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Technical Appendix: Non-Market Economic Value of Recreation Use on the Outer Coast of Washington and the Olympic Coast National Marine Sanctuary, An Attributes Approach: Volume 5, 2014

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Abstract

This is the Technical Appendix to the non-technical main report of findings on the non-market economic value of outdoor recreation use on the Outer Coast of Washington and the Olympic Coast National Marine Sanctuary. The recreation activity was by those from Washington households that participated in outdoor recreation on the Outer Coast of Washington in 2014. The attributes approach to valuation was used to value changes in natural resource conditions from the "Status Quo" or low condition (i.e., the condition the resources will be in if existing policies and management continue over the next 10 to 20 years) and improved conditions to a medium and high condition. Many different techniques can be used and we chose the discrete choice experiment approach. Values were also estimated as a function of user characteristics (e.g., per capita income, experience with the Outer Coast for recreation and user's ecological worldview). This report is part of a six volume series of reports which include demographic profiles, activity profiles, expenditure profiles and the economic impact of the spending on local area economies, and importance-satisfaction ratings of 25 natural resource attributes, facilities and services. Details of the survey methodology and estimation methods used in volume 1 to 3 are in volume 4. Details of the estimation methods for a technical audience that may want to replicate results found in the main report (that only includes results) and for peer reviewers.

Key Words

Non-market economic value, stated preferences, conjoint, discrete choice experiment, choice modeling, attributes, coastal, ocean, recreation

1. Introduction

Purpose

This report provides documentation on the methods used to estimate non-market economic use values included in Leeworthy et al. (forthcoming). The report is intended for peer reviewers and others who would like to replicate the study in other areas or extend the study to samples of those who engage in recreation activities on Washington's Outer Coast who are not residents of the State of Washington.

This report is part of a six volume series of reports for the study on outdoor recreation activities by Washington households on the Outer Coast of Washington. Volume 1 provides a socioeconomic profile of those who engaged in outdoor recreation on Washington's Outer Coast and in the OCNMS. Demographic profiles include age, sex, race/ethnicity, household income, educational attainment, household size, housing type, marital status, employment status and county and zip code of residence. For recreation activities, the amount of recreation was estimated (measured in annual person-trips and person-days) using information on percent of households that recreated on Washington's Outer Coast, the average number of trips they made over the past 12 months and the average length of stay for the trips. The spatial distribution by activity type was used to derive the spatial distribution of person-days by activity type. Activity participation rates by activity type were also estimated. Expenditure profiles were also developed by detailed spending categories for the last trip. Expenditure estimates were normalized to expenditures per person per day. See Leeworthy et al. (2016a).

Volume 2 of the series reports the total expenditure estimates by detailed spending category and normalized per person per day. These expenditures were then used to estimate the economic impacts/contribution to the local area economy in terms of output/sales, value-added, income and employment, including multiplier impacts using the IMPLAN input-output model. See Leeworthy et al (2016b).

Volume 3 of the series reports importance-satisfaction ratings for 25 natural resource attributes, facilities and services. See Leeworthy et al. (2016c).

Volume 4 of the series is the Technical Appendix for Volumes 1 to 3 and documents all the sampling and estimation methods. See Leeworthy et al. (2016d).

Background

In 2013-14, Point97 and the Surfrider Foundation conducted an Internet survey using a Knowledge Networks Panel, which included a random sample of all State of Washington households. Non-Washington households were not included due to the cost. The survey addressed visitation on the Outer Coast of Washington with emphasis on outdoor recreation activities. The survey covered visitation over the past 12 months and included information on detailed recreation activities participated in over the past 12 months and on the last trip. The last trip was important for two reasons: 1) trip expenditures and 2) spatial use by activity type were obtained for the last trip. A special tool developed by Ecotrust/Point97 was used to obtain estimates of spatial use. Demographics were obtained for all panel members. The project was funded by the State of Washington to support their Marine Spatial Planning process.

In 2014, two offices in NOAA's National Ocean Service, the Office of National Marine Sanctuaries (ONMS), Conservation Science Division and the National Centers for Coastal Ocean Sciences (NCCOS), Center for Coastal Monitoring and Assessment, Biogeography Branch partnered to obtain information on the preferences and non-market economic values and how those non-market values change with changes in natural resource attributes and user characteristics. NCCOS provided funding and ONMS issued a request for proposals to provide the information. Through the competitive bidding process Point97 was awarded the contract. Point97 proposed a survey using their existing Internet Panel with Knowledge Networks (KN). Modules were designed for a second wave of surveying to include the NOAA objectives. NOAA's objectives were to estimate project parameters to support the Socioeconomic Action Plan for the Olympic Coast National Marine Sanctuary, while also meeting the needs of the State of Washington in their Marine Spatial Planning process.

NOAA's objectives included obtaining information on people's preferences for different marine animals (e.g. seabirds and marine mammals), development of an environmental index for predicting people's non-market economic values, estimation of the non-market economic values, and estimation of how those values change with changes in natural resource attributes and user characteristics. This data was collected in addition to the previously described information on visitation.

NOAA's objectives were determined by the OCNMS Management Plan's socioeconomic priorities and the Office of National Marine Sanctuaries (ONMS) new guidelines for its "Condition Reports" (ONMS 2015). All future ONMS Condition Reports will evaluate the status and trends of the ecosystem services provided in each sanctuary. This report provides the research necessary to support the interpretation of various indicators to evaluate the recreation ecosystem service.

Organization of the Report

Chapter 2 of the report details the survey methodology, the survey questionnaire design and the experimental design. Chapter 3 provides definitions and descriptive statistics for all model variables and model estimation results. Chapter 4 provides the estimates of non-market economic values and how to use the results in policy/management analyses. Chapter 5 provides conclusions and needs for future research. Several appendices contain the materials used in selecting the natural resource attributes to value and the condition levels of the attributes; focus groups; the pre-test; the final questionnaires and detailed sample descriptive statistics.

2. Survey Methodology

Internet Panel

The survey methodology is presented in Pont97 and Surfrider Foundation (2015) and in Leeworthy et al (2016d), but the relevant portions pertaining to the non-market economic valuation will be repeated here. The survey was done using the Knowledge Networks, Inc. (KN) panel of the State of Washington households. To accommodate the needs of the State of Washington and NOAA, KN supplemented their regular panel with additional recruits to expand sample sizes.

The survey was done in two waves. The first wave was conducted from June 13-30, 2014 and included 3,017 households. The second wave was conducted from November 19, 2014 to February 14, 2015 and included 3,112 households. For both waves, there were a total of 6,219 households in the panels. KN recruited panel members to obtain a random sample representative of all households in the State of Washington. The sampling frame included those 18 years or older living in State of Washington households. The non-market economic values were addressed only in wave 2. Waves 1 and 2 were used to estimate total use and how to extrapolate from sample to population.

Survey Response Rates.
Out of the 6,129 panel members across both waves, 5,538 households responded for a response rate of 90.36%. For wave 1, the response rate was 100% (N=3,017), while for wave 2 the response rate was 81% (N=2,521). The Wave 2 response rate was likely lower due to the holiday season and the fact that in Internet Panels it is common to have some sample attrition.

Sample Weighting.
KN provided sample weights for the panel to make them representative of all Washington households. KN weighted the sample for four factors: age, gender, race/ethnicity and county of residence. County of residence was included because of the estimation of spatial use. Two sets of weights were provided: weight1 was the sample weight for the regular KN panel members and weight2 was the weight for the full panel. In all our estimates we used weight2 since we used the entire panel.

Sample Sizes for Non-market Economic Value Estimation.
As noted above, 2,521 Internet Panel members responded to wave 2 of the survey, which included the non-market economic valuation questions. Of these, 42.24% participated in outdoor recreation on the Outer Coast in the past 12 months for an eligible sample size of 1,065. Twenty of these panel members did not answer any of the willingness-to-pay

questions leaving a sample size of 1,045. As will be discussed in Chapter 3, actual sample sizes used in model estimation are different due to the fact that each respondent is presented four choices with each choice including three scenarios/alternatives thus each respondent has 12 scenarios/alternatives with which to make their choices yielding a sample size for model estimation of 12,540. Of these 12,540 choices, one respondent only answered one choice with three scenarios/alternatives so the sample size for choices was reduced to 12,531. However, many of these observations are eliminated in final model estimation due to respondents' classification as "protestors", (i.e., those who may have value but rejected the valuation scenario for various reasons). This will be discussed in detail in Chapter 3.

Designing the Survey Questionnaire and Experimental Design

Characterization of the Decision Problem.

As discussed in the Chapter 1 (Introduction – Background), the survey was designed to address OCNMS Management Plan needs and the needs of a future OCNMS Condition Report which will evaluate ecosystem services in the sanctuary. In evaluating ecosystem services, a suite of ecological, economic and non-economic human dimensions' indicators is required. The attribute approach to valuation using discrete choice modeling allows for estimating people's preferences for different natural resource attributes using dollar metrics. This also allows for the identification of the attributes of the natural environment that people care about and which ecological indicators would apply to the recreation ecosystem service. The importance-satisfaction ratings in Leeworthy et al. (2016c) provide non-economic human dimensions' indicators for this evaluation.

The attribute approach to economic valuation has historically used travel cost random utility models to value natural and cultural resource attributes by looking at how site choices are related to the cost of access and the levels of resource attributes across sites. The problem faced by users of these models is that site characteristics (attributes) are often highly correlated resulting in multi-collinearity and the inability to identify statistically significant estimates of attributes' importance (Hanneman et al., 2004). Economists using random utility theory to address this problem (Louviere, Hensher and Swait, 2000 and 2009) adapted the stated preference method used by psychologists. This method uses experimental design to allow for orthogonal (uncorrelated) estimates of attribute values and thus identification of statistically significant effects of attributes on economic values. Therefore, we chose this approach in designing our questionnaire and experimental design.

Choice of Attributes and Attribute Levels.

There were four steps used in the process of selecting attributes to test which attributes are important: 1) review of the literature; 2) NCCOS Biogeography Team's research and monitoring results for various attributes for the Outer Coast of Washington; 3) focus groups to test what attributes were important to people who recreate on Washington's

Outer Coast and what changes in levels of those attributes would change their economic values;, and 4) a pre-test of the survey to test the finding of the focus groups and design the dollar bids to be used.

Review of the Literature.

A review of the literature did not find any studies to assist us in identifying the attributes of the natural environment that those who recreate on Washington's Outer Coast would care about and/or value. We did explore the literature more generally about attributes including not just economic valuation studies but also studies that might have rated attributes in terms of importance to recreation activities. A good web site for this is the on-line bibliography of the Marine Ecosystem Service Partnership (MESP 2013).

NCCOS Biogeography Team's Assessment of Natural Resource Attributes.

When we began our research, the NCCOS Biogeography Team was already in the process of collaborating with the State of Washington's Marine Spatial Planning Initiative and the California Current Integrated Ecosystem Assessment (IEA), which includes many agencies and universities on the West Coast of the U.S, in assessing the conditions and spatial distributions of natural resources on the Outer Coast of Washington. In our choice experiment, the information provided the basis for establishing the "Status Quo" condition of various natural resource attributes (i.e., the condition that the resources would be in over the next 10 years if current management and policies continued). The information also provided a range of levels of natural resource conditions that are feasible to achieve with changes in management and policies, thus providing the levels of changes for which we could use to estimate changes in values. For each attribute, a suite of indicators was developed with conditions rated as "Low", "Medium" and "High" with "Low" being equal to the "Status Quo".

Working together, the Biogeography Team and the Socioeconomic Team developed nine main attributes for which "Low", "Medium" and "High levels of conditions" could be specified using the indicators for each attribute. Two of the nine attributes (numbers eight and nine below) were from the Socioeconomic Team. Crowding is a more complex topic in economic valuation work since different people have different preferences for the number of other people they encounter while undertaking their recreation activities. We discuss this in more detail in the tests with focus groups and in Chapter 3 when we discuss the creation of model variables. The information compiled on each of the nine attributes is in Appendix A.

The nine main attributes were:

1) Diversity and Abundance of Marine Mammals
2) Diversity of Seabirds
3) Diversity of fish for viewing
4) Diversity of Tide Pool Organisms
5) Clear water (high visibility)

6) Clean water (no to low pollution) to support water-based activities
7) Beach and Shoreline Quality
8) Unobstructed Natural Viewscapes
9) Number of other Users (Crowding)

Focus Groups.

The next step in the process of developing the list of attributes and levels of each attribute was to test them with focus groups. Two focus groups were conducted by 5 Circles Research under contract to Point97. To get urban/suburban representation a focus group was conducted on August 6, 2014 in Kirkland, WA, a suburb of Seattle. Eight people were recruited for this group. A second focus group was conducted in the more rural area of Ocean Shores, WA on August 7, 2014. Nine people were selected for this group.

Participants were screened to meet the following criteria:

- At least one visit to the Outer Coast in the previous 12 months, with a mix of places visited and days/trips.
- Took part in a variety of types of recreation including activities at or near the beach, collecting and viewing, and active ocean activities.
- Range of ages, incomes, education, ethnicities and household composition.

In addition, participants filled out a questionnaire in the waiting room to gauge the amount and types of activity they participated in on the Outer Coast, and completed individual exercises during their group sessions. The groups were recorded (both audio and video), clients (NOAA personnel) were invited to hear and view the sessions in separate rooms so they did not have direct contact with focus groups members, and transcripts were created. All materials were provided to the client on DVDs/CDs.

The focus groups were tasked with the following:

1. From a list of activities and attributes, what attributes were important to them for what activities.
2. Identify any activities and attributes not on the list that were important to them.
3. Did they think it was important to separate diversity and abundance for marine mammals, sea birds and tidal pool organisms?
4. Levels of attributes and willingness-to-pay for changes in levels of attributes: They were asked what they considered to be “Low”, “Medium” and “High” conditions for each attribute for each activity. Using our definitions of “Low”, “Medium” and “High”, would moving from “Low” to “Medium” or “Medium to “High” or “Low” to “High” change their willingness-to-pay” for their trips. They were also asked to provide their maximum willingness-to-pay for each movements of the bundle of all attributes moving from “Low” to “Medium”, from “Low to High” and from “Medium to High”. Focus group members were provided definitions of “Low”, “Medium” and “High” conditions for each

attribute. For this exercise, focus group members were told the definition of willingness-to-pay, were provided a payment vehicle that was more neutral (cost of their trips and businesses would pass on the costs to them in higher prices for investments made in improving conditions) and were told that it was understood that it was not natural to reveal their maximum willingness to pay but that it would help researchers design the survey range of prices that will be presented to people in future surveys.

The focus group materials and questionnaires are all included in Appendix B.

Lessons learned from the focus groups:

1. Our list of activities was considered complete and representative.
2. Our list of attributes was generally very good. Driftwood was considered to be important as both firewood when camping and for artistic collecting purposes, but could not think of different levels for this attribute. Too much driftwood can interfere with swimming activities.
3. For crowding, recognized that some people go to crowded beaches for the social interaction so crowding can be positive, while others prefer less crowding conditions.
4. Birds, mammals and tide pool organisms were all important with diversity being more important than abundance.
5. For some attributes (e.g., seabirds and predators) increases from the "Low" to "Medium" condition was generally supported, but moving from "Medium" to "High" was not.
6. Clean water and clean beaches were the most important attributes.
7. Unobstructed views were important.
8. Pictures of crowding conditions were helpful and people distinguished the different levels of other people within view that were derived from the norm curves in Manning et al. (2000).
9. Beach access was important.

The focus groups also provided a starting point for the pre-test by assisting in designing the dollar bid amounts for the choice questions on willingness-to-pay.

Pre-test.

The pre-test was conducted from 11/23/2014 to 11/24/2014 on 589 randomly selected households from the KN Internet Panel. Of these households 291 (49.41%) visited the Outer Coast of Washington for outdoor recreation during the past 12 months.

The objectives of the pre-test were to:

1. Develop the six prices (dollar bids) to be used in the willingness-to-pay choice questions.
2. Test the length of survey.
3. Test 34 items in importance-satisfaction and select the 25 most important.
4. Test whether four choice questions per respondent would be answered or whether we needed to reduce the number of choice questions to avoid respondent fatigue.
5. Test information provided for choice questions and possible scenario rejection.
6. Test whether abundance or diversity was more important.
7. Determine the percent of Washington households that use the Outer Coast for recreation to determine whether sample sizes would be adequate for estimation of many project parameters.
8. Test the use of crowding photos.

Pre-test Results.

The survey was judged to be a little too long. Thirty-four items in the importance-satisfaction module of questions were tested for relative importance. Based on these tests, the importance-satisfaction module was cut from 34 items to 25. A module of questions was also designed on which species of sea birds, tide pool organisms and marine mammal people liked using a seven point Likert scale. This was done since we were not able to value every species, but only classes of species. We also added the "New Ecological Paradigm" questions (Dunlap and Van Liere, 1978), since in past research this index and its predecessor, the "New Environmental Paradigm" (Dunlap et al., 2000 and Dunlap 2008) has been a good predictor of people's willingness-to-pay (Aldrich et al., 2007).

All answered the four willingness-to-pay (WTP) choice questions without wide-spread scenario rejection (i.e., few protestors). Diversity was thought to be more important than abundance. Respondents thought the crowding photos were helpful. The percent of households that visited the Outer Coast of Washington for recreation was higher than expected indicating the sample size of the full wave 2 Internet Panel would be adequate for parameter estimation.

For the WTP choice questions, 11 prices were used on four versions of the survey with each respondent answering four choice questions. See Appendix C for the choice questions in each version. The pre-test allowed us to select six prices to be used in our optimal design. Prices tested were $15, $20, $30, $40, $60, $80, $125, $175, $250, $350, and $500. Generally, as the prices increased, holding option/alternative constant, the percent choosing the alternative declined. It is important that everyone in the sample that received the lowest dollar amount accept it or that all that received the highest dollar amount not accept it to avoid the econometric problem of "fat tails". The problem of "fat tails" adds no information (i.e., you do not learn anything from the information). No one rejected the $15 amount and not enough people rejected the $500 (24% accepted)

amount, so in our final design we selected the following six prices: $20, $40, $80, $175, $350 and $700 (See Appendix D).

Experimental Design

With three levels for the ten attributes and six levels for price, a total of 354,294 combinations were possible. Thus, we had to use a fractional factorial design. We used the SAS macros choiceff and mktex provided in Johnson et al. (2007). This resulted in an orthogonal and balanced design with 36 combinations of attribute and price levels. A blocking factor of nine required that each respondent answer four questions to achieve 36 choices. Each choice question had the "Status Quo" which always set the attributes to the "Low" level and cost the household $0 per year (an opt-out option). Each choice also included an option B and an option C, both of which was a mix of "low", "medium" and "high" conditions for the ten attributes, plus a positive price in the range of prices stated above. See Appendix C for the final questionnaire used for the choice questions and other supporting materials. The options or alternatives were generic, not labeled (Louviere, Hensher and Swait, 2009).

Sample Sizes Required for Statistical Efficiency:

In Orme (1998), the following formula is found for determining the minimum sample size for a given design:

N = 500 * NLEV/(NALT*NREP)

where,

N = minimum sample size required

NLEV = the largest number of levels in any attribute (here 6 for number of prices)

NALT = number of alternatives (options) per choice set (not including the Status Quo), (here 2)

NREP = number of choice sets per respondent (here 4)

So in our design, a minimum sample size of 375 is required for statistical efficiency. Our sample size was 1,045, so our sample sizes are sufficient to not only meet minimum requirements, but provide added safety for margin of error.

In addition to the above, as a general rule, six observations are needed for each attribute in a bundle of attributes to identify statistically significant effects (Bunch and Batsell, 1989 and Louviere et al, 2009). Since we have 10 attributes plus price, we have 11 attributes so we need 66 observations per version. Our design includes

nine versions, so we needed a sample size of 594 at a minimum. Since we obtained 1,045 completed interviews for the choice questions (after eliminating protestors), so we have 116 observations per version, which again is above the requirements to achieve statistical efficiency.

3. Definitions of Variables used in Models and Model Estimations

Definition of Model Variables

Natural Resource Attributes.

In defining variables to be used in model estimations, we first began by considering three methods of coding natural resource attribute variables: linear, dummy and effects coding. In linear coding, all the natural resource attributes are coded as 0=Status Quo or Low Condition, 1=Medium Condition and 2=High Condition. The problem with this approach is that it assumes that as natural resource conditions improve from the "Status Quo" or "Low" condition, the dollar value of the attribute increases at a constant amount. The better economic argument would be to assume declining marginal utility with increases in the quality of natural resource conditions, so this approach was abandoned in model estimations.

The dummy variable and effects coding approaches for coding the natural resource attributes do not force the relationship and can allow for constant, increasing or declining marginal utility. Hasan-Basri and Karim (2013) and Bech and Gyrd-Hansen (2005) discuss the pros and cons of dummy versus effects coding. We found that both approaches identified the same attributes as being statistically significant in preliminary model estimation, but abandoned the effects coding approach based on advice from Dr. Barbara Kanninen (Kanninen 2015).

Ultimately, a modified dummy variable approach was used. For several variables, "Medium" and "High" dummy variables were used, while for other variables they were set to either the values or midpoint of values described in the survey. This was done due to the concern that too many dummy variables might lead to problems with multi-collinearity even though the statistical design was orthogonal. The problem of multi-collinearity can occur due to the construct of dummy variables (Bech and Gyrd-Hansen, 2005). The dummy variable approach was not used for several natural resource attributes (e.g. tidal pool organisms, tidal pool access, beach shoreline quality-amount of debris/trash, beach shoreline quality-number of beaches open/no harmful algal blooms and crowding conditions). These variables were chosen since they lent themselves more to numerical coding. These variables were converted to numeric interval measurement. The detailed descriptions provided to respondents in the questionnaires of the natural resource attributes and the "Status Quo" or Low Condition, the Medium Condition, and the High Condition are in Table 3.1.

Table 3.1 Attribute Definitions

Attributes	Status Quo (Low)	Medium	High
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L**: Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M**: No Increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.	**H**: A decrease in number of threatened and endangered and all 11 species removed from species of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations).	**L**: Currently 19 species nest here and many more migrate through the area: 5 endangered or threatened; 9 on list of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M**: No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.	**H**: A decrease in the number of threatened and endangered species and no species on list of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L**: Never seen.	**M**: Occasionally seen.	**H**: Commonly seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L**: 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**M**: 20 to 40 species with no expected loss of species. Rare species are occasionally seen. Invasive species reduced but are occasionally seen.	**H**: Greater than 40 species. Rare species become less rare and more commonly seen. Invasive species are rarely or never seen.
Tide Pool Access	**L**: Distance from access point greater than 2 miles.	**M**: Distance from access point is 0.25 to 2 miles.	**H**: Distance from access point is 0.25 miles or less.
Clean water (no to low pollutants) to support water-based activities.	**L**: 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**M**: 14 to 26 beach closures for a total of 108 to 215 days of closure. 6 to 10 beach advisories with 41 to 82 beach days with advisories. Conditions mostly meet health standards.	**H**: 0 to 13 beach closures for a total of 0 to 107 days of closure. 0 to 5 beach advisories with 0 to 40 beach days with advisories. All conditions meet health standards.
Beach and shoreline quality (absence of debris/garbage).	**L**: Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**M**: Moderate amounts of debris or trash visible on the shore 1.6 lbs. per 100 feet of shoreline.	**H**: Minimal debris or trash visible on the shore 0.5 lbs. per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms).	**L**: Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**M**: A few harmful algal blooms causing respiratory distress to beach and shoreline users. 16 to 30 beaches open for razor clam digging per year.	**H**: No harmful algal blooms causing respiratory distress to beach and shoreline users. 31 to 58 beaches open for razor clam digging per year.

Attributes	Status Quo (Low)	Medium	High
Views not obstructed by onshore or offshore development.	**L**: Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to beach or shorelines.	**M**: Limited to low intensity development with views partially obstructed by a few offshore structures. Some access to beaches and shoreline.	**H**: Low impacts of development with no offshore structures and easy access to beaches and shores.
Uncrowded by other recreational users.	**L**: 21 or more people encountered during a beach visit.	**M**: 11 to 20 people encountered on a beach visit.	**H**: 0 to 10 people encountered on a beach visit.

Crowding.

The issue of crowding or congestion has received a lot of attention in the recreation demand and economic valuation literature. It has been found that crowding is characterized by heterogeneity in preferences in many applications (Graefe, Vaske and Kuss, 1984; Eroglu and Harrell, 1986; and Anderson, Kerstetter and Graefe (1998) and that psychometric data can aid in defining appropriate variables for model estimation to account for preference heterogeneity (Lavin and Hanemann, 2007).

Four pictures depicting different levels of visitor density were presented to the respondents. The density levels were derived from the norm curves provided in Manning et al. (2000). And were tested in focus groups and the pre-test as discussed above. The natural resources attribute of "uncrowded by other recreational users" (Table 3.1) was then coded to 21=Status Quo or Low Condition, 15.5=Medium Condition and 5=High Condition.

Respondents were then asked to indicate which picture represented 1) the number of visitors they would expect to see, 2) the number of visitors they would prefer to see, 3) the maximum acceptable number of visitors, and 4) the number of visitors that would cause them to not return. If a respondent preferred an empty beach (picture 1), then they were classified as a "wilderness lover." If a respondent preferred the highest level of crowding presented (picture 4) or would not return to a beach that had a lower level of crowding than their preferred level, then they were classified as a "crowd lover." Of the 1,065 respondents who completed the survey, 299 were wilderness lovers and 22 were crowd lovers.

The two crowding preference dummy variables (wilderness_loving and crowd_loving) were then interacted with the "uncrowded" attribute to create two new variables to measure the different preferences for crowding between wilderness and crowd lovers (wildnerness_crowd and crowding_crowd).

Ecological World View.

The "New Ecological Paradigm (NEP)" (Dunlap et al. 2000 and Dunlap 2008) was included in the survey questionnaire based on past efforts to explain willingness-to-pay for outdoor recreation (Aldrich et al. 2007). Respondents were asked to indicate their level of agreement or disagreement with the 15 NEP statements. Responses were coded using a seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Agreement with eight particular NEP statements indicates endorsement of the NEP pro environmental stance; whereas agreement with the remaining seven indicates endorsement of the Dominant Social Paradigm (DSP) or pro development stance. The fact is that some statements were skipped by some respondents (see Table 3.2 for the response rate for each NEP statement as well as for the summed NEP and DSP statements for respondents who had visited the outer coast in the past 12 months).

The Likert scale values of the DSP statements were reversed so that 1 corresponds to strongly agree and 7 corresponds to strongly disagree and averaged.

Table 3.2 New Ecological Paradigm (NEP) Question Response Rates

Variable	*Description*	*Number of Responses*	*Response Rate*
NEP_limit	We are approaching the limit of the number of people the earth can support.	1,040	97.65%
NEP_interfere	When humans interfere with nature it often produces disastrous consequences.	1,024	96.15%
NEP_abuse	Humans are seriously abusing the environment.	1,039	97.56%
NEP_exist	Plants and animals have as much right as humans to exist.	1,033	97.00%
NEP_abilities	Despite our special abilities, humans are still subject to the laws of nature.	1,032	96.90%
NEP_spaceship	The Earth is like a spaceship with very limited room and resources.	1,035	97.18%
NEP_delicate	The balance of nature is very delicate and easily upset.	1,034	97.09%
NEP_catastrophe	If things continue on their present course, we will soon experience a major ecological catastrophe.	1,038	97.46%
All NEP Statements		**978**	**91.83%**
DSP_modify	Humans have the right to modify the natural environment to suit their needs.	947	88.92%
DSP_ingenuity	Human ingenuity will insure that we do not make the Earth unlivable.	1,040	97.65%
DSP_develop	The Earth has plenty of natural resources if we just learn how to develop them.	1,036	97.28%
DSP_balance	The balance of nature is strong enough to cope with the impacts of modern industrial nations.	1,035	97.18%
DSP_crises	The so-called "ecological crisis" facing humankind has been greatly exaggerated.	1,039	97.56%
DSP_rule	Humans were meant to rule over the rest of nature.	1,035	97.18%
DSP_control	Humans will eventually learn enough about how nature works to be able to control it.	1,026	96.34%
All DSP Statements		**906**	**85.07%**

Total Sample Size was 1,065.

While each individual question has a relatively high response rate, roughly 10-15% of the summed NEP and DSP values are missing. This is a potential issue since one common way to form an ecological worldview index is to simply add all of these values together, which would lead to roughly 20% of the respondents being dropped from the analysis.

In order to address this issue, the mean NEP and DSP scores were calculated for each respondent and then averaged to form the index. Using this technique, ecological worldview indices can be calculated for 98.12% of respondents. The remaining 20 respondents had chosen not to respond to any of the NEP statements and, therefore, could not be assigned mean NEP and DSP values. However, these 20 respondents also chose

not to respond to the willingness to pay scenarios and were, therefore, dropped from the analysis.

The average NEP score is 5.12 (standard deviation of 1.03) with a range of values from 1.71 to 7. The average DSP score is 4.32 (standard deviation of 1.20) with a range from 1 to 7. Only 20 respondents did not respond to any NEP statements.

As the DSP scores are reversed from the NEP scores, they both measure pro-ecological worldviews. Therefore, the two mean scores can be added for each respondent.

Cluster analysis using this final score yielded three distinct ecological worldview groups: a strong ecological worldview group, a moderate ecological worldview group, and a dominant social worldview group. Three dummy variables, NEP_strong, NEP_mod, and DSP, were created for these groups.

Cluster analysis segments individuals into groups with homogenous intra-group characteristics and heterogeneous inter-group characteristics. The specific method used was k-means clustering, which partitions *n* observations into *k* clusters in which each observation belongs to the cluster with the nearest mean. The basic algorithm is as follows:

1. Randomly assign a cluster to each observation
2. Calculate the means for each cluster
3. Assign each observation to the cluster with the closest mean
4. Calculate the new means for each cluster
5. Repeat steps 3 and 4 until the assignments no longer change

The cluster analysis was conducted using STATA Version 14 (StataCorp, 2015).

Price, Use and Income.

Price refers to the annual cost to the household for each alternative and its development was discussed above in the focus group and pre-tests. The payment vehicle was defined for respondents in the information sheet provided in the questionnaire (Appendix C). There were six prices randomly assigned in the optimal design to different alternatives: $20, $40, $80, $175, $350 and $700. This was the annual cost to the household for alternatives. For the Status Quo or all conditions at the "Low" condition (opt out choice) was always priced at $0. For estimation, price was scaled to thousands of dollars (price_1000).

