon. We received your completed survey – thank you!

We are writing to ask for your continued participation in a follow-up survey about your fishing activities. The follow-up survey is sponsored by the National Marine Fisheries Service (NMFS), often referred to as “NOAA Fisheries,” an agency within the National Oceanic and Atmospheric Administration responsible for management, conservation, and protection of the nation's marine resources.

You have been selected to represent others who fish in Oregon and your answers will help NMFS better manage fish stocks and the economic impact of saltwater fishing in Oregon. It is important that you complete the survey even if you do not participate in the activities listed.

Participation is quick and easy. Please take a few minutes to complete the follow-up survey and return it in the enclosed stamped envelope.

Participation in the survey is voluntary. Survey responses are confidential and only aggregate data will be reported. This research is for scientific purposes and you will **not** be contacted to purchase any products or services. If you have any questions about the survey please call me at 1-206-302-2403. If you need assistance completing the survey please contact ICF, an independent research firm hired to conduct this study, at 855-276-3395 or via email at noaasurvey@icfsurveysupport.com.

Thank you in advance for your participation.

Sincerely,

A handwritten signature in blue ink that reads "Leif Anderson".

Leif Anderson
Project Director
NOAA Fisheries | Northwest Fisheries Science Center

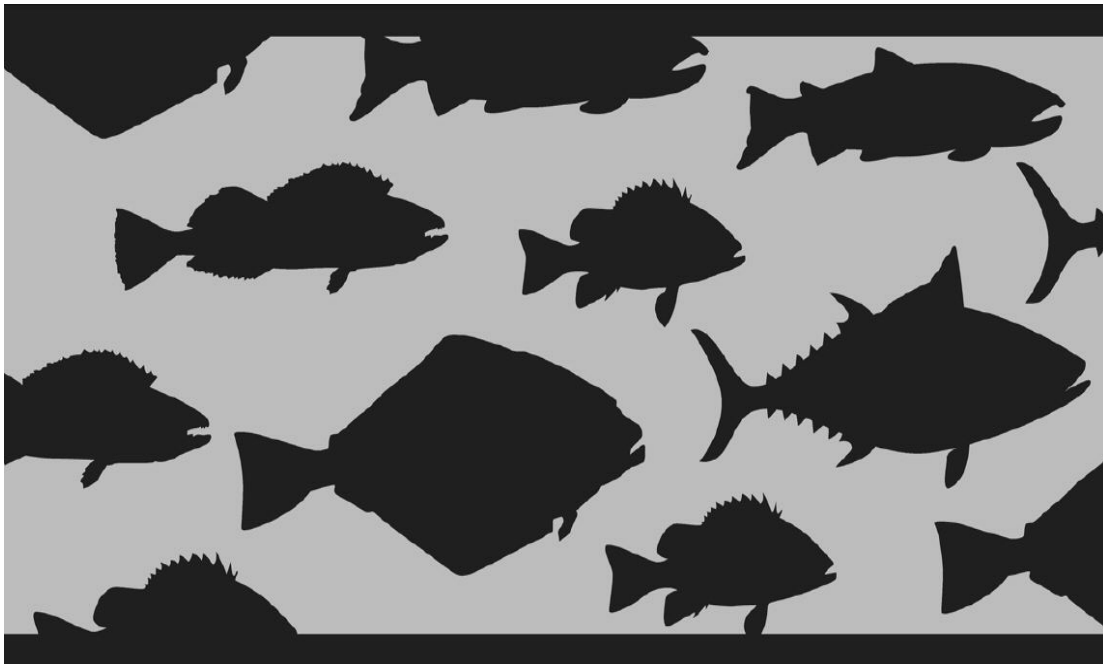
B-4. Full Survey Instrument, Pilot Test

B-4a. Saltwater fishing; Oregon

“00010515F”

ORV1 1 1

Oregon Sport Fishing Survey



OMB Control #0648-0750 expires 3/31/2020.

Response to this request is voluntary and anonymous. Notwithstanding any other provisions of the law; no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with a collection of information subject to the requirement of the Paperwork Reduction Act, unless that collection of information displays a currently valid OMB Control Number. Public reporting burden for this survey is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Leif Anderson, NWFSC FRAM Division, 2725 Montlake Blvd. E, Seattle, WA 98112-2097.



**NOAA
FISHERIES**

This survey is voluntary.
All responses are anonymous.



Section A: Your Oregon Sport Fishing Activities

The questions in this survey are about YOU and YOUR fishing activities and preferences. Except when asked, please do not include any information from other household members or other fishing party members.

Please print clearly.

Write numbers as two digits: 1 Trip = 0 1 Fill in boxes with a

A1 How much do you like fishing compared to other recreational activities?

<input type="checkbox"/>	Fishing is my favorite recreational activity.
<input type="checkbox"/>	I like fishing and other recreational activities about the same.
<input type="checkbox"/>	I like other recreational activities more than fishing.

A2 Do you prefer saltwater or freshwater fishing?

<input type="checkbox"/>	I prefer saltwater fishing.
<input type="checkbox"/>	I like saltwater and freshwater fishing about the same.
<input type="checkbox"/>	I prefer freshwater fishing.

A3 Have you FRESHWATER sport fished in Oregon in the last 12 months?

<input type="checkbox"/>	Yes ↓ Continue	<input type="checkbox"/>	No → Skip to A4
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Approximately how many days (count partial days as full days) did you freshwater fish in Oregon in the last 12 months?

Freshwater days last 12 months:

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A4 Have you SALTWATER sport fished in Oregon in the last 12 months? (Saltwater is defined as all waters seaward of river or stream mouths, including estuaries, and the Columbia River seaward of the Tongue Point-Rocky Point line.)

<input type="checkbox"/>	Yes ↓ Continue	<input type="checkbox"/>	No → Skip to Section D on page 15
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Approximately how many days (count partial days as full days) did you saltwater fish in Oregon in the last 12 months from a private boat, from a charter boat, and from the shore?

Saltwater days last 12 months:

...from a private boat:	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table>		
...from a charter boat:	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table>		
...from the shore:	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table>		

Please use this map of Oregon saltwater fishing locations when answering the questions on the next 3 pages.



Questions? Email us at Leif.Anderson@noaa.gov

A5 Have you ever taken trips targeting TUNA in Oregon?

<input type="checkbox"/> Yes	↓ Continue	<input type="checkbox"/> No	→ Skip to A7
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A6 How many TUNA trips did you take in the past 12 months in Oregon?

Tuna trips last 12 months:

A7 Do you plan on taking any TUNA trips in the next 12 months in Oregon?

<input type="checkbox"/> No, I do not plan on taking any tuna trips in the next 12 months.	→ Skip to A11
<input type="checkbox"/> Yes, I plan on taking <input type="text"/> <input type="text"/> tuna trips in the next 12 months.	↓ Continue to A8

A8 From the locations given on the map, where are you most likely to board the boat on a future TUNA fishing trip in Oregon? (mark one location)

<input type="checkbox"/> Astoria	<input type="checkbox"/> Depoe Bay	<input type="checkbox"/> Hammond	<input type="checkbox"/> Netarts	<input type="checkbox"/> Reedsport
<input type="checkbox"/> Bandon	<input type="checkbox"/> Florence	<input type="checkbox"/> Ilwaco	<input type="checkbox"/> Newport	<input type="checkbox"/> Seaside
<input type="checkbox"/> Brookings	<input type="checkbox"/> Garibaldi	<input type="checkbox"/> Kernville	<input type="checkbox"/> Pacific City	<input type="checkbox"/> Tillamook
<input type="checkbox"/> Coos Bay	<input type="checkbox"/> Gold Beach	<input type="checkbox"/> Nehalem	<input type="checkbox"/> Port Orford	<input type="checkbox"/> Waldport
<input type="checkbox"/> Other (specify): _____				

A9 On your TUNA trips, do you typically fish from a private boat (yours or a friend's) or from a charter boat? (mark only one)

<input type="checkbox"/> Private boat (my own)
<input type="checkbox"/> Private boat (friend or family's)
<input type="checkbox"/> Charter boat

A10 On the TUNA trips you take, do you typically stay one or more nights in a house you own, a vacation rental, a hotel / motel, a campground, or sleep on the boat? (mark only one)

<input type="checkbox"/> No. This is usually a day trip.
<input type="checkbox"/> House I own
<input type="checkbox"/> Vacation rental
<input type="checkbox"/> Hotel, motel, or B&B
<input type="checkbox"/> Campground or trailer park
<input type="checkbox"/> Sleep on the boat
<input type="checkbox"/> Other lodging: _____

A11 Have you ever taken trips targeting saltwater SALMON in Oregon?

<input type="checkbox"/> Yes ↓ Continue	<input type="checkbox"/> No → Skip to A13
--	--

A12 How many saltwater SALMON trips did you take in the past 12 months in Oregon?

Saltwater salmon trips last 12 months:

A13 Do you plan on taking any saltwater SALMON trips in the next 12 months in Oregon?

<input type="checkbox"/> No, I do not plan on taking any saltwater salmon trips in the next 12 months. → Skip to A17
<input type="checkbox"/> Yes, I plan on taking <input type="text"/> <input type="text"/> saltwater salmon trips in the next 12 months. ↓ Continue to A14

A14 From the locations given on the map, where are you most likely to board the boat on a future saltwater SALMON fishing trip in Oregon? (**mark one location**)

<input type="checkbox"/> Astoria	<input type="checkbox"/> Depoe Bay	<input type="checkbox"/> Hammond	<input type="checkbox"/> Netarts	<input type="checkbox"/> Reedsport
<input type="checkbox"/> Bandon	<input type="checkbox"/> Florence	<input type="checkbox"/> Ilwaco	<input type="checkbox"/> Newport	<input type="checkbox"/> Seaside
<input type="checkbox"/> Brookings	<input type="checkbox"/> Garibaldi	<input type="checkbox"/> Kernville	<input type="checkbox"/> Pacific City	<input type="checkbox"/> Tillamook
<input type="checkbox"/> Coos Bay	<input type="checkbox"/> Gold Beach	<input type="checkbox"/> Nehalem	<input type="checkbox"/> Port Orford	<input type="checkbox"/> Waldport
<input type="checkbox"/> Other (specify): _____				

A15 On your saltwater SALMON trips, do you typically fish from a private boat (yours or a friend's) or from a charter boat? (**mark only one**)

<input type="checkbox"/> Private boat (my own)
<input type="checkbox"/> Private boat (friend or family's)
<input type="checkbox"/> Charter boat

A16 On the saltwater SALMON trips you take, do you typically stay one or more nights in a house you own, a vacation rental, a hotel / motel, a campground, or sleep on the boat? (**mark only one**)

<input type="checkbox"/> No. This is usually a day trip.
<input type="checkbox"/> House I own
<input type="checkbox"/> Vacation rental
<input type="checkbox"/> Hotel, motel, or B&B
<input type="checkbox"/> Campground or trailer park
<input type="checkbox"/> Sleep on the boat
<input type="checkbox"/> Other lodging: _____

A17 Have you ever taken trips targeting BOTTOMFISH in Oregon?

<input type="checkbox"/> Yes	↓ Continue	<input type="checkbox"/> No	→ Skip to A19
------------------------------	------------	-----------------------------	---------------

A18 How many BOTTOMFISH trips did you take in the past 12 months in Oregon?

Bottomfish trips last 12 months:

A19 Do you plan on taking any BOTTOMFISH trips in the next 12 months in Oregon?

<input type="checkbox"/> No, I do not plan on taking any bottomfish trips in the next 12 months.	→ Skip to A23
<input type="checkbox"/> Yes, I plan on taking <input type="text"/> <input type="text"/> bottomfish trips in the next 12 months.	↓ Continue to A20

A20 From the locations given on the map, where are you most likely to board the boat on a future BOTTOMFISH fishing trip in Oregon? (**mark one location**)

<input type="checkbox"/> Astoria	<input type="checkbox"/> Depoe Bay	<input type="checkbox"/> Hammond	<input type="checkbox"/> Netarts	<input type="checkbox"/> Reedsport
<input type="checkbox"/> Bandon	<input type="checkbox"/> Florence	<input type="checkbox"/> Ilwaco	<input type="checkbox"/> Newport	<input type="checkbox"/> Seaside
<input type="checkbox"/> Brookings	<input type="checkbox"/> Garibaldi	<input type="checkbox"/> Kernville	<input type="checkbox"/> Pacific City	<input type="checkbox"/> Tillamook
<input type="checkbox"/> Coos Bay	<input type="checkbox"/> Gold Beach	<input type="checkbox"/> Nehalem	<input type="checkbox"/> Port Orford	<input type="checkbox"/> Waldport
<input type="checkbox"/> Other (specify): _____				

A21 On your BOTTOMFISH trips, do you typically fish from a private boat (yours or a friend's) or from a charter boat? (**mark only one**)

<input type="checkbox"/> Private boat (my own)
<input type="checkbox"/> Private boat (friend or family's)
<input type="checkbox"/> Charter boat

A22 On the BOTTOMFISH trips you take, do you typically stay one or more nights in a house you own, a vacation rental, a hotel / motel, a campground, or sleep on the boat? (**mark only one**)

<input type="checkbox"/> No. This is usually a day trip.
<input type="checkbox"/> House I own
<input type="checkbox"/> Vacation rental
<input type="checkbox"/> Hotel, motel, or B&B
<input type="checkbox"/> Campground or trailer park
<input type="checkbox"/> Sleep on the boat
<input type="checkbox"/> Other lodging: _____

A23 For your saltwater fishing trips, is fishing the primary purpose of taking a trip?

<input type="checkbox"/>	Yes
<input type="checkbox"/>	Fishing and other purposes are equally important
<input type="checkbox"/>	No, the primary purpose is for something other than fishing

A24 Below are some reasons why you might saltwater sport fish in Oregon. Mark how much you agree or disagree with each statement.

"I saltwater sport fish in Oregon to..."	Strongly Agree	Agree	Feel Neutral	Disagree	Strongly Disagree
...Spend time outdoors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Spend time with family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Spend time with friends or others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Relax	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Get some exercise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Eat something I caught myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Provide food for me or my family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A25 If saltwater fishing conditions were ideal, what is the greatest number of saltwater trips you would realistically consider taking in Oregon within the next 12 months?

Saltwater trips under ideal conditions next 12 months:

...from a private or charter boat

...from the shore

Section B: Your Typical Oregon Saltwater Fishing Trip Expenses

B1 Do you take more boat trips targeting tuna, salmon, or bottomfish?

<input type="checkbox"/>	Tuna
<input type="checkbox"/>	Salmon
<input type="checkbox"/>	Bottomfish

B2 Are these trips typically from a private boat or a charter boat?

<input type="checkbox"/>	Private
<input type="checkbox"/>	Charter

B3 On the type of trip marked above (tuna, salmon, or bottomfish; private or charter), about how much money did you or your household spend **per trip** in each of the following expenditure categories? For each type, indicate the number of people covered by the expenditure.

TYPE of EXPENDITURE		Expenditures by you or your household (round to the nearest dollar)				# of people covered by this expense (including you)				
		\$								
Fishing Cost	Charter or guide fees	\$.00				
	Fish filleting fees and tips	\$.00				
	Bait	\$.00				
	Ice	\$.00				
	Boat fuel	\$.00				
	Launch, haul out, parking fees	\$.00				
Transportation	Auto, truck, or RV fuel	\$.00				
	Auto or RV rental	\$.00				
	Airfare	\$.00				
	Ferry	\$.00				
	Other transportation: _____	\$.00				
Lodging / Food	Campgrounds and trailer parks	\$.00				
	Hotels, motels, and B&B	\$.00				
	Vacation rental	\$.00				
	Grocery and convenience stores	\$.00				
	Restaurants and bars	\$.00				
	Other lodging/food: _____	\$.00				

Questions? Call us at 1-206-302-2403

Section C: Trips You Would Likely Take During a Season

In this section, we'd like you to think about the saltwater fishing trips you are likely to take in a typical season, and how changes in target species availability, catch rates, bag limits, depth restrictions, or fishing costs would affect your plans.

Target species: The primary type of saltwater fish (tuna, salmon, bottomfish) targeted by the boat.

Expected catch: The total number of each species you expect to catch per day based on current fishing reports.

Bag limit: The number of fish you are legally allowed to keep per day.

Fishing cost: Your personal share of the daily fishing cost. The fishing costs in the tables vary from trip to trip due to uncertainty about future prices of things like boat fuel and charter operations. This will allow your answers to be used in the future as well as today. Please remember you would also need to pay for travel to the boat launch site and may also need to pay for lodging, if you would take an overnight trip.


Private boat cost: If you typically use a private boat for this target species, please consider the listed private boat cost when making your selection. These costs would include bait, ice, daily moorage or launch fees, and boat fuel.

Charter boat cost: If you typically use a charter boat for this target species, please consider the listed charter boat cost when making your selection. These costs include all charter fees and tips. Please treat all charter trips as being taken on the same type of boat and having the same amenities, regardless of cost.

C1. Suppose that you had the choice between three boat fishing trips in Oregon saltwater (Choice A, Choice B, or Choice C) or not taking a boat fishing trip in Oregon saltwater (Choice D). Please review the table and answer the questions below, indicating which of these choices you like best.


		Choice A	Choice B	Choice C	Choice D
Target species		Tuna	Salmon	Bottomfish	Do something other than boat fishing in Oregon saltwater ...shore fishing in saltwater ...freshwater fishing ...do something other than fishing
Expected catch (per person per day)		For every 10 anglers... 9 catch 10 albacore each 1 catches 5 albacore	For every 10 anglers... 9 catch 2 silvers each 1 catches 1 silver	For every 10 anglers... 9 catch 0 halibut each 1 catches 3 halibut	
Bag limit		15 albacore	2 silver salmon	2 halibut	
Fishing cost (per person per day)	Private	\$250	\$125	\$50	
	Charter	\$450	\$175	\$75	

If you were presented with these four choices (A, B, C, D), which one would you choose to do?
(mark only one)




Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
----------	--------------------------	----------	--------------------------	----------	--------------------------	----------	--------------------------

If your first choice was not available, what would be your second choice?
(mark only one)



Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
----------	--------------------------	----------	--------------------------	----------	--------------------------	----------	--------------------------

If your first and second choices were not available, what would be your third choice?
(mark only one)

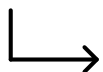


Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
----------	--------------------------	----------	--------------------------	----------	--------------------------	----------	--------------------------

C2. Suppose that you had the choice between three boat fishing trips in Oregon saltwater (Choice A, Choice B, or Choice C) or not taking a boat fishing trip in Oregon saltwater (Choice D). Please review the table and answer the questions below, indicating which of these choices you like best.

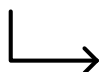
		Choice A	Choice B	Choice C	Choice D
Target species		Tuna	Salmon	Bottomfish	Do something other than boat fishing in Oregon saltwater ...shore fishing in saltwater ...freshwater fishing ...do something other than fishing
Expected catch (per person per day)		For every 10 anglers... 9 catch 0 albacore each 1 catches 2 albacore	For every 10 anglers... 9 catch 0 silvers each 1 catches 6 silvers	For every 10 anglers... 8 catch 0 rockfish each 1 catches 12 rockfish 1 catches 8 rockfish	
Bag limit		15 albacore	2 silver salmon	5 rockfish	
Fishing cost (per person per day)	Private	\$125	\$125	\$75	
	Charter	\$175	\$175	\$125	

If you were presented with these four choices (A, B, C, D), which one would you choose to do?
(mark only one)



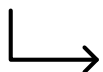
Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
----------	--------------------------	----------	--------------------------	----------	--------------------------	----------	--------------------------

If your first choice was not available, what would be your second choice?
(mark only one)



Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
----------	--------------------------	----------	--------------------------	----------	--------------------------	----------	--------------------------

If your first and second choices were not available, what would be your third choice?
(mark only one)




Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
----------	--------------------------	----------	--------------------------	----------	--------------------------	----------	--------------------------


C3 Suppose that you had the choice between two boat fishing trips in Oregon saltwater (Choice A or Choice B) or not taking a boat fishing trip in Oregon saltwater (Choice D). Suppose that bottomfish fishing (Choice C) is currently closed. Please review the table and answer the questions below, indicating which of these choices you like best.

		Choice A	Choice B	Choice C	Choice D
Target species		Tuna	Salmon	Bottomfish	Do something other than boat fishing in Oregon saltwater ...shore fishing in saltwater ...freshwater fishing ...do something other than fishing
Expected catch (per person per day)		For every 10 anglers... 7 catch 10 albacore each 2 catch 5 albacore each 1 catches 20 albacore	For every 10 anglers... 7 catch 2 kings each 2 catch 0 kings each 1 catches 6 kings	Closed	
Bag limit		15 albacore	2 king salmon	Closed	
Fishing cost (per person per day)	Private	\$250	\$75	N/A	
	Charter	\$450	\$125	N/A	

If you were presented with these three choices (A, B, D), which one would you choose to do?
(mark only one)


Choice A
Choice B
Choice D

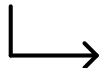
If your first choice was not available, what would be your second choice?
(mark only one)


Choice A
Choice B
Choice D

C4. Suppose that you had the choice between three boat fishing trips in Oregon saltwater (Choice A, Choice B, or Choice C) or not taking a boat fishing trip in Oregon saltwater (Choice D). Please review the table and answer the questions below, indicating which of these choices you like best.

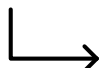
		Choice A	Choice B	Choice C	Choice D
Target species		Tuna	Salmon	Bottomfish	Do something other than boat fishing in Oregon saltwater ...shore fishing in saltwater ...freshwater fishing ...do something other than fishing
Expected catch <small>(per person per day)</small>		For every 10 anglers... 9 catch 0 albacore each 1 catches 20 albacore	For every 10 anglers... 8 catch 0 kings each 1 catches 6 kings 1 catches 3 kings	For every 10 anglers... 8 catch 0 lingcod each 1 catches 5 lingcod 1 catches 3 lingcod	
Bag limit		15 albacore	1 king salmon	1 lingcod	
Fishing cost <small>(per person per day)</small>	Private	\$125	\$125	\$50	
	Charter	\$175	\$175	\$75	

If you were presented with these four choices (A, B, C, D), which one would you choose to do?
(mark only one)



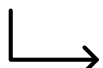
Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
----------	--------------------------	----------	--------------------------	----------	--------------------------	----------	--------------------------

If your first choice was not available, what would be your second choice?
(mark only one)



Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
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If your first and second choices were not available, what would be your third choice?



Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
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Section D: About You and Your Household

The following questions will help us know more about saltwater anglers. The information you provide will remain STRICTLY CONFIDENTIAL, and you will not be identified with your answers.

D1 In what year were you born?

Year:

D2 Are you...?

<input type="checkbox"/> Male	<input type="checkbox"/> Female
-------------------------------	---------------------------------

D3 What is the highest level of education you have completed? **(mark one response)**

<input type="checkbox"/>	Some high school
<input type="checkbox"/>	High school graduate
<input type="checkbox"/>	Technical school
<input type="checkbox"/>	Some college
<input type="checkbox"/>	College graduate or more

D4 How many adults and children (under 18) are there in your household including yourself?

Adults: # Children:

D5 Which of the following best describes your household's TOTAL annual income before taxes in 2016?

<input type="checkbox"/> Less than \$20,000	<input type="checkbox"/> \$80,000 - \$99,999
<input type="checkbox"/> \$20,000 - \$39,999	<input type="checkbox"/> \$100,000 - \$124,999
<input type="checkbox"/> \$40,000 - \$59,999	<input type="checkbox"/> \$125,000 - \$149,999
<input type="checkbox"/> \$60,000 - \$79,999	<input type="checkbox"/> \$150,000 or more

D6 Are you employed part time or full time outside the home?

<input type="checkbox"/>	No, I am a homemaker, retired, or currently unemployed	→ Skip to Thank You
<input type="checkbox"/>	I work part time (less than 35 hours per week)	
<input type="checkbox"/>	I work full time (at least 35 hours per week)	

B-4b. Recreation; Oregon

master id

ORV1 1 1



OMB Control #0648-0750 expires 3/31/2020.

Response to this request is voluntary and anonymous. Notwithstanding any other provisions of the law; no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with a collection of information subject to the requirement of the Paperwork Reduction Act, unless that collection of information displays a currently valid OMB Control Number. Public reporting burden for this survey is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Leif Anderson, NWFSC FRAM Division, 2725 Montlake Blvd. E, Seattle, WA 98112-2097.



NOAA
FISHERIES

This survey is voluntary.
All responses are anonymous.



Section A: Your Oregon Sport Fishing Activities

The questions in this survey are about YOU and YOUR fishing activities and preferences. Except when asked, please do not include any information from other household members or other fishing party members.

Please print clearly.

Write numbers as two digits: 1 Trip = 0 1 Fill in boxes with a

A1 How much do you like fishing compared to other recreational activities?

<input type="checkbox"/>	Fishing is my favorite recreational activity.
<input type="checkbox"/>	I like fishing and other recreational activities about the same.
<input type="checkbox"/>	I like other recreational activities more than fishing.

A2 Do you prefer saltwater or freshwater fishing?

<input type="checkbox"/>	I prefer saltwater fishing.
<input type="checkbox"/>	I like saltwater and freshwater fishing about the same.
<input type="checkbox"/>	I prefer freshwater fishing.

A3 Have you FRESHWATER sport fished in Oregon in the last 12 months?

<input type="checkbox"/>	Yes ↓ Continue	<input type="checkbox"/>	No → Skip to A4
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Approximately how many days (count partial days as full days) did you freshwater fish in Oregon in the last 12 months?

Freshwater days last 12 months:

A4 Have you SALTWATER sport fished in Oregon in the last 12 months? (Saltwater is defined as all waters seaward of river or stream mouths, including estuaries, and the Columbia River seaward of the Tongue Point-Rocky Point line.)

<input type="checkbox"/>	Yes ↓ Continue	<input type="checkbox"/>	No → Skip to Section D on page 15
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Approximately how many days (count partial days as full days) did you saltwater fish in Oregon in the last 12 months from a private boat, from a charter boat, and from the shore?

Saltwater days last 12 months:

...from a private boat:	
...from a charter boat:	
...from the shore:	

Please use this map of Oregon saltwater fishing locations when answering the questions on the next 3 pages.



Questions? Email us at Leif.Anderson@noaa.gov

A5 Have you ever taken trips targeting TUNA in Oregon?

<input type="checkbox"/> Yes ↓ Continue	<input type="checkbox"/> No → Skip to A7
---	--

A6 How many TUNA trips did you take in the past 12 months in Oregon?

Tuna trips last 12 months:

A7 Do you plan on taking any TUNA trips in the next 12 months in Oregon?

<input type="checkbox"/> No, I do not plan on taking any tuna trips in the next 12 months. → Skip to A11
<input type="checkbox"/> Yes, I plan on taking <input type="text"/> <input type="text"/> tuna trips in the next 12 months. ↓ Continue to A8

A8 From the locations given on the map, where are you most likely to board the boat on a future TUNA fishing trip in Oregon? (mark one location)

<input type="checkbox"/> Astoria	<input type="checkbox"/> Depoe Bay	<input type="checkbox"/> Hammond	<input type="checkbox"/> Netarts	<input type="checkbox"/> Reedsport
<input type="checkbox"/> Bandon	<input type="checkbox"/> Florence	<input type="checkbox"/> Ilwaco	<input type="checkbox"/> Newport	<input type="checkbox"/> Seaside
<input type="checkbox"/> Brookings	<input type="checkbox"/> Garibaldi	<input type="checkbox"/> Kernville	<input type="checkbox"/> Pacific City	<input type="checkbox"/> Tillamook
<input type="checkbox"/> Coos Bay	<input type="checkbox"/> Gold Beach	<input type="checkbox"/> Nehalem	<input type="checkbox"/> Port Orford	<input type="checkbox"/> Waldport
<input type="checkbox"/> Other (specify): _____				

A9 On your TUNA trips, do you typically fish from a private boat (yours or a friend's) or from a charter boat? (mark only one)

<input type="checkbox"/> Private boat (my own)
<input type="checkbox"/> Private boat (friend or family's)
<input type="checkbox"/> Charter boat

A10 On the TUNA trips you take, do you typically stay one or more nights in a house you own, a vacation rental, a hotel / motel, a campground, or sleep on the boat? (mark only one)

<input type="checkbox"/> No. This is usually a day trip.
<input type="checkbox"/> House I own
<input type="checkbox"/> Vacation rental
<input type="checkbox"/> Hotel, motel, or B&B
<input type="checkbox"/> Campground or trailer park
<input type="checkbox"/> Sleep on the boat
<input type="checkbox"/> Other lodging: _____

A11 Have you ever taken trips targeting saltwater SALMON in Oregon?

<input type="checkbox"/> Yes ↓ Continue	<input type="checkbox"/> No → Skip to A13
--	--

A12 How many saltwater SALMON trips did you take in the past 12 months in Oregon?

Saltwater salmon trips last 12 months:

A13 Do you plan on taking any saltwater SALMON trips in the next 12 months in Oregon?

<input type="checkbox"/> No, I do not plan on taking any saltwater salmon trips in the next 12 months. → Skip to A17
<input type="checkbox"/> Yes, I plan on taking <input type="text"/> saltwater salmon trips in the next 12 months. ↓ Continue to A14

A14 From the locations given on the map, where are you most likely to board the boat on a future saltwater SALMON fishing trip in Oregon? (**mark one location**)

<input type="checkbox"/> Astoria	<input type="checkbox"/> Depoe Bay	<input type="checkbox"/> Hammond	<input type="checkbox"/> Netarts	<input type="checkbox"/> Reedsport
<input type="checkbox"/> Bandon	<input type="checkbox"/> Florence	<input type="checkbox"/> Ilwaco	<input type="checkbox"/> Newport	<input type="checkbox"/> Seaside
<input type="checkbox"/> Brookings	<input type="checkbox"/> Garibaldi	<input type="checkbox"/> Kernville	<input type="checkbox"/> Pacific City	<input type="checkbox"/> Tillamook
<input type="checkbox"/> Coos Bay	<input type="checkbox"/> Gold Beach	<input type="checkbox"/> Nehalem	<input type="checkbox"/> Port Orford	<input type="checkbox"/> Waldport
<input type="checkbox"/> Other (specify): _____				

A15 On your saltwater SALMON trips, do you typically fish from a private boat (yours or a friend's) or from a charter boat? (**mark only one**)

<input type="checkbox"/> Private boat (my own)
<input type="checkbox"/> Private boat (friend or family's)
<input type="checkbox"/> Charter boat

A16 On the saltwater SALMON trips you take, do you typically stay one or more nights in a house you own, a vacation rental, a hotel / motel, a campground, or sleep on the boat? (**mark only one**)

<input type="checkbox"/> No. This is usually a day trip.
<input type="checkbox"/> House I own
<input type="checkbox"/> Vacation rental
<input type="checkbox"/> Hotel, motel, or B&B
<input type="checkbox"/> Campground or trailer park
<input type="checkbox"/> Sleep on the boat
<input type="checkbox"/> Other lodging: _____

A17 Have you ever taken trips targeting BOTTOMFISH in Oregon?

<input type="checkbox"/> Yes	↓ Continue	<input type="checkbox"/> No	→ Skip to A19
------------------------------	------------	-----------------------------	---------------

A18 How many BOTTOMFISH trips did you take in the past 12 months in Oregon?

Bottomfish trips last 12 months:

A19 Do you plan on taking any BOTTOMFISH trips in the next 12 months in Oregon?

<input type="checkbox"/> No, I do not plan on taking any bottomfish trips in the next 12 months.	→ Skip to A23
<input type="checkbox"/> Yes, I plan on taking <input type="text"/> <input type="text"/> bottomfish trips in the next 12 months.	↓ Continue to A20

A20 From the locations given on the map, where are you most likely to board the boat on a future BOTTOMFISH fishing trip in Oregon? (**mark one location**)

<input type="checkbox"/> Astoria	<input type="checkbox"/> Depoe Bay	<input type="checkbox"/> Hammond	<input type="checkbox"/> Netarts	<input type="checkbox"/> Reedsport
<input type="checkbox"/> Bandon	<input type="checkbox"/> Florence	<input type="checkbox"/> Ilwaco	<input type="checkbox"/> Newport	<input type="checkbox"/> Seaside
<input type="checkbox"/> Brookings	<input type="checkbox"/> Garibaldi	<input type="checkbox"/> Kernville	<input type="checkbox"/> Pacific City	<input type="checkbox"/> Tillamook
<input type="checkbox"/> Coos Bay	<input type="checkbox"/> Gold Beach	<input type="checkbox"/> Nehalem	<input type="checkbox"/> Port Orford	<input type="checkbox"/> Waldport
<input type="checkbox"/> Other (specify): _____				

A21 On your BOTTOMFISH trips, do you typically fish from a private boat (yours or a friend's) or from a charter boat? (**mark only one**)

<input type="checkbox"/> Private boat (my own)
<input type="checkbox"/> Private boat (friend or family's)
<input type="checkbox"/> Charter boat

A22 On the BOTTOMFISH trips you take, do you typically stay one or more nights in a house you own, a vacation rental, a hotel / motel, a campground, or sleep on the boat? (**mark only one**)

<input type="checkbox"/> No. This is usually a day trip.
<input type="checkbox"/> House I own
<input type="checkbox"/> Vacation rental
<input type="checkbox"/> Hotel, motel, or B&B
<input type="checkbox"/> Campground or trailer park
<input type="checkbox"/> Sleep on the boat
<input type="checkbox"/> Other lodging: _____

A23 For your saltwater fishing trips, is fishing the primary purpose of taking a trip?

<input type="checkbox"/>	Yes
<input type="checkbox"/>	Fishing and other purposes are equally important
<input type="checkbox"/>	No, the primary purpose is for something other than fishing

A24 Below are some reasons why you might saltwater sport fish in Oregon. Mark how much you agree or disagree with each statement.

"I saltwater sport fish in Oregon to..."	Strongly Agree	Agree	Feel Neutral	Disagree	Strongly Disagree
...Spend time outdoors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Spend time with family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Spend time with friends or others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Relax	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Get some exercise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Eat something I caught myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Provide food for me or my family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A25 If saltwater fishing conditions were ideal, what is the greatest number of saltwater trips you would realistically consider taking in Oregon within the next 12 months?

Saltwater trips under ideal conditions next 12 months:

...from a private or charter boat

...from the shore

Section B: Your Typical Oregon Saltwater Fishing Trip Expenses

B1 Do you take more boat trips targeting tuna, salmon, or bottomfish?

<input type="checkbox"/>	Tuna
<input type="checkbox"/>	Salmon
<input type="checkbox"/>	Bottomfish

B2 Are these trips typically from a private boat or a charter boat?

<input type="checkbox"/>	Private
<input type="checkbox"/>	Charter

B3 On the type of trip marked above (tuna, salmon, or bottomfish; private or charter), about how much money did you or your household spend **per trip** in each of the following expenditure categories? For each type, indicate the number of people covered by the expenditure.

TYPE of EXPENDITURE		Expenditures by you or your household (round to the nearest dollar)				# of people covered by this expense (including you)				
		\$								
Fishing Cost	Charter or guide fees	\$.00				
	Fish filleting fees and tips	\$.00				
	Bait	\$.00				
	Ice	\$.00				
	Boat fuel	\$.00				
	Launch, haul out, parking fees	\$.00				
Transportation	Auto, truck, or RV fuel	\$.00				
	Auto or RV rental	\$.00				
	Airfare	\$.00				
	Ferry	\$.00				
	Other transportation: _____	\$.00				
Lodging / Food	Campgrounds and trailer parks	\$.00				
	Hotels, motels, and B&B	\$.00				
	Vacation rental	\$.00				
	Grocery and convenience stores	\$.00				
	Restaurants and bars	\$.00				
	Other lodging/food: _____	\$.00				

Questions? Call us at 1-206-302-2403

Section C: Trips You Would Likely Take During a Season

In this section, we'd like you to think about the saltwater fishing trips you are likely to take in a typical season, and how changes in target species availability, catch rates, bag limits, depth restrictions, or fishing costs would affect your plans.

Target species: The primary type of saltwater fish (tuna, salmon, bottomfish) targeted by the boat.

Expected catch: The total number of each species you expect to catch per day based on current fishing reports.

Bag limit: The number of fish you are legally allowed to keep per day.

Fishing cost: Your personal share of the daily fishing cost. The fishing costs in the tables vary from trip to trip due to uncertainty about future prices of things like boat fuel and charter operations. This will allow your answers to be used in the future as well as today. Please remember you would also need to pay for travel to the boat launch site and may also need to pay for lodging, if you would take an overnight trip.


Private boat cost: If you typically use a private boat for this target species, please consider the listed private boat cost when making your selection. These costs would include bait, ice, daily moorage or launch fees, and boat fuel.

Charter boat cost: If you typically use a charter boat for this target species, please consider the listed charter boat cost when making your selection. These costs include all charter fees and tips. Please treat all charter trips as being taken on the same type of boat and having the same amenities, regardless of cost.

C1. Suppose that you had the choice between three boat fishing trips in Oregon saltwater (Choice A, Choice B, or Choice C) or not taking a boat fishing trip in Oregon saltwater (Choice D). Please review the table and answer the questions below, indicating which of these choices you like best.


		Choice A	Choice B	Choice C	Choice D
Target species		Tuna	Salmon	Bottomfish	Do something other than boat fishing in Oregon saltwater ...shore fishing in saltwater ...freshwater fishing ...do something other than fishing
Expected catch (per person per day)		For every 10 anglers... 9 catch 10 albacore each 1 catches 5 albacore	For every 10 anglers... 9 catch 2 silvers each 1 catches 1 silver	For every 10 anglers... 9 catch 0 halibut each 1 catches 3 halibut	
Bag limit		15 albacore	2 silver salmon	2 halibut	
Fishing cost (per person per day)	Private	\$250	\$125	\$50	
	Charter	\$450	\$175	\$75	

If you were presented with these four choices (A, B, C, D), which one would you choose to do?
(mark only one)




Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
----------	--------------------------	----------	--------------------------	----------	--------------------------	----------	--------------------------

If your first choice was not available, what would be your second choice?
(mark only one)



Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
----------	--------------------------	----------	--------------------------	----------	--------------------------	----------	--------------------------

If your first and second choices were not available, what would be your third choice?
(mark only one)

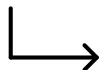


Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
----------	--------------------------	----------	--------------------------	----------	--------------------------	----------	--------------------------

C2. Suppose that you had the choice between three boat fishing trips in Oregon saltwater (Choice A, Choice B, or Choice C) or not taking a boat fishing trip in Oregon saltwater (Choice D). Please review the table and answer the questions below, indicating which of these choices you like best.