Table 3.3 Derivation of Annual Household Income

Category	*Description*	*Range Midpoint*
1	Less than $5,000	$2,500.00
2	$5,000-$7,499	$6,249.50
3	$7,500-$9,999	$8,749.50
4	$10,00-$12,499	$11,249.50
5	$12,500-$14,999	$13,749.50
6	$15,000-$19,999	$17,499.50
7	$20,000-$24,999	$22,499.50
8	$25,000-$29,999	$27,499.50
9	$30,000-$34,999	$32,499.50
10	$35,000-$39,999	$37,499.50
11	$40,000-$49,999	$44,999.50
12	$50,000-$59,999	$54,999.50
13	$60,000-$74,999	$67,499.50
14	$75,000-$84,999	$79,999.50
15	$85,000-$99,999	$92,499.50
16	$100,000-$124,999	$112,499.50
17	$125,000-$149,999	$137,499.50
18	$150,000-$174,999	$162,499.50
19	$175,000 or more	$200,000.00

Use. Experience was specified using the variable (how_long) which was the answer to question 5 in the questionnaire.

Q5. For how long have you been visiting the Pacific coast of Washington and enjoying one or more of the activities you identified [this was preceded by a listing of all the recreation activities they did on the Outer Coast]?

1= Just last year
2= One to three years
3= About four to ten years
4 = More than ten years
5 = All my life

If Q5 was equal to one, then a dummy variable was created (first_time) where 1=first time visitor (Q5=1) and 0=not first time visitor (Q5 greater than or equal to two).

Income. Income was obtained from all panel members with no missing information. Missing information for income is typical of most survey research. Annual Household Income was obtained in 19 categories. From this a numeric interval variable was created

(inc_value) by assigning the mid-point of each interval for each category from 1 to 18. For the upper limit (category 19), the income was set to $200,000 (Table 3.3).

As per capita income has been found to be a better explanatory variable in willingness-to-pay studies (Alberini, Longo and Veronesi, 2006), per capita income was calculated by dividing total annual household income by the household size. It was then scaled to thousands of dollars for model estimation (per_capita_income_1000).

Issues Affecting Sample Sizes for Model Estimation

Protestors.

In any use of stated preferences methods for estimating people's economic values, there are likely to be survey respondents who reject the valuation scenario presented. This rejection results in them not revealing their "true" willingness-to-pay for the good or service offered. A thorough analysis to identify protest bids was completed. A series of eight questions were presented after the choice sets to better understand how respondents chose between the various combinations of attribute conditions and prices. Respondents were asked for their level of agreement or disagreement with eight statements on a scale of 1 (strongly disagree) to 5 (strongly agree). Four of these statements were used to identify potential protest bids:

a. There was not enough information for me to make informed decisions about doing more to protect and restore natural resources or expand and improve facilities and services.
b. I was concerned the federal, state and local governments cannot effectively manage the natural resources and facilities or provide the services.
c. I should not have to pay more for maintaining or improving conditions.
d. I do not believe the scenarios accurately represent the current or potential states of the environment.

Table 3.4 below shows how many respondents either 'agreed' or 'strongly agreed' with the above statements and chose the status quo option at least once.

Table 3.4 Frequency of "Yes" Responses to Protest Questions

Protest Statement	*Count*	*Percent*	*Total Responded*
There was not enough information for me to make informed decisions about doing more to protect and restore natural resources or expand and improve facilities and services.	303	29.4%	1,030
I was concerned the federal, state and local governments cannot effectively manage the natural resources and facilities or provide the services.	500	48.4%	1,033
I should not have to pay more for maintaining or improving conditions.	280	27.1%	1,034
I do not believe the scenarios accurately represent the current or potential states of the environment.	224	21.6%	1,035
Answered yes to all four questions.	47	4.4%	1,065
Answered yes to at least one of the four questions.	734	68.9%	1,065
Total Sample Size	1,065	100%	1,065

If a respondent agreed with at least one of those statements, their responses were further analyzed as being potential protest bids. Respondents who choose the status quo for all four of the choice questions and “agreed” or “strongly agreed” with at least one of the questions were recorded as Protestors and their observations were removed from the non-market valuation analysis. This resulted in 113 respondents’ observations being removed from the data set. Given that each respondent was asked to make four choices with three alternatives each, 113 protestors are equivalent to 1,356 protest responses that were dropped from the sample for model estimation.

Some respondents did answer yes to the status quo at least once, but not to all four questions and agreed with at least one of the statements. Their choices were also analyzed as potential protests. However, their responses were consistent with economic theory and behavior. They chose options with lower prices, but as prices increased they chose the status quo. This is consistent with decreasing marginal willingness to pay for goods and services. Given this, their responses were included in the analysis as valid economic responses.

Inconsistent Response to Crowding Questions.

Not every respondent answered the four visitor density questions consistently and these respondents were not included in the willingness to pay analysis. There were 39 respondents who indicated that they preferred to see more visitors than the maximum acceptable number of visitors. There were 126 respondents who expected to see the number of visitors that would cause them not to return. Finally, there were 98 respondents who

preferred to see the number of visitors that would cause them not to return. Three dummy variables, flag_max, flag_expect, and flag_prefer, were created to flag these respondents. In total, there were 157 respondents who were inconsistent in at least one way, but 12 of these were also protestors. Therefore, 145 additional respondents were dropped from the sample. As one of these respondents skipped one of the choice questions, 1,737 responses were dropped[1].

Sample Sizes Used in Model Estimations and Descriptive Statistics[1]

There were originally 1,065 respondents, but, as 20 did not answer any of the choice questions, only 1,045 were used in the analysis. This provided a potential sample size of 12,531 for model estimation. After eliminating 113 protestors, this reduced the sample size to 11,175 observations for model estimation. Further, after eliminating 1,737 that had inconsistent responses to the crowding questions, the total sample size for model estimation was 9,348.

We tested for differences between protestors and non-protestors for natural resource attributes, per capita income, first time use, NEP variables and crowding variables used in model estimation. No differences were found for natural resource attributes, price or first time use. For per capita income, protestors had lower incomes than non-protestors. For NEP variables, protestors were more likely to be pro-development than non-protestors. For crowding variables, inconsistencies were higher for non-protestors. Results of the statistical tests are in Appendix E, Table E.11. The descriptive statistics for the variables used in model estimation are included in Table 3.5. For complete descriptive statistics for all observations, non-protestors and protestors see Appendix E: Tables E.1 to E.10.

Models and Model Estimation

Three types of models were estimated: Multi-nomial logit (MNL), Nested Choice Logit (NL) and Mixed Logit or Random Parameters (RP). Only the final models selected are presented here. The latter two were estimated since none of the specifications for the MNL passed the Hausman-McFadden IIA test for the assumption of independence of irrelevant alternatives (Hausman and McFadden, 1984). However, not passing the IIA assumption should not be of much concern, as the alternatives "can plausibly be assumed to be distinct and weighted independently in the eyes of each decision maker (Long and Freese 2006, p. 243).

[1] One peer reviewer commented "I think this analysis makes sense. I just wonder about the visitors who expected to see the number of visitors that would cause them not to return. Perhaps these people would like to see this area once, and but they expect crowds so high that once they have seen it they would not come back". There is no data to test this hypothesis.

As the survey was developed to present respondents with distinct scenarios to choose from, it is reasonable to accept this model specification. So we maintain it as providing a possible legitimate model and use it along with the NL and RP models to provide a range of results.

One benefit of the NL and RP models is that they allow for heterogeneity and address the IID violation of constant variance for the observed portion of the variance (Louviere, Hensher and Swait, 2009). So the NL and RP models allow for heterogeneity and address the IID violation.

For the NL model, the respondent is assumed to first decide between the status quo or "not the status quo". If they choose "not the status quo", they then choose between the remaining options (B and C in this case) (Wielgus et al., 2003).

For the RP Model, the normal error structure was assumed. Price and per capita income were fixed factors and all other variables were random. Only four variables (D3WATER, bch_open, crowding_crowd and NEP_Strong) that were treated as random had significant coefficient on their standard deviations (SDs) (Table 3.8). This means that for these variables there is significant heterogeneity among households for these attributes.

Applied work similar to our own for the MNL model can be found in Sorice et al. (2005), for the NL model (Wielgus et al. 2003) and for the RP model (Wallmo and Lew 2012).

We do not present the math behind each of the model specifications. These can be found in Louviere, Hensher and Swait (2009). We used STATA Version 14 (StataCorp, 2015) to estimate all three models.

Model Specifications

For the MNL specification with the natural resource attributes coded in their simple linear version see Appendix E (Tables E.1 to E.3). This simple model identified all the natural resource attributes as statistically significant; however, this model was rejected since it imposes the assumption of linear utility. For the range of policy/management levels of conditions evaluated, constant marginal utility was not considered a reasonable assumption for most attributes. The descriptive statistics for all the variables included in the model estimations are in Table 3.5.

Table 3.5 Descriptive Statistics for Variables used in Estimated Models

Variable	*Description*	*Mean*	*Standard Error*	*Min*	*Max*	*N*
D2MARINE	Dummy Variable Marine Mammals Medium Condition	0.2386	0.0044	0	1	9,438
D3MARINE	Dummy Variable Marine Mammals High Condition	0.2314	0.0043	0	1	9,438
D2SEABRD	Dummy Variable Seabirds Medium Condition	0.2338	0.0044	0	1	9,438
D3SEABRD	Dummy Variable Seabirds High Condition	0.2172	0.0042	0	1	9,438
D2PREDTR	Dummy Variable Predators Medium Condition	0.2320	0.0043	0	1	9,438
D3PREDTR	Dummy Variable Predators High Condition	0.2148	0.0042	0	1	9,438
tdpl_num	Tide Pool Organisms: 15=Status Quo, 30=Medium, 41=High	24.4216	0.1116	15	41	9,438
tdpl_acc	Tide Pool Access(Miles from Access point)): 2.0=Status Quo, 1.125=Medium, 0.25=High	1.3851	0.0074	0.25	2	9,438
D2WATER	Dummy Variable Clean Water Medium Condition	0.2234	0.0043	0	1	9,438
D3WATER	Dummy Variable Clean Water High Condition	0.2311	0.0043	0	1	9,438
debris	Shoreline Quality Debris (Number per 100 foot) 3.25=Status Quo, 1.6=Medium, 0.5=High	2.7094	0.0069	0.5	3.25	9,438
bch_open	Shoreline Quality Number beaches Open 8=Status Quo, 23=Medium, 45=High	20.3627	0.1575	8	45	9,438
D2DEVELP	Dummy Variable Development Medium Condition	0.2324	0.0043	0	1	9,438
D3DEVELP	Dummy Variable Development High Condition	0.2293	0.0043	0	1	9,438
wilderness_crowd	Wilderness_loving times uncrowd	5.3400	0.0867	0	21	9,438
crowding_crowd	Crowd_loving times uncrowd	0.0148	0.0016	0	21	9,438
price_1000	Annual cost to Household in thousands of dollars	0.1503	0.0021	0	0.7	9,438
per_capita_income_1000	Per capita Household Income in thousands of dollars	35.8012	0.2612	0.5	200	9,438
NEP_strong	Dummy Variable NEP Strong Environmentalist	0.2845	0.0046	0	1	9,438
NEP_mod	Dummy Variable NEP Moderate Environmentalist	0.4374	0.0051	0	1	9,438
first_time	Dummy Variable First Time Visitor to Outer Coast of WA for Recreation 1=first time visitor	0.1182	0.0033	0	1	9,438

Model Results

Table 3.6 Estimated Multinomial Logit (MNL) Model

variable	*coefficient*[1]	*robust std error*	*z*	*P>|z|*	*95% Conf. Interval]*	
asc	**-0.53**	0.27	-1.96	0.05	-1.06	0.00
D2MARINE	**0.27**	0.09	3.10	0.00	0.10	0.45
D3MARINE	**0.37**	0.09	4.22	0.00	0.20	0.55
D2SEABRD	0.09	0.08	1.05	0.29	-0.08	0.26
D3SEABRD	0.02	0.08	0.24	0.81	-0.13	0.17
D2PREDTR	**0.17**	0.08	2.06	0.04	0.01	0.34
D3PREDTR	**0.22**	0.10	2.26	0.02	0.03	0.40
tdpl_num	-0.0017	0.00	-0.50	0.62	-0.01	0.01
tdpl_acc	**0.18**	0.05	3.79	0.00	0.09	0.28
D2WATER	**0.24**	0.09	2.79	0.01	0.07	0.41
D3WATER	**0.47**	0.09	5.05	0.00	0.29	0.65
debris	**-0.09**	0.03	-2.76	0.01	-0.15	-0.03
bch_open	**0.01**	0.00	3.23	0.00	0.00	0.01
D2DEVELP	**0.28**	0.08	3.47	0.00	0.12	0.43
D3DEVELP	**0.42**	0.10	4.21	0.00	0.22	0.61
wilderness_crowd	**-0.02**	0.01	-1.77	0.08	-0.04	0.00
crowding_crowd	0.03	0.05	0.59	0.56	-0.07	0.12
price_1000	**-2.46**	0.34	-7.22	0.00	-3.12	-1.79
per_capita_income_1000_asc	**0.01**	0.00	2.34	0.02	0.00	0.02
NEP_strong_asc	**1.70**	0.30	5.76	0.00	1.12	2.28
NEP_mod_asc	**1.17**	0.21	5.50	0.00	0.75	1.59
first_time_asc	**-0.51**	0.27	-1.87	0.06	-1.05	0.02
obs	9,438					
clusters	787					
pseudo log likelihood (full)	-2804.51					
pseudo Log likelihood (null)	-3310.92					
Chi-square (24)	281.7					
Chi-square Significance	0					
pseudo R^2	0.15					
Adj. pseudo R^2	0.15					

1. Statistically significant coefficients at least at the 0.10 level in bold.

Table 3.7 Estimated Nested Logit Model

variable	*coefficient*[1]	*robust std error*	*z*	*P>|z|*	*95% Conf. Interval]*	
asc	-0.08	0.33	-0.26	0.80	-0.73	0.56
D2MARINE	**0.16**	0.09	1.81	0.07	-0.01	0.33
D3MARINE	**0.21**	0.10	2.04	0.04	0.01	0.42
D2SEABRD	**0.09**	0.05	1.84	0.07	-0.01	0.19
D3SEABRD	0.04	0.04	0.98	0.33	-0.04	0.12
D2PREDTR	**0.12**	0.06	2.09	0.04	0.01	0.23
D3PREDTR	**0.16**	0.07	2.24	0.03	0.02	0.29
tdpl_num	0.0005	0.0020	0.26	0.80	-0.0034	0.0045
tdpl_acc	**0.09**	0.05	1.88	0.06	0.00	0.19
D2WATER	**0.16**	0.07	2.17	0.03	0.02	0.30
D3WATER	**0.27**	0.12	2.17	0.03	0.03	0.50
debris	**-0.06**	0.03	-2.45	0.01	-0.11	-0.01
bch_open	**0.0037**	0.00219	1.71	0.09	-0.00055	0.01
D2DEVELP	**0.16**	0.08	2.01	0.05	0.00	0.32
D3DEVELP	**0.24**	0.12	2.08	0.04	0.01	0.47
price_1000	**-1.57**	0.65	-2.41	0.02	-2.85	-0.29
per_capita_income_1000_asc	**0.01**	0.00	2.41	0.02	0.00	0.02
NEP_strong_asc	**1.68**	0.30	5.65	0.00	1.10	2.27
NEP_mod_asc	**1.17**	0.21	5.60	0.00	0.76	1.57
wilderness_crowd	-0.01	0.01	-1.43	0.15	-0.02	0.00
crowding_crowd	**0.01**	0.03	0.45	0.66	-0.05	0.07
first_time_asc	**-0.49**	0.27	-1.81	0.07	-1.02	0.04
dissimilarity parameters						
/status_quo_tau	1.00	34.59			-66.79	68.79
/other_tau	0.53	0.24			0.06	0.99
obs	9438					
clusters	787					
pseudo log likelihood (full)	-2799.65					
Chi-square (22)	326.55					
Chi-square Significance	0.00					

1. Statistically significant coefficients at least at the 0.10 level in bold.

Table 3.8 Estimated Mixed Logit/Random Parameters Model

variable	*coefficient*[1]	*robust std error*	*z*	*P>|z|*	*95% Conf. Interval]*	
Mean						
price_1000	**-3.94**	0.56	-6.99	0.00	-5.05	-2.84
per_capita_income_1000_asc	**0.02**	0.01	2.60	0.01	0.00	0.03
asc	-0.57	0.44	-1.31	0.19	-1.43	0.28
D2MARINE	**0.37**	0.12	3.17	0.00	0.14	0.60
D3MARINE	**0.52**	0.12	4.28	0.00	0.28	0.76
D2SEABRD	**0.19**	0.12	1.61	0.11	-0.04	0.41
D3SEABRD	0.08	0.10	0.78	0.43	-0.12	0.27
D2PREDTR	**0.29**	0.12	2.46	0.01	0.06	0.52
D3PREDTR	**0.34**	0.12	2.89	0.00	0.11	0.57
tdpl_num	0.0006	0.0045	0.14	0.89	-0.01	0.01
tdpl_acc	**0.20**	0.08	2.69	0.01	0.06	0.35
D2WATER	**0.36**	0.11	3.24	0.00	0.14	0.58
D3WATER	**0.58**	0.15	3.94	0.00	0.29	0.87
debris	**-0.13**	0.04	-3.20	0.00	-0.21	-0.05
bch_open	**0.01**	0.00	2.72	0.01	0.00	0.02
D2DEVELP	**0.35**	0.10	3.52	0.00	0.16	0.55
D3DEVELP	**0.52**	0.13	4.01	0.00	0.26	0.77
NEP_strong_asc	**3.83**	0.89	4.31	0.00	2.09	5.57
NEP_mod_asc	**2.28**	0.56	4.09	0.00	1.19	3.37
wilderness_crowd	**-0.02**	0.01	-1.69	0.09	-0.05	0.00
crowding_crowd	0.00	0.05	0.06	0.95	-0.09	0.10
first_time_asc	-0.91	0.49	-1.88	0.06	-1.87	0.04

1. Statistically significant coefficients at least at the 0.10 level in bold.

Table 3.8 Estimated Mixed Logit/Random Parameters Model (continued)

variable	*coefficient*[1]	*robust std error*	*z*	*P>|z|*	*95% Conf. Interval]*	
SD						
asc	**1.87**	0.42	4.44	0.00	1.05	2.70
D2MARINE	**0.44**	0.43	1.03	0.30	-0.40	1.29
D3MARINE	**0.12**	0.23	0.54	0.59	-0.32	0.57
D2SEABRD	0.00	0.17	-0.02	0.98	-0.35	0.34
D3SEABRD	-0.13	0.18	-0.71	0.48	-0.49	0.23
D2PREDTR	0.07	1.09	0.07	0.95	-2.06	2.20
D3PREDTR	0.42	0.23	1.79	0.07	-0.04	0.87
tdpl_num	0.02	0.02	1.29	0.20	-0.01	0.05
tdpl_acc	0.25	0.34	0.73	0.46	-0.42	0.93
D2WATER	0.13	0.37	0.35	0.73	-0.60	0.85
D3WATER	**-0.73**	0.28	-2.58	0.01	-1.28	-0.17
debris	-0.21	0.18	-1.13	0.26	-0.56	0.15
bch_open	**-0.02**	0.01	-2.02	0.04	-0.04	0.00
D2DEVELP	-0.29	0.24	-1.20	0.23	-0.76	0.18
D3DEVELP	-0.18	0.58	-0.30	0.76	-1.32	0.96
NEP_strong_asc	**-2.06**	0.84	-2.44	0.02	-3.71	-0.41
NEP_mod_asc	-1.89	1.17	-1.61	0.11	-4.19	0.41
wilderness_crowd	0.05	0.06	0.90	0.37	-0.06	0.16
crowding_crowd	**-0.18**	0.06	-3.05	0.00	-0.30	-0.07
first_time	-0.97	0.76	-1.29	0.20	-2.46	0.51
obs	9,438					
pseudo log likelihood	-2,619.61					
Chi-square (22)	212.08					
Chi-Square Significance	0.00					

1. Statistically significant coefficients at least at the 0.10 level in bold.

Non-significant Variables or Weak Results.

In the final estimated models (MNL, NL, and RP), there were two natural resource attributes that were not significant: abundance and diversity of tidal pool organisms (tdpl_num) and abundance and diversity of seabirds at the High level of condition (D3SEABRD).

To help explain the insignificance of the abundance and diversity of tidal pool organisms, the importance-satisfaction ratings of the two items related to tidal pool organisms, the presence of starfish/sea stars to see in tidal pools and tidal pools with a diverse and healthy

population of organisms, are provided in Leeworthy et al. (2016c). As both rated relatively low on the importance scale, this finding is consistent with user preferences.

To help explain the insignificance of the abundance and diversity of seabirds at the high condition level, likeability measures for different species found on the Outer Coast were developed by asking respondents to rate each species on a 1 to 7 Likert scale.

Two of the most disliked animals were seagulls and terns and the least known animals were all birds (plovers, terns, sandpipers, and puffins). However, two of the most liked animals were eagles and hawks. Therefore, it is likely that the category of "seabirds" was too heterogeneous to find clear, significant results. Future research should develop separate seabird categories in order to achieve more robust results.

For the issue of crowding, the results were relatively weak even though we distinguished between those who love crowds (crowding_crowd) and those who prefer a non-crowded experience (wilderness_loving). Interpretation of the coefficients on these variables is tricky. Wildnerness_crowd had the hypothesized negative sign meaning as crowding conditions improved (decreased) the marginal value increases. This was true all three models, but it was not significant in the NL model.

Those who loved crowds (crowding_crowd) had the hypothesized positive sign in two of the three models (e.g. MNL and NL), but was not significant in the MNL and RP models. The positive coefficient means as crowding conditions improved (decreased) the marginal values declined.

The results for crowding are consistent with the importance-satisfaction ratings (Leeworthy et al. 2016c). Importance of uncrowded conditions was relatively more important but weak and relatively more satisfied. So, very few people seemed to have experienced high crowding conditions on the Outer Coast of Washington, so this would seem to explain the weak results for crowding in the estimated models.

Significant Model Variables

Natural Resource Attributes.

The diversity and abundance of marine mammals was estimated using dummy variables representing the medium condition (D2MARINE=1) and the high condition (D3MARINE=1). D1MARINE is the “Status Quo” or low condition and the reference condition. Results from all three models indicate the value of marine mammals increases with condition level at a decreasing rate. This result is consistent with declining marginal utility.

For the diversity and abundance of seabirds, again the dummy variable approach was used with the medium condition (D2SEABRD=1) and the high condition (D3SEABRD)

and the reference was the Status Quo or low condition (D1SEABRD). Results from all three models indicate that the medium condition level is preferred to the status quo or high condition level. As discussed above, this is likely due to the heterogeneity in the "sea birds" resource attribute.

For the opportunity to see large predators, the dummy variable approach was used. The medium condition was represented by D2PREDTR and the high condition by D3PREDTR with the Status Quo or low condition equal to the reference category. Results from the three models are mixed. The MNL and NL models suggest declining marginal utility as with marine mammals; however, the RP model suggests the medium condition level is preferred to the status quo or high condition level as with sea birds. This second result is consistent with focus group members who indicated that, while they disliked predators, they felt they were important for healthy ecosystems. Additionally, out of the 18 species ranked, Orcas were the 4th most popular, but sharks were the second least popular. This heterogeneity could be affecting the results similarly to the sea birds. This will present a challenge in how to proceed in what results to use in estimating marginal willingness-to-pay estimates and in the valuation function to estimate different management scenarios. Simple averaging of results will not account for this different relationship, so there will be higher uncertainty on these results.

Clean water (no or low pollutants) used the dummy variable coding with the medium condition represented by D2WATER and the high condition by D3WATER. The status quo or low condition was the reference category. The coefficients were consistent with increasing value going from low to medium and then from medium to high condition. Results from all three models are consistent with declining marginal utility.

The last natural resource attribute using the dummy variable coding was the state of development both onshore and offshore that would obstruct the natural viewscape. The medium condition was represented by D2DEVELP and the high condition by D3DEVELP with the status quo or low condition as the reference category. Again, results from all three models are consistent with declining marginal utility.

Tidal pool organism abundance was converted to a numeric interval variable (tdpl_num) and, as was noted above, it was positive in the NL and RP models and negative in the MNL model, but not significant in either of the three model specifications. The results were consistent with the importance-satisfaction ratings that found tidal pool organisms were not of high relative importance.

Tidal pool access was also treated as a numeric interval variable and was stated in miles from the access point with the low condition being the furthest from the access point and the highest condition at the closest to the access point. The estimated relationship was opposite of what was expected. In all three model specifications as the tidal pools were further from the access point, it increased value. This result suggests that respondents

preferred tidal pools to be further away from access points. In fact, the correlation between tide pool access (tdpl_acc) and wilderness lovers (wilderness_crowding) was 0.07.

Beach or shoreline quality was measured using two attributes. The first was defined as the amount of debris (in pounds) of trash per 100 feet of shoreline (debris) and was converted to a numeric interval variable. As expected, the results from all three models are consistent with declining marginal utility.

The second measure of beach or shoreline quality was measured as the numbers of beaches open (bch_open). Beaches are often closed for clam digging when water quality is poor or from harmful algal blooms that can cause respiratory distress. As expected, as the number of beaches opened increases value increases and was significant in all three model specifications. Results from all three models was consistent with increasing marginal utility.

As crowding has been found to be a more difficult attribute to model, variables were constructed to capture the heterogeneity in preferences. The coefficient on wilderness lovers (wilderness_crowd) had the expected negative sign indicating wilderness lovers prefer less crowded areas.
Wilderness lovers (wilderness_crowd) had the expected negative sign in all three model specifications, but was only significant in two of the three models (MNL and RP). As the areas recreated in become more crowded, wilderness lovers experience a decline in value. Only 28.13% of all recreation visitors to the Outer Coast were classified as wilderness lovers. This is consistent with the importance-satisfaction ratings in Leeworthy et al. (2016c) which found crowding conditions relatively less important, but visitors are relatively more satisfied with them.

For crowd lovers (crowding_crowd), the results were inconsistent and not significant in any of the three estimated models. A positive coefficient is consistent with the hypothesis that as crowding increases the value to people who love crowds would increase. The RP model produced a negative but insignificant coefficient. In evaluating management alternatives, we will average the coefficients from the MNL and NL models. But again, crowding was relatively less important on the Outer Coast of Washington with only 1.72% of all users classified as crowd lovers.

Individual Attributes.
Per capita income, experience with recreating on the Outer Coast of Washington, and visitor's ecological worldview were included as explanatory variables. To include them requires interacting them with an alternative specific constant (ASC). The ASC was set to zero if the status quo was chosen and equal to one if either option/alternative B or C was chosen. The ASC was interacted with the individual attributes to avoid "Hessian singularities" (Bennett and Adamowicz, 2001).

For the NL, the respondent is assumed to first decide between the status quo or "not the status quo." If they choose "not the status quo," they then choose between the remaining options (B and C in this case) (Wielgus et al., 2003).

Per capita income was scaled to thousands of dollars (per_capita_income_1000) to keep variables at similar scales to aid in estimation. It was positive and significant in all three models estimated as hypothesized. This adds to what has been called 'construct validity' in that it is consistent with economic theory in the demand for normal goods (Louviere, Hensher and Swait, 2009).

A visitor's experience with recreating on Washington's Outer Coast was specified as a dummy variable (first_time) set to one if the visitor was a first time visitor and zero otherwise. We hypothesized that more experienced visitors would have higher values than first time visitors, so a negative sign was expected. The experience variable was negative and significant in two of the three models estimated (MNL and NL) and was negative and not significant in the RP model. We averaged the coefficients in estimating the value of management scenarios using the valuation function.

A respondent's ecological world view is defined above. Two dummy variables were formed with NEP_Strong set equal to one for those that fell within the cluster analysis grouping with a high index value for the pro environmental stance, while NEP_mod was set to one for those with a moderate index value for the pro environmental stance. The reference category was the group with the low index value for the pro environmental stance, or the pro-development group. Results in all three models support the hypothesis that as people's world view becomes more pro-environmental their values increase and there is declining marginal utility i.e. the coefficient on NEP_strong is higher than that of NEP_mod. However, when we set the values for NEP_strong and NEP_mod to their mean value, which weights them for the percent of the population that have these preferences, the means are higher for NEP_mod for the MNL and NL model valuation functions (Tables 3.9, 3.10 and 3.11).

Price.

Price is the most important explanatory variable in a valuation model. It is fundamental to be able to estimate a negative and statistically significant coefficient on price as theory would dictate (construct validity). Price was scaled to thousands of dollars (price_1000) to put in on the same scale as other variables, which aids estimation. In all three models price was negative and significant, thus validating the model. To estimate marginal willingness-to-pay for each model attribute one divides the coefficient on the attribute by the negative of the price coefficient.

Marginal Willingness to Pay

For the estimated models, the marginal willingness to pay (MWTP) can be calculated for each natural resource attribute to assess relative importance. MWTP here is the change in value at movement from the low condition (Status Quo) to the medium condition or from the low condition to the high condition. One can subtract the value at the movement form low to medium from the movement from low to high to derive the value of the movement from medium to high. With these three measurements one can then assess if there is declining marginal utility (i.e., that the marginal value of moving from the medium to high condition level is less than the marginal value of moving from low to medium). The formula for MWTP is the attribute's coefficient divided by the negative of the price coefficient (Louviere, Hensher and Swait, 2009; Green, 2007). The results for the MNL, NL, and RP models are summarized in Tables 3.9, 3.10, and 3.11, respectively.

The most valued natural resource attributes across all three models were marine mammals, clean water and unobstructed views from development. The most influential individual characteristics on value are ecological worldview and per capita income. First time visitors had a relatively large marginal effect, but once it is weighted for the percent of the population that are first time visitors, the relative importance of this factor declines significantly (only 11.89% of visitors were first time visitors).

Although the model picked up the heterogeneity of crowding as hypothesized, the effects were relatively small which is consistent with previous findings in Leeworthy (2016d) on importance-satisfaction ratings. When crowd lovers are weighted for their percent of the population of users its effect was very small. When we restrict ourselves to the NL and RP models for Tidal Pool Organisms, the effects are relatively small. So given this factor was not significant in any of the estimated models, including it in the valuation function will not have a large impact. Tidal Pool Access is more problematic. It was significant in the MNL and NL models and is characterized by constant marginal utility across all three model specifications (Tables 3.9, 3.10 and 3.11). The MWTP is also relatively high giving it some weight in the total valuation function to be used in evaluating management alternatives. As noted above, because it was not significant in the RP model and the sign on this factor was opposite of what was expected, there is more uncertainty with respect to these findings. So caution will be needed in evaluating management strategies that are focused on changing access to the tidal pools.