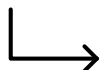
		Choice A	Choice B	Choice C	Choice D
Target species		Tuna	Salmon	Bottomfish	Do something other than boat fishing in Oregon saltwater ...shore fishing in saltwater ...freshwater fishing ...do something other than fishing
Expected catch (per person per day)		For every 10 anglers... 9 catch 0 albacore each 1 catches 2 albacore	For every 10 anglers... 9 catch 0 silvers each 1 catches 6 silvers	For every 10 anglers... 8 catch 0 rockfish each 1 catches 12 rockfish 1 catches 8 rockfish	
Bag limit		15 albacore	2 silver salmon	5 rockfish	
Fishing cost (per person per day)	Private	\$125	\$125	\$75	
	Charter	\$175	\$175	\$125	

If you were presented with these four choices (A, B, C, D), which one would you choose to do?
(mark only one)



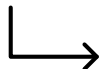
Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
----------	--------------------------	----------	--------------------------	----------	--------------------------	----------	--------------------------

If your first choice was not available, what would be your second choice?
(mark only one)



Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
----------	--------------------------	----------	--------------------------	----------	--------------------------	----------	--------------------------

If your first and second choices were not available, what would be your third choice?
(mark only one)




Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
----------	--------------------------	----------	--------------------------	----------	--------------------------	----------	--------------------------


C3 Suppose that you had the choice between two boat fishing trips in Oregon saltwater (Choice A or Choice B) or not taking a boat fishing trip in Oregon saltwater (Choice D). Suppose that bottomfish fishing (Choice C) is currently closed. Please review the table and answer the questions below, indicating which of these choices you like best.

		Choice A	Choice B	Choice C	Choice D
Target species		Tuna	Salmon	Bottomfish	Do something other than boat fishing in Oregon saltwater ...shore fishing in saltwater ...freshwater fishing ...do something other than fishing
Expected catch (per person per day)		For every 10 anglers... 7 catch 10 albacore each 2 catch 5 albacore each 1 catches 20 albacore	For every 10 anglers... 7 catch 2 kings each 2 catch 0 kings each 1 catches 6 kings	Closed	
Bag limit		15 albacore	2 king salmon	Closed	
Fishing cost (per person per day)	Private	\$250	\$75	N/A	
	Charter	\$450	\$125	N/A	

If you were presented with these three choices (A, B, D), which one would you choose to do?
(mark only one)


Choice A
Choice B
Choice D

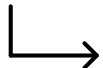
If your first choice was not available, what would be your second choice?
(mark only one)


Choice A
Choice B
Choice D

C4. Suppose that you had the choice between three boat fishing trips in Oregon saltwater (Choice A, Choice B, or Choice C) or not taking a boat fishing trip in Oregon saltwater (Choice D). Please review the table and answer the questions below, indicating which of these choices you like best.

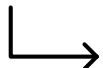
		Choice A	Choice B	Choice C	Choice D
Target species		Tuna	Salmon	Bottomfish	Do something other than boat fishing in Oregon saltwater ...shore fishing in saltwater ...freshwater fishing ...do something other than fishing
Expected catch <small>(per person per day)</small>		For every 10 anglers... 9 catch 0 albacore each 1 catches 20 albacore	For every 10 anglers... 8 catch 0 kings each 1 catches 6 kings 1 catches 3 kings	For every 10 anglers... 8 catch 0 lingcod each 1 catches 5 lingcod 1 catches 3 lingcod	
Bag limit		15 albacore	1 king salmon	1 lingcod	
Fishing cost <small>(per person per day)</small>	Private	\$125	\$125	\$50	
	Charter	\$175	\$175	\$75	

If you were presented with these four choices (A, B, C, D), which one would you choose to do?
(mark only one)



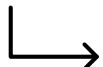
Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
----------	--------------------------	----------	--------------------------	----------	--------------------------	----------	--------------------------

If your first choice was not available, what would be your second choice?
(mark only one)



Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
----------	--------------------------	----------	--------------------------	----------	--------------------------	----------	--------------------------

If your first and second choices were not available, what would be your third choice?



Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
----------	--------------------------	----------	--------------------------	----------	--------------------------	----------	--------------------------

Section D: About You and Your Household

The following questions will help us know more about saltwater anglers. The information you provide will remain STRICTLY CONFIDENTIAL, and you will not be identified with your answers.

D1 In what year were you born?

Year:

D2 Are you...?

<input type="checkbox"/> Male	<input type="checkbox"/> Female
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D3 What is the highest level of education you have completed? **(mark one response)**

<input type="checkbox"/>	Some high school
<input type="checkbox"/>	High school graduate
<input type="checkbox"/>	Technical school
<input type="checkbox"/>	Some college
<input type="checkbox"/>	College graduate or more

D4 How many adults and children (under 18) are there in your household including yourself?

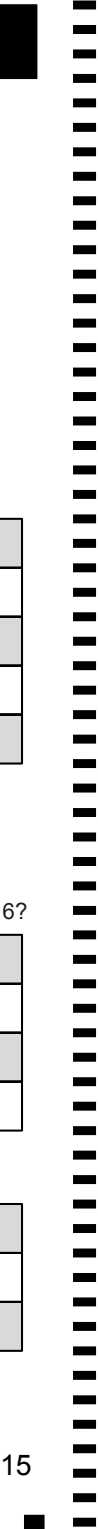
Adults: # Children:

D5 Which of the following best describes your household's TOTAL annual income before taxes in 2016?

<input type="checkbox"/> Less than \$20,000	<input type="checkbox"/> \$80,000 - \$99,999
<input type="checkbox"/> \$20,000 - \$39,999	<input type="checkbox"/> \$100,000 - \$124,999
<input type="checkbox"/> \$40,000 - \$59,999	<input type="checkbox"/> \$125,000 - \$149,999
<input type="checkbox"/> \$60,000 - \$79,999	<input type="checkbox"/> \$150,000 or more

D6 Are you employed part time or full time outside the home?

<input type="checkbox"/>	No, I am a homemaker, retired, or currently unemployed	→ Skip to Thank You
<input type="checkbox"/>	I work part time (less than 35 hours per week)	
<input type="checkbox"/>	I work full time (at least 35 hours per week)	



Appendix C: Final Survey Materials

This appendix provides the contacts that were used for the final survey.

While the final survey was administered in all four study regions—Oregon, Washington, Northern California, and Southern California—most of the contacts included only minor differences, primarily limited to the region name. In contrast to other contacts, the full survey instruments included substantial differences in fishing locations and target species. Therefore, we provide each of the regional survey instruments in their entirety, and include other correspondence materials for only one region: Oregon.

Section C-1 provides several versions of the correspondences used for the final study. Correspondences include: a) advance letter/invitation, web survey; b) email invitation, web survey; c) reminder postcard; d) mail cover letter, mail survey; and e) second mail cover letter, mail survey.

Section C-2 provides a copy of each region's final survey instrument.

C-1. Correspondence

C-1a. Advance letter/invitation; Web survey

Subject: NOAA Fishing Survey

Dear [NAME]:

The National Marine Fisheries Service (NMFS), often referred to as “NOAA Fisheries Service,” is an agency within the National Oceanic and Atmospheric Administration responsible for management, conservation, and protection of the nation's marine resources. NMFS is conducting a survey about fishing activities in [STATE]. Your answers will represent others who fish in [STATE] and will help NMFS estimate the economic impact of saltwater fishing and better manage fish stocks in [STATE]

Participation is quick and easy. Please click the link below to access the survey:

[INSERT LINK with MID embedded]

Participation in the survey is voluntary. Survey responses are confidential and only aggregate data will be reported. This research is for scientific purposes, and you will **not** be contacted to purchase any products or services. If you have any questions about the survey please call me at 1-206-302-2403. If you need assistance completing the survey please contact ICF, an independent research firm hired to conduct this study, at 855-276-3395 or via email at noaasurvey@icfsurveysupport.com.

Thank you in advance for your participation.

Leif Anderson
Project Director
NOAA Fisheries | Northwest Fisheries Science Center

C-1b. Email invitation; Web survey



Current Resident  12345678A

980 Beaver Creek Drive
Martinsville, VA 24054



*****AUTO**3-DIGIT 980

OR 1 1

Dear John Smith:

The National Marine Fisheries Service (NMFS), often referred to as “NOAA Fisheries Service,” is an agency within the National Oceanic and Atmospheric Administration responsible for management, conservation, and protection of the nation's marine resources. NMFS is conducting a survey about fishing activities in Oregon. Your answers will represent others who fish in Oregon and will help NMFS estimate the economic impact of saltwater fishing and better manage fish stocks in Oregon.

Participation is quick and easy. You can access the survey online by going to:

www.NOAASurvey.com

You will need to enter the following passcode to complete the survey: 12345678A

Participation in the survey is voluntary. Survey responses are confidential and only aggregate data will be reported. This research is for scientific purposes, and you will **not** be contacted to purchase any products or services. If you have any questions about the survey please call me at 1-206-302-2403. If you need assistance completing the survey please contact ICF, an independent research firm hired to conduct this study, at 855-276-3395 or via email at noaasurvey@icfsurveysupport.com.

Thank you in advance for your participation.

Sincerely,

A handwritten signature in blue ink that reads "Leif Anderson".

Leif Anderson
Project Director
NOAA Fisheries | Northwest Fisheries Science Center

P.S. We have enclosed a small token of our appreciation as a way of saying thanks for completing the survey.

C-1c. Reminder postcard

	C/O ICF 980 Beaver Creek Drive Martinsville, VA 24112
 12345678A	
John Smith 980 Beaver Creek Drive Martinsville, VA 24112 OR	

Dear John Smith:

About a week ago, we sent you a letter asking you to participate in an Oregon fishing activity survey conducted by the National Marine Fisheries Service (NMFS). As of July 2, 2018 we have not received a response. You have been selected to represent others who fish in Oregon and your answers will help NMFS estimate the economic impact of saltwater fishing and better manage fish stocks in Oregon.

Participation is quick and easy. You can access the survey by going to www.NOAASurvey.com and entering the following passcode: 12345678A

If you have any questions about the survey please call me at 1-206-302-2403. If you need assistance completing the survey please contact independent research firm ICF at 855-276-3395 or via email at noaasurvey@icfsurveysupport.com.

Sincerely,



Leif Anderson— Project Director, Northwest Fisheries Science Center

C-1d. Mail cover letter; Mail survey



Current Resident  12345678A
980 Beaver Creek Drive
Martinsville, VA 24054

*****AUTO**3-DIGIT 980
OR 1 1

Dear John Smith:

We are writing to ask for your participation in a survey about your fishing activities. The survey is sponsored by the National Marine Fisheries Service (NMFS), often referred to as "NOAA Fisheries," an agency within the National Oceanic and Atmospheric Administration responsible for management, conservation, and protection of the nation's marine resources.

You have been selected to represent others who fish in Oregon and your answers will help NMFS estimate the economic impact of saltwater fishing and better manage fish stocks in Oregon.

Participation is quick and easy. Please take a few minutes to complete the survey and return it in the enclosed stamped envelope.

Participation in the survey is voluntary. Survey responses are confidential and only aggregate data will be reported. This research is for scientific purposes and you will **not** be contacted to purchase any products or services. If you have any questions about the survey please call me at 1-206-302-2403. If you need assistance completing the survey please contact ICF, an independent research firm hired to conduct this study, at 855-276-3395 or via email at noaasurvey@icfsurveysupport.com.

Thank you in advance for your participation.

Sincerely,

A handwritten signature in blue ink that reads "Leif Anderson".

Leif Anderson
Project Director
NOAA Fisheries | Northwest Fisheries Science Center

C-1e. Second mail cover letter; Mail survey



Current Resident  12345678A

980 Beaver Creek Drive

Martinsville, VA 24054



*****AUTO**3-DIGIT 980

OR 1 1

Dear John Smith:

About two weeks ago, we sent you a survey in the mail asking about your fishing activities in Oregon. As of August 28, 2018 we have not received a response. If you have already mailed it to us, we thank you for your assistance.

The survey is sponsored by the National Marine Fisheries Service (NMFS), often referred to as "NOAA Fisheries," an agency within the National Oceanic and Atmospheric Administration responsible for management, conservation, and protection of the nation's marine resources.

You have been selected to represent others who fish in Oregon and your answers will help NMFS estimate the economic impact of saltwater fishing and better manage fish stocks in Oregon.

Participation is quick and easy. Please take a few minutes to complete the survey and return it in the enclosed stamped envelope.

Participation in the survey is voluntary. Survey responses are confidential and only aggregate data will be reported. This research is for scientific purposes and you will **not** be contacted to purchase any products or services. If you have any questions about the survey please call me at 1-206-302-2403. If you need assistance completing the survey please contact ICF, an independent research firm hired to conduct this study, at 855-276-3395 or via email at noaasurvey@icfsurveysupport.com.

Thank you in advance for your participation.

Sincerely,

A handwritten signature in blue ink that reads "Leif Anderson".

Leif Anderson

Project Director

NOAA Fisheries | Northwest Fisheries Science Center

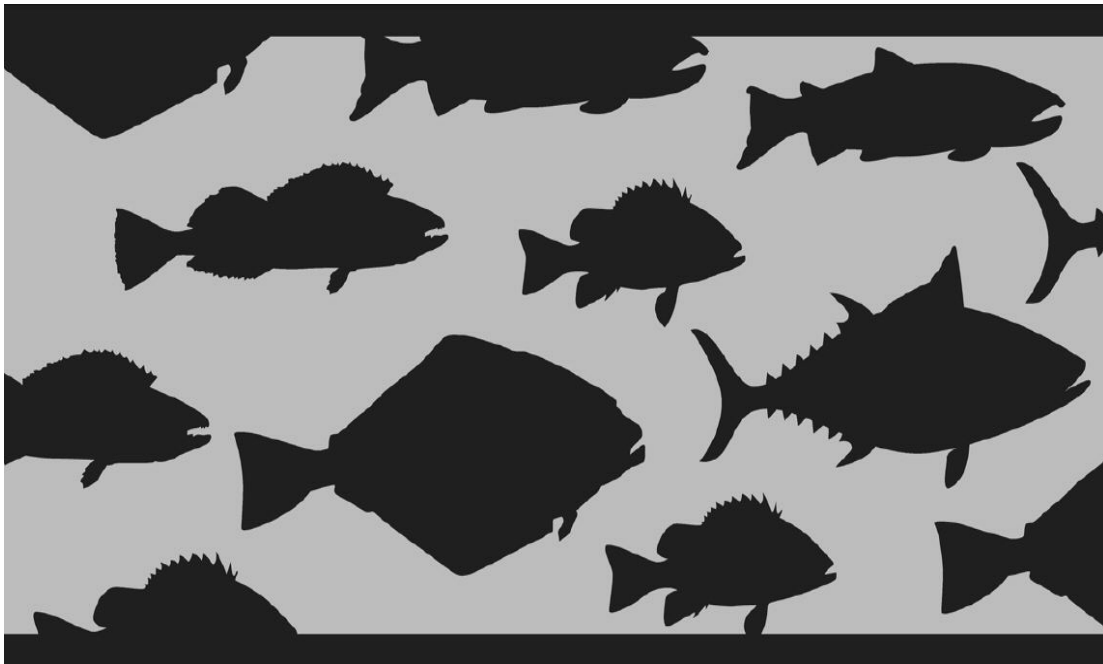
C-2. Final Survey Instrument

C-2a. Washington survey

"08400817F"

WAV4 1 1

Washington Sport Fishing Survey



OMB Control #0648-0750 expires 3/31/2020.

Response to this request is voluntary and anonymous. Notwithstanding any other provisions of the law; no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with a collection of information subject to the requirement of the Paperwork Reduction Act, unless that collection of information displays a currently valid OMB Control Number. Public reporting burden for this survey is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Leif Anderson, NWFSC FRAM Division, 2725 Montlake Blvd. E, Seattle, WA 98112-2097.



**NOAA
FISHERIES**

This survey is voluntary.
All responses are anonymous.



Section A: Your Washington Sport Fishing Activities

The questions in this survey are about YOU and YOUR fishing activities and preferences. Except when asked, please do not include any information from other household members or other fishing party members.

Please print clearly.

Write numbers as two digits: 1 Trip =

0	1
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 Fill in boxes with a

X

A1 How much do you like fishing compared to other recreational activities?

<input type="checkbox"/>	Fishing is my favorite recreational activity.
<input type="checkbox"/>	I like fishing and other recreational activities about the same.
<input type="checkbox"/>	I like other recreational activities more than fishing.

A2 Do you prefer saltwater or freshwater fishing?

<input type="checkbox"/>	I prefer saltwater fishing.
<input type="checkbox"/>	I like saltwater and freshwater fishing about the same.
<input type="checkbox"/>	I prefer freshwater fishing.

A3 Have you FRESHWATER sport fished in Washington in the last 12 months?

<input type="checkbox"/>	Yes ↓ Continue		<input type="checkbox"/>	No → Skip to A4
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Approximately how many days (count partial days as full days) did you freshwater fish in Washington in the last 12 months?

Freshwater days last 12 months:

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A4 Have you SALTWATER sport fished in Washington in the last 12 months? (Saltwater is defined as all waters seaward of river or stream mouths, including estuaries, and the Columbia River seaward of the Tongue Point-Rocky Point line.)

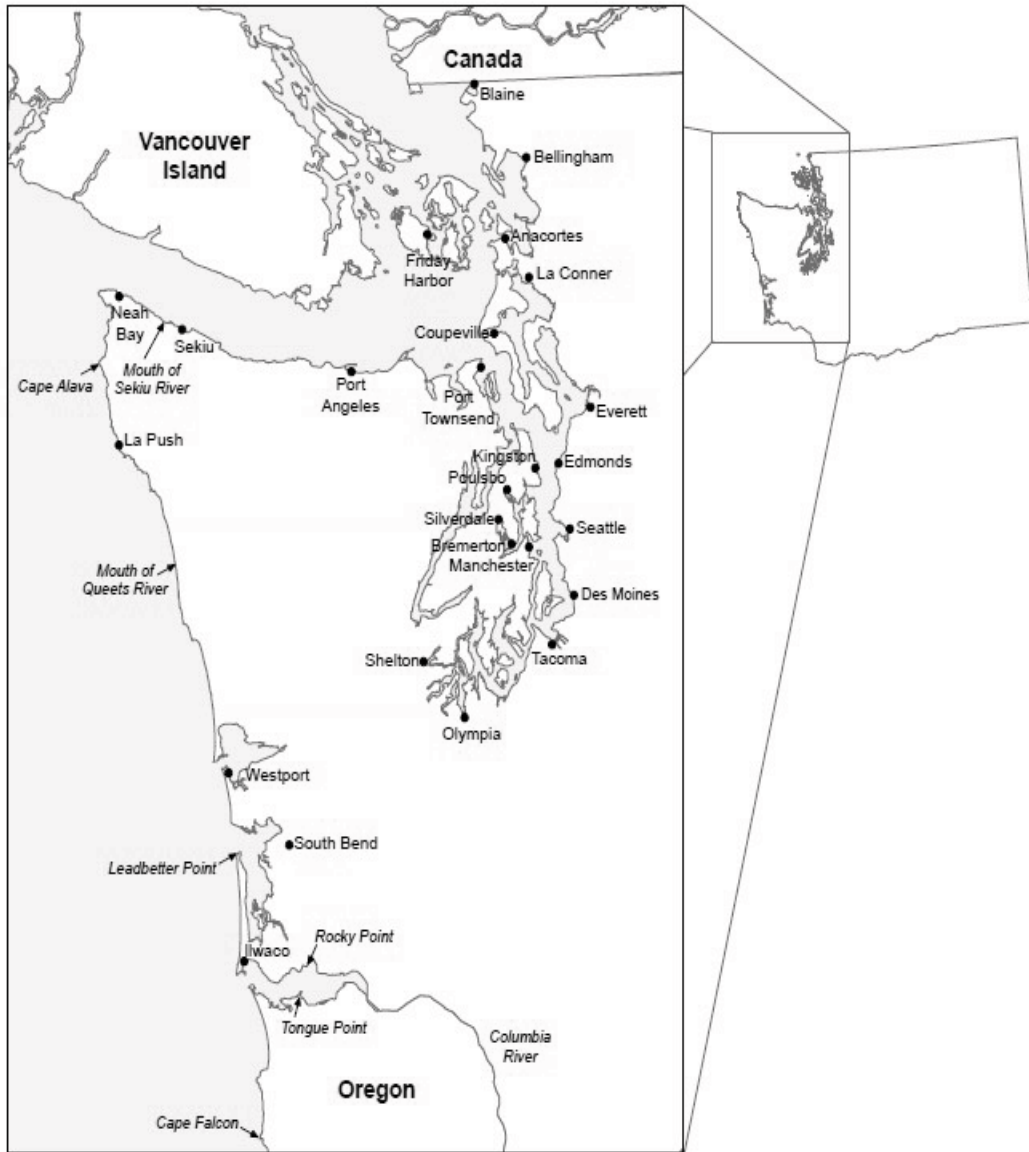
<input type="checkbox"/>	Yes ↓ Continue		<input type="checkbox"/>	No → Skip to Section D on page 15
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Approximately how many days (count partial days as full days) did you saltwater fish in Washington in the last 12 months from a private boat, from a charter boat, and from the shore?

Saltwater days last 12 months:

...from a private boat:	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table>		
...from a charter boat:	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table>		
...from the shore:	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table>		

Please use this map of Washington saltwater fishing locations when answering the questions on the next 3 pages.



Questions? Email us at Leif.Anderson@noaa.gov

A5 Have you ever taken trips targeting TUNA in Washington?

<input type="checkbox"/> Yes	↓ Continue	<input type="checkbox"/> No	→ Skip to A7
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A6 How many TUNA trips did you take in the past 12 months in Washington?

Tuna trips last 12 months:

A7 Do you plan on taking any TUNA trips in the next 12 months in Washington?

<input type="checkbox"/> No, I do not plan on taking any tuna trips in the next 12 months.	→ Skip to A11
<input type="checkbox"/> Yes, I plan on taking <input type="text"/> <input type="text"/> tuna trips in the next 12 months.	↓ Continue to A8

A8 From the locations given on the map, where are you most likely to board the boat on a future TUNA fishing trip in Washington? (mark one location)

<input type="checkbox"/> Anacortes	<input type="checkbox"/> Edmonds	<input type="checkbox"/> La Conner	<input type="checkbox"/> Port Angeles	<input type="checkbox"/> Shelton
<input type="checkbox"/> Bellingham	<input type="checkbox"/> Everett	<input type="checkbox"/> La Push	<input type="checkbox"/> Port Townsend	<input type="checkbox"/> Silverdale
<input type="checkbox"/> Blaine	<input type="checkbox"/> Friday Harbor	<input type="checkbox"/> Manchester	<input type="checkbox"/> Poulsbo	<input type="checkbox"/> South Bend
<input type="checkbox"/> Bremerton	<input type="checkbox"/> Ilwaco	<input type="checkbox"/> Neah Bay	<input type="checkbox"/> Seattle	<input type="checkbox"/> Tacoma
<input type="checkbox"/> Coupeville	<input type="checkbox"/> Kingston	<input type="checkbox"/> Olympia	<input type="checkbox"/> Sekiu	<input type="checkbox"/> Westport
<input type="checkbox"/> Des Moines	<input type="checkbox"/> Other (specify): _____			

A9 On your TUNA trips, do you typically fish from a private boat (yours or a friend's) or from a charter boat? (mark only one)

<input type="checkbox"/> Private boat (my own)
<input type="checkbox"/> Private boat (friend or family's)
<input type="checkbox"/> Charter boat

A10 On the TUNA trips you take, do you typically stay one or more nights in a house you own, a vacation rental, a hotel / motel, a campground, or sleep on the boat? (mark only one)

<input type="checkbox"/> No. This is usually a day trip.
<input type="checkbox"/> House I own
<input type="checkbox"/> Vacation rental
<input type="checkbox"/> Hotel, motel, or B&B
<input type="checkbox"/> Campground or trailer park
<input type="checkbox"/> Sleep on the boat
<input type="checkbox"/> Other lodging: _____

Questions? Call us at 1-206-302-2403

A11 Have you ever taken trips targeting saltwater SALMON in Washington?

<input type="checkbox"/> Yes ↓ Continue	<input type="checkbox"/> No → Skip to A13
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A12 How many saltwater SALMON trips did you take in the past 12 months in Washington?

Saltwater salmon trips last 12 months:

A13 Do you plan on taking any saltwater SALMON trips in the next 12 months in Washington?

<input type="checkbox"/> No, I do not plan on taking any saltwater salmon trips in the next 12 months. → Skip to A17
<input type="checkbox"/> Yes, I plan on taking <input type="text"/> <input type="text"/> saltwater salmon trips in the next 12 months. ↓ Continue to A14

A14 From the locations given on the map, where are you most likely to board the boat on a future saltwater SALMON fishing trip in Washington? (**mark one location**)

<input type="checkbox"/> Anacortes	<input type="checkbox"/> Edmonds	<input type="checkbox"/> La Conner	<input type="checkbox"/> Port Angeles	<input type="checkbox"/> Shelton
<input type="checkbox"/> Bellingham	<input type="checkbox"/> Everett	<input type="checkbox"/> La Push	<input type="checkbox"/> Port Townsend	<input type="checkbox"/> Silverdale
<input type="checkbox"/> Blaine	<input type="checkbox"/> Friday Harbor	<input type="checkbox"/> Manchester	<input type="checkbox"/> Poulsbo	<input type="checkbox"/> South Bend
<input type="checkbox"/> Bremerton	<input type="checkbox"/> Ilwaco	<input type="checkbox"/> Neah Bay	<input type="checkbox"/> Seattle	<input type="checkbox"/> Tacoma
<input type="checkbox"/> Coupeville	<input type="checkbox"/> Kingston	<input type="checkbox"/> Olympia	<input type="checkbox"/> Sekiu	<input type="checkbox"/> Westport
<input type="checkbox"/> Des Moines	<input type="checkbox"/> Other (specify): _____			

A15 On your saltwater SALMON trips, do you typically fish from a private boat (yours or a friend's) or from a charter boat? (**mark only one**)

<input type="checkbox"/> Private boat (my own)
<input type="checkbox"/> Private boat (friend or family's)
<input type="checkbox"/> Charter boat

A16 On the saltwater SALMON trips you take, do you typically stay one or more nights in a house you own, a vacation rental, a hotel / motel, a campground, or sleep on the boat? (**mark only one**)

<input type="checkbox"/> No. This is usually a day trip.
<input type="checkbox"/> House I own
<input type="checkbox"/> Vacation rental
<input type="checkbox"/> Hotel, motel, or B&B
<input type="checkbox"/> Campground or trailer park
<input type="checkbox"/> Sleep on the boat
<input type="checkbox"/> Other lodging: _____

A17 Have you ever taken trips targeting BOTTOMFISH in Washington?

<input type="checkbox"/> Yes ↓ Continue	<input type="checkbox"/> No → Skip to A19
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A18 How many BOTTOMFISH trips did you take in the past 12 months in Washington?

Bottomfish trips last 12 months:

A19 Do you plan on taking any BOTTOMFISH trips in the next 12 months in Washington?

<input type="checkbox"/> No, I do not plan on taking any bottomfish trips in the next 12 months. → Skip to A23
<input type="checkbox"/> Yes, I plan on taking <input type="text"/> <input type="text"/> bottomfish trips in the next 12 months. ↓ Continue to A20

A20 From the locations given on the map, where are you most likely to board the boat on a future BOTTOMFISH fishing trip in Washington? (mark one location)

<input type="checkbox"/> Anacortes	<input type="checkbox"/> Edmonds	<input type="checkbox"/> La Conner	<input type="checkbox"/> Port Angeles	<input type="checkbox"/> Shelton
<input type="checkbox"/> Bellingham	<input type="checkbox"/> Everett	<input type="checkbox"/> La Push	<input type="checkbox"/> Port Townsend	<input type="checkbox"/> Silverdale
<input type="checkbox"/> Blaine	<input type="checkbox"/> Friday Harbor	<input type="checkbox"/> Manchester	<input type="checkbox"/> Poulsbo	<input type="checkbox"/> South Bend
<input type="checkbox"/> Bremerton	<input type="checkbox"/> Ilwaco	<input type="checkbox"/> Neah Bay	<input type="checkbox"/> Seattle	<input type="checkbox"/> Tacoma
<input type="checkbox"/> Coupeville	<input type="checkbox"/> Kingston	<input type="checkbox"/> Olympia	<input type="checkbox"/> Sekiu	<input type="checkbox"/> Westport
<input type="checkbox"/> Des Moines	<input type="checkbox"/> Other (specify): _____			

A21 On your BOTTOMFISH trips, do you typically fish from a private boat (yours or a friend's) or from a charter boat? (mark only one)

<input type="checkbox"/> Private boat (my own)
<input type="checkbox"/> Private boat (friend or family's)
<input type="checkbox"/> Charter boat

A22 On the BOTTOMFISH trips you take, do you typically stay one or more nights in a house you own, a vacation rental, a hotel / motel, a campground, or sleep on the boat? (mark only one)

<input type="checkbox"/> No. This is usually a day trip.
<input type="checkbox"/> House I own
<input type="checkbox"/> Vacation rental
<input type="checkbox"/> Hotel, motel, or B&B
<input type="checkbox"/> Campground or trailer park
<input type="checkbox"/> Sleep on the boat
<input type="checkbox"/> Other lodging: _____

A23 For your saltwater fishing trips, is fishing the primary purpose of taking a trip?

<input type="checkbox"/>	Yes
<input type="checkbox"/>	Fishing and other purposes are equally important
<input type="checkbox"/>	No, the primary purpose is for something other than fishing

A24 Below are some reasons why you might saltwater sport fish in Washington. Mark how much you agree or disagree with each statement.

"I saltwater sport fish in Washington to..."	Strongly Agree	Agree	Feel Neutral	Disagree	Strongly Disagree
...Spend time outdoors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Spend time with family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Spend time with friends or others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Relax	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Get some exercise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Eat something I caught myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Provide food for me or my family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A25 If saltwater fishing conditions were ideal, what is the greatest number of saltwater trips you would realistically consider taking in Washington within the next 12 months?

Saltwater trips under ideal conditions next 12 months:

...from a private or charter boat

...from the shore

Section B: Your Typical Washington Saltwater Fishing Trip Expenses

B1 Do you take more boat trips targeting tuna, salmon, or bottomfish?

<input type="checkbox"/>	Tuna
<input type="checkbox"/>	Salmon
<input type="checkbox"/>	Bottomfish

B2 Are these trips typically from a private boat or a charter boat?

<input type="checkbox"/>	Private
<input type="checkbox"/>	Charter

B3 On the type of trip marked above (tuna, salmon, or bottomfish; private or charter), about how much money did you or your household spend **per trip** in each of the following expenditure categories? For each type, indicate the number of people covered by the expenditure.

TYPE of EXPENDITURE		Expenditures by you or your household (round to the nearest dollar)				# of people covered by this expense (including you)					
Fishing Cost	Charter or guide fees	\$									
	Fish filleting fees and tips	\$									
	Bait	\$									
	Ice	\$									
	Boat fuel	\$									
	Launch, haul out, parking fees	\$									
Transportation	Auto, truck, or RV fuel	\$									
	Auto or RV rental	\$									
	Airfare	\$									
	Ferry	\$									
	Other transportation: _____	\$									
Lodging / Food	Campgrounds and trailer parks	\$									
	Hotels, motels, and B&B	\$									
	Vacation rental	\$									
	Grocery and convenience stores	\$									
	Restaurants and bars	\$									
	Other lodging/food: _____	\$									

Questions? Call us at 1-206-302-2403

Section C: Trips You Would Likely Take During a Season

In this section, we'd like you to think about the saltwater fishing trips you are likely to take in a typical season, and how changes in target species availability, catch rates, bag limits, depth restrictions, or fishing costs would affect your plans.

Target species: The primary type of saltwater fish (tuna, salmon, bottomfish) targeted by the boat.

Expected catch: The total number of each species you expect to catch per day based on current fishing reports.

Bag limit: The number of fish you are legally allowed to keep per day.

Fishing cost: Your personal share of the daily fishing cost. The fishing costs in the tables vary from trip to trip due to uncertainty about future prices of things like boat fuel and charter operations. This will allow your answers to be used in the future as well as today. Please remember you would also need to pay for travel to the boat launch site and may also need to pay for lodging, if you would take an overnight trip.


Private boat cost: If you typically use a private boat for this target species, please consider the listed private boat cost when making your selection. These costs would include bait, ice, daily moorage or launch fees, and boat fuel.

Charter boat cost: If you typically use a charter boat for this target species, please consider the listed charter boat cost when making your selection. These costs include all charter fees and tips. Please treat all charter trips as being taken on the same type of boat and having the same amenities, regardless of cost.

C1. Suppose that you had the choice between three boat fishing trips in Washington saltwater (Choice A, Choice B, or Choice C) or not taking a boat fishing trip in Washington saltwater (Choice D). Please review the table and answer the questions below, indicating which of these choices you like best.


		Choice A	Choice B	Choice C	Choice D
Target species		Tuna	Salmon	Bottomfish	Do something other than boat fishing in Washington saltwater ...shore fishing in saltwater ...freshwater fishing ...do something other than fishing
Expected catch (per person per day)		For every 10 anglers... 9 catch 0 albacore each 1 catches 20 albacore	For every 10 anglers... 7 catch 2 kings each 2 catch 0 kings each 1 catches 6 kings	For every 10 anglers... 9 catch 0 lingcod each 1 catches 5 lingcod	
Bag limit		25 albacore	2 king salmon	2 lingcod	
Fishing cost (per person per day)	Private	\$125	\$125	\$50	
	Charter	\$175	\$175	\$75	

If you were presented with these four choices (A, B, C, D), which one would you choose to do?
(mark only one)




Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
----------	--------------------------	----------	--------------------------	----------	--------------------------	----------	--------------------------

If your first choice was not available, what would be your second choice?
(mark only one)



Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
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If your first and second choices were not available, what would be your third choice?
(mark only one)

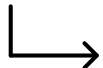


Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
----------	--------------------------	----------	--------------------------	----------	--------------------------	----------	--------------------------

C2. Suppose that you had the choice between three boat fishing trips in Washington saltwater (Choice A, Choice B, or Choice C) or not taking a boat fishing trip in Washington saltwater (Choice D). Please review the table and answer the questions below, indicating which of these choices you like best.

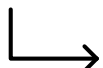
		Choice A	Choice B	Choice C	Choice D
Target species		Tuna	Salmon	Bottomfish	Do something other than boat fishing in Washington saltwater ...shore fishing in saltwater ...freshwater fishing ...do something other than fishing
Expected catch (per person per day)	For every 10 anglers...	8 catch 5 albacore each 2 catch 2 albacore each	For every 10 anglers... 9 catch 0 silvers each 1 catches 6 silvers	For every 10 anglers... 8 catch 0 lingcod each 1 catches 5 lingcod 1 catches 3 lingcod	
Bag limit		15 albacore	2 silver salmon	1 lingcod	
Fishing cost (per person per day)	Private	\$250	\$75	\$50	
	Charter	\$450	\$125	\$75	

If you were presented with these four choices (A, B, C, D), which one would you choose to do?
(mark only one)



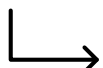
Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
----------	--------------------------	----------	--------------------------	----------	--------------------------	----------	--------------------------

If your first choice was not available, what would be your second choice?
(mark only one)



Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
----------	--------------------------	----------	--------------------------	----------	--------------------------	----------	--------------------------

If your first and second choices were not available, what would be your third choice?
(mark only one)




Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
----------	--------------------------	----------	--------------------------	----------	--------------------------	----------	--------------------------

C3 Suppose that you had the choice between three boat fishing trips in Washington saltwater (Choice A, Choice B, or Choice C) or not taking a boat fishing trip in Washington saltwater (Choice D). Please review the table and answer the questions below, indicating which of these choices you like best.


		Choice A	Choice B	Choice C	Choice D
Target species		Tuna	Salmon	Bottomfish	Do something other than boat fishing in Washington saltwater ...shore fishing in saltwater ...freshwater fishing ...do something other than fishing
Expected catch (per person per day)	For every 10 anglers...	9 catch 0 albacore each 1 catches 2 albacore	8 catch 0 kings each 1 catches 6 kings 1 catches 3 king	7 catch 12 rockfish each 2 catch 8 rockfish each 1 catches 0 rockfish	
Bag limit		15 albacore	1 king salmon	10 rockfish	
Fishing cost (per person per day)	Private	\$125	\$125	\$125	
	Charter	\$175	\$175	\$175	

If you were presented with these four choices (A, B, C, D), which one would you choose to do?
(mark only one)




Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
----------	--------------------------	----------	--------------------------	----------	--------------------------	----------	--------------------------

If your first choice was not available, what would be your second choice?
(mark only one)



Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
----------	--------------------------	----------	--------------------------	----------	--------------------------	----------	--------------------------

If your first and second choices were not available, what would be your third choice?
(mark only one)

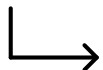


Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
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C4. Suppose that you had the choice between three boat fishing trips in Washington saltwater (Choice A, Choice B, or Choice C) or not taking a boat fishing trip in Washington saltwater (Choice D). Please review the table and answer the questions below, indicating which of these choices you like best.

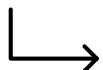
		Choice A	Choice B	Choice C	Choice D
Target species		Tuna	Salmon	Bottomfish	Do something other than boat fishing in Washington saltwater ...shore fishing in saltwater ...freshwater fishing ...do something other than fishing
Expected catch (per person per day)		For every 10 anglers... 7 catch 10 albacore each 2 catch 5 albacore each 1 catches 20 albacore	For every 10 anglers... 9 catch 2 kings each 1 catches 1 king	For every 10 anglers... 9 catch 0 rockfish each 1 catches 1 rockfish	
Bag limit		15 albacore	2 king salmon	1 rockfish	
Fishing cost (per person per day)	Private	\$250	\$125	\$50	
	Charter	\$450	\$175	\$75	

If you were presented with these four choices (A, B, C, D), which one would you choose to do?
(mark only one)



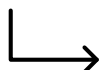
Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
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If your first choice was not available, what would be your second choice?
(mark only one)



Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
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If your first and second choices were not available, what would be your third choice?
(mark only one)



Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
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Section D: About You and Your Household

The following questions will help us know more about saltwater anglers. The information you provide will remain STRICTLY CONFIDENTIAL, and you will not be identified with your answers.