Table 3.9 Annual Household Marginal Willingness to Pay using the MNL Model

Variable	***Low to Medium***	***Medium to High***	***Low to High***
Marine Mammals	$109.76	$40.65	$150.41
Seabirds	$36.59	-$28.46	$8.13
Large Predators	$69.11	$20.33	$89.43
Tidal Pool Organisms	-$10.37	-$6.91	-$17.28
Tidal Pool Access[1]	-$64.02	-$64.02	-$128.04
Clean Water	$97.56	$93.50	$191.06
Shoreline Quality-debris	$60.37	$40.24	$100.65
Shoreline Quality-beaches open	$60.98	$89.43	$150.41
Development-unobstructed views	$113.82	$56.91	$150.41
Wilderness Lovers[2]	$12.58	$24.01	$36.59
Crowd Lovers[3]	-$1.15	-$2.20	-$3.36
	MWTP	MWTP at Mean	
NEP_strong[4]	$691.06	$196.61	
NEP_mod[4]	$475.61	$208.03	
Per Capita Income (thousands $)[5]	$4.07	$145.53	
First time visitor[6]	-$207.32	-$24.50	

1. As tidal pool access decreased in distance from the access point there was less willingness to pay: change in distance low to medium (0.0 to 2.0) and low to high (0.25 to 2.0).
2. As crowding conditions improve (decrease), marginal willingness to pay by wilderness lovers increases: low to medium (15.5-21) *.2813, low to high (5-21) *0.2813.
3 As crowding conditions improve (decrease), marginal willingness to pay decreases for crowd lovers: low to medium (15.5-21) *0.0172, low to high (5-21) *0.0172.
4. NEP_strong at mean (0.2845) and NEP_mod at mean (0.4374).
5. Marginal Willingness to pay per $1,000 of annual household income per capita and marginal willingness to pay at the mean annual household income per capita in thousands of dollars.
6. Marginal willingness to pay calculated at mean of first_time equal to 0.1182.

Table 3.10 Annual Household Marginal Willingness to Pay using the Nested Logit Model

Variable	***Low to Medium***	***Medium to High***	***Low to High***
Marine Mammals	$101.91	$31.85	$133.76
Seabirds	$57.32	-$31.85	$25.48
Large Predators	$76.43	$25.48	$101.91
Tidal Pool Organisms	$4.78	$3.18	$7.96
Tidal Pool Access[1]	-$50.16	-$50.16	-$100.32
Clean Water	$101.91	$70.06	$171.97
Shoreline Quality-debris	$63.06	$42.04	$105.10
Shoreline Quality-beaches open	$35.35	$51.85	$87.20
Development-unobstructed views	$101.91	$50.96	$152.87
Wilderness Lovers[2]	$9.85	$18.81	$28.67
Crowd Lovers[3]	-$0.60	-$1.15	-$1.75
	MWTP	MWTP at Mean	
NEP_strong[4]	$1,070.06	$304.43	
NEP_mod[4]	$745.22	$325.96	
Per Capita Income (thousands $)[5]	$6.37	$228.03	
First time visitor[6]	-$312.10	-$36.89	

1. As tidal pool access decreased in distance from the access point there was less willingness to pay: change in distance low to medium (0.0 to 2.0) and low to high (0.25 to 2.0).
2. As crowding conditions improve (decrease), marginal willingness to pay by wilderness lovers increases: low to medium (15.5-21) *.2813, low to high (5-21) *0.2813.
3 As crowding conditions improve (decrease), marginal willingness to pay decreases for crowd lovers: low to medium (15.5-21) *0.0172, low to high (5-21) *0.0172.
4. NEP_strong at mean (0.2845) and NEP_mod at mean (0.4374).
5. Marginal Willingness to pay per $1,000 of annual household income per capita and marginal willingness to pay at the mean annual household income per capita in thousands of dollars.
6. Marginal willingness to pay calculated at mean of first_time equal to 0.1182.

Table 3.11 Annual Household Marginal Willingness to Pay using the Mixed Logit/ Random Parameters Model

Variable	*Low to Medium*	*Medium to High*	*Low to High*
Marine Mammals	$93.91	$38.07	$131.98
Seabirds	$48.22	-$27.92	$20.30
Large Predators	$73.60	$12.69	$86.29
Tidal Pool Organisms	$3.10	$2.07	$5.17
Tidal Pool Access[1]	-$44.42	-$44.42	-$88.84
Clean Water	$91.37	$55.84	$147.21
Shoreline Quality-debris	$54.44	$36.29	$90.74
Shoreline Quality-beaches open	$38.07	$55.84	$93.91
Development-unobstructed views	$88.83	$43.15	$131.98
Wilderness Lovers[2]	$7.85	$14.99	$22.85
Crowd Lovers[3]	$1.18	$2.24	$3.42
	MWTP	MWTP at Mean	
NEP_strong[4]	$972.08	$276.56	
NEP_mod[4]	$578.68	$253.11	
Per Capita Income (thousands $)[5]	$5.08	$181.73	
First time visitor[6]	-$230.96	-$27.30	

1. As tidal pool access decreased in distance from the access point there was less willingness to pay: change in distance low to medium (0.0 to 2.0) and low to high (0.25 to 2.0).
2. As crowding conditions improve (decrease), marginal willingness to pay by wilderness lovers increases: low to medium (15.5-21) *.2813, low to high (5-21) *0.2813.
3 As crowding conditions improve (decrease), marginal willingness to pay decreases for crowd lovers: low to medium (15.5-21) *0.0172, low to high (5-21) *0.0172.
4. NEP_strong at mean (0.2845) and NEP_mod at mean (0.4374).
5. Marginal Willingness to pay per $1,000 of annual household income per capita and marginal willingness to pay at the mean annual household income per capita in thousands of dollars.
6. Marginal willingness to pay calculated at mean of first_time equal to 0.1182.

4. Total Annual Value for Changing Conditions

Approach

In this chapter, the total valuation functions are used to evaluate changes in the total non-market economic value for changes in the natural resource conditions. All changes are from the low condition (Status Quo) to higher conditions (i.e., medium or high). The Status Quo (Low Condition) is not valued, only changes from the Status Quo can be estimated with our chosen approach.

The three estimated models presented in Chapter 3 are used here to demonstrate the use of the models for three scenarios:

1. All natural resource attributes set to the medium condition.
2. All natural resource attributes set to the high condition.
3. Natural resource conditions set to a mix of low, medium and high conditions.

For scenario (3), Marine Mammals are maintained at the Low Condition (Status Quo); Seabirds, Water Cleanliness, Tidal Pool Number of Organisms, Number of Beaches Open and Development are set to the medium condition; and Tidal Pool Access and Crowding are set the High Condition. This scenario was done to demonstrate a more general capability of the model.

All individual characteristics (i.e., Per capita income, first time visitor and ecological world view) are set to sample averages.

The functions estimate the average annual value or willingness to pay per household for those who visit the Outer Coast of WA for outdoor recreation activities. This was then aggregated for the estimated 1,067,892 households that visited the Outer Coast for recreation.

Estimates are made using all three model valuation functions then averaged across all three functions. This is similar to how the Federal Reserve treats the several econometric models used to forecast the macro economy (Faust and Wright, 2007; Faust et. al., 2013). The average across all models has proven to be a better predictor than any one model. Some are now using this approach as well for political polls (Grenier, 2015). So we don't rely on simple log likelihood ratio tests to choose the "best" model, but instead chose to use the averaging approach.

We do impose some judgment in not incorporating some model results that are inconsistent with economic theory. In these cases, we drop a component from the model if it is highly influential and inconsistent with economic theory. Increasing marginal utility would be an example of something we generally would not accept. We did find this for the crowding factors, but we maintained them because they don't have relatively large influence on the estimated values. In addition, the coefficient on number of tidal pool organisms (tdpl_num) in the MNL model had the opposite sign from what was hypothesized, so it was dropped from the MNL model valuation function. It was maintained in the NL and RP models and the average of these two models is used. Also, the coefficient on crowd lovers (crowding_crowd) had a positive sign opposite of what was hypothesized for the RP model and so was dropped from the valuation function for the RP model. Thus the MNL and NL model results are averaged.

Results

Medium Condition.

The results of the valuation functions when all natural resource conditions are set to the medium condition are $440.54 for the MNL model, $460.83 for the NL model and $420.99 for the RP model for the average household. Averaging these values leads to an estimate of $445.17 per household.

Aggregating these values for all WA households that recreate on the Outer Coast of WA yields an estimated annual total value of $470.5 million using the MNL model; $492.1 million for the NL model; $449.6 million for the RP model. Averaging these values leads to an estimate of $475.4 million (Table 4.1).

Table 4.1 Total Annual Value: All Conditions at Medium Level

Variable	*MNL*	*NL*	*RP*	*Average*	*Medium Condition*[1]
ASC	-0.53	-0.08	-0.57	-0.39	1
D2MARINE	109.76	101.91	93.91	101.86	1
D3MARINE	0.00	0.00	0.00	0.00	0
D2SEABRD	36.59	57.32	48.22	47.38	1
D3SEABRD	0.00	0.00	0.00	0.00	0
D2PREDTR	69.11	76.43	73.60	73.05	1
D3PREDTR	0.00	0.00	0.00	0.00	0
tdpl_num[2]	**-10.37**	0.01	0.01	0.0083	15
tdpl_acc	-64.02	-50.16	-44.42	-52.87	-0.875
D2WATER	97.56	101.91	91.37	96.95	1
D3WATER	0.00	0.00	0.00	0.00	0
debris	60.37	63.06	54.44	59.29	-1.65
bch_open	60.98	35.35	38.07	44.80	15
D2DEVELP	113.82	101.91	88.83	101.52	1
D3DEVELP	0.00	0.00	0.00	0.00	0
wilderness_crowd	-36.59	-28.67	-22.85	-29.37	4.5008
crowding_crowd[3]	3.3561	1.7529	**-0.2095**	2.5545	0.2752
NEP_strong	196.61	304.43	276.56	259.20	0.2845
NEP_mod	208.03	325.96	253.11	262.37	0.4374
per_captia_income_1000	145.53	228.03	181.73	185.09	35.8
first_time	-24.65	-37.11	-27.46	-29.74	0.1189
Avg. Annual Value/Household	440.54	460.83	420.99	445.17	
Total Annual Value[4]	470,454,177	492,118,490	449,570,026	475,390,932	

1. NEP_strong, NEP_mod, per_capita_income_1000 and first_time set to their mean values.
2. MNL model coefficient not consistent with hypothesis and not significant and dropped from calculation.
3. Coefficient on crowd_crowding in RP model not consistent with hypothesis so dropped from the RP Model and MNL and NL model coefficients averaged for the average value column. Price coefficient for average is 2.63.
4. Number of Washington households visiting the Outer Coast for Recreation: 1,067,892.

High Condition.

The results of the valuation functions when all natural resource conditions are set to the high condition are $706.55 for the MNL model, $687.23 for the NL model and $621.52 for the RP model for the average household. Averaging these values leads to an estimate of $677.21 per household.

Aggregating these values for all WA households that recreate on the Outer Coast of WA yields an estimated annual total value of $754.5 million using the MNL model; $733.9 million for the NL model; $663.7 million for the RP model. Averaging these values leads to an estimate of $723.2 million (Table 4.2).

Table 4.2 Total Annual Value: All Conditions at High Level

Variable	*MNL*	*NL*	*RP*	*Average*	*High Condition*[1]
ASC	-0.53	-0.08	-0.57	-0.39	1
D2MARINE	0.00	0.00	0.00	0.00	0
D3MARINE	150.41	133.76	131.98	138.71	1
D2SEABRD	0.00	0.00	0.00	0.00	0
D3SEABRD	8.13	25.48	20.30	17.97	1
D2PREDTR	0.00	0.00	0.00	0.00	0
D3PREDTR	89.43	101.91	86.29	92.55	1
tdpl_num[2]	**-17.28**	0.01	0.02	0.0138	25
tdpl_acc	-128.05	-100.32	-88.83	-105.73	-1.75
D2WATER	0.00	0.00	0.00	0.00	0
D3WATER	170.73	171.97	147.21	163.30	1
debris	100.61	105.10	90.74	98.81	-2.75
bch_open	150.41	87.20	93.91	110.50	37
D2DEVELP	0.00	0.00	0.00	0.00	0
D3DEVELP	170.73	152.87	131.98	151.86	1
wilderness_crowd	12.58	9.85	7.85	10.10	-1.54715
crowding_crowd[3]	-1.1537	-0.6025	**0.0720**	-0.8781	-0.0946
NEP_strong	196.61	304.43	276.56	259.20	0.2845
NEP_mod	208.03	325.96	253.11	262.37	0.4374
per_captia_income_1000	145.53	228.03	181.73	185.09	35.8
first_time	-24.65	-37.11	-27.46	-29.74	0.1189
Avg. Annual Value/Household	706.55	687.23	621.52	677.21	
Total Annual Value[4]	754,515,620	733,883,355	663,715,450	723,187,941	

1. NEP_strong, NEP_mod, per_capita_income_1000 and first_time set to their mean values.
2. MNL model coefficient not consistent with hypothesis and not significant and dropped from calculation.
3. Coefficient on crowd_crowding in RP model not consistent with hypothesis so dropped from the RP Model and MNL and NL model coefficients averaged for the average value column. Price coefficient for average is 2.63.
4. Number of Washington households visiting the Outer Coast for Recreation: 1,067,892.

Change from the Medium to High Condition.
Overall, the value function results demonstrate declining marginal utility from changes from low to medium conditions to low to high conditions. The average across all three models was a change of $232.04 per household and a total aggregate change in value of $247.8 million or a 52.1% increase (Table 4.3).

Table 4.3 Summary Results for Estimates of Total Annual Value for Attributes set to All Medium and All High by Model Specification

	Model Specification			
Attribute Levels[1]	MNL	NL	RP	Average
Medium: Annual Household ($)	440.54	460.83	420.99	445.17
High: Annual Household ($)	706.55	687.23	621.52	677.21
Medium: Total Annual Value ($)	470,454,177	492,118,490	449,570,026	475,390,026
High: Total Annual Value ($)	754,515,620	733,883,355	663,715,450	723,187,941
Changes From Medium to High				
Annual Household ($)	266.01	226.40	200.53	232.04
Total Annual Value ($)	284,061,443	241,764,865	214,145,424	247,797,915
Annual Household (%)	60.38	49.13	47.63	52.12
Total Annual Value (%)	60.38	49.13	47.63	52.13

1. Medium is the change in value from the Status Quo or Low Condition of attributes to the medium condition of attributes and High is the change in value from the Status Quo or Low Condition of attributes to the High condition of attributes.

Mixed Conditions.
To demonstrate how the model could be used in management, we chose to do a scenario where there is a mix of low, medium and high conditions. We developed a simple Excel Workbook that can be used to evaluate different management strategies for improving conditions of natural resource attributes.

The results of the valuation functions with a mix of natural resource conditions are $607.77 for the MNL model; $591.68 for the NL model; and $542.83 for the RP model for the average household. Averaging these values leads to an estimate of $583.90 per household.

Aggregating these values for all WA households that recreate on the Outer Coast of WA yields an estimated annual total value of $649.0 million using the MNL model; $631.9

million for the NL model; $579.7 million for the RP model. Averaging these estimates yields an estimate of $623.5 million (Table 4.4).

Table 4.4 Total Annual Value: Mixed Conditions[1]

Variable	*MNL*	*NL*	*RP*	*Average*	*Condition[2]*
ASC	-0.53	-0.08	-0.57	-0.39	1
D2MARINE	109.76	101.91	93.91	101.86	1
D3MARINE	0.00	0.00	0.00	0.00	0
D2SEABRD	36.59	57.32	48.22	47.38	1
D3SEABRD	0.00	0.00	0.00	0.00	0
D2PREDTR	69.11	76.43	73.60	73.05	1
D3PREDTR	0.00	0.00	0.00	0.00	0
tdpl_num[3]	**-10.37**	0.01	0.01	0.0083	15
tdpl_acc	-128.05	-100.32	-88.83	-105.73	-1.75
D2WATER	97.56	101.91	91.37	96.95	1
D3WATER	0.00	0.00	0.00	0.00	0
debris	100.61	105.10	90.74	98.81	-2.75
bch_open	150.41	87.20	93.91	110.50	37
D2DEVELP	0.00	0.00	0.00	0.00	0
D3DEVELP	170.73	152.87	131.98	151.86	1
wilderness_crowd	12.58	9.85	7.85	10.10	-1.54715
crowding_crowd[4]	-1.1537	-0.6025	**0.0720**	-0.8781	-0.0946
NEP_strong	196.61	304.43	276.56	259.20	0.2845
NEP_mod	208.03	325.96	253.11	262.37	0.4374
per_captia_income_1000	145.53	228.03	181.73	185.09	35.8
first_time	-24.65	-37.11	-27.46	-29.74	0.1189
Avg. Annual Value/Household	607.77	591.68	542.83	583.90	
Total Annual Value[5]	649,028,727	631,850,117	579,687,083	623,543,237	

1. Scenario has Marine Mammals at Low Condition; Seabirds, Predators, Water Cleanliness, Tidal Pool Number of Organisms, Number of Beaches Open and Development in medium Condition; and Tidal Pool Access and Crowding at the High Condition.
2. NEP_strong, NEP_mod, per_capita_income_1000 and first_time set to their mean values.
3. MNL model coefficient not consistent with hypothesis and not significant and dropped from calculation.
4. Coefficient on crowd_crowding in RP model not consistent with hypothesis so dropped from the RP Model and MNL and NL model coefficients average for the average value column. Price coefficient is 2.63.
5. Number of Washington households visiting the Outer Coast for Recreation: 1,067,892

Relative Importance of Species.

The likeability scoring of marine mammals, seabirds, large predators and total pool organisms is discussed above, with descriptive statistics and rankings provided in Appendix E Tables E.14 to E.17. We explored whether there was a relationship with each model variable included in the valuation functions for these species groups with individual

species likeability scores. Regressions were run for each of the species groups as a function of the species likeability scores for the individual species in the group. None of the regressions were significant. Simple ranking by species is the best we can do in determining the relative importance of species within species groups.

Uncertainty.

Research is emerging on incorporating uncertainty in model estimates Krupnick and Cropper (1992) and Vossler et al. (2003); however, there is no consensus on how to use measures of uncertainty in calibrating valuation estimates. The survey incorporated a question about the respondent's self-evaluation of their uncertainty of their response to the choice questions. A five-point scale was used to measure uncertainty with 1=Not sure at all, 2=Slightly sure, 3=Moderately sure, 4=Very sure and 5=Extremely sure. Those who were "not sure at all" or "Slightly sure" were re-assigned to choosing the "Status Quo" (opt out). There were 46 respondents that meeting this criterion. The models were re-run with this recoding. The results were more attributes were not significant but for those that were, the estimated values increased. This is opposite what is hypothesized by incorporating uncertainty i.e. that by not incorporating uncertainty estimates are biased upwards. The differences were not significant. We reject the approach of incorporating this kind of uncertainty in calibrating results. In real markets there is no such thing as changing people's decisions on purchasing a good or service on their decision to purchase based on uncertainty. Whatever choice they made they have to live with. We see no reason to treat stated preference studies any differently.

Hypothetical Bias.

In all stated preference work, researchers must address the potential for hypothetical bias. This was addressed in carefully designing the survey information through focus group work and pre-testing. In addition, the evaluation of protestors and dropping those who did not accept our scenarios and scientific information address this concern. Making the choice consequential is a key element in avoiding hypothetical bias Vossler and Evans (2009) and Bishop et al. (2011). In the design of our payment vehicle and in the elimination of protesters, we believe we have addressed any potential issues with hypothetical bias.

5. Conclusions and Future Research

Conclusions

The discrete choice experiment is a good method for valuing multiple resource attributes, but it does have its limits in the number of attributes that can be evaluated from a single sample of people. Fractional factorial designs that produce orthogonal and balanced designs that estimate "main effects" can be successful in statistically identifying the importance of many attributes, especially in applications where interaction or cross effects are relatively unimportant.

The estimated models were generally robust in estimating the marginal value of changes in natural resource attributes while controlling for user characteristics for WA households that visit the Outer Coast of WA for recreation. The valuation functions were somewhat sensitive to model specification and so we believe averaging results across model specification and rejecting results counter to our hypotheses in individual models is the best predictor of value rather than choosing one model result as better based on simple log likelihood ratio tests.

Use of non-economic human dimensions (e.g., importance-satisfaction ratings and species likeability ratings) are important complements to assessing people's preferences for natural resource attribute conditions. For the issue of crowding, heterogeneity of preferences can be successfully modeled using psychometric data.

Aggregating species into groups (e.g., marine mammals, seabirds, large predators and tidal pool organisms) can sometimes be problematic due to heterogeneity in preferences. For example, sea gulls were generally disliked imparting statistical noise into the valuation functions.

The New Ecological Paradigm (NEP) index is a good predictor of people's willingness to pay for environmental protection and restoration. The finding here bolsters the results of past research and support future use of this index in environmental valuation.

The results presented here will support management objectives including evaluating investments in environmental protection and restoration; assessing damages; and contributing to the deep research behind interpreting indicators used in evaluation of the recreation ecosystem service in future sanctuary Condition Reports.

Future Research

As noted above, disaggregating sea gulls from other seabirds should be addressed in future research when attempting to value changes in seabird conditions. Generally, focus groups can help in identifying problems in forming species groups and understanding when more of something (large predators) is not always preferred. But larger pre-tests are also required to uncover issues and relationships not revealed in small focus groups.

An area of future research with the survey data used here is the relationship between recreation users' choices and how it changes their levels of use. This could then be used to estimate the market economic impacts (e.g., changes in spending in the local economy and the associated impacts on output, value-added, income and jobs in the local economy).

In addition, the Internet Panel used in this study consisted of a random sample of all WA households. In aggregating changes in value to all WA households that visit the Outer Coast for recreation, a static estimate of the number of households was used. There is a capability to estimate recreation participation functions to be able to forecast future recreation use of the Outer Coast of WA.

Our sample was limited to WA households that visited the Outer Coast for recreation. Future research should extend the study to non-WA residents that visit the Outer Coast of WA for recreation. This would supply a more complete picture of the valuation of natural resources of the Outer Coast.

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A. Attributes

Diversity and Abundance of Marine Mammals

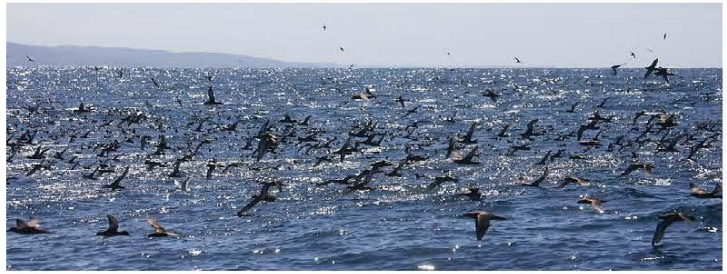
"Twenty-nine species of marine mammals have been sighted in the Olympic Coast National Marine Sanctuary, including eight species listed under the Endangered Species Act. Two species are frequent foragers in the sanctuary: the humpback whale and the killer whale (also called orca). Gray whales, which were recently removed from the endangered species list, travel through the sanctuary on their annual migrations between breeding and calving grounds in the Baja Peninsula and summer feeding grounds in the northern Pacific. Sea otters, harbor and elephant seals, and Stellar and California sea lions aggregate along the shore and haul out on land at many locations along the coast throughout the year" (OCNMS Condition Report 2008). Eleven species of marine mammals found in the sanctuary are on either the federal or state species of concern lists across their range (WDFW 2008).




INDICATOR	LOW	MEDIUM	HIGH	Notes
Number of T/E species	Status quo = continued increase in the number of T/E species	Marginal protection of marine mammals and their habitats = no increase in T/E species	Significant increase in protection of marine mammals and their habitats = a decrease in the number of T/E species	OCNMS 2008
Species diversity	Non functioning, catastrophic loss	Limited types of marine mammals for viewing	Many kinds of species of marine mammals for viewing	None
Species of concern	Many species listed as endangered, threatened or species of concern	Few species listed as E/T or species of concern	No species listed as E/T or species of concern	
Likelihood of rare species	Never seen	Occasionally seen	Commonly seen	None
Likelihood of human disturbance (overfishing of important food fish, derelict fishing gear)	Degraded environment	Sparse disturbance	Rare to never	None

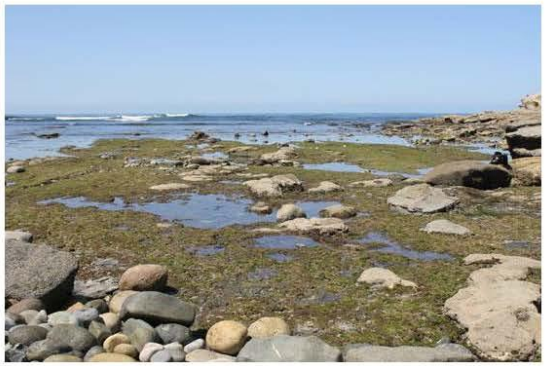
Diversity of Seabirds

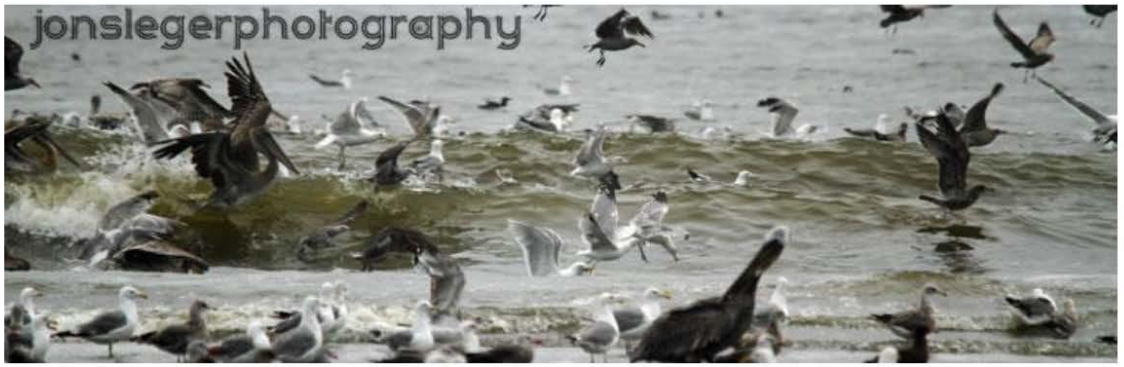
"Seabirds are the most conspicuous members of the offshore fauna of the Olympic Coast. Sea stacks and islands provide critical nesting habitat for 19 species of marine birds and marine-associated raptors and shorebirds, including seven alcid species (murres, puffins, murrelets, etc.), three cormorant species, four gull and tern species, two storm petrel species, two raptors and one shorebird, the Black Oystercatcher. Productive offshore waters attract large feeding aggregations of marine birds that breed in other regions of the world but travel great distances to 'winter' in sanctuary waters. The coastline forms an important migratory pathway for millions of birds that pass through each year, guiding waterfowl, cranes, shorebirds, and raptors toward northern breeding areas during the spring and southward as winter approaches" (OCNMS Condition Report 2008).



INDICATOR	LOW	MEDIUM	HIGH	Notes
Number of T/E species	Status quo = continued increase in the number of T/E species	Marginal protection of seabirds and their habitats = no increase in T/E species	Significant increase in protection of seabirds and their habitats = a decrease in the number of T/E species	OCNMS 2008
Species diversity	Non functioning, catastrophic loss	Limited types of seabirds, including shorebirds for viewing	Many species of seabirds, including shorebirds for viewing	None
Species of concern	Many species listed as endangered, threatened or species of concern	Few species listed as E/T or species of concern	No species listed as E/T or species of concern	
Likelihood of rare species	Never seen	Occasionally seen	Commonly seen	None
Likelihood of human disturbance (e.g. nesting sites)	Degraded environment	Sparse disturbance	Rare to never	None

Diversity of Seabirds

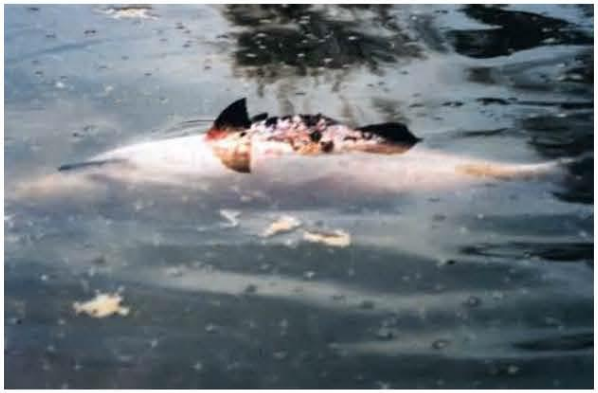


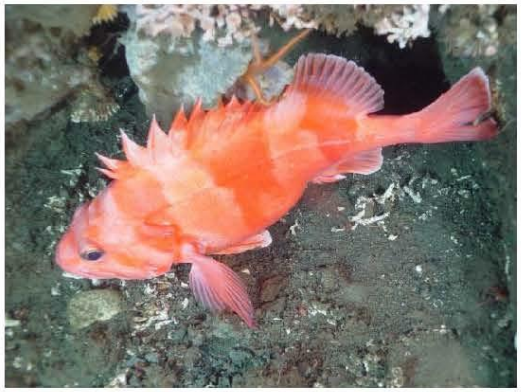


Status quo - Populations of Common Murre, Tufted, Puffin, Marbled Murrelet, Cassin's Auklet and Brandt's Cormorant are declining in the area, and all are Washington state species of concern. Many species were historically more abundant (OCNMS 2008). Nine species of marine birds found in the sanctuary are on either the federal or state species of concern lists across their range (WDFW 2008). Seabird colonies and feeding areas are protected by the Sanctuary, and federal and state regulations. Increased protection could include: larger marine and terrestrial protected areas, and increased investment in oil spill risk reduction.