D1 In what year were you born?

Year:

D2 Are you...?

<input type="checkbox"/> Male	<input type="checkbox"/> Female
-------------------------------	---------------------------------

D3 What is the highest level of education you have completed? **(mark one response)**

<input type="checkbox"/>	Some high school
<input type="checkbox"/>	High school graduate
<input type="checkbox"/>	Technical school
<input type="checkbox"/>	Some college
<input type="checkbox"/>	College graduate or more

D4 How many adults and children (under 18) are there in your household including yourself?

Adults: # Children:

D5 Which of the following best describes your household's TOTAL annual income before taxes in 2016?

<input type="checkbox"/> Less than \$20,000	<input type="checkbox"/> \$80,000 - \$99,999
<input type="checkbox"/> \$20,000 - \$39,999	<input type="checkbox"/> \$100,000 - \$124,999
<input type="checkbox"/> \$40,000 - \$59,999	<input type="checkbox"/> \$125,000 - \$149,999
<input type="checkbox"/> \$60,000 - \$79,999	<input type="checkbox"/> \$150,000 or more

D6 Are you employed part time or full time outside the home?

<input type="checkbox"/>	No, I am a homemaker, retired, or currently unemployed	→ Skip to Thank You
<input type="checkbox"/>	I work part time (less than 35 hours per week)	
<input type="checkbox"/>	I work full time (at least 35 hours per week)	

D7

Approximately what is your personal hourly wage rate?

<input type="checkbox"/> \$5.00 - \$9.99	<input type="checkbox"/> \$20.00 - \$29.99	<input type="checkbox"/> \$50.00 - \$59.99
<input type="checkbox"/> \$10.00 - \$14.99	<input type="checkbox"/> \$30.00 - \$39.99	<input type="checkbox"/> \$60.00 - \$74.99
<input type="checkbox"/> \$15.00 - \$19.99	<input type="checkbox"/> \$40.00 - \$49.99	<input type="checkbox"/> \$75.00 or more

D8

Do you take time off work to take saltwater fishing trips? **(mark all that apply)**

<input type="checkbox"/> No
<input type="checkbox"/> Yes, I take paid time off (vacation, sick leave)
<input type="checkbox"/> Yes, I take unpaid time off

Thank You for Participating!

Please use the space below to make any additional comments you may have. If you have any questions regarding the survey, please call 1-206-302-2403 or email Leif.Anderson@noaa.gov.

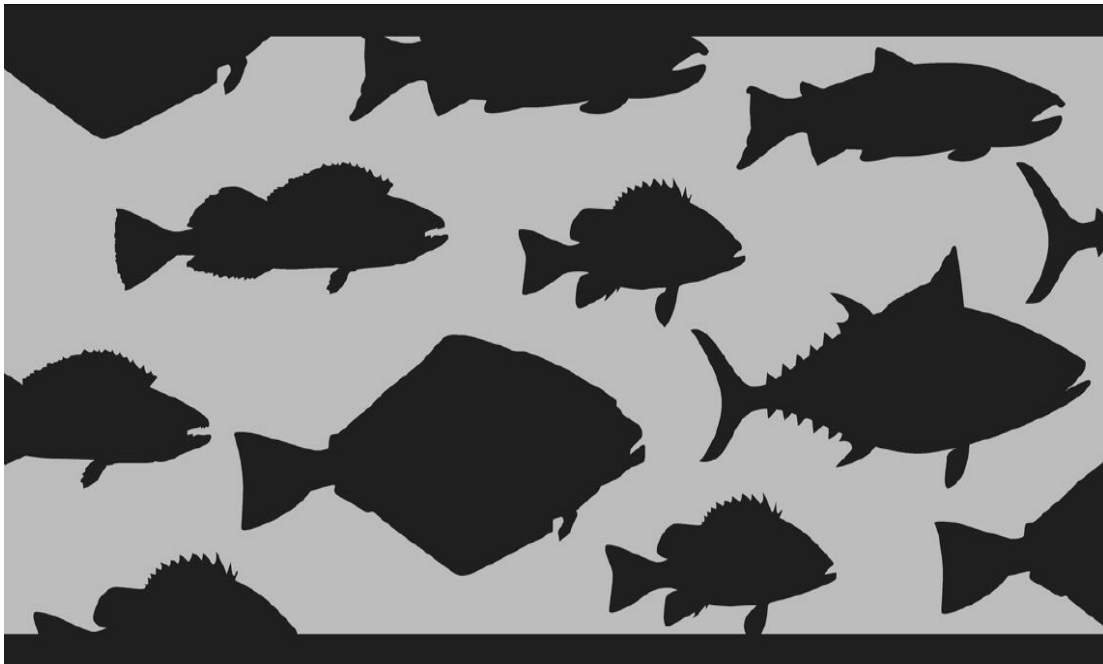
Questions? Email us at Leif.Anderson@noaa.gov

C-2b. Oregon survey

"00010515F"

ORV3 1 1

Oregon Sport Fishing Survey



OMB Control #0648-0750 expires 3/31/2020.

Response to this request is voluntary and anonymous. Notwithstanding any other provisions of the law; no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with a collection of information subject to the requirement of the Paperwork Reduction Act, unless that collection of information displays a currently valid OMB Control Number. Public reporting burden for this survey is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Leif Anderson, NWFSC FRAM Division, 2725 Montlake Blvd. E, Seattle, WA 98112-2097.



**NOAA
FISHERIES**

This survey is voluntary.
All responses are anonymous.



Section A: Your Oregon Sport Fishing Activities

The questions in this survey are about YOU and YOUR fishing activities and preferences. Except when asked, please do not include any information from other household members or other fishing party members.

Please print clearly.

Write numbers as two digits: 1 Trip =

0	1
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 Fill in boxes with a

A1 How much do you like fishing compared to other recreational activities?

<input type="checkbox"/>	Fishing is my favorite recreational activity.
<input type="checkbox"/>	I like fishing and other recreational activities about the same.
<input type="checkbox"/>	I like other recreational activities more than fishing.

A2 Do you prefer saltwater or freshwater fishing?

<input type="checkbox"/>	I prefer saltwater fishing.
<input type="checkbox"/>	I like saltwater and freshwater fishing about the same.
<input type="checkbox"/>	I prefer freshwater fishing.

A3 Have you FRESHWATER sport fished in Oregon in the last 12 months?

<input type="checkbox"/>	Yes ↓ Continue		<input type="checkbox"/>	No → Skip to A4
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Approximately how many days (count partial days as full days) did you freshwater fish in Oregon in the last 12 months?

Freshwater days last 12 months:

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A4 Have you SALTWATER sport fished in Oregon in the last 12 months? (Saltwater is defined as all waters seaward of river or stream mouths, including estuaries, and the Columbia River seaward of the Tongue Point-Rocky Point line.)

<input type="checkbox"/>	Yes ↓ Continue		<input type="checkbox"/>	No → Skip to Section D on page 15
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Approximately how many days (count partial days as full days) did you saltwater fish in Oregon in the last 12 months from a private boat, from a charter boat, and from the shore?

Saltwater days last 12 months:

...from a private boat:	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table>		
...from a charter boat:	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table>		
...from the shore:	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table>		

Please use this map of Oregon saltwater fishing locations when answering the questions on the next 3 pages.



Questions? Email us at Leif.Anderson@noaa.gov

A5 Have you ever taken trips targeting TUNA in Oregon?

<input type="checkbox"/> Yes	↓ Continue	<input type="checkbox"/> No	→ Skip to A7
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A6 How many TUNA trips did you take in the past 12 months in Oregon?

Tuna trips last 12 months:

A7 Do you plan on taking any TUNA trips in the next 12 months in Oregon?

<input type="checkbox"/> No, I do not plan on taking any tuna trips in the next 12 months.	→ Skip to A11
<input type="checkbox"/> Yes, I plan on taking <input type="text"/> <input type="text"/> tuna trips in the next 12 months.	↓ Continue to A8

A8 From the locations given on the map, where are you most likely to board the boat on a future TUNA fishing trip in Oregon? (mark one location)

<input type="checkbox"/> Astoria	<input type="checkbox"/> Depoe Bay	<input type="checkbox"/> Hammond	<input type="checkbox"/> Netarts	<input type="checkbox"/> Reedsport
<input type="checkbox"/> Bandon	<input type="checkbox"/> Florence	<input type="checkbox"/> Ilwaco	<input type="checkbox"/> Newport	<input type="checkbox"/> Seaside
<input type="checkbox"/> Brookings	<input type="checkbox"/> Garibaldi	<input type="checkbox"/> Kernville	<input type="checkbox"/> Pacific City	<input type="checkbox"/> Tillamook
<input type="checkbox"/> Coos Bay	<input type="checkbox"/> Gold Beach	<input type="checkbox"/> Nehalem	<input type="checkbox"/> Port Orford	<input type="checkbox"/> Waldport
<input type="checkbox"/> Other (specify): _____				

A9 On your TUNA trips, do you typically fish from a private boat (yours or a friend's) or from a charter boat? (mark only one)

<input type="checkbox"/> Private boat (my own)
<input type="checkbox"/> Private boat (friend or family's)
<input type="checkbox"/> Charter boat

A10 On the TUNA trips you take, do you typically stay one or more nights in a house you own, a vacation rental, a hotel / motel, a campground, or sleep on the boat? (mark only one)

<input type="checkbox"/> No. This is usually a day trip.
<input type="checkbox"/> House I own
<input type="checkbox"/> Vacation rental
<input type="checkbox"/> Hotel, motel, or B&B
<input type="checkbox"/> Campground or trailer park
<input type="checkbox"/> Sleep on the boat
<input type="checkbox"/> Other lodging: _____

A11 Have you ever taken trips targeting saltwater SALMON in Oregon?

<input type="checkbox"/> Yes ↓ Continue	<input type="checkbox"/> No → Skip to A13
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A12 How many saltwater SALMON trips did you take in the past 12 months in Oregon?

Saltwater salmon trips last 12 months:

A13 Do you plan on taking any saltwater SALMON trips in the next 12 months in Oregon?

<input type="checkbox"/> No, I do not plan on taking any saltwater salmon trips in the next 12 months. → Skip to A17
<input type="checkbox"/> Yes, I plan on taking <input type="text"/> saltwater salmon trips in the next 12 months. ↓ Continue to A14

A14 From the locations given on the map, where are you most likely to board the boat on a future saltwater SALMON fishing trip in Oregon? (**mark one location**)

<input type="checkbox"/> Astoria	<input type="checkbox"/> Depoe Bay	<input type="checkbox"/> Hammond	<input type="checkbox"/> Netarts	<input type="checkbox"/> Reedsport
<input type="checkbox"/> Bandon	<input type="checkbox"/> Florence	<input type="checkbox"/> Ilwaco	<input type="checkbox"/> Newport	<input type="checkbox"/> Seaside
<input type="checkbox"/> Brookings	<input type="checkbox"/> Garibaldi	<input type="checkbox"/> Kernville	<input type="checkbox"/> Pacific City	<input type="checkbox"/> Tillamook
<input type="checkbox"/> Coos Bay	<input type="checkbox"/> Gold Beach	<input type="checkbox"/> Nehalem	<input type="checkbox"/> Port Orford	<input type="checkbox"/> Waldport
<input type="checkbox"/> Other (specify): _____				

A15 On your saltwater SALMON trips, do you typically fish from a private boat (yours or a friend's) or from a charter boat? (**mark only one**)

<input type="checkbox"/> Private boat (my own)
<input type="checkbox"/> Private boat (friend or family's)
<input type="checkbox"/> Charter boat

A16 On the saltwater SALMON trips you take, do you typically stay one or more nights in a house you own, a vacation rental, a hotel / motel, a campground, or sleep on the boat? (**mark only one**)

<input type="checkbox"/> No. This is usually a day trip.
<input type="checkbox"/> House I own
<input type="checkbox"/> Vacation rental
<input type="checkbox"/> Hotel, motel, or B&B
<input type="checkbox"/> Campground or trailer park
<input type="checkbox"/> Sleep on the boat
<input type="checkbox"/> Other lodging: _____

A17 Have you ever taken trips targeting BOTTOMFISH in Oregon?

<input type="checkbox"/> Yes	↓ Continue	<input type="checkbox"/> No	→ Skip to A19
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A18 How many BOTTOMFISH trips did you take in the past 12 months in Oregon?

Bottomfish trips last 12 months:

A19 Do you plan on taking any BOTTOMFISH trips in the next 12 months in Oregon?

<input type="checkbox"/> No, I do not plan on taking any bottomfish trips in the next 12 months.	→ Skip to A23
<input type="checkbox"/> Yes, I plan on taking <input type="text"/> <input type="text"/> bottomfish trips in the next 12 months.	↓ Continue to A20

A20 From the locations given on the map, where are you most likely to board the boat on a future BOTTOMFISH fishing trip in Oregon? (**mark one location**)

<input type="checkbox"/> Astoria	<input type="checkbox"/> Depoe Bay	<input type="checkbox"/> Hammond	<input type="checkbox"/> Netarts	<input type="checkbox"/> Reedsport
<input type="checkbox"/> Bandon	<input type="checkbox"/> Florence	<input type="checkbox"/> Ilwaco	<input type="checkbox"/> Newport	<input type="checkbox"/> Seaside
<input type="checkbox"/> Brookings	<input type="checkbox"/> Garibaldi	<input type="checkbox"/> Kernville	<input type="checkbox"/> Pacific City	<input type="checkbox"/> Tillamook
<input type="checkbox"/> Coos Bay	<input type="checkbox"/> Gold Beach	<input type="checkbox"/> Nehalem	<input type="checkbox"/> Port Orford	<input type="checkbox"/> Waldport
<input type="checkbox"/> Other (specify): _____				

A21 On your BOTTOMFISH trips, do you typically fish from a private boat (yours or a friend's) or from a charter boat? (**mark only one**)

<input type="checkbox"/> Private boat (my own)
<input type="checkbox"/> Private boat (friend or family's)
<input type="checkbox"/> Charter boat

A22 On the BOTTOMFISH trips you take, do you typically stay one or more nights in a house you own, a vacation rental, a hotel / motel, a campground, or sleep on the boat? (**mark only one**)

<input type="checkbox"/> No. This is usually a day trip.
<input type="checkbox"/> House I own
<input type="checkbox"/> Vacation rental
<input type="checkbox"/> Hotel, motel, or B&B
<input type="checkbox"/> Campground or trailer park
<input type="checkbox"/> Sleep on the boat
<input type="checkbox"/> Other lodging: _____

A23 For your saltwater fishing trips, is fishing the primary purpose of taking a trip?

<input type="checkbox"/>	Yes
<input type="checkbox"/>	Fishing and other purposes are equally important
<input type="checkbox"/>	No, the primary purpose is for something other than fishing

A24 Below are some reasons why you might saltwater sport fish in Oregon. Mark how much you agree or disagree with each statement.

"I saltwater sport fish in Oregon to..."	Strongly Agree	Agree	Feel Neutral	Disagree	Strongly Disagree
...Spend time outdoors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Spend time with family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Spend time with friends or others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Relax	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Get some exercise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Eat something I caught myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Provide food for me or my family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A25 If saltwater fishing conditions were ideal, what is the greatest number of saltwater trips you would realistically consider taking in Oregon within the next 12 months?

Saltwater trips under ideal conditions next 12 months:

...from a private or charter boat

...from the shore

Section B: Your Typical Oregon Saltwater Fishing Trip Expenses

B1 Do you take more boat trips targeting tuna, salmon, or bottomfish?

<input type="checkbox"/>	Tuna
<input type="checkbox"/>	Salmon
<input type="checkbox"/>	Bottomfish

B2 Are these trips typically from a private boat or a charter boat?

<input type="checkbox"/>	Private
<input type="checkbox"/>	Charter

B3 On the type of trip marked above (tuna, salmon, or bottomfish; private or charter), about how much money did you or your household spend **per trip** in each of the following expenditure categories? For each type, indicate the number of people covered by the expenditure.

TYPE of EXPENDITURE		Expenditures by you or your household (round to the nearest dollar)				# of people covered by this expense (including you)				
		\$								
Fishing Cost	Charter or guide fees	\$.00				
	Fish filleting fees and tips	\$.00				
	Bait	\$.00				
	Ice	\$.00				
	Boat fuel	\$.00				
	Launch, haul out, parking fees	\$.00				
Transportation	Auto, truck, or RV fuel	\$.00				
	Auto or RV rental	\$.00				
	Airfare	\$.00				
	Ferry	\$.00				
	Other transportation: _____	\$.00				
Lodging / Food	Campgrounds and trailer parks	\$.00				
	Hotels, motels, and B&B	\$.00				
	Vacation rental	\$.00				
	Grocery and convenience stores	\$.00				
	Restaurants and bars	\$.00				
	Other lodging/food: _____	\$.00				

Questions? Call us at 1-206-302-2403

Section C: Trips You Would Likely Take During a Season

In this section, we'd like you to think about the saltwater fishing trips you are likely to take in a typical season, and how changes in target species availability, catch rates, bag limits, depth restrictions, or fishing costs would affect your plans.

Target species: The primary type of saltwater fish (tuna, salmon, bottomfish) targeted by the boat.

Expected catch: The total number of each species you expect to catch per day based on current fishing reports.

Bag limit: The number of fish you are legally allowed to keep per day.

Fishing cost: Your personal share of the daily fishing cost. The fishing costs in the tables vary from trip to trip due to uncertainty about future prices of things like boat fuel and charter operations. This will allow your answers to be used in the future as well as today. Please remember you would also need to pay for travel to the boat launch site and may also need to pay for lodging, if you would take an overnight trip.


Private boat cost: If you typically use a private boat for this target species, please consider the listed private boat cost when making your selection. These costs would include bait, ice, daily moorage or launch fees, and boat fuel.

Charter boat cost: If you typically use a charter boat for this target species, please consider the listed charter boat cost when making your selection. These costs include all charter fees and tips. Please treat all charter trips as being taken on the same type of boat and having the same amenities, regardless of cost.

C1. Suppose that you had the choice between three boat fishing trips in Oregon saltwater (Choice A, Choice B, or Choice C) or not taking a boat fishing trip in Oregon saltwater (Choice D). Please review the table and answer the questions below, indicating which of these choices you like best.


		Choice A	Choice B	Choice C	Choice D
Target species		Tuna	Salmon	Bottomfish	Do something other than boat fishing in Oregon saltwater ...shore fishing in saltwater ...freshwater fishing ...do something other than fishing
Expected catch (per person per day)		For every 10 anglers... 8 catch 10 albacore each 1 catches 20 albacore 1 catches 0 albacore	For every 10 anglers... 7 catch 2 kings each 2 catch 0 kings each 1 catches 6 kings	For every 10 anglers... 9 catch 0 halibut each 1 catches 3 halibut	
Bag limit		25 albacore	2 king salmon	2 halibut	
Fishing cost (per person per day)	Private	\$250	\$125	\$50	
	Charter	\$450	\$175	\$75	

If you were presented with these four choices (A, B, C, D), which one would you choose to do?
(mark only one)




Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
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If your first choice was not available, what would be your second choice?
(mark only one)



Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
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If your first and second choices were not available, what would be your third choice?
(mark only one)

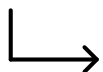


Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
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C2. Suppose that you had the choice between three boat fishing trips in Oregon saltwater (Choice A, Choice B, or Choice C) or not taking a boat fishing trip in Oregon saltwater (Choice D). Please review the table and answer the questions below, indicating which of these choices you like best.

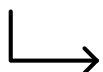
		Choice A	Choice B	Choice C	Choice D
Target species		Tuna	Salmon	Bottomfish	Do something other than boat fishing in Oregon saltwater ...shore fishing in saltwater ...freshwater fishing ...do something other than fishing
Expected catch <small>(per person per day)</small>		For every 10 anglers... 9 catch 0 albacore each 1 catches 2 albacore	For every 10 anglers... 9 catch 0 kings each 1 catches 6 kings	For every 10 anglers... 9 catch 0 rockfish each 1 catches 12 rockfish	
Bag limit		15 albacore	2 king salmon	10 rockfish	
Fishing cost <small>(per person per day)</small>	Private	\$125	\$125	\$75	
	Charter	\$175	\$175	\$125	

If you were presented with these four choices (A, B, C, D), which one would you choose to do?
(mark only one)



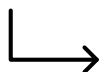
Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
----------	--------------------------	----------	--------------------------	----------	--------------------------	----------	--------------------------

If your first choice was not available, what would be your second choice?
(mark only one)



Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
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If your first and second choices were not available, what would be your third choice?
(mark only one)




Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
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C3 Suppose that you had the choice between three boat fishing trips in Oregon saltwater (Choice A, Choice B, or Choice C) or not taking a boat fishing trip in Oregon saltwater (Choice D). Please review the table and answer the questions below, indicating which of these choices you like best.


		Choice A	Choice B	Choice C	Choice D
Target species		Tuna	Salmon	Bottomfish	Do something other than boat fishing in Oregon saltwater ...shore fishing in saltwater ...freshwater fishing ...do something other than fishing
Expected catch (per person per day)		For every 10 anglers... 8 catch 5 albacore each 1 catches 20 albacore 1 catches 0 albacore	For every 10 anglers... 9 catch 0 silvers each 1 catches 6 silvers	For every 10 anglers... 9 catch 0 lingcod each 1 catches 5 lingcod	
Bag limit		25 albacore	2 silver salmon	2 lingcod	
Fishing cost (per person per day)	Private	\$250	\$125	\$50	
	Charter	\$450	\$175	\$75	

If you were presented with these four choices (A, B, C, D), which one would you choose to do?
(mark only one)




Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
----------	--------------------------	----------	--------------------------	----------	--------------------------	----------	--------------------------

If your first choice was not available, what would be your second choice?
(mark only one)



Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
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If your first and second choices were not available, what would be your third choice?
(mark only one)

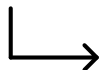


Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
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C4. Suppose that you had the choice between three boat fishing trips in Oregon saltwater (Choice A, Choice B, or Choice C) or not taking a boat fishing trip in Oregon saltwater (Choice D). Please review the table and answer the questions below, indicating which of these choices you like best.

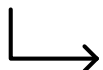
		Choice A	Choice B	Choice C	Choice D
Target species		Tuna	Salmon	Bottomfish	Do something other than boat fishing in Oregon saltwater ...shore fishing in saltwater ...freshwater fishing ...do something other than fishing
Expected catch (per person per day)	For every 10 anglers...	9 catch 0 albacore each 1 catches 20 albacore	8 catch 0 silvers each 1 catches 6 silvers 1 catches 3 silvers	7 catch 3 rockfish each 2 catch 8 rockfish each 1 catches 12 rockfish	
Bag limit		15 albacore	1 silver salmon	5 rockfish	
Fishing cost (per person per day)	Private	\$125	\$125	\$75	
	Charter	\$175	\$175	\$125	

If you were presented with these four choices (A, B, C, D), which one would you choose to do?
(mark only one)



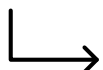
Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
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If your first choice was not available, what would be your second choice?
(mark only one)



Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
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If your first and second choices were not available, what would be your third choice?
(mark only one)



Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
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Section D: About You and Your Household

The following questions will help us know more about saltwater anglers. The information you provide will remain STRICTLY CONFIDENTIAL, and you will not be identified with your answers.

D1 In what year were you born?

Year:

D2 Are you...?

<input type="checkbox"/> Male	<input type="checkbox"/> Female
-------------------------------	---------------------------------

D3 What is the highest level of education you have completed? **(mark one response)**

<input type="checkbox"/>	Some high school
<input type="checkbox"/>	High school graduate
<input type="checkbox"/>	Technical school
<input type="checkbox"/>	Some college
<input type="checkbox"/>	College graduate or more

D4 How many adults and children (under 18) are there in your household including yourself?

Adults: # Children:

D5 Which of the following best describes your household's TOTAL annual income before taxes in 2016?

<input type="checkbox"/> Less than \$20,000	<input type="checkbox"/> \$80,000 - \$99,999
<input type="checkbox"/> \$20,000 - \$39,999	<input type="checkbox"/> \$100,000 - \$124,999
<input type="checkbox"/> \$40,000 - \$59,999	<input type="checkbox"/> \$125,000 - \$149,999
<input type="checkbox"/> \$60,000 - \$79,999	<input type="checkbox"/> \$150,000 or more

D6 Are you employed part time or full time outside the home?

<input type="checkbox"/>	No, I am a homemaker, retired, or currently unemployed	→ Skip to Thank You
<input type="checkbox"/>	I work part time (less than 35 hours per week)	
<input type="checkbox"/>	I work full time (at least 35 hours per week)	

D7. Approximately what is your personal hourly wage rate?

<input type="checkbox"/>	\$5.00 - \$9.99	<input type="checkbox"/>	\$20.00 - \$29.99	<input type="checkbox"/>	\$50.00 - \$59.99
<input type="checkbox"/>	\$10.00 - \$14.99	<input type="checkbox"/>	\$30.00 - \$39.99	<input type="checkbox"/>	\$60.00 - \$74.99
<input type="checkbox"/>	\$15.00 - \$19.99	<input type="checkbox"/>	\$40.00 - \$49.99	<input type="checkbox"/>	\$75.00 or more

D8. Do you take time off work to take saltwater fishing trips? **(mark all that apply)**

<input type="checkbox"/>	No
<input type="checkbox"/>	Yes, I take paid time off (vacation, sick leave)
<input type="checkbox"/>	Yes, I take unpaid time off

Thank You for Participating!

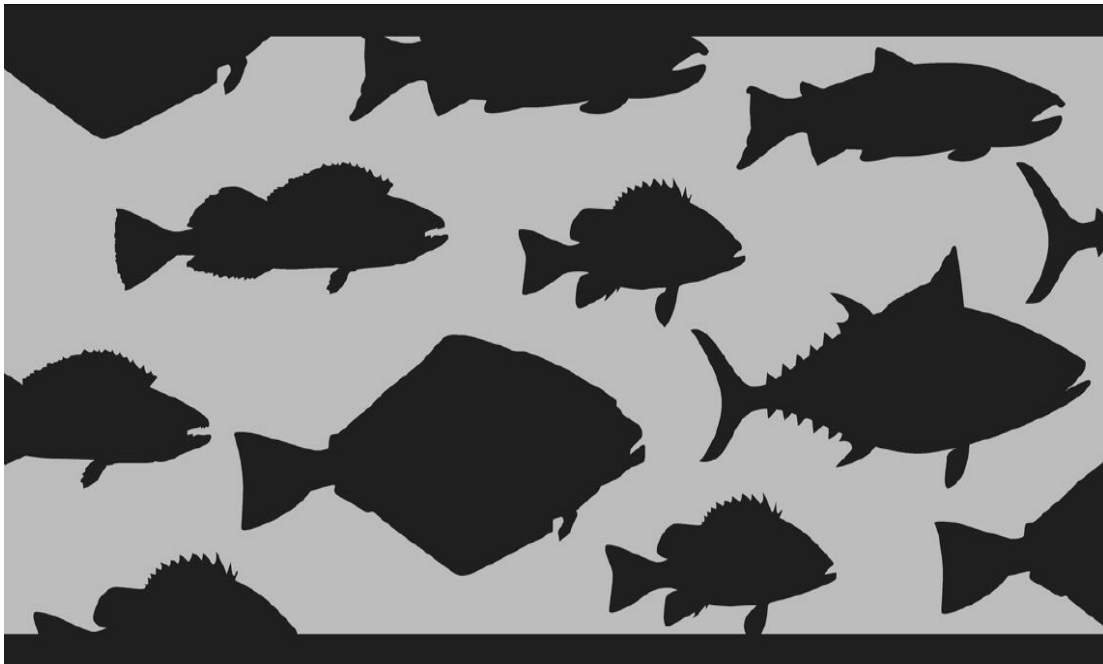
Please use the space below to make any additional comments you may have. If you have any questions regarding the survey, please call 1-206-302-2403 or email Leif.Anderson@noaa.gov.

Questions? Email us at Leif.Anderson@noaa.gov

“08400817F”

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Northern California Sport Fishing Survey



OMB Control #0648-0750 expires 3/31/2020. Response to this request is voluntary and anonymous. Notwithstanding any other provisions of the law; no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with a collection of information subject to the requirement of the Paperwork Reduction Act, unless that collection of information displays a currently valid OMB Control Number. Public reporting burden for this survey is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Leif Anderson, NWFSC FRAM Division, 2725 Montlake Blvd. E, Seattle, WA 98112-2097.

This survey is voluntary.
All responses are anonymous.



Section A: Your Northern California Sport Fishing Activities

The questions in this survey are about YOU and YOUR fishing activities and preferences. Except when asked, please do not include any information from other household members or other fishing party members.

Please print clearly.

Write numbers as two digits: 1 Trip =

0	1
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 Fill in boxes with a

A1 How much do you like fishing compared to other recreational activities?

<input type="checkbox"/>	Fishing is my favorite recreational activity.
<input type="checkbox"/>	I like fishing and other recreational activities about the same.
<input type="checkbox"/>	I like other recreational activities more than fishing.

A2 Do you prefer saltwater or freshwater fishing?

<input type="checkbox"/>	I prefer saltwater fishing.
<input type="checkbox"/>	I like saltwater and freshwater fishing about the same.
<input type="checkbox"/>	I prefer freshwater fishing.

A3 Have you FRESHWATER sport fished in California in the last 12 months?

<input type="checkbox"/>	Yes ↓ Continue		<input type="checkbox"/>	No → Skip to A4
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Approximately how many days (count partial days as full days) did you freshwater fish in California in the last 12 months?

Freshwater days last 12 months:

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A4 Have you SALTWATER sport fished in Northern California or Southern California in the last 12 months? (Saltwater is defined as all waters seaward of river or stream mouths, including estuaries. Northern California is defined as north of Point Conception and south of the Oregon border, and Southern California is defined as north of the Mexican border and south of Point Conception. See map on page 4.)

<input type="checkbox"/>	Yes ↓ Continue		<input type="checkbox"/>	No → Skip to Section D on page 15
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Approximately how many days (count partial days as full days) did you saltwater fish in Northern California or Southern California in the last 12 months from a private boat, from a charter boat, and from the shore?

# Saltwater days last 12 months:	...from a private boat:	N. CA	S. CA												
	...from a charter boat:	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table>							<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table>						
...from the shore:	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table>							<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table>							

Questions? Call us at 1-858-546-7140

Please use this map of Northern California saltwater fishing locations when answering the questions on the next 3 pages.



Questions? Email us at James.Hilger@noaa.gov

A5 Have you ever taken trips targeting TUNA in Northern California?

<input type="checkbox"/> Yes ↓ Continue	<input type="checkbox"/> No → Skip to A7
--	---

A6 How many TUNA trips did you take in the past 12 months in Northern California?

Tuna trips last 12 months:

A7 Do you plan on taking any TUNA trips in the next 12 months in Northern California?

<input type="checkbox"/> No, I do not plan on taking any tuna trips in the next 12 months. → Skip to A11
<input type="checkbox"/> Yes, I plan on taking <input type="text"/> <input type="text"/> tuna trips in the next 12 months. ↓ Continue to A8

A8 From the locations given on the map, where are you most likely to board the boat on a future TUNA fishing trip in Northern California? (**mark one location**)

<input type="checkbox"/> Alameda	<input type="checkbox"/> Emeryville	<input type="checkbox"/> Monterey	<input type="checkbox"/> Port San Luis	<input type="checkbox"/> San Simeon
<input type="checkbox"/> Berkeley	<input type="checkbox"/> Eureka	<input type="checkbox"/> Morro Bay	<input type="checkbox"/> Richmond	<input type="checkbox"/> Santa Cruz
<input type="checkbox"/> Bodega Bay	<input type="checkbox"/> Fort Bragg	<input type="checkbox"/> Moss Landing	<input type="checkbox"/> San Francisco	<input type="checkbox"/> Shelter Cove
<input type="checkbox"/> Bolinas	<input type="checkbox"/> Guadalupe Beach	<input type="checkbox"/> Pacifica	<input type="checkbox"/> San Rafael	<input type="checkbox"/> Trinidad
<input type="checkbox"/> Crescent City	<input type="checkbox"/> Half Moon Bay	<input type="checkbox"/> Other (specify): _____		

A9 On your TUNA trips, do you typically fish from a private boat (yours or a friend's) or from a charter boat? (**mark only one**)

<input type="checkbox"/> Private boat (my own)
<input type="checkbox"/> Private boat (friend or family's)
<input type="checkbox"/> Charter boat

A10 On the TUNA trips you take, do you typically stay one or more nights in a house you own, a vacation rental, a hotel / motel, a campground, or sleep on the boat? (**mark only one**)

<input type="checkbox"/> No. This is usually a day trip.
<input type="checkbox"/> House I own
<input type="checkbox"/> Vacation rental
<input type="checkbox"/> Hotel, motel, or B&B
<input type="checkbox"/> Campground or trailer park
<input type="checkbox"/> Sleep on the boat
<input type="checkbox"/> Other lodging: _____

A11 Have you ever taken trips targeting saltwater SALMON in Northern California?

<input type="checkbox"/> Yes ↓ Continue	<input type="checkbox"/> No → Skip to A13
--	--

A12 How many saltwater SALMON trips did you take in the past 12 months in Northern California?

Saltwater salmon trips last 12 months:

A13 Do you plan on taking any saltwater SALMON trips in the next 12 months in Northern California?

<input type="checkbox"/> No, I do not plan on taking any saltwater salmon trips in the next 12 months. → Skip to A17
<input type="checkbox"/> Yes, I plan on taking <input type="text"/> saltwater salmon trips in the next 12 months. ↓ Continue to A14

A14 From the locations given on the map, where are you most likely to board the boat on a future saltwater SALMON fishing trip in Northern California? (**mark one location**)

<input type="checkbox"/> Alameda	<input type="checkbox"/> Emeryville	<input type="checkbox"/> Monterey	<input type="checkbox"/> Port San Luis	<input type="checkbox"/> San Simeon
<input type="checkbox"/> Berkeley	<input type="checkbox"/> Eureka	<input type="checkbox"/> Morro Bay	<input type="checkbox"/> Richmond	<input type="checkbox"/> Santa Cruz
<input type="checkbox"/> Bodega Bay	<input type="checkbox"/> Fort Bragg	<input type="checkbox"/> Moss Landing	<input type="checkbox"/> San Francisco	<input type="checkbox"/> Shelter Cove
<input type="checkbox"/> Bolinas	<input type="checkbox"/> Guadalupe Beach	<input type="checkbox"/> Pacifica	<input type="checkbox"/> San Rafael	<input type="checkbox"/> Trinidad
<input type="checkbox"/> Crescent City	<input type="checkbox"/> Half Moon Bay	<input type="checkbox"/> Other (specify): _____		

A15 On your saltwater SALMON trips, do you typically fish from a private boat (yours or a friend's) or from a charter boat? (**mark only one**)

<input type="checkbox"/> Private boat (my own)
<input type="checkbox"/> Private boat (friend or family's)
<input type="checkbox"/> Charter boat

A16 On the saltwater SALMON trips you take, do you typically stay one or more nights in a house you own, a vacation rental, a hotel / motel, a campground, or sleep on the boat? (**mark only one**)

<input type="checkbox"/> No. This is usually a day trip.
<input type="checkbox"/> House I own
<input type="checkbox"/> Vacation rental
<input type="checkbox"/> Hotel, motel, or B&B
<input type="checkbox"/> Campground or trailer park
<input type="checkbox"/> Sleep on the boat
<input type="checkbox"/> Other lodging: _____

Questions? Email us at James.Hilger@noaa.gov

A17 Have you ever taken trips targeting BOTTOMFISH in Northern California?

<input type="checkbox"/> Yes ↓ Continue	<input type="checkbox"/> No → Skip to A19
---	---

A18 How many BOTTOMFISH trips did you take in the past 12 months in Northern California?

Bottomfish trips last 12 months:

A19 Do you plan on taking any BOTTOMFISH trips in the next 12 months in Northern California?

<input type="checkbox"/> No, I do not plan on taking any bottomfish trips in the next 12 months. → Skip to A23
<input type="checkbox"/> Yes, I plan on taking <input type="text"/> <input type="text"/> bottomfish trips in the next 12 months. ↓ Continue to A20

A20 From the locations given on the map, where are you most likely to board the boat on a future BOTTOMFISH fishing trip in Northern California? (mark one location)

<input type="checkbox"/> Alameda	<input type="checkbox"/> Emeryville	<input type="checkbox"/> Monterey	<input type="checkbox"/> Port San Luis	<input type="checkbox"/> San Simeon
<input type="checkbox"/> Berkeley	<input type="checkbox"/> Eureka	<input type="checkbox"/> Morro Bay	<input type="checkbox"/> Richmond	<input type="checkbox"/> Santa Cruz
<input type="checkbox"/> Bodega Bay	<input type="checkbox"/> Fort Bragg	<input type="checkbox"/> Moss Landing	<input type="checkbox"/> San Francisco	<input type="checkbox"/> Shelter Cove
<input type="checkbox"/> Bolinas	<input type="checkbox"/> Guadalupe Beach	<input type="checkbox"/> Pacifica	<input type="checkbox"/> San Rafael	<input type="checkbox"/> Trinidad
<input type="checkbox"/> Crescent City	<input type="checkbox"/> Half Moon Bay	<input type="checkbox"/> Other (specify): _____		

A21 On your BOTTOMFISH trips, do you typically fish from a private boat (yours or a friend's) or from a charter boat? (mark only one)

<input type="checkbox"/> Private boat (my own)
<input type="checkbox"/> Private boat (friend or family's)
<input type="checkbox"/> Charter boat

A22 On the BOTTOMFISH trips you take, do you typically stay one or more nights in a house you own, a vacation rental, a hotel / motel, a campground, or sleep on the boat? (mark only one)

<input type="checkbox"/> No. This is usually a day trip.
<input type="checkbox"/> House I own
<input type="checkbox"/> Vacation rental
<input type="checkbox"/> Hotel, motel, or B&B
<input type="checkbox"/> Campground or trailer park
<input type="checkbox"/> Sleep on the boat
<input type="checkbox"/> Other lodging: _____

A23 For your saltwater fishing trips, is fishing the primary purpose of taking a trip?