INDICATOR	LOW	MEDIUM	HIGH	REF
Number of T&E species	status quo = continued increase in the number of T&E species.	marginal protection of seabird colonies and feeding areas = no increase in T&E species	significant increase in protection of seabird colonies and feeding areas = a decrease in the number of T&E species	OCNMS 2008
Biodiversity index				
Number of species				

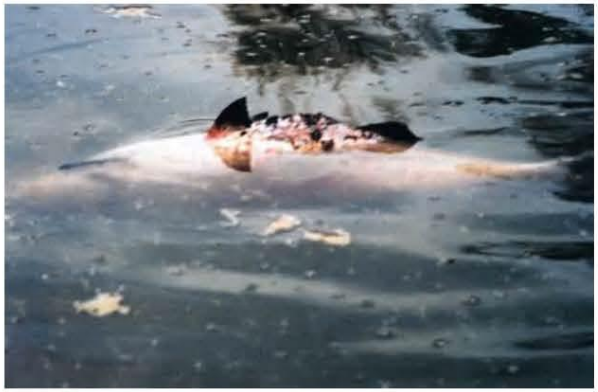
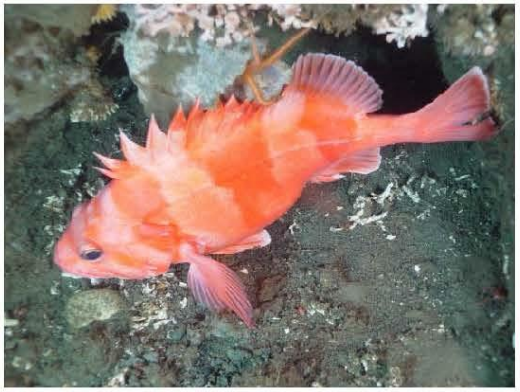
Number of different kinds of fish for viewing





INDICATOR	LOW	MEDIUM	HIGH	REF
Species diversity	Non functioning, catastrophic loss	Limited types of fish for viewing	Many kinds of species of fish for viewing	None
Species of concern	Many species listed as endangered, threatened or species of concern	Few species listed as E/T or species of concern	No fish species listed as E/T or species of concern	
Likelihood of rare species	Never seen	Occasionally seen	Commonly seen	None
Likelihood of human disturbance (overfishing, derelict fishing gear)	Degraded environment	Sparse disturbance	Rare to never	None
Likelihood of invasive species	Common and abundant, 10-100%	Sparse 1-10%	Rare to never 0%	None

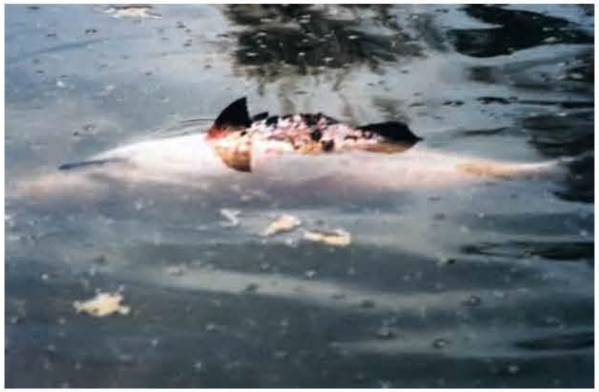
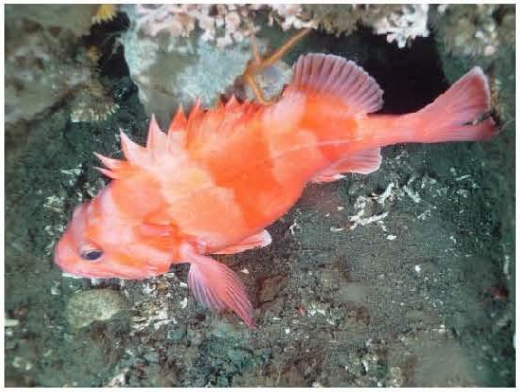
Number of different kinds of fish for viewing


"Sanctuary waters are inhabited by diverse and abundant fish and invertebrate populations. Commercially important fish and shellfish include at least 30 species of rockfish (including 13 state species of concern, of which three are also federal species of concern), plus Pacific halibut, herring, Pacific cod, Pacific whiting, lingcod, sablefish, 15 or more species of flatfish, Dungeness crab, razor clams, and several species of shrimp. Five species of Pacific salmon (chinook, sockeye, pink, chum and coho) occur along the outer coast of Washington and breed in the Olympic Peninsula's rivers and streams. Three similar salmonid species found in freshwater systems (sea-run cutthroat trout, bull trout, and steelhead) spend portions of their lives in nearshore marine waters. Nearshore habitats of the sanctuary are important for salmon that spawn in adjacent streams. The sanctuary also encompasses the migration corridor of both juvenile and adult salmonids from California, Oregon and British Columbia, and from other rivers in Washington. Sharks, albacore, sardines, mackerel, anchovies and other migratory species are also found in the sanctuary seasonally." (OCNMS Condition Report, 2008)

INDICATOR	LOW	MEDIUM	HIGH	REF
Number of species	Degradation of status quo – less species diversity and more species of concern	Status quo – current level of species diversity, some species of concern	Restoration of species of concern, high species diversity	

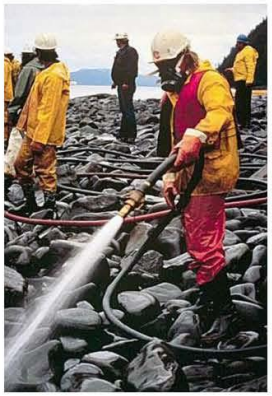
Number of different kinds of fish for viewing

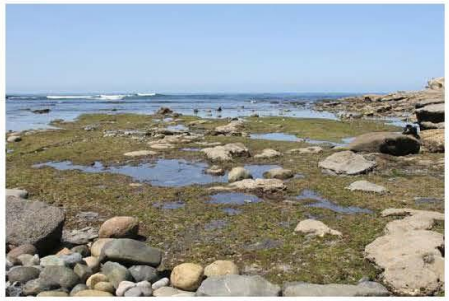




Status quo – In Washington State, 43 species of fish currently have the status of Federal Endangered, Federal Threatened, Federal Species of Concern, or State Species of Concern, including many species of rockfish, salmon and other Pacific groundfish (WDFW). Currently, gear restrictions and the designation of Essential Fish Habitat and Rockfish Conservation Areas reduce impacts on overfished fish species and fish habitat. Increased protection could include: larger marine protected areas, additional measures to decrease the amount of derelict fishing gear, and reducing fish stocks available to commercial and recreational fishermen.

INDICATOR	LOW	MEDIUM	HIGH	REF
Number of T&E species	status quo = continued increase in the number of T&E species.	marginal protection of fish and fish habitats = no increase in T&E species	significant increase in protection of fish and fish habitats = a decrease in the number of T&E species	OCNMS 2008

Diversity and Abundance of Tide Pool Organisms





INDICATOR	LOW	MEDIUM	HIGH	REF
Density of organisms	Non functioning, catastrophic loss	Impacted, but functioning state	Natural state	None
Biodiversity	25-40	40-60	60-75	Blanchette et al 2008
Likelihood of rare species	Never seen	Occasionally seen	Commonly seen	None
Accessibility to tide pools	Long distance >60 miles	15-60 miles	Short distance 0-15 miles	None
Likelihood of human disturbance	Degraded environment	Sparse disturbance	Rare to never	None
Likelihood of invasive species (Sargassum muticum)	Common and abundant, 10-100%	Sparse 1-10%	Rare to never 0%	None
Uniqueness	Common habitat	Unique in the California Current	Unique in the state	New York used similar classes for significant wildlife areas
Pisaster ochraceus (keystone predator)	Too few	Balanced state	Too many	None

Clear water (high visibility)



(g) Aquatic life turbidity criteria. Turbidity is measured in "nephelometric turbidity units" or "NTUs." Table 210 (1)(e) lists the one-day maximum turbidity allowed as a result of human actions for each of the aquatic life use categories.

- Extraordinary or Excellent quality, Turbidity must not exceed:
    - 5 NTUs over background when the background is 50 NTU or less; or
    - A 10 percent increase in turbidity when the background turbidity is more than 50 NTUs.
- Good or Fair quality, Turbidity must not exceed:
    - 10 NTUs over background when the background is 50 NTUs or less; or
    - A 20 percent increase in turbidity when the background turbidity is more than 50 NTUs.

Statutory Authority: Chapters 90.48 and 90.54 RCW. 03-14-129 (Order 02-14), § 173-201A-210, filed 7/1/03, effective 8/1/03.

NOTE: In-water visibility in the Pacific Northwest is known to be moderate to low by persons in the dive community. This is a normal state in this ecosystem. Visibility is highly dependent on location and weather. We recommend reconsideration of this attribute for inclusion if improving in-water visibility is not a management goal to accommodate divers, snorkelers and other resource users.

INDICATOR	LOW	MEDIUM	HIGH	Notes
Visibility in feet	Poor Visibility 0 to 5 ft	Good Visibility 6 to 25 ft	Excellent Visibility 26 or more ft	Typical or average ranges for diver visibility in the Pacific Northwest were acquired from descriptions of regional diving conditions from commercial dive shops, regional divers, municipal park officials, and NOAA. Information was accessed online. It is important to note that low visibility is common and a natural state for this ecosystem. Excess turbidity can be caused by algal and plankton bloom events. Degree of water clarity, ergo visibility, may be seasonal as well as locational.

Clean water (no to low pollutants) to support water-based activities

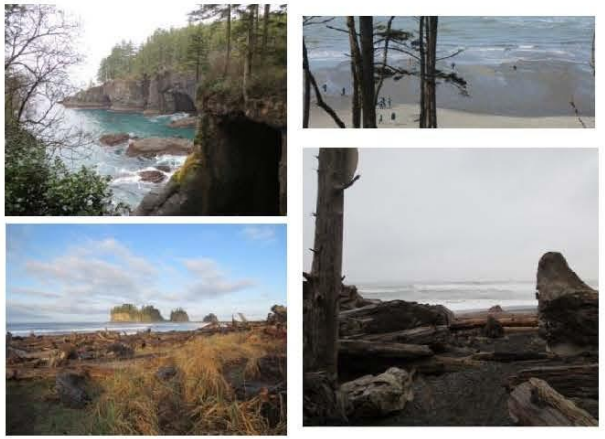
1. The department shall classify the beach as open when the following three conditions are met:
   a) The marine water covering a recreational shellfish beach shall not exceed a geometric mean value of fourteen fecal coliform bacteria/100 ml of water. In addition, not more than ten percent of the individual water samples may exceed forty-three fecal coliform bacteria/100 ml of water. The geometric mean value shall be calculated on no less than fifteen samples for each water quality station;
   b) Upon completion of a sanitary survey, there are no major sources of pollution of public health significance identified as affecting the beach; and
   c) Natural and synthetic toxin levels shall not exceed established standards. WAC 246-280-030

INDICATOR	LOW	MEDIUM	HIGH	Notes
Number of Beach Closures per Year	Many Closures 27-40	Moderate Number of Closures 14-26	Few Closures 0-13	From 2003 to 2010, the number of beach closures in WA ranged from 1 (in 2007) to 37 (in 2006). Source: Dept. of Ecology, State of Washington. Online at: http://www.ecy.wa.gov/programs/eap/beach/data.html
Number of Days Beaches Closed per Year	Many Days 216-323	Moderate Number of Days 108-215	Few Days 0-107	From 2003 to 2010, the number of beach closure days ranged from 2 (in 2003) to 322 (in 2006). Source: Dept. of Ecology, State of Washington. Online at: http://www.ecy.wa.gov/programs/eap/beach/data.html
Number of Beach Advisories per Year	Many Advisories 11-15	Moderate Number Advisories 6-10	Few Advisories 0-5	From 2003 to 2010, the number of beach advisories ranged from 1 (in 2006) to 15 (in 2010). Source: Dept. of Ecology, State of Washington. Online at: http://www.ecy.wa.gov/programs/eap/beach/data.html
Number of Days Beach Advisories in Place per Year	Many Days 83-124	Moderate Number of Days 41-82	Few Days 0-40	From 2003 to 2010, the number of days that beach advisories were in place ranged from 2 (in 2006) to 124 (in 2008). Source: Dept. of Ecology, State of Washington. Online at: http://www.ecy.wa.gov/programs/eap/beach/data.html
Number of Beach Advisories & Closures Per Year	Many Advisories & Closures 27-40	Moderate Number of Advisories & Days 14-26	Few Advisories & Closures 0-13	From 2003 to 2010, the number of beach advisories and closures in WA ranged from 2 (in 2011) to 38 (in 2006). Source: Dept. of Ecology, State of Washington. Online at: http://www.ecy.wa.gov/programs/eap/beach/data.html

Beach and Shoreline Quality

1. The chart below details a few indicators of the public beaches accessible on the outer coast of Washington. There are 58 total beaches on the outer coast of Washington. The indicators are as follows:
    a) Monitored beaches;
    b) Access fee associated with the beaches;
    c) Parking fee associated with the beaches ; and,

It is assumed that monitoring beach quality costs money and one way of paying for monitoring is to increase (or put in place) access or parking fees.

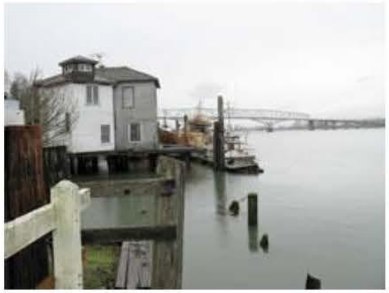


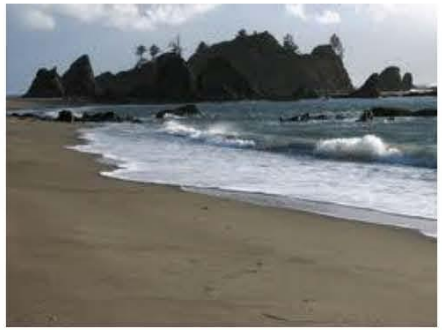
INDICATOR	LOW	MEDIUM	HIGH	Notes
Visible presence of marine debris and trash on shore	Large amounts of debris or trash visible on shore	Moderate amount of debris or trash visible on shore	No debris or trash visible on shore	Assessment of this attribute would likely be best using pictures or graphics showing differing amounts of trash and debris to ascertain degrees of tolerance for the presence of marine debris and trash on shore.
Number of beaches open for razor clam digging per year (1-partially)	0-15	16-30	31-58	Number of beaches on outer coast open for clamming. Digging for razor clams is a significant recreational activity on Washington beaches. Beaches are closed to clam digging when HAB events occur and clams may be contaminated. Source: Dept. of Ecology, State of Washington. Online at: https://fortress.wa.gov/doh/eh/maps/biotoxin/biotoxin.html
Monitored Beaches (6)	0-15	16-30	31-58	Number of beaches monitored from Memorial Day to Labor Day on the outer coast of Washington; currently there are 6 monitored. Source: Dept. of Ecology, State of Washington. Online at: https://fortress.wa.gov/ecy/coastalatlas/tools/BeachClosure.aspx
Access fees (11)	0-15	16-30	31-58	Number of beaches currently charging an access fee. Source: Dept. of Ecology, State of Washington. Online at: https://fortress.wa.gov/ecy/coastalatlas/tools/PublicAccessDownload.aspx
Parking fees (1)	0-15	16-30	31-58	Number of beaches currently charging a parking fee. Source: Dept. of Ecology, State of Washington. Online at: https://fortress.wa.gov/ecy/coastalatlas/tools/BeachClosure.aspx

NOTE: Red number indicates current number/level

Unobstructed Natural Viewscapes

Much of the mainland adjacent to the sanctuary consists of sparsely populated areas under federal or tribal management, as well as sizeable tracts of privately-owned timberlands.





INDICATOR	LOW	MEDIUM	HIGH	REF
Obstructed by coastal development (residences and roads)	Med -High intensity of coastal development, obstructed views and limited access to shore	Limited to low intensity coastal development, somewhat obstructed views and limited access to shore	Low impact or no coastal development, access to shore	County parcel information (Jefferson, Clallam, Grays Harbor)
Obstructed by offshore development (renewable energy infrastructure)	Views obstructed by offshore infrastructure such as wind and/or wave energy	Views partially obstructed by offshore infrastructure such as wind and/or wave energy	Views unobstructed by offshore development	
Potential for future development	Land or water areas zoned for medium to high intensity levels of future development	Land or water areas zoned for low levels of future development	Land or water areas zoned for open space or undeveloped	County zoning shapefiles (Jefferson, Clallam, Grays Harbor)
Presence of desirable scenic resources (geological features, habitats, wildlife populations, etc.)	Absence of desirable scenic resources	Presence of some desirable scenic resources	High amounts of desirable scenic resources	Flickr photo analysis/ InVEST
Accessibility to areas with viewscapes (shoreline, hills, etc.)	Limited/ no access	Some access	Easily accessible	

Number of Other Users (Crowding)

Because visitor determination or perception of crowding is a cognitive process based on internal (e.g., motivation, preference, expectation, etc.) and external factors (e.g., number and type of people, state of environment, etc.) we suggest exploring with focus group participants the factors most relevant to them. Note: A sense of crowding that results in some normative response can be highly contextual and dependent on the situation. Assessments of perceived "crowding" levels are often gathered by showing photographs or graphics depicting different levels of visitor density to respondents. Graphics could be used during the focus group to determine levels of tolerance for crowding in Washington's coastal areas.

INDICATOR	LOW	MEDIUM	HIGH	Notes
Ease of access to facilities	Very difficult to access	Accessible	Very easy to access	Perceived crowding can be related to the number of people accessing or using park facilities at a given time, which can be a factor of the number of visitors or number of facilities, or both (Manning 1999). Could be measured by learning tolerance for wait times needed to access facilities (e.g., restrooms, checkout registers, etc.).
Number of people encountered during a visit to the beach	Crowded 21 or more	Moderately Crowded 11-20	Not Crowded 0-10	Motivation, preferences, expectations and experiences influence how visitors perceive crowding in parks and other natural settings (Manning 1999) . It can also depend upon the similarity of persons/groups encountered during visits (Manning 1999). These encounter estimates are based on the average number of visitors encountered per survey for select beaches in the Olympic National Park, which ranged from 0 to 40 from 2001 to 2005 (Klinger et al 2008).
Density/number of users per defined area	UKN	UKN	UKN	Perceptions of crowded conditions have been correlated with visitor density (Polette and Raucci 2003, De Ruyck et al. 1997). What constitutes a "crowded" condition is generally extrapolated from data gathered using visitor surveys. Density tolerance is estimated by learning the (un)acceptable levels of proximity to other users in meters squared or some other measure of proximity, such as feet or meters distant. Context/situational dependent.

B. Focus Group Materials

Focus Group Tasks

FOCUS GROUP TASKS

OUTER COAST OF WA/OLYMPIC COAST NATIONAL MARINE SANCTUARY

NON-CONSUMPTIVE RECREATION

TASK1: What attributes are important to people that participate in non-consumptive recreation on the Outer Coast of Washington and in the Olympic Coast National Marine Sanctuary?

- Handout Activities list that defines what we mean by non-consumptive recreation.
- Handout map showing Outer coast of WA and Olympic Coast National Marine Sanctuary
- Handout Attributes and Activities Matrix.

1. Ask group to fill out Attributes and Activities Matrix by placing a check mark for each attribute that is important to them for each activity.
2. Discuss any attributes on the lists that are not important to them for any of the activities.
3. Discuss any attributes Not on the list that are important and should be added.

TASK2: Identify different levels of attribute conditions that would affect their non-consumptive recreational use and economic value of those uses.

- Handout Attributes and Attributes Conditions Matrix.

1. What do they consider a *Low*, *Medium* and *High* condition for each attribute?
2. For attributes where scientists have specified what they think are *Low*, *Medium* and *High* conditions, do focus group members agree with the scientists?

TASK3: Identify levels of attribute conditions that would affect their economic values.

- Handout Attribute Conditions Willingness to Pay sheet.

1. Have group check columns indicating if their values would change if the attributes would change from *Low* to *Medium* and *Medium* to *High*.
2. For those attributes moving from *Low* to *Medium* conditions that would NOT change their values, discuss what level conditions would have to reach to change their values.
3. For those attributes moving from *Medium* to *High* conditions that would NOT change their values, discuss what level conditions would have to reach to change their values.

TASK4: Dollar Bid Amounts for Willingness to Pay for different attribute conditions.

- Handout with description of payment vehicle (i.e. how recreation users will pay for protection and restoration of attributes).

1. Discuss and answer any questions.

- Explain that for this next task that it is not natural to reveal one's maximum willingness to pay for any good or service.

Sellers are trying to find out a buyer's maximum willingness to pay, while buyers are trying to find out what is the lowest price the seller is willing to sell them the good or service. When buying a car, the seller might say the buyer needs leather seats and a five CD Player and this will cost a certain amount. The buyer might respond they don't need those things (attributes) and would want to know the cost of the car without them.

So we know it is not natural for you to tell us what your maximum willingness to pay is, but we need your help in designing the survey and we need you to share with us your maximum willingness to pay. We never will ask Maximum willingness to pay in a survey. We give people different dollar prices and simply ask whether they would pay it or not. But we need to know the range of dollar amounts we should use.

- Handout sheet with Willingness to Pay Questions.

1. Determine the Maximum amount they would be willing to pay per year to move from *Low* to *Medium* conditions for all attributes.

   If all attribute conditions could be maintained or increased from the *Low* condition to the *Medium* condition.

   What would be the maximum your household would be willing to pay per year and still maintain your current level of use on the Outer Coast of Washington? $_____.

2. Determine the Maximum amount they would be willing to pay per year to move from *Medium* to *High* conditions for all attributes.

   If all attribute conditions could be maintained or increased from the *Medium* condition to the *High* condition.

   What would be the maximum your household would be willing to pay per year and still maintain your current level of use on the Outer Coast of Washington? $ _____.

3. Discuss any problems with the willingness to pay (e.g. already think they pay too much, don't trust the government, etc.).

TASK5: Background questions about themselves.

Recreation Activities

- Refer them to questions on the Willingness to Pay sheet about their recreation activities.

1. During the past 12 months, how many days have you done non-consumptive recreation on the Outer Coast of Washington? _____ (Number of days)

- Refer to the Activities List.

2. Have them circle the letters for each activity they do on the Outer Coast of Washington.

End of tasks.

Focus Group Screener

Washington Outer Coast Focus Groups, July 2014
SCREENER
RECRUIT 11 for 8-11 to show

OVERVIEW

	Kirkland	Ocean Shores
Number of groups	1	1
Markets and Dates	Kirkland, 8/6/14	Ocean Shores 8/7/14
Location/Facility	Fieldworks Carillon Point	*Shilo Inn (tent.)*
Disclose client	Yes:	Not for recruiting
Incentives	$100 cash	$100 cash
Recruiting sources	Recruiter sources	Recruiter sources
Gender	Mix	Mix
Age	Mix	Mix
Home situation (not required, but expected)	Reside in Seattle Area	Reside at the Coast
HH income	Mix of Incomes	Mix of Incomes
HH composition	Mix of single, couple, with children	Mix of single, couple, with children
Education	Mix if possible	Mix if possible
Ethnicity	Mix if possible include Latino and Asian American	Mix if possible include Latino and Asian American
Past Non-consumptive recreation at the Coast	At least 1 day past 12 months. Mix of more days/trips if possible	At least 1 day past 12 months. Mix of more days/trips if possible
Future Non-consumptive recreation at the Coast	Record	Record
Clamming	Record	Record

Screener template, © 2007-2014, 5 Circles Research

RECREATIONAL ACTIVITIES AT THE COAST

S1: How many days did you visit the Outer Coast of Washington for recreation in the past 12 months? How many trips did you make? **[IF NECESSARY – From Neah Bay at the North end of the Olympic Coast to the Columbia at the South. Map available for reference]**

____ **[Record Number of Days] [THANK, TERMINATE & TALLY ACCORDING TO OVERVIEW]**
____ **[Record Number of Trips] [THANK, TERMINATE & TALLY ACCORDING TO OVERVIEW]**

S2: Which recreational activities did you participate in during your last visit to the Outer Coast of Washington? **[use list for reference, Recruit mix of different type, people participating in multiple groups, at least 2 for each group with 3 types, at least 4 for each group with 2 types, no more than 2 in each group with only 1 type]**

Activity	Type 1 Beach and beyond	Type 2 Collecting and viewing marine related	Type 3 Active ocean
Beach going (sitting, walking, jogging/running, dog walking, kite flying, etc.)	☐		
Beach driving	☐		
Hiking or Biking	☐		
Horseback riding	☐		
Camping	☐		
Photography	☐		
Sightseeing/Scenic enjoyment	☐		
Sitting in your car watching the scene	☐		
Collection of non-living resources (agates, driftwood, beach glass, etc.)		☐	
Watching birds, whales, seals and/or other marine life from shore		☐	
Watching birds, whales, seals and/or other marine life from private boat **[Your boat/friend/rental_____]**		☐	
Watching birds, whales, seals and/or other marine life from charter boat/guide service		☐	
Tide pooling		☐	
Collecting/picking/harvesting sea life from shore (clamming, seaweed, mussels, etc.) **[Which ? _____. Include 1 or 2 clamming if possible]**		☐	
Hang gliding / parasailing			☐
Skim boarding			☐
Surfing (from board or kayak)			☐
Swimming or body surfing			☐
Windsurfing/Kite boarding			☐
Personal watercraft (jet skis, wave runner)			☐
Snorkeling/free diving from shore			☐
Snorkeling/free diving from private boat **[Your boat/friend/rental_____]**			☐
Snorkeling/free diving from charter boat/guide service			☐
Kayaking or other paddling activity (canoe, stand up paddle board, Tribal canoe journey)			☐
Boating/sailing **[Your boat/friend/rental_____]**			☐
SCUBA diving from shore			☐
SCUBA diving from private boat **[Your boat/friend/rental_____]**			☐
SCUBA diving from charter boat/guide service			☐
Fishing **[RECORD separately. Not counted]**			
Other not in list [RECORD_____]			

S3: Where did you go during your last trip to the Outer Coast of Washington? **[Probe for name of beach, nearest town, etc.]**

_____ **[Record Locations] [QUALITY CONTROL – RECHECK DURING CALL BACK]**

S4: About how many times have you visited the Outer Coast of Washington for recreation during the **last** 12 months? How many times you think you might visit the Outer Coast of Washington for recreation during the **next** 12 months

Last 12 months ____ **[Record Number of Times] [THANK, TERMINATE & TALLY ACCORDING TO OVERVIEW]**
Next 12 months ____ **[Record Number of Times] [THANK, TERMINATE & TALLY ACCORDING TO OVERVIEW]**

S5: Tell me what you like about recreation on the Outer Coast of Washington and why you like to visit? **[Probe for if they really like to visit, and what they don't like/what could be improved]**

_____
_____

RESPONDENT ARTICULATE?

1. Yes
2. No **[THANK, TERMINATE & TALLY]**

NOTE: UPDATE / VERIFY LISTS

S6: Are you or any member of your household now employed in any of the following industries?

1. Advertising or public relations firms **[THANK, TERMINATE & TALLY]**
2. Marketing research companies **[THANK, TERMINATE & TALLY]**
3. Hotel **[FOR COAST - THANK, TERMINATE & TALLY]**
4. Restaurant **[FOR COAST - THANK, TERMINATE & TALLY]**
5. Company involved in recreational activities?
   PROBE: What specifically is the company involved in?
   [Do Not Read Unless Required for Probe]
   - Equipment rental (surfboard, paddleboard, etc.)
   - Tours (whale watching, cycling, etc.)
   - Others
   - **[RECORD THANK, TERMINATE & TALLY]**

SCREENING DEMOGRAPHICS

S7: Are you?

1. Male
   Female

S8: Which of the following categories includes your age? **[MIX ACCORDING TO OVERVIEW]**

1. Under age 18 **[THANK, TERMINATE & TALLY]**
2. 18 to 24
3. 25 to 34
4. 35 to 44
5. 45 to 54
6. 55 to 64
7. 65 or older

S9: Which of the following best describes your household? **[MIX ACCORDING TO OVERVIEW]**

1. Adult couple, no children at home
2. Adult couple, with children at home
3. Single parent, with children
4. Single adult, with roommate[s]
5. Single adult, living with parents
6. One-person household

97. Other (please specify) **[OTHER]**
98. Prefer not to answer **[THANK, TERMINATE & TALLY]**

S10: which of the following categories best describes your annual household income before taxes for 2012? **[MIX ACCORDING TO OVERVIEW]**

1. Under $25,000
2. $25,000 but less than $35,000
3. $35,000 but less than $45,000
4. $45,000 but less than $50,000
5. $50,000 but less than $75,000
6. $75,000 but less than $100,000
7. $100,000 but less than $150,000
8. $150,000 or more
9. Prefer not to answer **[THANK, TERMINATE & TALLY]**

S11: What is the highest level of education you have completed? **[MIX ACCORDING TO OVERVIEW]**

1. Some high school
2. High school graduate
3. Some college, no degree
4. 2 year college degree
5. College graduate
6. Postgraduate work/degree

98. Prefer not to answer **[THANK, TERMINATE & TALLY]**

S12: Which ethnic group(s) you would include yourself in? (You can select more than one.) **[MIX ACCORDING TO OVERVIEW]**

1. White / Caucasian
2. African-American, Black
3. Asian-American
4. Hispanic (Mexican, Mexican-American, Chicano, or Latino)
5. American Indian / Alaska Native, / Pacific-Islander
6. Another race? (please specify) _____ **[OTHER]**

98. Prefer not to answer

INVITATION AND RECRUITING PROTOCOL HERE.

Waiting Room Exercise

Pre-Group Questionnaire. Please fill out this form while you are waiting. Bring the form with you into the group.

1. First Name: _____
2. Group Location _____
3. **During the past 12 months**, how many DAYS have you done the non-consumptive activities listed below on the Outer Coast of Washington (from Cape Flattery in the North to the mouth of the Columbia in the South). _____
4. Please fill out the boxes for each activity you have done

Non-Consumptive Activity	**HAVE DONE EVER**	One of **FIVE top favorites.** Use a number (1=top) or just check	**HAVEN'T DONE**, but interested
Beach going (sitting, walking, jogging/running, dog walking, kite flying, etc.)	☐		☐
Beach driving	☐		☐
Hiking or Biking	☐		☐
Camping	☐		☐
Photography	☐		☐
Sightseeing/Scenic enjoyment	☐		☐
Sitting in your car watching the scene	☐		☐
Collection of non-living resources (agates, driftwood, beach glass, etc.)	☐		☐
Watching birds, whales, seals and/or other marine life from **shore**	☐		☐
Watching birds, whales, seals and/or other marine life from **private boat**	☐		☐
Watching birds, whales, seals and/or other marine life from **charter boat/guide service**	☐		☐
Horseback riding	☐		☐
Tide pooling	☐		☐
Hang gliding / parasailing	☐		☐
Skim boarding	☐		☐
Surfing (from board or kayak)	☐		☐
Swimming or body surfing	☐		☐
Windsurfing/Kite boarding	☐		☐
Personal watercraft (jet skis, wave runner)	☐		☐
Snorkeling/free diving from **shore**	☐		☐
Snorkeling/free diving from **private boat**	☐		☐
Snorkeling/free diving from **charter boat/guide service**	☐		☐
Kayaking or other paddling activity (canoe, stand up paddle board, Tribal canoe journey)	☐		☐
Boating/sailing	☐		☐
SCUBA diving from **shore**	☐		☐
SCUBA diving from **private boat**	☐		☐
SCUBA diving from **charter boat/guide service**	☐		☐

5. Please estimate the total amount you spent for all the trips to the Outer Coast of Washington over the past 12 months. Include gas, lodging, food, rentals, entrance fees – everything. _____
6. Did you buy a Discover Pass during the last 12 months? Annual ☐ Daily ☐

Thank you – that's all we have. Enjoy your focus group!

Activities List

ACTIVITIES LIST

Please circle letters for each activity you have done on the Outer Coast of Washington

a) Beach going (sitting, walking, jogging/running, dog walking, kite flying, etc.)
b) Beach driving
c) Hiking or Biking
d) Camping
e) Photography
f) Sightseeing/Scenic enjoyment
g) Sitting in your car watching the scene
h) Collection of non-living resources (agates, driftwood, beach glass, etc)
i) Watching birds, whales, seals and/or other marine life from shore
j) Watching birds, whales, seals and/or other marine life from private boat
k) Watching birds, whales, seals and/or other marine life from charter boat/guide service
l) Horseback riding
m) Tide pooling
n) Hang gliding / parasailing
o) Skim boarding
p) Surfing (from board or kayak)
q) Swimming or body surfing
r) Windsurfing/Kite boarding
s) Personal watercraft (jet skis, wave runner)
t) Snorkeling/free diving from shore
u) Snorkeling/free diving from private boat
v) Snorkeling/free diving from charter boat/guide service
w) Kayaking or other paddling activity (canoe, stand up paddle board, Tribal canoe journey)
x) Boating/sailing
y) SCUBA diving from shore
z) SCUBA diving from private boat
aa) SCUBA diving from charter boat/guide service

Demographics Card

DEMOGRAPHICS CARD

What is your age?

a. 16 – 24
b. 25 – 34
c. 35 – 44
d. 45 - 54
e. 55 - 64
f. 65 or older

What race do you consider yourself?

Select as many as apply

a. White
b. Black or African American
c. American Indian or Alaskan Native
d. Asian
e. Native Hawaiian or Other Pacific Islander

What is the highest level of education that you have completed?

Select one answer only

a. 8th grade or less
b. 9th to 11th grade
c. 12th grade. High School Graduate or equivalent (GED)
d. 13 to 15 years (some college or vocational training)
e. College Graduate
f. Graduate School, Law School, Medical School

What is your employment status?

Select all that apply

a. Unemployed
b. Employed full-time
c. Employed Part-time
d. Retired
e. Student
f. Homemaker
g. None of the above (specify)
_____

What is vour household income before taxes?

Select one answer only

a. Under $5,000
b. $5,000 to $9,999
c. $10,000 to $14,999
d. $15,000 to $19,999
e. $20,000 to $24,999
f. $25,000 to $29,999
g. $30,000 to $39,999
h. $40,000 to $49,999
i. $50,000 to $59,999
j. $60,000 to $74,999
k. $75,000 to $99,999
L. $100,000 to $149,999
m. $150,000 +

Activities/Attributes Worksheet

Your Name: _____

Focus Group Location: _____

INSTRUCTIONS: PART 1: PLACE AN "I" IN THE CORRESPONDING BOX IF THE ATTRIBUTE IS IMPORTANT TO THE ACTIVITY. Start with your favorite activities, and if time add other activities that you have done.

ATTRIBUTE		ACTIVITY									
		Scuba diving	Kayaking / Canoeing	Beach activities / Coastal Hiking / Camping / Horseback riding / Sitting in car watching the scene/ Beach driving	Swimming / Body Surfing	Sailing / Motor Boating	Tide Pooling	Photography / Nature Study	Sightseeing / Scenic enjoyment	Watching birds, marine mammals or other wildlife	Collecting non-living resources such as driftwood or beach glass
Marine Mammals	Number of different kinds (diversity)										
	Abundance										
Seabirds	Number of different kinds (diversity)										
	Abundance										
Opportunity to see large predators such as killer whales, sharks, etc.											
Fish (viewing while SCUBA diving or snorkeling)	Number of different kinds (diversity)										
	Abundance										
Tide pool organisms	Number of different kinds (diversity)										
	Abundance										
Water	Clear water (high visibility)										
	Clean water (no to low pollutants) to support water-based activities										
Beach and shoreline quality (absence of debris/garbage or harmful algal blooms)											
Views not obstructed by onshore or offshore development											
Uncrowded by other recreational users											
Availability of driftwood for collection											
Kelp Beds											
Other attributes not in the list above (write in): 1 _____											
Other attributes not in the list above (write in): 2 _____											
Other attributes not in the list above (write in): 3 _____											

Willingness to Pay Information Card

WILLINGNESS TO PAY CARD

- **If <u>current management practices</u> continue in the future (<u>Status Quo</u>), in 10 to 20 years scientists expect that the conditions of natural resources will be in a poor or <u>Low condition</u>.**

- **If <u>management is changed</u> to improve conditions, it will require both public and private investments to protect and restore the natural resources, which would include enforcement of rules and regulations.**

- **There is an estimated cost to your household per year that would be required to achieve each condition.**

- **The <u>cost per year</u> is based on the costs that will be paid by businesses and households to pay for investments that protect and restore the natural resources like improved sewage treatment, filtering and cleaning urban run-off, erosion control from agricultural areas and development projects, installation of mooring buoys to protect bottom habitats from anchor damage, habitat restoration activities, and enforcement of rules and regulations.**

- **The <u>costs per year</u> would be paid by all residents and visitors to the Outer Coast of Washington through increased prices of goods and services. This might also include increases in local sales taxes to cover government costs to pay for protection and restoration.**

1. If all conditions could be maintained or increased from the Low to Medium condition.

   What would be the <u>maximum</u> your household would be willing to pay <u>per year</u> and still maintain your current level of reef use? $_____

2. If all conditions could be maintained or increased from the Low condition to the High condition,

   What would be the maximum your household would be willing to pay <u>per year</u> and still maintain your current level of reef use? $ _____.

----------flip over to other side----------

3. If willingness to pay is zero, please list reasons.

_____

_____

_____

_____

_____

Activity Level

1. During the past 12 months, how many days have you done non-consumptive recreation on the Outer Coast of Washington?
   _____ (number of days)

Your Name: _____

Focus Group Location: _____

PART 1: Write in each of the boxes what you think are the LOW, MEDIUM and HIGH levels. Start with the IMPORTANT attributes for your favorite activities, and if time add others that you can think of

		CONDITION		
ATTRIBUTE		**Low**	**Medium**	**High**
Marine Mammals	Number of different kinds (diversity)	Currently 29 species;8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen.	No increase in threated and endangered species or loss of species. Rare species occasionally seen.	A decrease in number of threatened and endangered and all 11 species removed from species of concern. Rare species commonly seen.
	Abundance	Significant loss in abundance due to overfishing of important food sources and derelict fishing gear.	Impacts of overfishing and derelict gear reduced with moderate improvement in abundance.	Impacts of overfishing and derelict fishing gear rare to never so significant increase in abundance.
Seabirds	Number of different kinds (diversity)	Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species.	No increase in threated and endangered species or loss of species. Rare species occasionally seen.	A decrease in the number of threatened and endangered species an no species on list of concern. Rare species commonly seen.
	Abundance	Human disturbance of nesting sites reduce abundance and increase the number of threatened and endangered species with loss of some species.	Human disturbance of nesting sites reduced with moderate increases in abundance.	Human disturbance of nesting sites is rare to never with significant increase in abundance.
Opportunity to see large predators such as killer whales, sharks, etc.		Never seen	Occasionally seen	Commonly seen.
Fish (viewing while SCUBA diving or snorkeling)	Number of different kinds (diversity)	Currently 30 species of rockfish, 15 or more species of flatfish and five species of salmon and several other species of finfish. Also Dungeness crabs, razor clams and several species of shrimp. 16 species of rockfish are on the list of concern. 43 species endangered, threatened or of concern. Expect reduction in number of species, and increase in number of species and number on list of concerned. Rare species never seen. Invasive species common.	Maintain current number of species and reduce number of species of concern. Rare species occasionally seen. Invasive species occasionally seen.	Maintain current number of species and no species on list of concerned. Rare species commonly seen. Invasive species rarely to never seen.
	Abundance	Overfishing, derelict fishing gear, habitat destruction, water quality and invasive species significantly reduce abundance.	Negative factors moderately reduced with moderate increases in abundance. Invasive species moderate abundance.	Negative factors reduced to rare or never with significant increases in abundance. Invasive species extremely low abundance.
Tide pool organisms	Number of different kinds (diversity)	10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common. Distance from access point greater than 2 miles.	20 to 40 species with no expected loss of species. Rare species are occasionally seen. Invasive species are occasionally seen. Distance from access point is 0.25 to 2 miles.	Greater than 40 species. Rare species are commonly seen. Invasive species are rarely or never seen. Distance form access point is 0.25 miles or less..
	Abundance	Due to many human disturbances like oil and chemical spills and harvesting abundance is significantly reduced. Invasive species are abundant.	Human disturbance is reduced with moderate increases in abundance. Invasive species are in low abundance.	Human disturbances are significantly reduced to being very rare with significant increases in abundance. Invasive species are in very low a abundance to zero abundance.

Water	Clear water (high visibility)	0 to 5 feet	6 to 25 feet	26 or more feet
	Clean water (no to low pollutants) to support water-based activities	27 to 40 beach closers for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	14 to 26 beach closers for a total of108 to 215 days of closure. 6 to 10 beach advisories with 41 to 82 beach days with advisories. Conditions mostly meet health standards.	0 to 13 beach closers for a total of 0 to 107 days of closure. 0 to 5 beach advisories with 0 to 40 beach days with advisories. All conditions meet health standards.
Beach and shoreline quality (absence of debris/garbage or harmful algal blooms)		Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline. Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	Moderate amounts of debris or trash visible on the shore 1.6 lbs. per 100 feet of shoreline. A few harmful algal blooms causing respiratory distress to beach and shoreline users. 16 to 30 beaches open for razor clam digging per year.	Minimal debris or trash visible on the shore 0.5lbs. per 100 feet of shoreline. No harmful algal blooms causing respiratory distress to beach and shoreline users. 31 to 58 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development		Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	Limited to low intensity development with views partially obstructed by a few offshore structures. Some access to beaches and shoreline.	Low impact of development with no offshore structures and easy access to beaches and shores.
Uncrowded by other recreational users		21 or more people encountered during a beach visit.	11 to 20 people encountered on a beach visit.	0 to 10 people encountered on a beach visit.
Availability of driftwood for collection		Very limited availability and taking of driftwood prohibited.	Moderate availability of driftwood with some areas closed for taking of driftwood.	High abundance of driftwood and no limitations on taking of driftwood.
Abundance of shellfish to harvest for consumption		Low abundance of shellfish due to health effects of consumption. 0 to 15 beaches open for razor clams.	Moderate abundance due to moderate number of closures due to health effects of consumption. 16 to 30 beaches open for razor clams.	Very abundant with few closures due to health effects of consumption. 31 to 58 beaches open for razor clams
Kelp Beds		Low abundance	Moderate abundance	High abundance
Other attributes not in the list above (write in): 1 _____				
Other attributes not in the list above (write in): 2 _____				
Other attributes not in the list above (write in): 3 _____				

Natural Resource Conditions – Level Handouts

		CONDITION					
ATTRIBUTE		Low	Low EVAL	Medium	Med EVAL	High	High EVAL
Water	Clear water (high visibility)	0 to 5 feet	U C	6 to 25 feet	U C	26 or more feet	U C
	Clean water (no to low pollutants) to support water-based activities	27 to 40 beach closers for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	U C	14 to 26 beach closers for a total of108 to 215 days of closure. 6 to 10 beach advisories with 41 to 82 beach days with advisories. Conditions mostly meet health standards.	U C	0 to 13 beach closers for a total of 0 to 107 days of closure. 0 to 5 beach advisories with 0 to 40 beach days with advisories. All conditions meet health standards.	U C
Beach and shoreline quality (absence of debris/garbage or harmful algal blooms)		Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline. Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	U C	Moderate amounts of debris or trash visible on the shore 1.6 lbs. per 100 feet of shoreline. A few harmful algal blooms causing respiratory distress to beach and shoreline users. 16 to 30 beaches open for razor clam digging per year.	U C	Minimal debris or trash visible on the shore 0.5lbs. per 100 feet of shoreline. No harmful algal blooms causing respiratory distress to beach and shoreline users. 31 to 58 beaches open for razor clam digging per year.	U C
Views not obstructed by onshore or offshore development		Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	U C	Limited to low intensity development with views partially obstructed by a few offshore structures. Some access to beaches and shoreline.		Low impact of development with no offshore structures and easy access to beaches and shores.	U C
Uncrowded by other recreational users		21 or more people encountered during a beach visit.	U C	11 to 20 people encountered on a beach visit.	U C	0 to 10 people encountered on a beach visit.	U C
Availability of driftwood for collection		Very limited availability and taking of driftwood prohibited.	U C	Moderate availability of driftwood with some areas closed for taking of driftwood.	U C	High abundance of driftwood and no limitations on taking of driftwood.	U C
Abundance of shellfish to harvest for consumption		Low abundance of shellfish due to health effects of consumption. 0 to 15 beaches open for razor clams.	U C	Moderate abundance due to moderate number of closures due to health effects of consumption. 16 to 30 beaches open for razor clams.	U C	Very abundant with few closures due to health effects of consumption. 31 to 58 beaches open for razor clams	U C
Kelp Beds		Low abundance	U C	Moderate abundance	U C	High abundance	U C
Other attributes not in the list above (write in): 1 _____			U C				U C
Other attributes not in the list above (write in): 2 _____			U C		U C		U C
Other attributes not in the list above (write in): 3 _____			U C		U C		U C

Willingness to Pay – Activity Days Questions

Willingness to Pay

1. If all attribute conditions could be maintained or increased from the *Low* condition to the *Medium* condition.

   What would be the maximum your household would be willing to pay per year and still maintain your current level of use on the Outer Coast of Washington? $ _____.

2. If all attribute conditions could be maintained or increased from the *Medium* condition to the *High* condition.

   What would be the maximum your household would be willing to pay per year and still maintain your current level of use on the Outer Coast of Washington? $ _____.

3. If willingness to pay is zero, please list reasons.

   _____

   _____

   _____

   _____

   _____

Activity Level

1. During the past 12 months, how many days have you done non-consumptive recreation on the Outer Coast of Washington?
   _____ (number of days)

C. Questionnaire

MANAGEMENT OPTIONS FOR THE OUTER COAST OF WASHINGTON -- WHAT IS YOUR OPINION?

Sometimes the Government considers starting a new program or expanding existing programs. The Government does not want to start a new program or expand existing programs unless people are willing to pay for it. One way for the Government to find out about this is to give people like you information about a program in a survey like this, so you can make up your own mind about it.

Some people think the program they are asked about is not needed; others think it is. We want to get the opinions of all kinds of people.

The particular program addressed in this survey involves the natural resources, facilities and services that people use when doing non-consumptive types of recreation on the State of Washington's Outer Coast. The federal, state and local governments are considering options to increase the protection and restoration of the natural resources and improve the facilities and services on the Outer Coast of Washington, but it is not sure if it should do more, because this will require more government spending paid for all residents and visitors.

We will provide you with information to help you answer the questions. Through this survey, government officials will consider your opinions, along with information from scientists and planners, when deciding what more, if anything, to do.

WARMUP QUESTIONS

Below is a list of animals that can be found on or along Washington's Outer Coast. Please tell us how much you like or dislike each of the animals listed below:

	Strongly Like	Like	Slightly Like	Neither Like nor Dislike	Slightly Dislike	Dislike	Strongly Dislike	I don't know of this animal
Q1 Puffins								
Q2 Ducks								
Q3 Seals/Sea lions								
Q4 Hawks								
Q5 Dolphins/Porpoises								
Q6 Plovers								
Q7 Sea urchins								
Q8 Whales								
Q9 Starfish/Seastars								
Q10 Sandpipers								

Q11 Sharks								
Q12 Sea gulls								
Q13 Corals								
Q14 Terns								
Q15 Killer whales/ Orcas								
Q16 Eagles								
Q17 Sea otters								
Q18 Sea anemones								

Please indicate to what extent you agree with the following statements:

	Strongly Agree	Agree	Slightly Agree	Neither Agree nor Disagree	Slightly Disagree	Disagree	Strongly Disagree
Q19 When I go to the outer coast I never want to see animals that I don't like.							
Q20 When I go to the outer coast I always want to see animals that I like.							
Q21 We are approaching the limit of the number of people the Earth can support.							
Q22 Humans have the right to modify the natural environment to suit their needs.							
Q23 When humans interfere with nature it often produces disastrous consequences.							
Q24 Human ingenuity will insure that we do not make the Earth unlivable.							

Q25 Humans are seriously abusing the environment.							
Q26 The Earth has plenty of natural resources if we just learn how to develop them.							
Q27 Plants and animals have as much right as humans to exist.							
Q28 The balance of nature is strong enough to cope with the impacts of modern industrial nations.							
Q29 Despite our special abilities, humans are still subject to the laws of nature.							
Q30 The so-called "ecological crisis" facing humankind has been greatly exaggerated.							
Q31 The Earth is like a spaceship with very limited room and resources.							
Q32 Humans were meant to rule over the rest of nature.							
Q33 The balance of nature is very delicate and easily upset.							
Q34 Humans will eventually learn enough about how nature works to be able to control it.							
Q35 If things continue on their present course, we will soon experience a major ecological catastrophe.							
Q36 I would be willing to pay much higher taxes in order to protect the environment.							
Q37 I would be willing to accept cuts in my standard of living to protect the environment.							
Q38 I would be willing to pay much higher prices in order to protect the environment.							

Please look at the following pictures that depict different levels of visitor use at a beach on the outer coast and answer the questions below.

	Picture 1	Picture 2	Picture 3	Picture 4	Picture 5
Q39 Which picture most closely represents the number of visitors you would expect to see during a trip to your favorite beach on the outer coast?					
Q40 Which picture best indicates your preferred number of fellow visitors when visiting your favorite beach on the outer coast?					
Q41 Which picture contains the maximum number of visitors that you would personally feel to be acceptable at your favorite beach during a visit to the outer coast?					
Q42 Which visitor density would be a reason for you to decide not to return to a favorite beach on the outer coast?					

IMPORTANCE-SATISFACTION

In this section, we are interested in identifying the recreation site information which is important to you, while visiting Washington's Outer Coast for your non-consumptive recreation activities.

IMPORTANCE

Please read each statement and rate the importance of each item as it contributes to an ideal recreation/tourism setting for the non-consumptive recreation activities you did on Washington's Outer Coast. If an item does not apply, indicate by selection n/a (not applicable). Likewise, if you don't know, select (dk).

n/a Not Applicable, dk Don't Know, 1=Not Important, 2=Somewhat Important, 3=Important, 4=Very Important, 5=Extremely Important

Q43 1. Clear water (high visibility)

Q44 2. Clean water (little to no pollution)

Q45 3. Many kinds of fish and sealife to view

Q46 4. Opportunity to view large wildlife (whales, dolphins, sharks, seals, sea lions, etc.) from shore

Q47 5. Opportunity to view large wildlife (whales, dolphins, sharks, seals, sea lions, etc.) from a boat

Q48 6. Ability to see whales from shore

Q49 7. Abundance of fish and sealife (healthy populations)

Q50 8. Tidal Pools with diverse and heathy populations of organisms

Q51 9. Presence of starfish/seastars to see in tidal pools

Q52 10. Control of invasive species

Q53 11. Cleanliness of beaches & shorelines

Q54 12. Availability of driftwood for firewood

Q55 13. Availability of driftwood for art

Q56 14. Natural views unobstructed by development on the water (oil & gas platforms, windmills, etc.)

Q57 15. Natural views unobstructed by development on the shore (high rise buildings, industrial facilities, etc.)

Q58 16. Parks and specially protected areas

Q59 17. Beach and shoreline access

Q60 18. Boat ramps/launches for trailered boats

Q61 19. Kayak launches with easy put-ins

Q62 20. Dog-friendly beaches

Q63 21. Driving on beaches allowed

Q64 22. Developed campgrounds (water, electric, sewage)

Q65 23. Undeveloped campgrounds or areas on beaches suitable for camping

Q66 24. Garbage cans/dumpsters at trailheads, other access points and parking lots

Q67 25. Historic preservation (historic landmarks, houses, shipwrecks, etc.)

Q68 26. Parking

Q69 27. Public restrooms at trailheads and campgrounds

Q70 28. Uncrowded conditions

Q71 29. Handicap accessible beaches

Q72 30. Maps, brochures and other tourist information

Q73 31. Signage at trailheads, other access points and parking lots with information on types of natural resources one can experience

Q74 32. Smartphone apps for information on parking and camping availability

Q75 33. Smartphone apps for information on natural resource likely to see at different sites

Q76 34. Organization of volunteer efforts to clean beaches & shorelines

SATISFACTION

You just indicated the importance of a list of items to your recreation/tourist experiences. Now please read each of the items on this list and rate how satisfied you were with each of the places you did your activities on the Outer Coast of Washington. If an item does not apply, indicate by selecting n/a (Not Applicable). Likewise, if you don't know, select (dk).

n/a Not Applicable, dk Don't Know, 1=Terrible, 2=Unhappy/Dissatisfied, 3=Mixed, 4=Happy/Satisfied, 5=Delighted

Q77 1. Clear water (high visibility)

Q78 2. Clean water (little to no pollution)

Q79 3. Many kinds of fish and sealife to view

Q80 4. Opportunity to view large wildlife (whales, dolphins, sharks, seals, sea lions, etc.) from shore

Q81 5. Opportunity to view large wildlife (whales, dolphins, sharks, seals, sea lions, etc.) from a boat

Q82 6. Ability to see whales from shore

Q83 7. Abundance of fish and sealife (healthy populations)

Q84 8. Tidal Pools with diverse and heathy populations of organisms

Q85 9. Presence of starfish/seastars to see in tidal pools

Q86 10. Control of invasive species

Q87 11. Cleanliness of beaches & shorelines

Q88 12. Availability of driftwood for firewood

Q89 13. Availability of driftwood for art

Q90 14. Natural views unobstructed by development on the water (oil & gas platforms, windmills, etc.)

Q91 15. Natural views unobstructed by development on the shore (high rise buildings, industrial facilities, etc.)

Q92 16. Parks and specially protected areas

Q93 17. Beach and shoreline access

Q94 18. Boat ramps/launches for trailered boats

Q95 19. Kayak launches with easy put-ins

Q96 20. Dog-friendly beaches

Q97 21. Driving on beaches allowed

Q98 22. Developed campgrounds (water, electric, sewage)

Q99 23. Undeveloped campgrounds or areas on beaches suitable for camping

Q100 24. Garbage cans/dumpsters at trailheads, other access points and parking lots

Q101 25. Historic preservation (historic landmarks, houses, shipwrecks, etc.)

Q102 26. Parking

Q103 27. Public restrooms at trailheads and campgrounds

Q104 28. Uncrowded conditions

Q105 29. Handicap accessible beaches

Q106 30. Maps, brochures and other tourist information

Q107 31. Signage at trailheads, other access points and parking lots with information on types of natural resources one can experience

Q108 32. Smartphone apps for information on parking and camping availability

Q109 33. Smartphone apps for information on natural resource likely to see at different sites

Q110 34. Organization of volunteer efforts to clean beaches & shorelines

In this section, you will be asked to choose among alternative sets (bundles) of attribute conditions on Washington's Outer Coast. Much like purchasing a car, you will be presented with different bundles of attribute conditions and each bundle has a price. You will be asked to choose your preferred bundle.

First some information to help you with making your decisions.

- **If current management practices continue in the future (Status Quo), in 10 to 20 years scientists expect that the conditions of natural resources will be in a poor or declining condition or Low Condition (L).**

- **If management is changed to improve conditions, it will require both public and private investments to protect and restore the natural resources, which would include enforcement of rules and regulations.**

- **Bundles of conditions are based on the amount of investment and the resulting levels of conditions. Bundles can be mixes of Low (L), Medium (M) and High (H) or Ideal conditions.**

- **There is an estimated cost to your household per year that would be required to achieve each condition.**

- **The cost per year is based on the costs that will be paid by businesses and households to pay for investments that protect and restore the natural resources like improved sewage treatment, filtering and cleaning urban run-off, erosion control from agricultural areas and development projects, installation of mooring buoys to protect bottom habitats from anchor damage, habitat restoration activities, and enforcement of rules and regulations. Businesses will pass on the costs to customers.**

- **The costs per year would be paid by all residents and visitors to the Outer Coast of Washington through increased prices of goods and services. This might also include increases in local sales taxes to cover government costs to pay for protection and restoration or provide facilities and services.**

You will be asked to make four choices across nine different bundles, including the Status Quo option.

You will also be asked for each of the four choices, how many days you would visit the Outer Coast per year for each choice you made.

You will also be asked to provide a brief explanation for each choice and how certain you were when making your choice.

The higher the level of conditions, the higher the costs to your household per year.

Remember, if you spend money for one of the bundles, that money won't be available to buy other goods and services. If you don't want to spend more to maintain or improve future conditions on the Outer Coast, then the Status Quo (Low Condition) would be your choice.

NOTE: THERE ARE FOUR VERSIONS OF THE CHOICE SETS. VERSIONS SHOULD BE RANDOMLLY ASSIGNED TO PANEL MEMBERS WITH EQUAL NUMBERS PER VERSION.

Q111 VERSION 1: Choice 1

Attributes	Status Quo All Low Condition	A All Medium Condition	B All High Condition
Marine Mammals: Number of different kinds (diversity)	Currently 29 species;8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen.	No increase in threatened and endangered species or loss of species. Rare species occasionally seen.	A decrease in number of threatened and endangered and all 11 species removed from species of concern. Rare species become less rare and more commonly seen.
Seabirds: Number of different kinds (diversity)	Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species.	No increase in threatened and endangered species or loss of species. Rare species occasionally seen.	A decrease in the number of threatened and endangered species an no species on list of concern. Rare species become less rare and more commonly seen.
Opportunity to see large predators such as killer whales, sharks, etc.	Never seen	Occasionally seen.	Commonly seen.
Tide Pool Organisms: Number of different kinds (diversity)	10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common. Distance from access point greater than 2 miles.	20 to 40 species with no expected loss of species. Rare species are occasionally seen. Invasive species reduced but are occasionally seen. Distance from access point is 0.25 to 2 miles.	Greater than 40 species. Rare species become less rare and more commonly seen. Invasive species are rarely or never seen. Distance form access point is 0.25 miles or less.
Clean water (no to low pollutants) to support water-based activities	27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	14 to 26 beach closures for a total of108 to 215 days of closure. 6 to 10 beach advisories with 41 to 82 beach days with advisories. Conditions mostly meet health standards.	0 to 13 beach closures for a total of 0 to 107 days of closure. 0 to 5 beach advisories with 0 to 40 beach days with advisories. All conditions meet health standards.
Abundance of seabirds, marine mammals and tidal pool organisms	Populations affected by human disturbances to the point of declining and unsustainable populations.	Human disturbances reduced with half of the populations of all species with stable and sustainable populations.	Human disturbances reduced to the point with all species with sustainable populations.
Beach and shoreline quality (absence of	Large amounts of debris or trash visible on the	Moderate amounts of debris or trash visible on	Minimal debris or trash visible on the shore 0.5lbs

debris/garbage or harmful algal blooms)	shore 3.25 lbs per 100 feet of shoreline. Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	the shore 1.6 lbs per 100 feet of shoreline. A few harmful algal blooms causing respiratory distress to beach and shoreline users. 16 to 30 beaches open for razor clam digging per year.	per 100 feet of shoreline. No harmful algal blooms causing respiratory distress to beach and shoreline users. 31 to 58 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	Limited to low intensity development with views partially obstructed by a few offshore structures. Some access to beaches and shoreline.	Low impact of development with no offshore structures and easy access to beaches and shores.
Uncrowded by other recreational users	21 or more people encountered during a beach visit.	11 to 20 people encountered on a beach visit.	0 to 10 people encountered on a beach visit.
Cost to your household per year	**$0**	**$350**	**$500**
Your preferred choice (check box)	☐	☐	☐

Q112 How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Q113 Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____

_____

_____

Q114 How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Q115 VERSION 1: Choice 2 Mixture of Medium and High Conditions

Attributes	Status Quo All Low Condition	A 4 M and 5 H	B 5 H and 4 M
Marine Mammals: Number of different kinds (diversity)	Currently 29 species;8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen.	**H:** A decrease in number of threatened and endangered and all 11 species removed from species of concern. Rare species become less rare and more commonly seen.
Seabirds: Number of different kinds (diversity)	Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen.	**H:** A decrease in the number of threatened and endangered species and no species on list of concern. Rare species become less rare and more commonly seen.
Opportunity to see large predators such as killer whales, sharks, etc.	Never seen	**M:** Occasionally seen.	**H:** Commonly seen.
Tide Pool Organisms: Number of different kinds (diversity)	10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common. Distance from access point greater than 2 miles.	**M:** 20 to 40 species with no expected loss of species. Rare species are occasionally seen. Invasive species reduced but are occasionally seen. Distance from access point is 0.25 to 2 miles.	**H:** Greater than 40 species. Rare species become less rare and more commonly seen. Invasive species are rarely or never seen. Distance form access point is 0.25 miles or less.
Clean water (no to low pollutants) to support water-based activities	27 to 40 beach closers for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**H:** 0 to 13 beach closures for a total of 0 to 107 days of closure. 0 to 5 beach advisories with 0 to 40 beach days with advisories. All conditions meet health standards.	**H:** 0 to 13 beach closures for a total of 0 to 107 days of closure. 0 to 5 beach advisories with 0 to 40 beach days with advisories. All conditions meet health standards.
Abundance of seabirds, marine mammals and tidal pool organisms	Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** Human disturbances reduced to the point with all species with sustainable populations.	**M:** Human disturbances reduced with half of the populations of all species with stable and sustainable populations.
Beach and shoreline quality (absence of	Large amounts of debris or trash visible on the	**H:** Minimal debris or trash visible on the shore	**M:** Moderate amounts of debris or trash visible on

debris/garbage or harmful algal blooms)	shore 3.25 lbs per 100 feet of shoreline. Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	0.5lbs per 100 feet of shoreline. No harmful algal blooms causing respiratory distress to beach and shoreline users. 31 to 58 beaches open for razor clam digging per year.	the shore 1.6 lbs per 100 feet of shoreline. A few harmful algal blooms causing respiratory distress to beach and shoreline users. 16 to 30 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**H:** Low impact of development with no offshore structures and easy access to beaches and shores.	**M:** Limited to low intensity development with views partially obstructed by a few offshore structures. Some access to beaches and shoreline.
Uncrowded by other recreational users	21 or more people encountered during a beach visit.	**H:** 0 to 10 people encountered on a beach visit.	**M:** 11 to 20 people encountered on a beach visit.
Cost to your household per year	**$0**	**$250**	**$250**
Your preferred choice (check box)	☐	☐	☐

Q116 How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Q117 Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____

_____

_____

Q118 How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Q119 **VERSION 1: Choice 3 Mixture of Low and High Conditions**