<input type="checkbox"/>	Yes
<input type="checkbox"/>	Fishing and other purposes are equally important
<input type="checkbox"/>	No, the primary purpose is for something other than fishing

A24 Below are some reasons why you might saltwater sport fish in Northern California. Mark how much you agree or disagree with each statement.

"I saltwater sport fish in Northern California to..."	Strongly Agree	Agree	Feel Neutral	Disagree	Strongly Disagree
...Spend time outdoors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Spend time with family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Spend time with friends or others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Relax	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Get some exercise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Eat something I caught myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Provide food for me or my family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A25 If saltwater fishing conditions were ideal, what is the greatest number of saltwater trips you would realistically consider taking in Northern California within the next 12 months?

Saltwater trips under ideal conditions next 12 months:

...from a private or charter boat

...from the shore

Section B: Your Typical Northern California Saltwater Fishing Trip Expenses

B1 Do you take more boat trips targeting tuna, salmon, or bottomfish?

<input type="checkbox"/>	Tuna
<input type="checkbox"/>	Salmon
<input type="checkbox"/>	Bottomfish

B2 Are these trips typically from a private boat or a charter boat?

<input type="checkbox"/>	Private
<input type="checkbox"/>	Charter

B3 On the type of trip marked above (tuna, salmon, or bottomfish; private or charter), about how much money did you or your household spend **per trip** in each of the following expenditure categories? For each type, indicate the number of people covered by the expenditure.

TYPE of EXPENDITURE		Expenditures by you or your household (round to the nearest dollar)				# of people covered by this expense (including you)			
Fishing Cost	Charter or guide fees	\$							
	Fish filleting fees and tips	\$							
	Bait	\$							
	Ice	\$							
	Boat fuel	\$							
	Launch, haul out, parking fees	\$							
Transportation	Auto, truck, or RV fuel	\$							
	Auto or RV rental	\$							
	Airfare	\$							
	Ferry	\$							
	Other transportation: _____	\$							
Lodging / Food	Campgrounds and trailer parks	\$							
	Hotels, motels, and B&B	\$							
	Vacation rental	\$							
	Grocery and convenience stores	\$							
	Restaurants and bars	\$							
	Other lodging/food: _____	\$							

9

Questions? Call us at 1-858-546-7140

Section C: Trips You Would Likely Take During a Season

In this section, we'd like you to think about the saltwater fishing trips you are likely to take in a typical season, and how changes in target species availability, catch rates, bag limits, depth restrictions, or fishing costs would affect your plans.

Target species: The primary type of saltwater fish (tuna, salmon, bottomfish) targeted by the boat.

Expected catch: The total number of each species you expect to catch per day based on current fishing reports.

Bag limit: The number of fish you are legally allowed to keep per day.

Fishing cost: Your personal share of the daily fishing cost. The fishing costs in the tables vary from trip to trip due to uncertainty about future prices of things like boat fuel and charter operations. This will allow your answers to be used in the future as well as today. Please remember you would also need to pay for travel to the boat launch site and may also need to pay for lodging, if you would take an overnight trip.

Private boat cost: If you typically use a private boat for this target species, please consider the listed private boat cost when making your selection. These costs would include bait, ice, daily moorage or launch fees, and boat fuel.

Charter boat cost: If you typically use a charter boat for this target species, please consider the listed charter boat cost when making your selection. These costs include all charter fees and tips. Please treat all charter trips as being taken on the same type of boat and having the same amenities, regardless of cost.

C1. Suppose that you had the choice between two boat fishing trips in Northern California saltwater (Choice A or Choice C) or not taking a boat fishing trip in Northern California saltwater (Choice D). Suppose that saltwater salmon fishing (Choice B) is currently closed. Please review the table and answer the questions below, indicating which of these choices you like best.

		Choice A	Choice B	Choice C	Choice D
Target species		Tuna	Salmon	Bottomfish	Do something other than boat fishing in Northern California saltwater ...shore fishing in saltwater ...freshwater fishing ...do something other than fishing
Expected catch (per person per day)		For every 10 anglers... 8 catch 10 albacore each 1 catches 20 albacore 1 catches 0 albacore	Closed	For every 10 anglers... 7 catch 3 rockfish each 2 catch 8 rockfish each 1 catches 12 rockfish	
Bag limit		25 albacore	Closed	5 rockfish	
Fishing cost (per person per day)	Private	\$250	N/A	\$50	
	Charter	\$450	N/A	\$75	

If you were presented with these three choices (A, C, D), which one would you choose to do?
(mark only one)


Choice A
Choice C
Choice D

If your first choice was not available, what would be your second choice?
(mark only one)

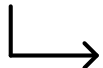

Choice A
Choice C
Choice D

C2

Suppose that you had the choice between three boat fishing trips in Northern California saltwater (Choice A, Choice B, or Choice C) or not taking a boat fishing trip in Northern California saltwater (Choice D). Please review the table and answer the questions below, indicating which of these choices you like best.

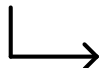
		Choice A	Choice B	Choice C	Choice D
Target species		Tuna	Salmon	Bottomfish	Do something other than boat fishing in Northern California saltwater ...shore fishing in saltwater ...freshwater fishing ...do something other than fishing
Expected catch <small>(per person per day)</small>		For every 10 anglers... 9 catch 0 albacore each 1 catches 20 albacore	For every 10 anglers... 9 catch 0 kings each 1 catches 1 king	For every 10 anglers... 9 catch 2 lingcod each 1 catches 1 lingcod	
Bag limit		15 albacore	2 king salmon	2 lingcod	
Fishing cost <small>(per person per day)</small>	Private	\$125	\$125	\$75	
	Charter	\$175	\$175	\$125	

If you were presented with these four choices (A, B, C, D), which one would you choose to do?
(mark only one)



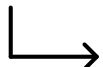
Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
----------	--------------------------	----------	--------------------------	----------	--------------------------	----------	--------------------------

If your first choice was not available, what would be your second choice?
(mark only one)



Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
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If your first and second choices were not available, what would be your third choice?
(mark only one)




Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
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C3 Suppose that you had the choice between three boat fishing trips in Northern California saltwater (Choice A, Choice B, or Choice C) or not taking a boat fishing trip in Northern California saltwater (Choice D). Please review the table and answer the questions below, indicating which of these choices you like best.


		Choice A	Choice B	Choice C	Choice D
Target species		Tuna	Salmon	Bottomfish	Do something other than boat fishing in Northern California saltwater ...shore fishing in saltwater ...freshwater fishing ...do something other than fishing
Expected catch (per person per day)		For every 10 anglers... 5 catch 0 albacore each 3 catch 20 albacore each 2 catch 10 albacore each	For every 10 anglers... 8 catch 0 kings each 1 catches 6 kings 1 catches 3 kings	For every 10 anglers... 7 catch 1 CA halibut each 2 catch 4 CA halibut each 1 catches 3 CA halibut	
Bag limit		25 albacore	1 king salmon	2 CA halibut	
Fishing cost (per person per day)	Private	\$250	\$50	\$50	
	Charter	\$450	\$75	\$75	

If you were presented with these four choices (A, B, C, D), which one would you choose to do?
(mark only one)




Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
----------	--------------------------	----------	--------------------------	----------	--------------------------	----------	--------------------------

If your first choice was not available, what would be your second choice?
(mark only one)



Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
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If your first and second choices were not available, what would be your third choice?
(mark only one)



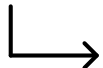
Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
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C4

Suppose that you had the choice between three boat fishing trips in Northern California saltwater (Choice A, Choice B, or Choice C) or not taking a boat fishing trip in Northern California saltwater (Choice D). Please review the table and answer the questions below, indicating which of these choices you like best.

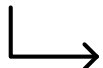
		Choice A	Choice B	Choice C	Choice D
Target species		Tuna	Salmon	Bottomfish	Do something other than boat fishing in Northern California saltwater ...shore fishing in saltwater ...freshwater fishing ...do something other than fishing
Expected catch <small>(per person per day)</small>		For every 10 anglers... 9 catch 10 albacore each 1 catches 5 albacore	For every 10 anglers... 9 catch 0 kings each 1 catches 6 kings	For every 10 anglers... 7 catch 4 CA halibut each 2 catch 1 CA halibut each 1 catches 0 CA halibut	
Bag limit		15 albacore	2 king salmon	3 CA halibut	
Fishing cost <small>(per person per day)</small>	Private	\$250	\$50	\$50	
	Charter	\$450	\$75	\$75	

If you were presented with these four choices (A, B, C, D), which one would you choose to do?
(mark only one)



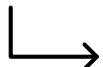
Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
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If your first choice was not available, what would be your second choice?
(mark only one)



Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
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If your first and second choices were not available, what would be your third choice?
(mark only one)



Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
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Section D: About You and Your Household

The following questions will help us know more about saltwater anglers. The information you provide will remain STRICTLY CONFIDENTIAL, and you will not be identified with your answers.

D1 In what year were you born?
 Year:

D2 Are you...?
 Male Female

D3 What is the highest level of education you have completed? **(mark one response)**

<input type="checkbox"/>	Some high school
<input type="checkbox"/>	High school graduate
<input type="checkbox"/>	Technical school
<input type="checkbox"/>	Some college
<input type="checkbox"/>	College graduate or more

D4 How many adults and children (under 18) are there in your household including yourself?
 # Adults: # Children:

D5 Which of the following best describes your household's TOTAL annual income before taxes in 2016?

<input type="checkbox"/> Less than \$20,000	<input type="checkbox"/> \$80,000 - \$99,999
<input type="checkbox"/> \$20,000 - \$39,999	<input type="checkbox"/> \$100,000 - \$124,999
<input type="checkbox"/> \$40,000 - \$59,999	<input type="checkbox"/> \$125,000 - \$149,999
<input type="checkbox"/> \$60,000 - \$79,999	<input type="checkbox"/> \$150,000 or more

D6 Are you employed part time or full time outside the home?

<input type="checkbox"/>	No, I am a homemaker, retired, or currently unemployed	→ Skip to Thank You
<input type="checkbox"/>	I work part time (less than 35 hours per week)	
<input type="checkbox"/>	I work full time (at least 35 hours per week)	

D7

Approximately what is your personal hourly wage rate?

<input type="checkbox"/>	\$5.00 - \$9.99	<input type="checkbox"/>	\$20.00 - \$29.99	<input type="checkbox"/>	\$50.00 - \$59.99
<input type="checkbox"/>	\$10.00 - \$14.99	<input type="checkbox"/>	\$30.00 - \$39.99	<input type="checkbox"/>	\$60.00 - \$74.99
<input type="checkbox"/>	\$15.00 - \$19.99	<input type="checkbox"/>	\$40.00 - \$49.99	<input type="checkbox"/>	\$75.00 or more

D8

Do you take time off work to take saltwater fishing trips? (mark all that apply)

<input type="checkbox"/>	No
<input type="checkbox"/>	Yes, I take paid time off (vacation, sick leave)
<input type="checkbox"/>	Yes, I take unpaid time off

Thank You for Participating!

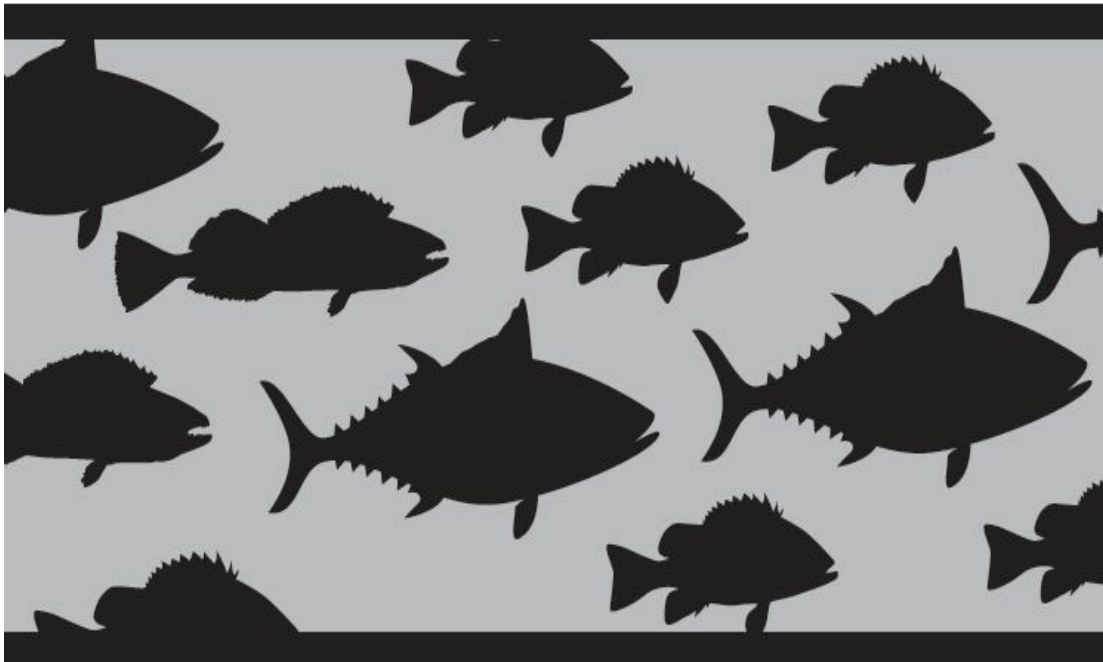
Please use the space below to make any additional comments you may have. If you have any questions regarding the survey, please call 1-858-546-7140 or email James.Hilger@noaa.gov.

C-2d. Southern California survey

{ m a s t e r

SCA V3 MS2

Southern California Sport Fishing Survey



OMB Control #0648-0750 expires 3/31/2020.

Response to this request is voluntary and anonymous. Notwithstanding any other provisions of the law; no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with a collection of information subject to the requirement of the Paperwork Reduction Act, unless that collection of information displays a currently valid OMB Control Number. Public reporting burden for this survey is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Leif Anderson, NWFSC FRAM Division, 2725 Montlake Blvd. E, Seattle, WA 98112-2097.

This survey is voluntary.
All responses are anonymous.



NOAA
FISHERIES



Section A: Your Southern California Sport Fishing Activities

The questions in this survey are about YOU and YOUR fishing activities and preferences. Except when asked, please do not include any information from other household members or other fishing party members.

Please print clearly.

Write numbers as two digits: 1 Trip =

0	1
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 Fill in boxes with a

X

A1 How much do you like fishing compared to other recreational activities?

<input type="checkbox"/>	Fishing is my favorite recreational activity.
<input type="checkbox"/>	I like fishing and other recreational activities about the same.
<input type="checkbox"/>	I like other recreational activities more than fishing.

A2 Do you prefer saltwater or freshwater fishing?

<input type="checkbox"/>	I prefer saltwater fishing.
<input type="checkbox"/>	I like saltwater and freshwater fishing about the same.
<input type="checkbox"/>	I prefer freshwater fishing.

A3 Have you FRESHWATER sport fished in California in the last 12 months?

<input type="checkbox"/>	Yes ↓ Continue		<input type="checkbox"/>	No → Skip to A4
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Approximately how many days (count partial days as full days) did you freshwater fish in California in the last 12 months?

Freshwater days last 12 months:

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A4 Have you SALTWATER sport fished in Northern California or Southern California in the last 12 months? (Saltwater is defined as all waters seaward of river or stream mouths, including estuaries. Northern California is defined as north of Point Conception and south of the Oregon border, and Southern California is defined as north of the Mexican border and south of Point Conception. See map on page 4.)

<input type="checkbox"/>	Yes ↓ Continue		<input type="checkbox"/>	No → Skip to Section D on page 15
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Approximately how many days (count partial days as full days) did you saltwater fish in Northern California or Southern California in the last 12 months from a private boat, from a charter boat, and from the shore?

# Saltwater days last 12 months:	...from a private boat:	N. CA	S. CA					
	...from a charter boat:	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table>			<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table>			
	...from the shore:	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table>			<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table>			

Please use this map of Southern California saltwater fishing locations when answering the questions on the next 3 pages.



Questions? Email us at James.Hilger@noaa.gov

A5 Have you ever taken trips targeting OFF-SHORE species, including tuna and other highly migratory species, in Southern California?

<input type="checkbox"/> Yes	↓ Continue	<input type="checkbox"/> No	→ Skip to A7
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A6 How many OFF-SHORE trips did you take in the past 12 months in Southern California?

Off-shore trips last 12 months:

A7 Do you plan on taking any OFF-SHORE trips in the next 12 months in Southern California?

<input type="checkbox"/> No, I do not plan on taking any off-shore trips in the next 12 months.	→ Skip to A11
<input type="checkbox"/> Yes, I plan on taking <input type="text"/> <input type="text"/> off-shore trips in the next 12 months.	↓ Continue to A8

A8 From the locations given on the map, where are you most likely to board the boat on a future OFF-SHORE fishing trip in Southern California? (mark one location)

<input type="checkbox"/> Catalina Island	<input type="checkbox"/> La Jolla	<input type="checkbox"/> Newport Beach	<input type="checkbox"/> San Pedro
<input type="checkbox"/> Dana Point	<input type="checkbox"/> Long Beach	<input type="checkbox"/> Oceanside	<input type="checkbox"/> Santa Barbara
<input type="checkbox"/> Gaviota Beach	<input type="checkbox"/> Malibu	<input type="checkbox"/> Oxnard	<input type="checkbox"/> Seal Beach
<input type="checkbox"/> Goleta Beach	<input type="checkbox"/> Marina Del Ray	<input type="checkbox"/> Redondo Beach	<input type="checkbox"/> Surf Beach
<input type="checkbox"/> Huntington Beach	<input type="checkbox"/> Mission Bay	<input type="checkbox"/> San Diego	<input type="checkbox"/> Ventura
<input type="checkbox"/> Other (specify): _____			

A9 On your OFF-SHORE trips, do you typically fish from a private boat (yours or a friend's) or from a charter boat? (mark only one)

<input type="checkbox"/> Private boat (my own)
<input type="checkbox"/> Private boat (friend or family's)
<input type="checkbox"/> Charter boat

A10 On the OFF-SHORE trips you take, do you typically stay one or more nights in a house you own, a vacation rental, a hotel / motel, a campground, or sleep on the boat? (mark only one)

<input type="checkbox"/> No. This is usually a day trip.
<input type="checkbox"/> House I own
<input type="checkbox"/> Vacation rental
<input type="checkbox"/> Hotel, motel, or B&B
<input type="checkbox"/> Campground or trailer park
<input type="checkbox"/> Sleep on the boat
<input type="checkbox"/> Other lodging: _____

A11 Have you ever taken trips targeting NEAR-SHORE saltwater species, including yellowtail and bass, in Southern California?

<input type="checkbox"/> Yes	↓ Continue	<input type="checkbox"/> No	→ Skip to A13
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A12 How many NEAR-SHORE trips did you take in the past 12 months in Southern California?

Near-shore trips last 12 months:

A13 Do you plan on taking any NEAR-SHORE trips in the next 12 months in Southern California?