Attributes	**Status Quo** **All Low Condition**	**A** **4 L and 5H**	**B** **5H and 4L**
Marine Mammals: Number of different kinds (diversity)	Currently 29 species;8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen.	**L:** Currently 29 species;8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen.	**H:** A decrease in number of threatened and endangered and all 11 species removed from species of concern. Rare species become less rare and more commonly seen.
Seabirds: Number of different kinds (diversity)	Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species.	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species.	**H:** A decrease in the number of threatened and endangered species and no species on list of concern. Rare species become less rare and more commonly seen.
Opportunity to see large predators such as killer whales, sharks, etc.	Never seen	**L:** Never seen	**H:** Commonly seen.
Tide Pool Organisms: Number of different kinds (diversity)	10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common. Distance from access point greater than 2 miles.	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common. Distance from access point greater than 2 miles.	**H:** Greater than 40 species. Rare species become less rare and more commonly seen. Invasive species are rarely or never seen. Distance form access point is 0.25 miles or less.
Clean water (no to low pollutants) to support water-based activities	27 to 40 beach closers for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**H:** 0 to 13 beach closures for a total of 0 to 107 days of closure. 0 to 5 beach advisories with 0 to 40 beach days with advisories. All conditions meet health standards.
Abundance of seabirds, marine mammals and tidal pool organisms	Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** Human disturbances reduced to the point with all species with sustainable populations.	**L:** Populations affected by human disturbances to the point of declining and unsustainable populations.
Beach and shoreline quality (absence of	Large amounts of debris or trash visible on the	**H:** Minimal debris or trash visible on the shore	**L:** Large amounts of debris or trash visible on

debris/garbage or harmful algal blooms)	shore 3.25 lbs per 100 feet of shoreline. Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	0.5lbs per 100 feet of shoreline. No harmful algal blooms causing respiratory distress to beach and shoreline users. 31 to 58 beaches open for razor clam digging per year.	the shore 3.25 lbs per 100 feet of shoreline. Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**H:** Low impact of development with no offshore structures and easy access to beaches and shores.	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.
Uncrowded by other recreational users	21 or more people encountered during a beach visit.	**H:** 0 to 10 people encountered on a beach visit.	**L:** 21 or more people encountered during a beach visit.
Cost to your household per year	**$0**	**$125**	**$125**
Your preferred choice (check box)	☐	☐	☐

Q120 How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Q121 Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____

_____

_____

Q122 How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Q123 **VERSION 1: Choice 4 Mixture of Low and Medium Conditions**

Attributes	**Status Quo** **All Low Condition**	**A** **4 L and 5 M**	**B** **5 M and 4 L**
Marine Mammals: Number of different kinds (diversity)	Currently 29 species;8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen.	**L:** Currently 29 species;8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen.
Seabirds: Number of different kinds (diversity)	Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species.	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen.
Opportunity to see large predators such as killer whales, sharks, etc.	Never seen	**L:** Never seen	**M:** Occasionally seen.
Tide Pool Organisms: Number of different kinds (diversity)	10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common. Distance from access point greater than 2 miles.	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common. Distance from access point greater than 2 miles.	**M:** 20 to 40 species with no expected loss of species. Rare species are occasionally seen. Invasive species reduced but are occasionally seen. Distance from access point is 0.25 to 2 miles.
Clean water (no to low pollutants) to support water-based activities	27 to 40 beach closers for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**M:** 14 to 26 beach closures for a total of108 to 215 days of closure. 6 to 10 beach advisories with 41 to 82 beach days with advisories. Conditions mostly meet health standards.	**M:** 14 to 26 beach closures for a total of108 to 215 days of closure. 6 to 10 beach advisories with 41 to 82 beach days with advisories. Conditions mostly meet health standards.
Abundance of seabirds, marine mammals and tidal pool organisms	Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** Human disturbances reduced with half of the populations of all species with stable and sustainable populations.	**L:** Populations affected by human disturbances to the point of declining and unsustainable populations.
Beach and shoreline quality (absence of	Large amounts of debris or trash visible on the shore 3.25 lbs per 100	**M:** Moderate amounts of debris or trash visible on the shore 1.6 lbs per 100	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs per 100

debris/garbage or harmful algal blooms)	feet of shoreline. Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	feet of shoreline. A few harmful algal blooms causing respiratory distress to beach and shoreline users. 16 to 30 beaches open for razor clam digging per year.	feet of shoreline. Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**M:** Limited to low intensity development with views partially obstructed by a few offshore structures. Some access to beaches and shoreline.	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.
Uncrowded by other recreational users	21 or more people encountered during a beach visit.	**M:** 11 to 20 people encountered on a beach visit.	**L:** 21 or more people encountered during a beach visit.
Cost to your household per year	**$0**	**$60**	**$60**
Your preferred choice (check box)	☐	☐	☐

Q124 How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Q125 Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____

_____

_____

Q126 How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

NOTE: Versions 2, 3 and 4 are the same choice sets, but with different prices.
Version 2, Choice 1: Status Quo=$0, A=$175, B=$250
Version 2, Choice 2: Status Quo=$0, A=$125, B=$125
Version 2, Choice 3: Status Quo=$0, A=$60, B=$60
Version 2, Choice 4: Status Quo=$0, A=$40, B=$40
Version 3, Choice 1: Status Quo=$0, A=$80, B=$125
Version 3, Choice 2: Status Quo=$0, A=$60, B=$60
Version 3, Choice 3: Status Quo=$0, A=$40, B=$40
Version 3, Choice 4: Status Quo=$0, A=$20, B=$20
Version 4, Choice 1: Status Quo=$0, A=$40, B=$60
Version 4, Choice 2: Status Quo=$0, A=$30, B=$30
Version 4, Choice 3: Status Quo=$0, A=$20, B=$20
Version 4, Choice 4: Status Quo=$0, A=$15, B=$15

We would like to learn more about how you reacted to the questions that asked you to choose between various combinations of conditions at various prices. Please indicate whether you agree a great deal, a lot, moderate amount, a little, or not at all with the following statements

Select one answer for each row in the grid.

1= A Great Deal, 2= A Lot, 3= A Moderate Amount, 4= A Little, and 5= Not at All

a. Q127 Costs should not be a factor when protecting the environment.
b. Q128 I found it difficult to select my most preferred choice.
c. Q129 There was not enough information for me to make informed decisions about doing more to protect and restore natural resources or expand and improve facilities and services.
d. Q130 I was concerned the federal, state and local governments cannot effectively manage the natural resources and facilities or provide the services.
e. Q131 I should not have to pay more for maintaining or improving conditions.
f. Q132 The public views as expressed in this survey should be important to government when it chooses how to manage these resources and facilities and the services they provide.

Q133 Did the photographs on beach crowding help you in making your decisions about how much you would be willing to pay for different beach conditions?

__ Yes
__ No

D.Quesionnaire Waves

Appendix A: Panel Survey Questions

[Demographic questions are asked in a separate survey module by Knowledge Networks (the online survey provider)]

Q1. We are interested in knowing about your coastal and ocean recreation activity on the Pacific coast of Washington. Have you been to the Pacific coast of Washington (dark blue area) at least once in the last 12 months?
[Insert Figure: Map of region, with shaded area distinguishing study region.]

- Yes……Continue
- No……Exit Interview

Q2. Please estimate how many trips you have made to the Pacific coast of Washington (see yellow area) in the last 12 months. Again a trip is defined as an **intentional trip** to the Pacific coast of Washington **separate from your daily routine**.
[NUMBER BOX; RANGE 1-365]

Q3. You previously responded that you made [from Q2] trips(s) to the Pacific coast of Washing in the last 12 months. Please indicate how many trips were made for the following primary purposes. The primary purpose is what primarily motivated you to take the trip(s) outside of your daily routine.

Outdoor Recreation
Leisure/Tourism
Visiting Family/Friends
Work Travel
Other

NOTE:
Outdoor Recreation includes activities such as beach going, sightseeing/scenic enjoyment, hiking, biking, walking, kayaking, boating/sailing, camping, photography, swimming, clamming, fishing, etc.

Leisure and Tourism includes activities such as dining, shopping, golf, attending festivals/events, eating at restaurants, etc.

Q4. We are interested in knowing what types of outdoor recreation activities you do when you go to the Pacific coast of Washington. Which of the following activities have you participated in **during the last 12 months** in the Pacific coast of Washington?

[PLEASE SHOW OPTIONS IN ONE LIST BUT RANDOMIZE ORDER OF SECTIONS. DO NOT INSERT HEADER]

[SECTION 1]

a) Beach going (sitting, walking, jogging/running, dog walking, kite flying, etc.)

b) Beach driving
c) Hiking or Biking
d) Camping
e) Photography

[SECTION 2]

f) Sightseeing/Scenic enjoyment
g) Sitting in your car watching the scene
h) Collection of non-living resources (agates, driftwood, beach glass, etc)
i) Watching birds, whales, seals and/or other marine life from shore
j) Watching birds, whales, seals and/or other marine life from private boat
k) Watching birds, whales, seals and/or other marine life from charter boat/guide service
l) Horseback riding
m) Tide pooling

[SECTION 3]

n) Fishing from shore/pier (e.g. hook and line, crabbing, spearfishing, etc.)
o) Fishing from private boat (e.g. hook and line, crabbing, spearfishing, etc.)
p) Fishing from charter boat/guide service (e.g. hook and line, crabbing, spearfishing, etc.)
q) Collecting/picking/harvesting sea life from shore (clamming, seaweed, mussels, etc.)
r) Hang gliding / parasailing
s) Skim boarding
t) Surfing (from board or kayak)
u) Swimming or body surfing

[SECTION 4]

v) Windsurfing/Kite boarding
w) Personal watercraft (jet skis, wave runner)
x) Snorkeling/free diving from shore
y) Snorkeling/free diving from private boat
z) Snorkeling/free diving from charter boat/guide service
aa) Kayaking or other paddling activity (canoe, stand up paddle board, Tribal canoe journey)
bb) Boating/sailing
cc) SCUBA diving from shore
dd) SCUBA diving from private boat
ee) SCUBA diving from charter boat/guide service
ff) Other, please list: [TEXTBOX]

Q5. For how long have you been visiting the Pacific coast of Washington and enjoying one or more of the activities you identified?

- Just the last year 1
- One to three years 2
- About four to ten years 3
- More than ten years 4

- All my life 5

Q6. Below is a map of the coastal counties within the Pacific coast of Washington. You previously responded that you visited this area **[INSERT RESPONSE FROM Q3]** time(s) for outdoor recreation in the last 12 months. Please indicate how many times you visited each of these coastal counties for outdoor recreation in the last 12 months on the map below. If you did not visit a particular coastal county, please choose 'zero'. Your best estimate of the county is fine.

i. HERE WE HAVE A MAP OF THE STUDY AREA THAT INCLUDES THE COUNTIES OF THE WASHINGTON PACIFIC COAST. For each county the respondent should be prompted to tell us how many visits they made to the county in the last 12 months.

[PLEASE ENSURE THE RESPONSES ADD UP TO AT MINIMUM THE RESPONSE IN Q3] [PROMPT ONCE]

•

Information Page:
The following questions are about your **last trip** to the Pacific coast of Washington (see yellow are on map) that was primarily for outdoor recreation purposes. A trip is defined as an **intentional trip** – **separate from your daily routine**.

For coastal residents, daily routine activities could include daily dog walks on the beach or driving along the coast to get to work or the store. An intentional trip (e.g., day/weekend trips, vacations, etc) is NOT a part of your daily routine.

Based on this, we'd like you to answer the following questions about your **last trip** to the Pacific coast of Washington that was **primarily for outdoor recreation**.

Q7. What was the date of your **last trip** to the Pacific coast of Washington that was **primarily for outdoor recreation purposes**. Your best estimate is fine. [SHOW STUDY REGION MAP]
[INSERT CALENDAR FOR RESPONDENT TO INDICATE DATE]

Date:

Q8. How many days and nights did you spend at the coast during your **last trip** to the Pacific coast of Washington that was **primarily for outdoor recreation** purposes?
[FILL IN BOXES]

Q9. On your **last trip** to the Pacific coast of Washington that was **primarily for outdoor recreation purposes**, did you start your trip from your home?

- Yes.....1
- No.....2

Q10. Since you did not start your last trip from home, what city and state did you start your trip from? [Appears only if answered no to Q9]

City: Fill In
State: Fill In

Q11. What was the primary mode(s) of transportation you used to get to the Pacific coast of Washington on your **last coastal recreation trip**?

- Bus 1
- Bike 2
- Fly. 3
- Walking 4
- Drove personal car 5
- Drove a rented car 6
- Rode with someone else – carpooled 7
- Train 8
- Ferry (without a personal vehicle) 9
- Other, please specify: **[TEXTBOX]** 10

Q12a. How would you describe the car that you used to get to the Pacific coast of Washington on your last trip?
[Appears if selected drove a personal/rented car in Q11}

Compact car, small sedan, or hybrid
Medium sedan
Large sedan/Wagon
SUV, Pickup trucks, or Mini van
Other (fill in)

Q12b. How many people (including yourself) were in the vehicle with you on the last trip?
[FILL IN BOX]

Q12c. How many of those passengers were your children/dependents?
[FILL IN BOX]

Q13a. Approximately how many people (including yourself) went on your last trip to the Pacific coast of Washington that was primarily for outdoor recreation purposes?
[FILL IN BOX]

Q13b. Approximately how many people on your last trip were under the age of eighteen?
[FILL IN BOX]

Q14. During your last trip to the Pacific coast of Washington, what outdoor recreation activities did you participate in?
[PLEASE SHOW OPTIONS IN ONE LIST BUT RANDOMIZE AND RECORD ORDER OF SECTIONS. DO NOT INSERT HEADER]

[SECTION 1]

a) Beach going (sitting, walking, jogging/running, dog walking, kite flying, etc.)
b) Beach driving

c) Hiking or Biking
d) Camping
e) Photography

[SECTION 2]

f) Sightseeing/Scenic enjoyment
g) Sitting in your car watching the scene
h) Collection of non-living resources (agates, driftwood, beach glass, etc)
i) Watching birds, whales, seals and/or other marine life from shore
j) Watching birds, whales, seals and/or other marine life from private boat
k) Watching birds, whales, seals and/or other marine life from charter boat/guide service
l) Horseback riding
m) Tide pooling

[SECTION 3]

n) Fishing from shore/pier (e.g. hook and line, crabbing, spearfishing, etc.)
o) Fishing from private boat (e.g. hook and line, crabbing, spearfishing, etc.)
p) Fishing from charter boat/guide service (e.g. hook and line, crabbing, spearfishing, etc.)
q) Collecting/picking/harvesting sea life from shore (clamming, seaweed, mussels, etc.)
r) Hang gliding / parasailing
s) Skim boarding
t) Surfing (from board of kayak)
u) Swimming or body surfing

[SECTION 4]

v) Windsurfing/Kite boarding
w) Personal watercraft (jet skis, wave runner)
x) Snorkeling/free diving from shore
y) Snorkeling/free diving from private boat
z) Snorkeling/free diving from charter boat/guide service
aa) Kayaking or other paddling activity (canoe, stand up paddle board, Tribal canoe journey)
bb) Boating/sailing
cc) SCUBA diving from shore
dd) SCUBA diving from private boat
ee) SCUBA diving from charter boat/guide service
ff) Other, please list: [TEXTBOX]

Q15. Of the outdoor recreation activities you selected what was your primary activity during your **last coastal recreation trip** to the Pacific coast of Washington? (please select only one)
[PLEASE SHOW ACTIVITIES SELECTED IN QUESTION Q11 and ONLY ALLOW THE SELECTION OF ONE PRIMARY ACTIVITY]

Q16. Mapping of Ocean and Coastal Recreation activity locations
[MAPPING COMPONENT OF SURVEY]
In the mapping component the respondent will be presented with a navigable map of the coast (e.g., Google maps) and will be ask:

1) Navigate the map or use search function to zoom to the areas which they conducted ocean and coastal recreation activities on their last trip.
    a. The user can utilize a search function (similar to google maps) to zoom to specific areas
    b. The user can zoom in and out and move the map around to navigate the map to specific areas
    c. If the use zooms out to far and attempts to drop an activity marker they will be prompted to zoom further in.
2) For each activity marker placed the user will be asked to:
    a. Associate one or more activity with the activity marker they place on the map
    b. In addition, respondents are asked:
        i. How many hours did you spend at this location on your last trips?
        ii. Please indicate why you chose to recreate at this particular place on this trip:
            a) The water is clean, clear and/or good to swim in
            b) The site has good facilities/amenities/access (e.g. parking, bathrooms, picnic tables, marina, camping, trails, etc)
            c) The site is beautiful or has striking natural features
            d) The site is perfect for my particular activity (e.g. surf break, fishing area, dive site, etc)
            e) Wildlife is abundant and diverse
            f) It's close to home/work/where I'm staying
            g) The site is large and offers room for exploration
            h) The site is secluded, away from crowds, and offers privacy
            i) This is where my friends or family have always gone
            j) I have lots of memories from this place
            k) This is a spiritual/inspiring place for me
            l) There are specific natural resources I like to collect here
            m) It is a place I can learn about, teach, or research the natural environment
            n) I feel healthier after going to this place
3) Once all activity markers have been placed the activity markers for the primary activity indicated in the previous portion of the survey will be presented
    a. Users will be prompted to distribute 100 pennies across this primary activity to indicate the relative importance of each location to their activity on their last trip
    b. This distribution of value will then be subsequently used with the trip expenditure data collected further in the survey to estimate the value of coastal and ocean recreation areas.

Q17a. During your **last trip** to the Pacific coast of Washington that was primarily for outdoor recreation purposes, please indicate if your party spent money on the following items.

a. Parking
b. Car fuel
c. Airline flight

d. Bus/Ferry/Train ticket
e. Food and beverages from a store
f. Food and beverages at a restaurant or bar
g. Shopping and souvenirs (t-shirts, posters, gifts, etc.)
h. Sundries (sunscreen, surf wax, motion sickness pills, batteries, camera data cards, etc.)
i. Car rental
j. Dive equipment rental and airfills
k. Equipment rental (Surfboard, bike, kayak, stand up paddle, etc)
l. Lodging/Campsite Fee (if you stayed overnight)
m. Charter fee (whale watching, etc.)
n. Park entrance, museum, aquarium, or other entrance fee
o. Lessons, clinics, camps
p. One-day fishing license fee
q. Bait and tackle
r. Boat fuel
s. Boat rental
t. Boat ramp fees
u. Other, please list **[TEXTBOX; PROMPT ONCE IF SELECTED BUT TEXT IS NOT ENTERED]**

Q17b. During your **last coastal recreation trip** to the Pacific coast of Washington, please estimate how much money **your party** spent on the following items and the number of people it covered.
[For Q14b show indicated expenditures from Q14a]
[GRID, NUMBER BOXES]
[All responses are required to be filled in]

Expense item	Cost: [NUMBER BOX, , RANGE IS 0-10000]	# of people covered
a) Parking		
b) Car fuel		
c) Food or beverage from a store		
d) List continues…		

[ENDDISPLAY]
Thank you so much for participating in our survey. We appreciate your help and input!

MANAGEMENT OPTIONS FOR THE OUTER COAST OF WASHINGTON -- WHAT IS YOUR OPINION?

Sometimes the Government considers starting a new program or expanding existing programs. The Government does not want to start a new program or expand existing programs unless people are willing to pay for it. One way for the Government to find out about this is to give people like you information about a program in a survey like this, so you can make up your own mind about it.

Some people think the program they are asked about is not needed; others think it is. We want to get the opinions of all kinds of people.

The particular program addressed in this survey involves the natural resources, facilities and services that people use when doing non-consumptive types of recreation on the State of Washington's Outer Coast. The federal, state and local governments are considering options to increase the protection and restoration of the natural resources and improve the facilities and services on the Outer Coast of Washington, but it is not sure if it should do more, because this will require more government spending paid for all residents and visitors.

We will provide you with information to help you answer the questions. Through this survey, government officials will consider your opinions, along with information from scientists and planners, when deciding what more, if anything, to do.

WARMUP QUESTIONS

Below is a list of birds that can be found on or along Washington's Outer Coast. Please tell us how much you like or dislike each of the animals listed below:

	Strongly Like	Like	Slightly Like	Neither Like nor Dislike	Slightly Dislike	Dislike	Strongly Dislike	I don't know of this animal
Puffins								
Ducks								
Hawks								
Plovers								
Sandpipers								
Sea gulls								
Terns								
Eagles								

Below is a list of marine mammals that can be found on or along Washington's Outer Coast. Please tell us how much you like or dislike each of the marine animals listed below:

	Strongly Like	Like	Slightly Like	Neither Like nor Dislike	Slightly Dislike	Dislike	Strongly Dislike	I don't know of this animal
Seals/Sea lions								
Dolphins/Porpoises								
Whales								
Killer whales/ Orcas								
Sea otters								

Below is a list of other marine animals that can be found on or along Washington's Outer Coast. Please tell us how much you like or dislike each of the animals listed below:

	Strongly Like	Like	Slightly Like	Neither Like nor Dislike	Slightly Dislike	Dislike	Strongly Dislike	I don't know of this animal
Sea urchins								
Starfish/Seastars								
Sharks								
Corals								
Sea anemones								

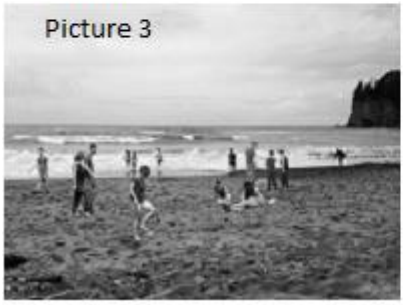
Please indicate to what extent you agree with the following statements:

	Strongly Agree	Agree	Slightly Agree	Neither Agree nor Disagree	Slightly Disagree	Disagree	Strongly Disagree
When I go to the outer coast I never want to see animals that I don't like.							
When I go to the outer coast I always want to see animals that I like.							
We are approaching the limit of the number of people the Earth can support.							
Humans have the right to modify the natural environment to suit their needs.							
When humans interfere with nature it often produces disastrous consequences.							

	Strongly Agree	Agree	Slightly Agree	Neither Agree nor Disagree	Slightly Disagree	Disagree	Strongly Disagree
Human ingenuity will insure that we do not make the Earth unlivable.							
Humans are seriously abusing the environment.							
The Earth has plenty of natural resources if we just learn how to develop them.							
Plants and animals have as much right as humans to exist.							
The balance of nature is strong enough to cope with the impacts of modern industrial nations.							
Despite our special abilities, humans are still subject to the laws of nature.							
The so-called “ecological crisis” facing humankind has been greatly exaggerated.							
The Earth is like a spaceship with very limited room and resources.							
Humans were meant to rule over the rest of nature.							
The balance of nature is very delicate and easily upset.							
Humans will eventually learn enough about how nature works to be able to control it.							
If things continue on their present course, we will soon							

	Strongly Agree	Agree	Slightly Agree	Neither Agree nor Disagree	Slightly Disagree	Disagree	Strongly Disagree
experience a major ecological catastrophe.							
I would be willing to pay much higher taxes in order to protect the environment.							
I would be willing to accept cuts in my standard of living to protect the environment.							
I would be willing to pay much higher prices in order to protect the environment.							

Please look at the following pictures that depict different levels of visitor use at a beach on the outer coast and answer the questions below.



	Picture 1	Picture 2	Picture 3	Picture 4
Which picture most closely represents the number of visitors you would expect to see during a trip to your favorite beach on the outer coast?				
Which picture best indicates your preferred number of fellow visitors when visiting your favorite beach on the outer coast?				
Which picture contains the maximum number of visitors that you would personally feel to be acceptable at your favorite beach during a visit to the outer coast?				
Which visitor density would be a reason for you to decide not to return to a favorite beach on the outer coast?				

IMPORTANCE-SATISFACTION

In this section, we are interested in identifying the recreation site information which is important to you, while visiting Washington's Outer Coast for your non-consumptive recreation activities.

IMPORTANCE

Please read each statement and rate the importance of each item as it contributes to an ideal recreation/tourism setting for the non-consumptive recreation activities you did on Washington's Outer Coast. If an item does not apply, indicate by selection n/a (not applicable). Likewise, if you don't know, select (dk).

n/a Not Applicable, dk Don't Know, 1=Not Important, 2=Somewhat Important, 3=Important, 4=Very Important, 5=Extremely Important

1. Clear water (high visibility)

2. Clean water (little to no pollution)

3. Many kinds of fish and sealife to view

4. Opportunity to view large wildlife (whales, dolphins, sharks, seals, sea lions, etc.) from shore

5. Opportunity to view large wildlife (whales, dolphins, sharks, seals, sea lions, etc.) from a boat

6. Ability to see whales from shore

7. Abundance of fish and sealife (healthy populations)

8. Tidal Pools with diverse and heathy populations of organisms

9. Presence of starfish/seastars to see in tidal pools

10. Control of invasive species

11. Cleanliness of beaches & shorelines

12. Natural views unobstructed by development on the water (oil & gas platforms, windmills, etc.)

13. Natural views unobstructed by development on the shore (high rise buildings, industrial facilities, etc.)

14. Parks and specially protected areas

15. Beach and shoreline access

16. Undeveloped campgrounds or areas on beaches suitable for camping

17. Garbage cans/dumpsters at trailheads, other access points and parking lots

18. Historic preservation (historic landmarks, houses, shipwrecks, etc.)

19. Parking

20. Public restrooms at trailheads and campgrounds

21. Uncrowded conditions

22. Handicap accessible beaches

23. Maps, brochures and other tourist information

24. Signage at trailheads, other access points and parking lots with information on types of natural resources one can experience

25. Organization of volunteer efforts to clean beaches & shorelines

SATISFACTION

You just indicated the importance of a list of items to your recreation/tourist experiences. Now please read each of the items on this list and rate how satisfied you were with each of the places you did your activities on the Outer Coast of Washington. If an item does not apply, indicate by selecting n/a (Not Applicable). Likewise, if you don't know, select (dk).

n/a Not Applicable, dk Don't Know, 1=Terrible, 2=Unhappy/Dissatisfied, 3=Mixed, 4=Happy/Satisfied, 5=Delighted

1. Clear water (high visibility)

2. Clean water (little to no pollution)

3. Many kinds of fish and sealife to view

4. Opportunity to view large wildlife (whales, dolphins, sharks, seals, sea lions, etc.) from shore

5. Opportunity to view large wildlife (whales, dolphins, sharks, seals, sea lions, etc.) from a boat

6. Ability to see whales from shore

7. Abundance of fish and sealife (healthy populations)

8. Tidal Pools with diverse and heathy populations of organisms

9. Presence of starfish/seastars to see in tidal pools

10. Control of invasive species

11. Cleanliness of beaches & shorelines

12. Natural views unobstructed by development on the water (oil & gas platforms, windmills, etc.)

13. Natural views unobstructed by development on the shore (high rise buildings, industrial facilities, etc.)

14. Parks and specially protected areas

15. Beach and shoreline access

16. Undeveloped campgrounds or areas on beaches suitable for camping

17. Garbage cans/dumpsters at trailheads, other access points and parking lots

18. Historic preservation (historic landmarks, houses, shipwrecks, etc.)

19. Parking

20. Public restrooms at trailheads and campgrounds

21. Uncrowded conditions

22. Handicap accessible beaches

23. Maps, brochures and other tourist information

24. Signage at trailheads, other access points and parking lots with information on types of natural resources one can experience

25. Organization of volunteer efforts to clean beaches & shorelines

In this section, you will be asked to choose among alternative sets (bundles) of attribute conditions on Washington's Outer Coast. Much like purchasing a car, you will be presented with different bundles of attribute conditions and each bundle has a price. You will be asked to choose your preferred bundle.

First some information to help you with making your decisions.

- **If <u>current management practices</u> continue in the future (<u>Status Quo</u>), in 10 to 20 years scientists expect that the conditions of natural resources will be in a poor or declining condition or <u>Low Condition (L)</u>.**

- **If <u>management is changed</u> to improve conditions, it will require both public and private investments to protect and restore the natural resources, which would include enforcement of rules and regulations.**

- **Bundles of conditions are based on the amount of investment and the resulting levels of conditions. Bundles can be mixes of Low (L), Medium (M) and High (H) or Ideal conditions.**

- **There is an estimated cost to your household per year that would be required to achieve each condition.**

- **The <u>cost per year</u> is based on the costs that will be paid by businesses and households to pay for investments that protect and restore the natural resources like improved sewage treatment, filtering and cleaning urban run-off, erosion control from agricultural areas and development projects,**

installation of mooring buoys to protect bottom habitats from anchor damage, habitat restoration activities, and enforcement of rules and regulations. Businesses will pass on the costs to customers.

- **The costs per year would be paid by all residents and visitors to the Outer Coast of Washington through increased prices of goods and services. This might also include increases in local sales taxes to cover government costs to pay for protection and restoration or provide facilities and services.**

You will be asked to make four choices across nine different bundles, including the Status Quo option. You will also be asked for each of the four choices, how many days you would visit the Outer Coast per year for each choice you made.

You will also be asked to provide a brief explanation for each choice and how certain you were when making your choice.

The higher the level of conditions, the higher the costs to your household per year.

Remember, if you spend money for one of the bundles, that money won't be available to buy other goods and services. If you don't want to spend more to maintain or improve future conditions on the Outer Coast, then the Status Quo (Low Condition) would be your choice.

NOTE: THERE ARE NINE VERSIONS OF THE CHOICE SETS. VERSIONS SHOULD BE RANDOMLLY ASSIGNED TO PANEL MEMBERS WITH EQUAL NUMBERS PER VERSION.

(See additional document for WTP Choice Questions)

We would like to learn more about how you reacted to the questions that asked you to choose between various combinations of conditions at various prices. Please indicate your level of agreement with the following statements

Select one answer for each row in the grid.

1=Strongly Disagree, 2=Disagree, 3=Neither Agree nor Disagree, 4=Agree, 5=Strongly Agree

e. Costs should not be a factor when protecting the environment.
f. I found it difficult to select my most preferred choice.
g. There was not enough information for me to make informed decisions about doing more to protect and restore natural resources or expand and improve facilities and services.
h. I was concerned the federal, state and local governments cannot effectively manage the natural resources and facilities or provide the services.
i. I should not have to pay more for maintaining or improving conditions.
j. The public views as expressed in this survey should be important to government when it chooses how to manage these resources and facilities and the services they provide.
k. I do not believe the scenarios accurately represent the current or potential states of the environment.

Did the photographs on beach crowding help you in making your decisions about how much you would be willing to pay for different beach conditions?

__ Yes
__ No

Willingness to Pay Choices – 9 Versions, 4 Choices per Version

Version 1, Choice 1

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.	**H:** A decrease in number of threatened and endangered and all 11 species removed from species of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in the number of threatened and endangered species and no species on list of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**L:** Never seen.	**M:** Occasionally seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**M:** 20 to 40 species with no expected loss of species. Rare species are occasionally seen. Invasive species reduced but are occasionally seen.	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**H:** Distance form access point is 0.25 miles or less.	**L:** Distance from access point greater than 2 miles.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**M:** 14 to 26 beach closures for a total of108 to 215 days of closure. 6 to 10 beach advisories with 41 to 82 beach days with advisories. Conditions mostly meet health standards.	**H:** 0 to 13 beach closures for a total of 0 to 107 days of closure. 0 to 5 beach advisories with 0 to 40 beach days with advisories. All conditions meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**H:** Minimal debris or trash visible on the shore 0.5lbs per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**M:** A few harmful algal blooms causing respiratory distress to beach and shoreline users. 16 to 30 beaches open for razor clam digging per year.	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**H:** Low impact of development with no offshore structures and easy access to beaches and shores.	**M:** Limited to low intensity development with views partially obstructed by a few offshore structures. Some access to beaches and shoreline.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**H:** 0 to 10 people encountered on a beach visit.	**M:** 11 to 20 people encountered on a beach visit.
Cost to your household per year	**$0**	**$80**	**$40**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____

_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 1, Choice 2

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in number of threatened and endangered and all 11 species removed from species of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**M:** Occasionally seen.	**L:** Never seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**M:** 20 to 40 species with no expected loss of species. Rare species are occasionally seen. Invasive species reduced but are occasionally seen.	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**M:** Distance from access point is 0.25 to 2 miles.	**H:** Distance form access point is 0.25 miles or less.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**M:** 14 to 26 beach closures for a total of108 to 215 days of closure. 6 to 10 beach advisories with 41 to 82 beach days with advisories. Conditions mostly meet health standards.	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**M:** Moderate amounts of debris or trash visible on the shore 1.6 lbs. per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**M:** A few harmful algal blooms causing respiratory distress to beach and shoreline users. 16 to 30 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**H:** Low impact of development with no offshore structures and easy access to beaches and shores.	**M:** Limited to low intensity development with views partially obstructed by a few offshore structures. Some access to beaches and shoreline.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**H:** 0 to 10 people encountered on a beach visit.	**M:** 11 to 20 people encountered on a beach visit.
Cost to your household per year	**$0**	**$20**	**$40**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____

_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 1, Choice 3

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in number of threatened and endangered and all 11 species removed from species of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in the number of threatened and endangered species and no species on list of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**L:** Never seen.	**H:** Commonly seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**M:** 20 to 40 species with no expected loss of species. Rare species are occasionally seen. Invasive species reduced but are occasionally seen.	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**M:** Distance from access point is 0.25 to 2 miles.	**H:** Distance form access point is 0.25 miles or less.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**H:** 0 to 13 beach closures for a total of 0 to 107 days of closure. 0 to 5 beach advisories with 0 to 40 beach days with advisories. All conditions meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**H:** Minimal debris or trash visible on the shore 0.5lbs per 100 feet of shoreline.	**M:** Moderate amounts of debris or trash visible on the shore 1.6 lbs. per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**M:** A few harmful algal blooms causing respiratory distress to beach and shoreline users. 16 to 30 beaches open for razor clam digging per year.	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**H:** Low impact of development with no offshore structures and easy access to beaches and shores.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**L:** 21 or more people encountered during a beach visit.	**H:** 0 to 10 people encountered on a beach visit.
Cost to your household per year	**$0**	**$175**	**$350**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____

_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 1, Choice 4

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in the number of threatened and endangered species and no species on list of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**M:** Occasionally seen.	**L:** Never seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**H:** Greater than 40 species. Rare species become less rare and more commonly seen. Invasive species are rarely or never seen.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**H:** Distance form access point is 0.25 miles or less.	**L:** Distance from access point greater than 2 miles.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**H:** 0 to 13 beach closures for a total of 0 to 107 days of closure. 0 to 5 beach advisories with 0 to 40 beach days with advisories. All conditions meet health standards.	**M:** 14 to 26 beach closures for a total of108 to 215 days of closure. 6 to 10 beach advisories with 41 to 82 beach days with advisories. Conditions mostly meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**H:** Minimal debris or trash visible on the shore 0.5lbs per 100 feet of shoreline.	**M:** Moderate amounts of debris or trash visible on the shore 1.6 lbs. per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**M:** A few harmful algal blooms causing respiratory distress to beach and shoreline users. 16 to 30 beaches open for razor clam digging per year.	**H:** No harmful algal blooms causing respiratory distress to beach and shoreline users. 31 to 58 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**M:** Limited to low intensity development with views partially obstructed by a few offshore structures. Some access to beaches and shoreline.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**L:** 21 or more people encountered during a beach visit.	**M:** 11 to 20 people encountered on a beach visit.
Cost to your household per year	**$0**	**$175**	**$80**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____

_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 2, Choice 1

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in number of threatened and endangered and all 11 species removed from species of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.	**H:** A decrease in the number of threatened and endangered species and no species on list of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**M:** Occasionally seen.	**L:** Never seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**H:** Greater than 40 species. Rare species become less rare and more commonly seen. Invasive species are rarely or never seen.	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**L:** Distance from access point greater than 2 miles.	**H:** Distance form access point is 0.25 miles or less.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**H:** 0 to 13 beach closures for a total of 0 to 107 days of closure. 0 to 5 beach advisories with 0 to 40 beach days with advisories. All conditions meet health standards.	**M:** 14 to 26 beach closures for a total of108 to 215 days of closure. 6 to 10 beach advisories with 41 to 82 beach days with advisories. Conditions mostly meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**M:** Moderate amounts of debris or trash visible on the shore 1.6 lbs. per 100 feet of shoreline.	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**H:** No harmful algal blooms causing respiratory distress to beach and shoreline users. 31 to 58 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**H:** Low impact of development with no offshore structures and easy access to beaches and shores.	**M:** Limited to low intensity development with views partially obstructed by a few offshore structures. Some access to beaches and shoreline.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**H:** 0 to 10 people encountered on a beach visit.	**M:** 11 to 20 people encountered on a beach visit.
Cost to your household per year	**$0**	**$700**	**$175**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____

_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 2, Choice 2

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.	**H:** A decrease in number of threatened and endangered and all 11 species removed from species of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in the number of threatened and endangered species and no species on list of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**L:** Never seen.	**M:** Occasionally seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**H:** Greater than 40 species. Rare species become less rare and more commonly seen. Invasive species are rarely or never seen.	**M:** 20 to 40 species with no expected loss of species. Rare species are occasionally seen. Invasive species reduced but are occasionally seen.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**M:** Distance from access point is 0.25 to 2 miles.	**H:** Distance form access point is 0.25 miles or less.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**H:** 0 to 13 beach closures for a total of 0 to 107 days of closure. 0 to 5 beach advisories with 0 to 40 beach days with advisories. All conditions meet health standards.	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**H:** Minimal debris or trash visible on the shore 0.5lbs per 100 feet of shoreline.	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**M:** A few harmful algal blooms causing respiratory distress to beach and shoreline users. 16 to 30 beaches open for razor clam digging per year.	**H:** No harmful algal blooms causing respiratory distress to beach and shoreline users. 31 to 58 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**H:** Low impact of development with no offshore structures and easy access to beaches and shores.	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**H:** 0 to 10 people encountered on a beach visit.	**L:** 21 or more people encountered during a beach visit.
Cost to your household per year	**$0**	**$700**	**$350**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____

_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 2, Choice 3

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in number of threatened and endangered and all 11 species removed from species of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**M:** Occasionally seen.	**L:** Never seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**M:** 20 to 40 species with no expected loss of species. Rare species are occasionally seen. Invasive species reduced but are occasionally seen.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**H:** Distance form access point is 0.25 miles or less.	**M:** Distance from access point is 0.25 to 2 miles.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**H:** 0 to 13 beach closures for a total of 0 to 107 days of closure. 0 to 5 beach advisories with 0 to 40 beach days with advisories. All conditions meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**M:** Moderate amounts of debris or trash visible on the shore 1.6 lbs. per 100 feet of shoreline.	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**H:** No harmful algal blooms causing respiratory distress to beach and shoreline users. 31 to 58 beaches open for razor clam digging per year.	**M:** A few harmful algal blooms causing respiratory distress to beach and shoreline users. 16 to 30 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**M:** Limited to low intensity development with views partially obstructed by a few offshore structures. Some access to beaches and shoreline.	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**M:** 11 to 20 people encountered on a beach visit.	**L:** 21 or more people encountered during a beach visit.
Cost to your household per year	**$0**	**$350**	**$175**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____

_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 2, Choice 4

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in the number of threatened and endangered species and no species on list of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**M:** Occasionally seen.	**H:** Commonly seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**M:** 20 to 40 species with no expected loss of species. Rare species are occasionally seen. Invasive species reduced but are occasionally seen.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**H:** Distance form access point is 0.25 miles or less.	**L:** Distance from access point greater than 2 miles.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**H:** 0 to 13 beach closures for a total of 0 to 107 days of closure. 0 to 5 beach advisories with 0 to 40 beach days with advisories. All conditions meet health standards.	**M:** 14 to 26 beach closures for a total of108 to 215 days of closure. 6 to 10 beach advisories with 41 to 82 beach days with advisories. Conditions mostly meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**M:** Moderate amounts of debris or trash visible on the shore 1.6 lbs. per 100 feet of shoreline.	**H:** Minimal debris or trash visible on the shore 0.5lbs per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**H:** No harmful algal blooms causing respiratory distress to beach and shoreline users. 31 to 58 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**H:** Low impact of development with no offshore structures and easy access to beaches and shores.	**M:** Limited to low intensity development with views partially obstructed by a few offshore structures. Some access to beaches and shoreline.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**H:** 0 to 10 people encountered on a beach visit.	**M:** 11 to 20 people encountered on a beach visit.
Cost to your household per year	**$0**	**$350**	**$700**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____

_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 3, Choice 1

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.	**H:** A decrease in number of threatened and endangered and all 11 species removed from species of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.	**H:** A decrease in the number of threatened and endangered species and no species on list of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**L:** Never seen.	**H:** Commonly seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**M:** 20 to 40 species with no expected loss of species. Rare species are occasionally seen. Invasive species reduced but are occasionally seen.	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**H:** Distance form access point is 0.25 miles or less.	**M:** Distance from access point is 0.25 to 2 miles.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**M:** 14 to 26 beach closures for a total of108 to 215 days of closure. 6 to 10 beach advisories with 41 to 82 beach days with advisories. Conditions mostly meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**M:** Moderate amounts of debris or trash visible on the shore 1.6 lbs. per 100 feet of shoreline.	**H:** Minimal debris or trash visible on the shore 0.5lbs per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**M:** A few harmful algal blooms causing respiratory distress to beach and shoreline users. 16 to 30 beaches open for razor clam digging per year.	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**H:** Low impact of development with no offshore structures and easy access to beaches and shores.	**M:** Limited to low intensity development with views partially obstructed by a few offshore structures. Some access to beaches and shoreline.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**H:** 0 to 10 people encountered on a beach visit.	**M:** 11 to 20 people encountered on a beach visit.
Cost to your household per year	**$0**	**$175**	**$80**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____

_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 3, Choice 2

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in number of threatened and endangered and all 11 species removed from species of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.	**H:** A decrease in the number of threatened and endangered species and no species on list of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**M:** Occasionally seen.	**H:** Commonly seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**M:** 20 to 40 species with no expected loss of species. Rare species are occasionally seen. Invasive species reduced but are occasionally seen.	**H:** Greater than 40 species. Rare species become less rare and more commonly seen. Invasive species are rarely or never seen.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**L:** Distance from access point greater than 2 miles.	**M:** Distance from access point is 0.25 to 2 miles.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**H:** 0 to 13 beach closures for a total of 0 to 107 days of closure. 0 to 5 beach advisories with 0 to 40 beach days with advisories. All conditions meet health standards.	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**H:** Minimal debris or trash visible on the shore 0.5lbs per 100 feet of shoreline.	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**H:** No harmful algal blooms causing respiratory distress to beach and shoreline users. 31 to 58 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**M:** Limited to low intensity development with views partially obstructed by a few offshore structures. Some access to beaches and shoreline.	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**M:** 11 to 20 people encountered on a beach visit.	**L:** 21 or more people encountered during a beach visit.
Cost to your household per year	**$0**	**$175**	**$350**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____

_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 3, Choice 3

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in number of threatened and endangered and all 11 species removed from species of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in the number of threatened and endangered species and no species on list of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**M:** Occasionally seen.	**H:** Commonly seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**M:** 20 to 40 species with no expected loss of species. Rare species are occasionally seen. Invasive species reduced but are occasionally seen.	**H:** Greater than 40 species. Rare species become less rare and more commonly seen. Invasive species are rarely or never seen.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**M:** Distance from access point is 0.25 to 2 miles.	**H:** Distance form access point is 0.25 miles or less.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**M:** 14 to 26 beach closures for a total of108 to 215 days of closure. 6 to 10 beach advisories with 41 to 82 beach days with advisories. Conditions mostly meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**H:** Minimal debris or trash visible on the shore 0.5lbs per 100 feet of shoreline.	**M:** Moderate amounts of debris or trash visible on the shore 1.6 lbs. per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**M:** A few harmful algal blooms causing respiratory distress to beach and shoreline users. 16 to 30 beaches open for razor clam digging per year.	**H:** No harmful algal blooms causing respiratory distress to beach and shoreline users. 31 to 58 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**M:** Limited to low intensity development with views partially obstructed by a few offshore structures. Some access to beaches and shoreline.	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**M:** 11 to 20 people encountered on a beach visit.	**L:** 21 or more people encountered during a beach visit.
Cost to your household per year	**$0**	**$350**	**$175**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____

_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 3, Choice 4

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in the number of threatened and endangered species and no species on list of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**M:** Occasionally seen.	**H:** Commonly seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**M:** 20 to 40 species with no expected loss of species. Rare species are occasionally seen. Invasive species reduced but are occasionally seen.	**H:** Greater than 40 species. Rare species become less rare and more commonly seen. Invasive species are rarely or never seen.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**M:** Distance from access point is 0.25 to 2 miles.	**L:** Distance from access point greater than 2 miles.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**M:** 14 to 26 beach closures for a total of108 to 215 days of closure. 6 to 10 beach advisories with 41 to 82 beach days with advisories. Conditions mostly meet health standards.	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**H:** Minimal debris or trash visible on the shore 0.5lbs per 100 feet of shoreline.	**M:** Moderate amounts of debris or trash visible on the shore 1.6 lbs. per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**H:** No harmful algal blooms causing respiratory distress to beach and shoreline users. 31 to 58 beaches open for razor clam digging per year.	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**M:** Limited to low intensity development with views partially obstructed by a few offshore structures. Some access to beaches and shoreline.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**L:** 21 or more people encountered during a beach visit.	**M:** 11 to 20 people encountered on a beach visit.
Cost to your household per year	**$0**	**$20**	**$80**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____

_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 4, Choice 1

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in number of threatened and endangered and all 11 species removed from species of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in the number of threatened and endangered species and no species on list of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**L:** Never seen.	**H:** Commonly seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**M:** 20 to 40 species with no expected loss of species. Rare species are occasionally seen. Invasive species reduced but are occasionally seen.	**H:** Greater than 40 species. Rare species become less rare and more commonly seen. Invasive species are rarely or never seen.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**M:** Distance from access point is 0.25 to 2 miles.	**L:** Distance from access point greater than 2 miles.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**M:** 14 to 26 beach closures for a total of108 to 215 days of closure. 6 to 10 beach advisories with 41 to 82 beach days with advisories. Conditions mostly meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**M:** Moderate amounts of debris or trash visible on the shore 1.6 lbs. per 100 feet of shoreline.	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**H:** No harmful algal blooms causing respiratory distress to beach and shoreline users. 31 to 58 beaches open for razor clam digging per year.	**M:** A few harmful algal blooms causing respiratory distress to beach and shoreline users. 16 to 30 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**H:** Low impact of development with no offshore structures and easy access to beaches and shores.	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**H:** 0 to 10 people encountered on a beach visit.	**L:** 21 or more people encountered during a beach visit.
Cost to your household per year	**$0**	**$80**	**$40**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____

_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 4, Choice 2

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in the number of threatened and endangered species and no species on list of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**H:** Commonly seen.	**L:** Never seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**M:** 20 to 40 species with no expected loss of species. Rare species are occasionally seen. Invasive species reduced but are occasionally seen.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**M:** Distance from access point is 0.25 to 2 miles.	**H:** Distance form access point is 0.25 miles or less.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**M:** 14 to 26 beach closures for a total of108 to 215 days of closure. 6 to 10 beach advisories with 41 to 82 beach days with advisories. Conditions mostly meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**H:** Minimal debris or trash visible on the shore 0.5lbs per 100 feet of shoreline.	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**H:** No harmful algal blooms causing respiratory distress to beach and shoreline users. 31 to 58 beaches open for razor clam digging per year.	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**M:** Limited to low intensity development with views partially obstructed by a few offshore structures. Some access to beaches and shoreline.	**H:** Low impact of development with no offshore structures and easy access to beaches and shores.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**M:** 11 to 20 people encountered on a beach visit.	**H:** 0 to 10 people encountered on a beach visit.
Cost to your household per year	**$0**	**$20**	**$40**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____
_____
_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 4, Choice 3

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in number of threatened and endangered and all 11 species removed from species of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in the number of threatened and endangered species and no species on list of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**M:** Occasionally seen.	**H:** Commonly seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**M:** 20 to 40 species with no expected loss of species. Rare species are occasionally seen. Invasive species reduced but are occasionally seen.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**L:** Distance from access point greater than 2 miles.	**H:** Distance form access point is 0.25 miles or less.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**M:** 14 to 26 beach closures for a total of108 to 215 days of closure. 6 to 10 beach advisories with 41 to 82 beach days with advisories. Conditions mostly meet health standards.	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**M:** Moderate amounts of debris or trash visible on the shore 1.6 lbs. per 100 feet of shoreline.	**H:** Minimal debris or trash visible on the shore 0.5lbs per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**M:** A few harmful algal blooms causing respiratory distress to beach and shoreline users. 16 to 30 beaches open for razor clam digging per year.	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**H:** Low impact of development with no offshore structures and easy access to beaches and shores.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**L:** 21 or more people encountered during a beach visit.	**H:** 0 to 10 people encountered on a beach visit.
Cost to your household per year	**$0**	**$40**	**$80**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____

_____

_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 4, Choice 4

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in the number of threatened and endangered species and no species on list of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**M:** Occasionally seen.	**H:** Commonly seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**H:** Greater than 40 species. Rare species become less rare and more commonly seen. Invasive species are rarely or never seen.	**M:** 20 to 40 species with no expected loss of species. Rare species are occasionally seen. Invasive species reduced but are occasionally seen.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**M:** Distance from access point is 0.25 to 2 miles.	**L:** Distance from access point greater than 2 miles.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**H:** 0 to 13 beach closures for a total of 0 to 107 days of closure. 0 to 5 beach advisories with 0 to 40 beach days with advisories. All conditions meet health standards.	**M:** 14 to 26 beach closures for a total of108 to 215 days of closure. 6 to 10 beach advisories with 41 to 82 beach days with advisories. Conditions mostly meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**M:** Moderate amounts of debris or trash visible on the shore 1.6 lbs. per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**H:** No harmful algal blooms causing respiratory distress to beach and shoreline users. 31 to 58 beaches open for razor clam digging per year.	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**M:** Limited to low intensity development with views partially obstructed by a few offshore structures. Some access to beaches and shoreline.	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**M:** 11 to 20 people encountered on a beach visit.	**L:** 21 or more people encountered during a beach visit.
Cost to your household per year	**$0**	**$40**	**$20**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____

_____

_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 5, Choice 1

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in number of threatened and endangered and all 11 species removed from species of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in the number of threatened and endangered species and no species on list of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**L:** Never seen.	**H:** Commonly seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**M:** 20 to 40 species with no expected loss of species. Rare species are occasionally seen. Invasive species reduced but are occasionally seen.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**L:** Distance from access point greater than 2 miles.	**H:** Distance form access point is 0.25 miles or less.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**M:** 14 to 26 beach closures for a total of108 to 215 days of closure. 6 to 10 beach advisories with 41 to 82 beach days with advisories. Conditions mostly meet health standards.	**H:** 0 to 13 beach closures for a total of 0 to 107 days of closure. 0 to 5 beach advisories with 0 to 40 beach days with advisories. All conditions meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**H:** Minimal debris or trash visible on the shore 0.5lbs per 100 feet of shoreline.	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**H:** No harmful algal blooms causing respiratory distress to beach and shoreline users. 31 to 58 beaches open for razor clam digging per year.	**M:** A few harmful algal blooms causing respiratory distress to beach and shoreline users. 16 to 30 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**H:** Low impact of development with no offshore structures and easy access to beaches and shores.	**M:** Limited to low intensity development with views partially obstructed by a few offshore structures. Some access to beaches and shoreline.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**H:** 0 to 10 people encountered on a beach visit.	**M:** 11 to 20 people encountered on a beach visit.
Cost to your household per year	**$0**	**$175**	**$350**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____
_____
_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 5, Choice 2

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.	**H:** A decrease in number of threatened and endangered and all 11 species removed from species of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in the number of threatened and endangered species and no species on list of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**M:** Occasionally seen.	**H:** Commonly seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**M:** 20 to 40 species with no expected loss of species. Rare species are occasionally seen. Invasive species reduced but are occasionally seen.	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**H:** Distance form access point is 0.25 miles or less.	**L:** Distance from access point greater than 2 miles.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**H:** 0 to 13 beach closures for a total of 0 to 107 days of closure. 0 to 5 beach advisories with 0 to 40 beach days with advisories. All conditions meet health standards.	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**M:** Moderate amounts of debris or trash visible on the shore 1.6 lbs. per 100 feet of shoreline.	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**H:** No harmful algal blooms causing respiratory distress to beach and shoreline users. 31 to 58 beaches open for razor clam digging per year.	**M:** A few harmful algal blooms causing respiratory distress to beach and shoreline users. 16 to 30 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**H:** Low impact of development with no offshore structures and easy access to beaches and shores.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**L:** 21 or more people encountered during a beach visit.	**H:** 0 to 10 people encountered on a beach visit.
Cost to your household per year	**$0**	**$700**	**$175**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____
_____
_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 5, Choice 3

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.	**H:** A decrease in number of threatened and endangered and all 11 species removed from species of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**M:** Occasionally seen.	**H:** Commonly seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**H:** Greater than 40 species. Rare species become less rare and more commonly seen. Invasive species are rarely or never seen.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**M:** Distance from access point is 0.25 to 2 miles.	**L:** Distance from access point greater than 2 miles.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**M:** 14 to 26 beach closures for a total of108 to 215 days of closure. 6 to 10 beach advisories with 41 to 82 beach days with advisories. Conditions mostly meet health standards.	**H:** 0 to 13 beach closures for a total of 0 to 107 days of closure. 0 to 5 beach advisories with 0 to 40 beach days with advisories. All conditions meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**M:** Moderate amounts of debris or trash visible on the shore 1.6 lbs. per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**M:** A few harmful algal blooms causing respiratory distress to beach and shoreline users. 16 to 30 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**H:** Low impact of development with no offshore structures and easy access to beaches and shores.	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**H:** 0 to 10 people encountered on a beach visit.	**L:** 21 or more people encountered during a beach visit.
Cost to your household per year	**$0**	**$175**	**$80**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____
_____
_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 5, Choice 4

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**M:** Occasionally seen.	**H:** Commonly seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**H:** Greater than 40 species. Rare species become less rare and more commonly seen. Invasive species are rarely or never seen.	**M:** 20 to 40 species with no expected loss of species. Rare species are occasionally seen. Invasive species reduced but are occasionally seen.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**L:** Distance from access point greater than 2 miles.	**M:** Distance from access point is 0.25 to 2 miles.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**M:** 14 to 26 beach closures for a total of108 to 215 days of closure. 6 to 10 beach advisories with 41 to 82 beach days with advisories. Conditions mostly meet health standards.	**H:** 0 to 13 beach closures for a total of 0 to 107 days of closure. 0 to 5 beach advisories with 0 to 40 beach days with advisories. All conditions meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**H:** Minimal debris or trash visible on the shore 0.5lbs per 100 feet of shoreline.	**M:** Moderate amounts of debris or trash visible on the shore 1.6 lbs. per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**H:** No harmful algal blooms causing respiratory distress to beach and shoreline users. 31 to 58 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**H:** Low impact of development with no offshore structures and easy access to beaches and shores.	**M:** Limited to low intensity development with views partially obstructed by a few offshore structures. Some access to beaches and shoreline.

Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**H:** 0 to 10 people encountered on a beach visit.	**M:** 11 to 20 people encountered on a beach visit.
Cost to your household per year	**$0**	**$350**	**$700**
Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____

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_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 6, Choice 1

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**H:** Commonly seen.	**L:** Never seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**H:** Greater than 40 species. Rare species become less rare and more commonly seen. Invasive species are rarely or never seen.	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**M:** Distance from access point is 0.25 to 2 miles.	**H:** Distance form access point is 0.25 miles or less.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**H:** 0 to 13 beach closures for a total of 0 to 107 days of closure. 0 to 5 beach advisories with 0 to 40 beach days with advisories. All conditions meet health standards.	**M:** 14 to 26 beach closures for a total of108 to 215 days of closure. 6 to 10 beach advisories with 41 to 82 beach days with advisories. Conditions mostly meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**M:** Moderate amounts of debris or trash visible on the shore 1.6 lbs. per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**H:** No harmful algal blooms causing respiratory distress to beach and shoreline users. 31 to 58 beaches open for razor clam digging per year.	**M:** A few harmful algal blooms causing respiratory distress to beach and shoreline users. 16 to 30 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**H:** Low impact of development with no offshore structures and easy access to beaches and shores.	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**H:** 0 to 10 people encountered on a beach visit.	**L:** 21 or more people encountered during a beach visit.
Cost to your household per year	**$0**	**$40**	**$80**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____
_____
_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 6, Choice 2

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**M:** Occasionally seen.	**H:** Commonly seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**H:** Greater than 40 species. Rare species become less rare and more commonly seen. Invasive species are rarely or never seen.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**H:** Distance form access point is 0.25 miles or less.	**M:** Distance from access point is 0.25 to 2 miles.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**H:** 0 to 13 beach closures for a total of 0 to 107 days of closure. 0 to 5 beach advisories with 0 to 40 beach days with advisories. All conditions meet health standards.	**M:** 14 to 26 beach closures for a total of108 to 215 days of closure. 6 to 10 beach advisories with 41 to 82 beach days with advisories. Conditions mostly meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**M:** Moderate amounts of debris or trash visible on the shore 1.6 lbs. per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**M:** A few harmful algal blooms causing respiratory distress to beach and shoreline users. 16 to 30 beaches open for razor clam digging per year.	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**M:** Limited to low intensity development with views partially obstructed by a few offshore structures. Some access to beaches and shoreline.	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**M:** 11 to 20 people encountered on a beach visit.	**L:** 21 or more people encountered during a beach visit.
Cost to your household per year	**$0**	**$80**	**$175**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____
_____
_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 6, Choice 3

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in number of threatened and endangered and all 11 species removed from species of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in the number of threatened and endangered species and no species on list of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**M:** Occasionally seen.	**L:** Never seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**H:** Greater than 40 species. Rare species become less rare and more commonly seen. Invasive species are rarely or never seen.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**M:** Distance from access point is 0.25 to 2 miles.	**H:** Distance form access point is 0.25 miles or less.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**M:** 14 to 26 beach closures for a total of108 to 215 days of closure. 6 to 10 beach advisories with 41 to 82 beach days with advisories. Conditions mostly meet health standards.	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**M:** Moderate amounts of debris or trash visible on the shore 1.6 lbs. per 100 feet of shoreline.	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**M:** A few harmful algal blooms causing respiratory distress to beach and shoreline users. 16 to 30 beaches open for razor clam digging per year.	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**M:** Limited to low intensity development with views partially obstructed by a few offshore structures. Some access to beaches and shoreline.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**L:** 21 or more people encountered during a beach visit.	**M:** 11 to 20 people encountered on a beach visit.
Cost to your household per year	**$0**	**$80**	**$20**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____
_____
_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 6, Choice 4

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in number of threatened and endangered and all 11 species removed from species of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**L:** Never seen.	**M:** Occasionally seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**H:** Greater than 40 species. Rare species become less rare and more commonly seen. Invasive species are rarely or never seen.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**M:** Distance from access point is 0.25 to 2 miles.	**L:** Distance from access point greater than 2 miles.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**M:** 14 to 26 beach closures for a total of108 to 215 days of closure. 6 to 10 beach advisories with 41 to 82 beach days with advisories. Conditions mostly meet health standards.	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**M:** Moderate amounts of debris or trash visible on the shore 1.6 lbs. per 100 feet of shoreline.	**H:** Minimal debris or trash visible on the shore 0.5lbs per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**H:** No harmful algal blooms causing respiratory distress to beach and shoreline users. 31 to 58 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**M:** Limited to low intensity development with views partially obstructed by a few offshore structures. Some access to beaches and shoreline.	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**M:** 11 to 20 people encountered on a beach visit.	**L:** 21 or more people encountered during a beach visit.
Cost to your household per year	**$0**	**$40**	**$80**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____
_____
_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 7, Choice 1

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in number of threatened and endangered and all 11 species removed from species of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.	**H:** A decrease in the number of threatened and endangered species and no species on list of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**H:** Commonly seen.	**L:** Never seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**H:** Greater than 40 species. Rare species become less rare and more commonly seen. Invasive species are rarely or never seen.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**H:** Distance form access point is 0.25 miles or less.	**M:** Distance from access point is 0.25 to 2 miles.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**M:** 14 to 26 beach closures for a total of108 to 215 days of closure. 6 to 10 beach advisories with 41 to 82 beach days with advisories. Conditions mostly meet health standards.	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**H:** Minimal debris or trash visible on the shore 0.5lbs per 100 feet of shoreline.	**M:** Moderate amounts of debris or trash visible on the shore 1.6 lbs. per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**H:** No harmful algal blooms causing respiratory distress to beach and shoreline users. 31 to 58 beaches open for razor clam digging per year.	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**H:** Low impact of development with no offshore structures and easy access to beaches and shores.	**M:** Limited to low intensity development with views partially obstructed by a few offshore structures. Some access to beaches and shoreline.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**H:** 0 to 10 people encountered on a beach visit.	**M:** 11 to 20 people encountered on a beach visit.
Cost to your household per year	**$0**	**$700**	**$350**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____

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_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 7, Choice 2

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in number of threatened and endangered and all 11 species removed from species of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in the number of threatened and endangered species and no species on list of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**L:** Never seen.	**M:** Occasionally seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**M:** 20 to 40 species with no expected loss of species. Rare species are occasionally seen. Invasive species reduced but are occasionally seen.	**H:** Greater than 40 species. Rare species become less rare and more commonly seen. Invasive species are rarely or never seen.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**L:** Distance from access point greater than 2 miles.	**H:** Distance form access point is 0.25 miles or less.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**H:** 0 to 13 beach closures for a total of 0 to 107 days of closure. 0 to 5 beach advisories with 0 to 40 beach days with advisories. All conditions meet health standards.	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**M:** Moderate amounts of debris or trash visible on the shore 1.6 lbs. per 100 feet of shoreline.	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**H:** No harmful algal blooms causing respiratory distress to beach and shoreline users. 31 to 58 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**H:** Low impact of development with no offshore structures and easy access to beaches and shores.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**L:** 21 or more people encountered during a beach visit.	**H:** 0 to 10 people encountered on a beach visit.
Cost to your household per year	**$0**	**$350**	**$175**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____

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_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 7, Choice 3