<input type="checkbox"/> No, I do not plan on taking any near-shore trips in the next 12 months.	→ Skip to A17
<input type="checkbox"/> Yes, I plan on taking <input type="text"/> <input type="text"/> near-shore trips in the next 12 months.	↓ Continue to A14

A14 From the locations given on the map, where are you most likely to board the boat on a future NEAR-SHORE fishing trip in Southern California? (mark one location)

<input type="checkbox"/> Catalina Island	<input type="checkbox"/> La Jolla	<input type="checkbox"/> Newport Beach	<input type="checkbox"/> San Pedro
<input type="checkbox"/> Dana Point	<input type="checkbox"/> Long Beach	<input type="checkbox"/> Oceanside	<input type="checkbox"/> Santa Barbara
<input type="checkbox"/> Gaviota Beach	<input type="checkbox"/> Malibu	<input type="checkbox"/> Oxnard	<input type="checkbox"/> Seal Beach
<input type="checkbox"/> Goleta Beach	<input type="checkbox"/> Marina Del Ray	<input type="checkbox"/> Redondo Beach	<input type="checkbox"/> Surf Beach
<input type="checkbox"/> Huntington Beach	<input type="checkbox"/> Mission Bay	<input type="checkbox"/> San Diego	<input type="checkbox"/> Ventura
<input type="checkbox"/> Other (specify): _____			

A15 On your NEAR-SHORE trips, do you typically fish from a private boat (yours or a friend's) or from a charter boat? (mark only one)

<input type="checkbox"/> Private boat (my own)
<input type="checkbox"/> Private boat (friend or family's)
<input type="checkbox"/> Charter boat

A16 On the NEAR-SHORE trips you take, do you typically stay one or more nights in a house you own, a vacation rental, a hotel / motel, a campground, or sleep on the boat? (mark only one)

<input type="checkbox"/> No. This is usually a day trip.
<input type="checkbox"/> House I own
<input type="checkbox"/> Vacation rental
<input type="checkbox"/> Hotel, motel, or B&B
<input type="checkbox"/> Campground or trailer park
<input type="checkbox"/> Sleep on the boat
<input type="checkbox"/> Other lodging: _____

A17 Have you ever taken trips targeting BOTTOMFISH in Southern California?

<input type="checkbox"/> Yes ↓ Continue	<input type="checkbox"/> No → Skip to A19
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A18 How many BOTTOMFISH trips did you take in the past 12 months in Southern California?

Bottomfish trips last 12 months:

A19 Do you plan on taking any BOTTOMFISH trips in the next 12 months in Southern California?

<input type="checkbox"/> No, I do not plan on taking any bottomfish trips in the next 12 months. → Skip to A23
<input type="checkbox"/> Yes, I plan on taking <input type="text"/> <input type="text"/> bottomfish trips in the next 12 months. ↓ Continue to A20

A20 From the locations given on the map, where are you most likely to board the boat on a future BOTTOMFISH fishing trip in Southern California? (mark one location)

<input type="checkbox"/> Catalina Island	<input type="checkbox"/> La Jolla	<input type="checkbox"/> Newport Beach	<input type="checkbox"/> San Pedro
<input type="checkbox"/> Dana Point	<input type="checkbox"/> Long Beach	<input type="checkbox"/> Oceanside	<input type="checkbox"/> Santa Barbara
<input type="checkbox"/> Gaviota Beach	<input type="checkbox"/> Malibu	<input type="checkbox"/> Oxnard	<input type="checkbox"/> Seal Beach
<input type="checkbox"/> Goleta Beach	<input type="checkbox"/> Marina Del Ray	<input type="checkbox"/> Redondo Beach	<input type="checkbox"/> Surf Beach
<input type="checkbox"/> Huntington Beach	<input type="checkbox"/> Mission Bay	<input type="checkbox"/> San Diego	<input type="checkbox"/> Ventura
<input type="checkbox"/> Other (specify): _____			

A21 On your BOTTOMFISH trips, do you typically fish from a private boat (yours or a friend's) or from a charter boat? (mark only one)

<input type="checkbox"/> Private boat (my own)
<input type="checkbox"/> Private boat (friend or family's)
<input type="checkbox"/> Charter boat

A22 On the BOTTOMFISH trips you take, do you typically stay one or more nights in a house you own, a vacation rental, a hotel / motel, a campground, or sleep on the boat? (mark only one)

<input type="checkbox"/> No. This is usually a day trip.
<input type="checkbox"/> House I own
<input type="checkbox"/> Vacation rental
<input type="checkbox"/> Hotel, motel, or B&B
<input type="checkbox"/> Campground or trailer park
<input type="checkbox"/> Sleep on the boat
<input type="checkbox"/> Other lodging: _____

Questions? Call us at 1-858-546-7140

A23 For your saltwater fishing trips, is fishing the primary purpose of taking a trip?

<input type="checkbox"/>	Yes
<input type="checkbox"/>	Fishing and other purposes are equally important
<input type="checkbox"/>	No, the primary purpose is for something other than fishing

A24 Below are some reasons why you might saltwater sport fish in Southern California. Mark how much you agree or disagree with each statement.

"I saltwater sport fish in Southern California to..."	Strongly Agree	Agree	Feel Neutral	Disagree	Strongly Disagree
...Spend time outdoors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Spend time with family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Spend time with friends or others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Relax	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Get some exercise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Eat something I caught myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...Provide food for me or my family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A25 If saltwater fishing conditions were ideal, what is the greatest number of saltwater trips you would realistically consider taking in Southern California within the next 12 months?

Saltwater trips under ideal conditions next 12 months:

...from a private or charter boat

...from the shore

Section B: Your Typical Southern California Saltwater Fishing Trip Expenses

B1 Do you take more boat trips targeting off-shore, near-shore, or bottomfish?

<input type="checkbox"/>	Off-shore
<input type="checkbox"/>	Near-shore
<input type="checkbox"/>	Bottomfish

B2 Are these trips typically from a private boat or a charter boat?

<input type="checkbox"/>	Private
<input type="checkbox"/>	Charter

B3 On the type of trip marked above (off-shore, near-shore, or bottomfish; private or charter), about how much money did you or your household spend **per trip** in each of the following expenditure categories? For each type, indicate the number of people covered by the expenditure.

TYPE of EXPENDITURE		Expenditures by you or your household (round to the nearest dollar)				# of people covered by this expense (including you)				
Fishing Cost	Charter or guide fees	\$.00			
	Fish filleting fees and tips	\$.00			
	Bait	\$.00			
	Ice	\$.00			
	Boat fuel	\$.00			
	Launch, haul out, parking fees	\$.00			
Transportation	Auto, truck, or RV fuel	\$.00			
	Auto or RV rental	\$.00			
	Airfare	\$.00			
	Ferry	\$.00			
	Other transportation: _____	\$.00			
Lodging / Food	Campgrounds and trailer parks	\$.00			
	Hotels, motels, and B&B	\$.00			
	Vacation rental	\$.00			
	Grocery and convenience stores	\$.00			
	Restaurants and bars	\$.00			
	Other lodging/food: _____	\$.00			

Questions? Call us at 1-858-546-7140

Section C: Trips You Would Likely Take During a Season

In this section, we'd like you to think about the saltwater fishing trips you are likely to take in a typical season, and how changes in target species availability, catch rates, bag limits, depth restrictions, or fishing costs would affect your plans.

Target species: The primary type of saltwater fish (off-shore, near-shore, bottomfish) targeted by the boat.

Expected catch: The total number of each species you expect to catch per day based on current fishing reports.

Bag limit: The number of fish you are legally allowed to keep per day.

Fishing cost: Your personal share of the daily fishing cost. The fishing costs in the tables vary from trip to trip due to uncertainty about future prices of things like boat fuel and charter operations. This will allow your answers to be used in the future as well as today. Please remember you would also need to pay for travel to the boat launch site and may also need to pay for lodging, if you would take an overnight trip.

Private boat cost: If you typically use a private boat for this target species, please consider the listed private boat cost when making your selection. These costs would include bait, ice, daily moorage or launch fees, and boat fuel.

Charter boat cost: If you typically use a charter boat for this target species, please consider the listed charter boat cost when making your selection. These costs include all charter fees and tips. Please treat all charter trips as being taken on the same type of boat and having the same amenities, regardless of cost.

C1

Suppose that you had the choice between a boat fishing trip in Southern California saltwater (Choice C) or not taking a boat fishing trip in Southern California saltwater (Choice D). Suppose that fishing for Off-shore species (Choice A) is not currently available and Near-shore fishing (Choice B) is closed. Please review the table and answer the questions below, indicating which of these choices you like best.

		Choice A	Choice B	Choice C	Choice D
Target species		Off-shore	Near-shore	Bottomfish	Do something other than boat fishing in Southern California saltwater ...shore fishing in saltwater ...freshwater fishing ...do something other than fishing
Expected catch (per person per day)		N/A	Closed	For every 10 anglers... 7 catch 10 rockfish each 2 catch 15 rockfish each 1 catches 0 rockfish	
Bag limit		N/A	Closed	10 rockfish	
Fishing cost (per person per day)	Private	N/A	N/A	\$50	
	Charter	N/A	N/A	\$75	

If you were presented with these two choices (C, D), which one would you choose to do? (mark only one)



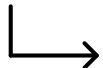
Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
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C2

Suppose that you had the choice between three boat fishing trips in Southern California saltwater (Choice A, Choice B, or Choice C) or not taking a boat fishing trip in Southern California saltwater (Choice D). Please review the table and answer the questions below, indicating which of these choices you like best.

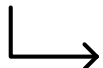
		Choice A	Choice B	Choice C	Choice D
Target species		Off-shore	Near-shore	Bottomfish	Do something other than boat fishing in Southern California saltwater ...shore fishing in saltwater ...freshwater fishing ...do something other than fishing
Expected catch <small>(per person per day)</small>		For every 10 anglers... 7 catch 7 yellowfin each 1 catches 5 yellowfin 2 catch 0 yellowfin each	For every 10 anglers... 8 catch 5 yellowtail each 1 catches 7 yellowtail 1 catches 3 yellowtail	For every 10 anglers... 9 catch 5 CA halibut each 1 catches 3 CA halibut	
Bag limit		10 yellowfin tuna	5 yellowtail	5 CA halibut	
Fishing cost <small>(per person per day)</small>	Private	\$250	\$50	\$50	
	Charter	\$450	\$75	\$75	

If you were presented with these four choices (A, B, C, D), which one would you choose to do?
(mark only one)



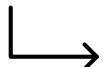
Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
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If your first choice was not available, what would be your second choice?
(mark only one)



Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
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If your first and second choices were not available, what would be your third choice?
(mark only one)




Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
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C3 Suppose that you had the choice between three boat fishing trips in Southern California saltwater (Choice A, Choice B, or Choice C) or not taking a boat fishing trip in Southern California saltwater (Choice D). Please review the table and answer the questions below, indicating which of these choices you like best.


		Choice A	Choice B	Choice C	Choice D
Target species		Off-Shore	Near-shore	Bottomfish	Do something other than boat fishing in Southern California saltwater ...shore fishing in saltwater ...freshwater fishing ...do something other than fishing
Expected catch (per person per day)		For every 10 anglers... 9 catch 3 dorado each 1 catches 2 dorado	For every 10 anglers... 8 catch 2 kelp bass each 1 catches 7 kelp bass 1 catches 5 kelp bass	For every 10 anglers... 9 catch 10 rockfish each 1 catches 7 rockfish	
Bag limit		10 dorado	3 kelp bass	10 rockfish	
Fishing cost (per person per day)	Private	\$250	\$50	\$50	
	Charter	\$450	\$75	\$75	

If you were presented with these four choices (A, B, C, D), which one would you choose to do?
(mark only one)




Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
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If your first choice was not available, what would be your second choice?
(mark only one)



Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
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If your first and second choices were not available, what would be your third choice?
(mark only one)

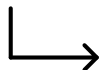


Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
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C4. Suppose that you had the choice between three boat fishing trips in Southern California saltwater (Choice A, Choice B, or Choice C) or not taking a boat fishing trip in Southern California saltwater (Choice D). Please review the table and answer the questions below, indicating which of these choices you like best.

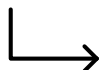
		Choice A	Choice B	Choice C	Choice D
Target species		Off-shore	Near-shore	Bottomfish	Do something other than boat fishing in Southern California saltwater ...shore fishing in saltwater ...freshwater fishing ...do something other than fishing
Expected catch <small>(per person per day)</small>		For every 10 anglers... 9 catch 0 dorado each 1 catches 3 dorado	For every 10 anglers... 8 catch 2 barred sand bass each 1 catches 7 barred sand bass 1 catches 5 barred sand bass	For every 10 anglers... 5 catch 4 lingcod each 5 catch 0 lingcod each	
Bag limit		10 dorado	3 barred sand bass	2 lingcod	
Fishing cost <small>(per person per day)</small>	Private	\$125	\$125	\$75	
	Charter	\$175	\$175	\$125	

If you were presented with these four choices (A, B, C, D), which one would you choose to do?
(mark only one)



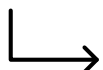
Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
----------	--------------------------	----------	--------------------------	----------	--------------------------	----------	--------------------------

If your first choice was not available, what would be your second choice?
(mark only one)



Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
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If your first and second choices were not available, what would be your third choice?
(mark only one)



Choice A	<input type="checkbox"/>	Choice B	<input type="checkbox"/>	Choice C	<input type="checkbox"/>	Choice D	<input type="checkbox"/>
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Section D: About You and Your Household

The following questions will help us know more about saltwater anglers. The information you provide will remain STRICTLY CONFIDENTIAL, and you will not be identified with your answers.

D1 In what year were you born?

Year:

D2 Are you...?

<input type="checkbox"/> Male	<input type="checkbox"/> Female
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D3 What is the highest level of education you have completed? **(mark one response)**

<input type="checkbox"/>	Some high school
<input type="checkbox"/>	High school graduate
<input type="checkbox"/>	Technical school
<input type="checkbox"/>	Some college
<input type="checkbox"/>	College graduate or more

D4 How many adults and children (under 18) are there in your household including yourself?

Adults: # Children:

D5 Which of the following best describes your household's TOTAL annual income before taxes in 2016?

<input type="checkbox"/> Less than \$20,000	<input type="checkbox"/> \$80,000 - \$99,999
<input type="checkbox"/> \$20,000 - \$39,999	<input type="checkbox"/> \$100,000 - \$124,999
<input type="checkbox"/> \$40,000 - \$59,999	<input type="checkbox"/> \$125,000 - \$149,999
<input type="checkbox"/> \$60,000 - \$79,999	<input type="checkbox"/> \$150,000 or more

D6 Are you employed part time or full time outside the home?

<input type="checkbox"/>	No, I am a homemaker, retired, or currently unemployed	→ Skip to Thank You
<input type="checkbox"/>	I work part time (less than 35 hours per week)	
<input type="checkbox"/>	I work full time (at least 35 hours per week)	

D7. Approximately what is your personal hourly wage rate?

<input type="checkbox"/>	\$5.00 - \$9.99	<input type="checkbox"/>	\$20.00 - \$29.99	<input type="checkbox"/>	\$50.00 - \$59.99
<input type="checkbox"/>	\$10.00 - \$14.99	<input type="checkbox"/>	\$30.00 - \$39.99	<input type="checkbox"/>	\$60.00 - \$74.99
<input type="checkbox"/>	\$15.00 - \$19.99	<input type="checkbox"/>	\$40.00 - \$49.99	<input type="checkbox"/>	\$75.00 or more

D8. Do you take time off work to take saltwater fishing trips? (mark all that apply)

<input type="checkbox"/>	No
<input type="checkbox"/>	Yes, I take paid time off (vacation, sick leave)
<input type="checkbox"/>	Yes, I take unpaid time off

Thank You for Participating!

Please use the space below to make any additional comments you may have. If you have any questions regarding the survey, please call 1-858-546-7140 or email James.Hilger@noaa.gov.

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NOAA Technical Memorandum NMFS-NWFSC-

- 154 Somers, K.A., J. Jannot, K. Richerson, V. Tuttle, N. B. Riley, and J. T. McVeigh. 2020. Estimated Discard and Catch of Groundfish Species in the 2018 U.S. West Coast Fisheries. U.S. Department of Commerce, NOAA Technical Memorandum NMFS-NWFSC-154. <https://doi.org/10.25923/z38p-sy40>
- 153 Somers, K. A., C. E. Whitmire, K. Richerson, J. E. Jannot, V. J. Tuttle, and J. T. McVeigh. 2020. Fishing Effort in the 2002–17 Pacific Coast Groundfish Fisheries. U.S. Department of Commerce, NOAA Technical Memorandum NMFS-NWFSC-153. <https://doi.org/10.25923/8y7r-0g25>
- 152 Jannot, J. E., K. Richerson, K. A. Somers, V. Tuttle, and J. T. McVeigh. 2020. Pacific Halibut Bycatch in U.S. West Coast Groundfish Fisheries, 2002–18. U.S. Department of Commerce, NOAA Technical Memorandum NMFS-NWFSC-152. <https://doi.org/10.25923/tkr3-b927>
- 151 Pess, G., and C. E. Jordan, editors. 2019. Characterizing Watershed-Scale Effects of Habitat Restoration Actions to Inform Life Cycle Models: Case Studies Using Data-Rich vs. Data-Poor Approaches. U.S. Department of Commerce, NOAA Technical Memorandum NMFS-NWFSC-151. <https://doi.org/10.25923/vka7-w128>
- 150 Somers, K. A., J. E. Jannot, K. Richerson, V. Tuttle, N. B. Riley, and J. T. McVeigh. 2019. Estimated Discard and Catch of Groundfish Species in the 2017 U.S. West Coast Fisheries. U.S. Department of Commerce, NOAA Technical Memorandum NMFS-NWFSC-150. <https://doi.org/10.25923/kr5q-je83>
- 149 Harvey, C., N. Garfield, G. Williams, N. Tolimieri, I. Schroeder, K. Andrews, K. Barnas, E. Bjorkstedt, S. Bograd, R. Brodeur, B. Burke, J. Cope, A. Coyne, L. deWitt, J. Dowell, J. Field, J. Fisher, P. Frey, T. Good, C. Greene, E. Hazen, D. Holland, M. Hunter, K. Jacobson, M. Jacox, C. Juhasz, I. Kaplan, S. Kasperski, D. Lawson, A. Leising, A. Manderson, S. Melin, S. Moore, C. Morgan, B. Muhling, S. Munsch, K. Norman, R. Robertson, L. Rogers-Bennett, K. Sakuma, J. Samhour, R. Selden, S. Siedlecki, K. Somers, W. Sydeman, A. Thompson, J. Thorson, D. Tommasi, V. Trainer, A. Varney, B. Wells, C. Whitmire, M. Williams, T. Williams, J. Zamon, and S. Zeman. 2019. Ecosystem Status Report of the California Current for 2019: A Summary of Ecosystem Indicators Compiled by the California Current Integrated Ecosystem Assessment Team (CCEIA). U.S. Department of Commerce, NOAA Technical Memorandum NMFS-NWFSC-149. <https://doi.org/10.25923/p0ed-ke21>
- 148 Sharma, R., C. E. Porch, E. A. Babcock, M. Maunder, and A. E. Punt, editors. 2019. Recruitment: Theory, Estimation, and Application in Fishery Stock Assessment Models. U.S. Department of Commerce, NOAA Technical Memorandum NMFS-NWFSC-148. <https://doi.org/10.25923/1r2p-hs38>

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