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in number of threatened and endangered and all 11 species removed from species of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in the number of threatened and endangered species and no species on list of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**H:** Commonly seen.	**L:** Never seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**M:** 20 to 40 species with no expected loss of species. Rare species are occasionally seen. Invasive species reduced but are occasionally seen.	**H:** Greater than 40 species. Rare species become less rare and more commonly seen. Invasive species are rarely or never seen.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**L:** Distance from access point greater than 2 miles.	**H:** Distance form access point is 0.25 miles or less.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**H:** 0 to 13 beach closures for a total of 0 to 107 days of closure. 0 to 5 beach advisories with 0 to 40 beach days with advisories. All conditions meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**M:** Moderate amounts of debris or trash visible on the shore 1.6 lbs. per 100 feet of shoreline.	**H:** Minimal debris or trash visible on the shore 0.5lbs per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**H:** No harmful algal blooms causing respiratory distress to beach and shoreline users. 31 to 58 beaches open for razor clam digging per year.	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**H:** Low impact of development with no offshore structures and easy access to beaches and shores.	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**H:** 0 to 10 people encountered on a beach visit.	**L:** 21 or more people encountered during a beach visit.
Cost to your household per year	**$0**	**$175**	**$80**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____
_____
_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 7, Choice 4

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in number of threatened and endangered and all 11 species removed from species of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.	**H:** A decrease in the number of threatened and endangered species and no species on list of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**M:** Occasionally seen.	**H:** Commonly seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**H:** Greater than 40 species. Rare species become less rare and more commonly seen. Invasive species are rarely or never seen.	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**M:** Distance from access point is 0.25 to 2 miles.	**L:** Distance from access point greater than 2 miles.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**H:** 0 to 13 beach closures for a total of 0 to 107 days of closure. 0 to 5 beach advisories with 0 to 40 beach days with advisories. All conditions meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**H:** Minimal debris or trash visible on the shore 0.5lbs per 100 feet of shoreline.	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**M:** A few harmful algal blooms causing respiratory distress to beach and shoreline users. 16 to 30 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**M:** Limited to low intensity development with views partially obstructed by a few offshore structures. Some access to beaches and shoreline.	**H:** Low impact of development with no offshore structures and easy access to beaches and shores.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**M:** 11 to 20 people encountered on a beach visit.	**H:** 0 to 10 people encountered on a beach visit.
Cost to your household per year	**$0**	**$40**	**$20**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____
_____
_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 8, Choice 1

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.	**H:** A decrease in number of threatened and endangered and all 11 species removed from species of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**H:** Commonly seen.	**M:** Occasionally seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**H:** Greater than 40 species. Rare species become less rare and more commonly seen. Invasive species are rarely or never seen.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**M:** Distance from access point is 0.25 to 2 miles.	**L:** Distance from access point greater than 2 miles.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**H:** 0 to 13 beach closures for a total of 0 to 107 days of closure. 0 to 5 beach advisories with 0 to 40 beach days with advisories. All conditions meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**H:** Minimal debris or trash visible on the shore 0.5lbs per 100 feet of shoreline.	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**H:** No harmful algal blooms causing respiratory distress to beach and shoreline users. 31 to 58 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**H:** Low impact of development with no offshore structures and easy access to beaches and shores.	**M:** Limited to low intensity development with views partially obstructed by a few offshore structures. Some access to beaches and shoreline.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**H:** 0 to 10 people encountered on a beach visit.	**M:** 11 to 20 people encountered on a beach visit.
Cost to your household per year	**$0**	**$350**	**$175**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____

_____

_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 8, Choice 2

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.	**H:** A decrease in number of threatened and endangered and all 11 species removed from species of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**L:** Never seen.	**M:** Occasionally seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**M:** 20 to 40 species with no expected loss of species. Rare species are occasionally seen. Invasive species reduced but are occasionally seen.	**H:** Greater than 40 species. Rare species become less rare and more commonly seen. Invasive species are rarely or never seen.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**L:** Distance from access point greater than 2 miles.	**M:** Distance from access point is 0.25 to 2 miles.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**H:** 0 to 13 beach closures for a total of 0 to 107 days of closure. 0 to 5 beach advisories with 0 to 40 beach days with advisories. All conditions meet health standards.	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**H:** Minimal debris or trash visible on the shore 0.5lbs per 100 feet of shoreline.	**M:** Moderate amounts of debris or trash visible on the shore 1.6 lbs. per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**H:** No harmful algal blooms causing respiratory distress to beach and shoreline users. 31 to 58 beaches open for razor clam digging per year.	**M:** A few harmful algal blooms causing respiratory distress to beach and shoreline users. 16 to 30 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**M:** Limited to low intensity development with views partially obstructed by a few offshore structures. Some access to beaches and shoreline.	**H:** Low impact of development with no offshore structures and easy access to beaches and shores.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**M:** 11 to 20 people encountered on a beach visit.	**H:** 0 to 10 people encountered on a beach visit.
Cost to your household per year	**$0**	**$350**	**$700**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____
_____
_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 8, Choice 3

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in the number of threatened and endangered species and no species on list of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**L:** Never seen.	**M:** Occasionally seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**M:** 20 to 40 species with no expected loss of species. Rare species are occasionally seen. Invasive species reduced but are occasionally seen.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**M:** Distance from access point is 0.25 to 2 miles.	**H:** Distance form access point is 0.25 miles or less.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**H:** 0 to 13 beach closures for a total of 0 to 107 days of closure. 0 to 5 beach advisories with 0 to 40 beach days with advisories. All conditions meet health standards.	**M:** 14 to 26 beach closures for a total of108 to 215 days of closure. 6 to 10 beach advisories with 41 to 82 beach days with advisories. Conditions mostly meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**H:** Minimal debris or trash visible on the shore 0.5lbs per 100 feet of shoreline.	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**M:** A few harmful algal blooms causing respiratory distress to beach and shoreline users. 16 to 30 beaches open for razor clam digging per year.	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**H:** Low impact of development with no offshore structures and easy access to beaches and shores.	**M:** Limited to low intensity development with views partially obstructed by a few offshore structures. Some access to beaches and shoreline.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**H:** 0 to 10 people encountered on a beach visit.	**M:** 11 to 20 people encountered on a beach visit.
Cost to your household per year	**$0**	**$350**	**$700**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____

_____

_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 8, Choice 4

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in number of threatened and endangered and all 11 species removed from species of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**H:** Commonly seen.	**M:** Occasionally seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**M:** 20 to 40 species with no expected loss of species. Rare species are occasionally seen. Invasive species reduced but are occasionally seen.	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**H:** Distance form access point is 0.25 miles or less.	**M:** Distance from access point is 0.25 to 2 miles.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**M:** 14 to 26 beach closures for a total of108 to 215 days of closure. 6 to 10 beach advisories with 41 to 82 beach days with advisories. Conditions mostly meet health standards.	**H:** 0 to 13 beach closures for a total of 0 to 107 days of closure. 0 to 5 beach advisories with 0 to 40 beach days with advisories. All conditions meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**H:** Minimal debris or trash visible on the shore 0.5lbs per 100 feet of shoreline.	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**M:** A few harmful algal blooms causing respiratory distress to beach and shoreline users. 16 to 30 beaches open for razor clam digging per year.	**H:** No harmful algal blooms causing respiratory distress to beach and shoreline users. 31 to 58 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**H:** Low impact of development with no offshore structures and easy access to beaches and shores.	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**H:** 0 to 10 people encountered on a beach visit.	**L:** 21 or more people encountered during a beach visit.
Cost to your household per year	**$0**	**$700**	**$350**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____

_____

_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 9, Choice 1

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**L:** Never seen.	**H:** Commonly seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**H:** Greater than 40 species. Rare species become less rare and more commonly seen. Invasive species are rarely or never seen.	**M:** 20 to 40 species with no expected loss of species. Rare species are occasionally seen. Invasive species reduced but are occasionally seen.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**M:** Distance from access point is 0.25 to 2 miles.	**H:** Distance form access point is 0.25 miles or less.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**M:** 14 to 26 beach closures for a total of108 to 215 days of closure. 6 to 10 beach advisories with 41 to 82 beach days with advisories. Conditions mostly meet health standards.	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**H:** Minimal debris or trash visible on the shore 0.5lbs per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**M:** A few harmful algal blooms causing respiratory distress to beach and shoreline users. 16 to 30 beaches open for razor clam digging per year.	**H:** No harmful algal blooms causing respiratory distress to beach and shoreline users. 31 to 58 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**M:** Limited to low intensity development with views partially obstructed by a few offshore structures. Some access to beaches and shoreline.	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**M:** 11 to 20 people encountered on a beach visit.	**L:** 21 or more people encountered during a beach visit.
Cost to your household per year	**$0**	**$80**	**$40**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____
_____
_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 9, Choice 2

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in number of threatened and endangered and all 11 species removed from species of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.	**H:** A decrease in the number of threatened and endangered species and no species on list of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**L:** Never seen.	**M:** Occasionally seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**H:** Greater than 40 species. Rare species become less rare and more commonly seen. Invasive species are rarely or never seen.	**M:** 20 to 40 species with no expected loss of species. Rare species are occasionally seen. Invasive species reduced but are occasionally seen.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**H:** Distance form access point is 0.25 miles or less.	**L:** Distance from access point greater than 2 miles.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**H:** 0 to 13 beach closures for a total of 0 to 107 days of closure. 0 to 5 beach advisories with 0 to 40 beach days with advisories. All conditions meet health standards.	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**H:** Minimal debris or trash visible on the shore 0.5lbs per 100 feet of shoreline.	**M:** Moderate amounts of debris or trash visible on the shore 1.6 lbs. per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**H:** No harmful algal blooms causing respiratory distress to beach and shoreline users. 31 to 58 beaches open for razor clam digging per year.	**M:** A few harmful algal blooms causing respiratory distress to beach and shoreline users. 16 to 30 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**M:** Limited to low intensity development with views partially obstructed by a few offshore structures. Some access to beaches and shoreline.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**L:** 21 or more people encountered during a beach visit.	**M:** 11 to 20 people encountered on a beach visit.
Cost to your household per year	**$0**	**$175**	**$80**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____

_____

_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 9, Choice 3

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**L:** Never seen.	**H:** Commonly seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**M:** 20 to 40 species with no expected loss of species. Rare species are occasionally seen. Invasive species reduced but are occasionally seen.	**H:** Greater than 40 species. Rare species become less rare and more commonly seen. Invasive species are rarely or never seen.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**L:** Distance from access point greater than 2 miles.	**H:** Distance form access point is 0.25 miles or less.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**H:** 0 to 13 beach closures for a total of 0 to 107 days of closure. 0 to 5 beach advisories with 0 to 40 beach days with advisories. All conditions meet health standards.	**M:** 14 to 26 beach closures for a total of108 to 215 days of closure. 6 to 10 beach advisories with 41 to 82 beach days with advisories. Conditions mostly meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**H:** Minimal debris or trash visible on the shore 0.5lbs per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**H:** No harmful algal blooms causing respiratory distress to beach and shoreline users. 31 to 58 beaches open for razor clam digging per year.	**M:** A few harmful algal blooms causing respiratory distress to beach and shoreline users. 16 to 30 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**H:** Low impact of development with no offshore structures and easy access to beaches and shores.	**M:** Limited to low intensity development with views partially obstructed by a few offshore structures. Some access to beaches and shoreline.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**H:** 0 to 10 people encountered on a beach visit.	**M:** 11 to 20 people encountered on a beach visit.
Cost to your household per year	**$0**	**$80**	**$175**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____

_____

_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

Version 9, Choice 4

Attributes	A: Status Quo	Scenario B	Scenario C
Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.	**H:** A decrease in number of threatened and endangered and all 11 species removed from species of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.	**L:** Currently 29 species; 8 endangered or threatened; 11 on list of species of concern; Expect future loss in number of species. Rare species never seen. Populations affected by human disturbances to the point of declining and unsustainable populations.
Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** Currently 19 species nest here and many more migrate through the area;5 endangered or threatened; 9 on list of species of concern; Expect future loss in number of species. Populations affected by human disturbances to the point of declining and unsustainable populations.	**M:** No increase in threatened and endangered species or loss of species. Rare species occasionally seen. Human disturbances reduced with half of the populations of all species with stable and sustainable populations.	**H:** A decrease in the number of threatened and endangered species and no species on list of concern. Rare species become less rare and more commonly seen. Human disturbances reduced to the point with all species with sustainable populations.
Opportunity to see large predators such as killer whales, sharks, etc.	**L:** Never seen.	**H:** Commonly seen.	**L:** Never seen.
Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	**L:** 10 to 20 species. Expect significant loss of species. Rare species never seen. Invasive species common.	**M:** 20 to 40 species with no expected loss of species. Rare species are occasionally seen. Invasive species reduced but are occasionally seen.	**H:** Greater than 40 species. Rare species become less rare and more commonly seen. Invasive species are rarely or never seen.
Tide Pool Access	**L:** Distance from access point greater than 2 miles.	**M:** Distance from access point is 0.25 to 2 miles.	**L:** Distance from access point greater than 2 miles.
Clean water (no to low pollutants) to support water-based activities	**L:** 27 to 40 beach closures for a total of 216 to 323 days of closure. 11 to 15 beach advisories with 83 to 124 beach days with advisories. Conditions generally do not meet health standards.	**H:** 0 to 13 beach closures for a total of 0 to 107 days of closure. 0 to 5 beach advisories with 0 to 40 beach days with advisories. All conditions meet health standards.	**M:** 14 to 26 beach closures for a total of108 to 215 days of closure. 6 to 10 beach advisories with 41 to 82 beach days with advisories. Conditions mostly meet health standards.
Beach and shoreline quality (absence of debris/garbage)	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**L:** Large amounts of debris or trash visible on the shore 3.25 lbs. per 100 feet of shoreline.	**H:** Minimal debris or trash visible on the shore 0.5lbs per 100 feet of shoreline.
Beach and shoreline quality (absence of harmful algal blooms)	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**L:** Numerous harmful algal blooms causing respiratory distress to beach and shoreline users. 0 to 15 beaches open for razor clam digging per year.	**H:** No harmful algal blooms causing respiratory distress to beach and shoreline users. 31 to 58 beaches open for razor clam digging per year.
Views not obstructed by onshore or offshore development	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**L:** Currently low development with no obstructed views. Low condition would be medium to high development on land and offshore development such as wind or wave energy. Limited or no access to the beach or shorelines.	**H:** Low impact of development with no offshore structures and easy access to beaches and shores.
Uncrowded by other recreational users	**L:** 21 or more people encountered during a beach visit.	**L:** 21 or more people encountered during a beach visit.	**H:** 0 to 10 people encountered on a beach visit.
Cost to your household per year	**$0**	**$175**	**$350**

Your preferred choice (check box)	☐	☐	☐

How many days per year would you visit the Outer Coast for the choice you just made? _____ (Number of days)

Please provide a brief comment that helps us understand why you chose the option you most preferred.

_____

_____

_____

How sure are you of the choice you just made? (Check one)

__ Not sure at all
__ Slightly sure
__ Moderately sure
__ Very sure
__ Extremely sure

E. Descriptive Statistics

Table E.1 Descriptive Statistics for the Nine Natural Resource Attributes: All Observations-Linear Coding

Variable Name	*Survey Question*	*Description*	*Values*[1]	*Mean*	*Standard Error*	*Min*	*Max*	*N*
MARINE_M	Choice Question	Variable for Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	0 = Status Quo, 1= Medium, 2 = High	0.698	0.007	0	2	12,531
SEABIRDS	Choice Question	Variable for Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	0 = Status Quo, 1= Medium, 2 = High	0.671	0.007	0	2	12,531
PREDATOR	Choice Question	Variable for Predators: Opportunity to see large predators such as killer whales, sharks, etc.	0 = Status Quo, 1= Medium, 2 = High	0.661	0.007	0	2	12,531
TIDE_POO	Choice Question	Variable for Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	0 = Status Quo, 1= Medium, 2 = High	0.694	0.007	0	2	12,531
TIDE_POA	Choice Question	Variable for Tide Pool Access	0 = Status Quo, 1= Medium, 2 = High	0.702	0.007	0	2	12,531
CLEAN_WA	Choice Question	Variable for Water Quality: Clean water (no to low pollutants) to support water-based activities	0 = Status Quo, 1= Medium, 2 = High	0.684	0.007	0	2	12,531
SHORELIN	Choice Question	Variable for Beach and shoreline quality: (absence of debris/garbage)	0 = Status Quo, 1= Medium, 2 = High	0.687	0.007	0	2	12,531
HABS	Choice Question	Variable for Beach and shoreline quality: (absence of harmful algal blooms)	0 = Status Quo, 1= Medium, 2 = High	0.713	0.007	0	2	12,531
DEVELOPM	Choice Question	Variable for Views: not obstructed by onshore or offshore development	0 = Status Quo, 1= Medium, 2 = High	0.687	0.007	0	2	12,531

1. See Table 3.1 for definition of Status Quo, Medium and High conditions.

Table E.2 Descriptive Statistics for the Nine Natural Resource Attributes: Non-Protestors Observations-Linear Coding

Variable Name	*Survey Question*	*Description*	*Values*[1]	*Mean*	*Standard Error*	*Min*	*Max*	*N*
MARINE_M	Choice Question	Variable for Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	0 = Status Quo, 1= Medium, 2 = High	0.699	0.008	0	2	11,175
SEABIRDS	Choice Question	Variable for Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	0 = Status Quo, 1= Medium, 2 = High	0.671	0.008	0	2	11,175
PREDATOR	Choice Question	Variable for Predators: Opportunity to see large predators such as killer whales, sharks, etc.	0 = Status Quo, 1= Medium, 2 = High	0.659	0.008	0	2	11,175
TIDE_POO	Choice Question	Variable for Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	0 = Status Quo, 1= Medium, 2 = High	0.691	0.008	0	2	11,175
TIDE_POA	Choice Question	Variable for Tide Pool Access	0 = Status Quo, 1= Medium, 2 = High	0.704	0.008	0	2	11,175
CLEAN_WA	Choice Question	Variable for Water Quality: Clean water (no to low pollutants) to support water-based activities	0 = Status Quo, 1= Medium, 2 = High	0.683	0.008	0	2	11,175
SHORELIN	Choice Question	Variable for Beach and shoreline quality: (absence of debris/garbage)	0 = Status Quo, 1= Medium, 2 = High	0.685	0.008	0	2	11,175
HABS	Choice Question	Variable for Beach and shoreline quality: (absence of harmful algal blooms)	0 = Status Quo, 1= Medium, 2 = High	0.709	0.008	0	2	11,175
DEVELOPM	Choice Question	Variable for Views: not obstructed by onshore or offshore development	0 = Status Quo, 1= Medium, 2 = High	0.687	0.008	0	2	11,175

1. See Table 3.1 for definition of Status Quo, Medium and High conditions.

Table E.3 Descriptive Statistics for the Nine Natural Resource Attributes: Protestors Observations-Linear Coding

Variable Name	*Survey Question*	*Description*	*Values*[1]	*Mean*	*Standard Error*	*Min*	*Max*	*N*
MARINE_M	Choice Question	Variable for Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	0 = Status Quo, 1= Medium, 2 = High	0.691	0.022	0	2	1,356
SEABIRDS	Choice Question	Variable for Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	0 = Status Quo, 1= Medium, 2 = High	0.671	0.022	0	2	1,356
PREDATOR	Choice Question	Variable for Predators: Opportunity to see large predators such as killer whales, sharks, etc.	0 = Status Quo, 1= Medium, 2 = High	0.680	0.022	0	2	1,356
TIDE_POO	Choice Question	Variable for Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	0 = Status Quo, 1= Medium, 2 = High	0.723	0.022	0	2	1,356
TIDE_POA	Choice Question	Variable for Tide Pool Access	0 = Status Quo, 1= Medium, 2 = High	0.684	0.022	0	2	1,356
CLEAN_WA	Choice Question	Variable for Water Quality: Clean water (no to low pollutants) to support water-based activities	0 = Status Quo, 1= Medium, 2 = High	0.687	0.022	0	2	1,356
SHORELIN	Choice Question	Variable for Beach and shoreline quality: (absence of debris/garbage)	0 = Status Quo, 1= Medium, 2 = High	0.697	0.023	0	2	1,356
HABS	Choice Question	Variable for Beach and shoreline quality: (absence of harmful algal blooms)	0 = Status Quo, 1= Medium, 2 = High	0.743	0.023	0	2	1,356
DEVELOPM	Choice Question	Variable for Views: not obstructed by onshore or offshore development	0 = Status Quo, 1= Medium, 2 = High	0.687	0.022	0	2	1,356

1. See Table 3.1 for definition of Status Quo, Medium and High conditions.

Table E.4 Variable Descriptions and Summary Statistics: All Observations-Dummy Variables for Natural Resource Attributes

Variable Name	*Description*	*Values*[1]	*Mean*	*Standard Error*	*Min*	*Max*	*N*
D2MARINE	Dummy variable for Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	1 = Medium, 0 = Other	0.2384	0.0038	0	1	12,531
D3MARINE		1 = High, 0 = Other	0.2298	0.0038	0	1	12,531
D2SEABRD	Dummy variable for Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	1 = Medium, 0 = Other	0.2344	0.0038	0	1	12,531
D3SEABRD		1 = High, 0 = Other	0.2183	0.0037	0	1	12,531
D2PREDTR	Dummy variable for Predators: Opportunity to see large predators such as killer whales, sharks, etc.	1 = Medium, 0 = Other	0.2290	0.0038	0	1	12,531
D3PREDTR		1 = High, 0 = Other	0.2159	0.0037	0	1	12,531
D2TIDEPL	Dummy variable for Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	1 = Medium, 0 = Other	0.2381	0.0038	0	1	12,531
D3TIDEPL		1 = High, 0 = Other	0.2282	0.0037	0	1	12,531
D2TIDEAC	Dummy variable for Tide Pool Access	1 = Medium, 0 = Other	0.2430	0.0038	0	1	12,531
D3TIDEAC		1 = High, 0 = Other	0.2296	0.0038	0	1	12,531
D2WATER	Dummy variable for Water Quality: Clean water (no to low pollutants) to support water-based activities	1 = Medium, 0 = Other	0.2244	0.0037	0	1	12,531
D3WATER		1 = High, 0 = Other	0.2297	0.0038	0	1	12,531
D2SHORE	Dummy variable for Beach and shoreline quality: (absence of debris/garbage)	1 = Medium, 0 = Other	0.2208	0.0037	0	1	12,531
D3SHORE		1 = High, 0 = Other	0.2329	0.0038	0	1	12,531
D2HABS	Dummy variable for Beach and shoreline quality: (absence of harmful algal blooms)	1 = Medium, 0 = Other	0.2136	0.0037	0	1	12,531
D3HABS		1 = High, 0 = Other	0.2497	0.0039	0	1	12,531
D2DEVELP	Dummy variable for Views: not obstructed by onshore or offshore development	1 = Medium, 0 = Other	0.2329	0.0038	0	1	12,531
D3DEVELP		1 = High, 0 = Other	0.2270	0.0037	0	1	12,531

1. See Table 3.1 for definition of Status Quo, Medium and High conditions.

Table E.5 Variable Descriptions and Summary Statistics: Non-Protestors Dummy Variables for Natural Resource Attributes

Variable Name	*Description*	*Values*[1]	*Mean*	*Standard Error*	*Min*	*Max*	*N*
D2MARINE	Dummy variable for Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	1 = Medium, 0 = Other	0.2382	0.0040	0	1	11,175
D3MARINE		1 = High, 0 = Other	0.2303	0.0040	0	1	11,175
D2SEABRD	Dummy variable for Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	1 = Medium, 0 = Other	0.2335	0.0040	0	1	11,175
D3SEABRD		1 = High, 0 = Other	0.2187	0.0039	0	1	11,175
D2PREDTR	Dummy variable for Predators: Opportunity to see large predators such as killer whales, sharks, etc.	1 = Medium, 0 = Other	0.2300	0.0040	0	1	11,175
D3PREDTR		1 = High, 0 = Other	0.2143	0.0039	0	1	11,175
D2TIDEPL	Dummy variable for Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	1 = Medium, 0 = Other	0.2360	0.0040	0	1	11,175
D3TIDEPL		1 = High, 0 = Other	0.2275	0.0040	0	1	11,175
D2TIDEAC	Dummy variable for Tide Pool Access	1 = Medium, 0 = Other	0.2430	0.0041	0	1	11,175
D3TIDEAC		1 = High, 0 = Other	0.2307	0.0040	0	1	11,175
D2WATER	Dummy variable for Water Quality: Clean water (no to low pollutants) to support water-based activities	1 = Medium, 0 = Other	0.2244	0.0039	0	1	11,175
D3WATER		1 = High, 0 = Other	0.2294	0.0040	0	1	11,175
D2SHORE	Dummy variable for Beach and shoreline quality: (absence of debris/garbage)	1 = Medium, 0 = Other	0.2228	0.0039	0	1	11,175
D3SHORE		1 = High, 0 = Other	0.2313	0.0040	0	1	11,175
D2HABS	Dummy variable for Beach and shoreline quality: (absence of harmful algal blooms)	1 = Medium, 0 = Other	0.2138	0.0039	0	1	11,175
D3HABS		1 = High, 0 = Other	0.2478	0.0041	0	1	11,175
D2DEVELP	Dummy variable for Views: not obstructed by onshore or offshore development	1 = Medium, 0 = Other	0.2327	0.0040	0	1	11,175
D3DEVELP		1 = High, 0 = Other	0.2271	0.0040	0	1	11,175

1. See Table 3.1 for definition of Status Quo, Medium and High conditions.

Table E.6 Variable Descriptions and Summary Statistics: Protestors Dummy Variables for Natural Resource Attributes

Variable Name	*Description*	*Values*[1]	*Mean*	*Standard Error*	*Min*	*Max*	*N*
D2MARINE	Dummy variable for Marine Mammals: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	1 = Medium, 0 = Other	0.2397	0.0116	0	1	1,356
D3MARINE		1 = High, 0 = Other	0.2257	0.0114	0	1	1,356
D2SEABRD	Dummy variable for Seabirds: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	1 = Medium, 0 = Other	0.2419	0.0116	0	1	1,356
D3SEABRD		1 = High, 0 = Other	0.2146	0.0112	0	1	1,356
D2PREDTR	Dummy variable for Predators: Opportunity to see large predators such as killer whales, sharks, etc.	1 = Medium, 0 = Other	0.2212	0.0113	0	1	1,356
D3PREDTR		1 = High, 0 = Other	0.2294	0.0114	0	1	1,356
D2TIDEPL	Dummy variable for Tide Pool Organisms: Number of different kinds (diversity) and Abundance (healthy, sustainable populations)	1 = Medium, 0 = Other	0.2559	0.0119	0	1	1,356
D3TIDEPL		1 = High, 0 = Other	0.2338	0.0115	0	1	1,356
D2TIDEAC	Dummy variable for Tide Pool Access	1 = Medium, 0 = Other	0.2434	0.0117	0	1	1,356
D3TIDEAC		1 = High, 0 = Other	0.2205	0.0113	0	1	1,356
D2WATER	Dummy variable for Water Quality: Clean water (no to low pollutants) to support water-based activities	1 = Medium, 0 = Other	0.2242	0.0113	0	1	1,356
D3WATER		1 = High, 0 = Other	0.2316	0.0115	0	1	1,356
D2SHORE	Dummy variable for Beach and shoreline quality: (absence of debris/garbage)	1 = Medium, 0 = Other	0.2043	0.0110	0	1	1,356
D3SHORE		1 = High, 0 = Other	0.2463	0.0117	0	1	1,356
D2HABS	Dummy variable for Beach and shoreline quality: (absence of harmful algal blooms)	1 = Medium, 0 = Other	0.2124	0.0111	0	1	1,356
D3HABS		1 = High, 0 = Other	0.2655	0.0120	0	1	1,356
D2DEVELP	Dummy variable for Views: not obstructed by onshore or offshore development	1 = Medium, 0 = Other	0.2345	0.0115	0	1	1,356
D3DEVELP		1 = High, 0 = Other	0.2264	0.0114	0	1	1,356

1. See Table 3.1 for definition of Status Quo, Medium and High conditions.

Table E.7 Descriptive Statistics for Numeric interval Coded Natural Resource Attributes: All Observations, Non-Protestors and Protestors

Variable	*Observation Type*	*Mean*	*Standard Error*	*Min*	*Max*	*N*
	All Observations					
tdpl_num	Number of different tidal pool organisms (Low=15, Medium=30 and High=41)	24.5039	0.0968	15	41	12,531
tdpl_acc	Distance from Access Point to Tidal Pool (Miles) Low=2.0, Medium=1.125, High=0.25	1.3856	0.0064	0.25	2	12,531
debris	Amount of debris or trash visibile on the shore (lbs per 100 foot) Low=3.25, Medium=1.6 and High=0.5	2.7109	0.0059	0.5	3.25	12,531
bch_open	Number of Beaches open for razor clam digging (no harmful algal blooms that cause respiratory distress) Low=8, Medium=23 and High=45	20.4434	0.137	8	45	12,531
	Non-Protestors					
tdpl_num	Number of different tidal pool organisms (Low=15, Medium=30 and High=40)	24.4539	0.1025	15	41	11,175
tdpl_acc	Distance from Access Point to Tidal Pool (Miles) Low=2.0, Medium=1.125, High=0.25	1.3837	0.0068	0.25	2	11,175
debris	Amount of debris or trash visibile on the shore (lbs per 100 foot) Low=3.25, Medium=1.6 and High=0.5	2.7088	0.0063	0.5	3.25	11,175
bch_open	Number of Beaches open for razor clam digging (no harmful algal blooms that cause respiratory distress) Low=8, Medium=23 and High=45	20.3748	0.1448	8	45	11,175
	Protestors					
tdpl_num	Number of different tidal pool organisms (Low=15, Medium=30 and High=40)	24.9167	0.2942	15	41	1,356
tdpl_acc	Distance from Access Point to Tidal Pool (Miles) Low=2.0, Medium=1.125, High=0.25	1.4012	0.0193	0.25	2	1,356
debris	Amount of debris or trash visibile on the shore (lbs per 100 foot) Low=3.25, Medium=1.6 and High=0.5	2.7282	0.0176	0.5	3.25	1,356
bch_open	Number of Beaches open for razor clam digging (no harmful algal blooms that cause respiratory distress) Low=8, Medium=23 and High=45	21.0088	0.4226	8	45	1,356

Table E.8 Descriptive Statistics for Crowding Variables: All Observations, Non-Protestors and Protestors

Variable	*Description*	*Mean*	*Standard Error*	*Min*	*Max*	*N*
	All Observations					
uncrowded[1]	Preference for crowding conditions (number of people within sight-picture choice) 5, 15.5, 21	11.0776	0.0612	5	21	12,531
wilderness_loving	Those who don't like crowds (chose picture with zero people) Dummy Variable 1=wilderness loving and 0=not wilderness loving	0.2863	0.0040	0	1	12,531
crowd_loving	Those who prefer crowds (chose picture 4 with highest number of users and would not return to that site if a lower number of people). Dummy variable 1=Loves Crowds 0=doesn't love crowds.	0.0211	0.0013	0	1	12,531
wilderness_crowd	uncrowed*wilderness_loving	3.1916	0.0557	0	21	12,531
crowding_crowd	uncrowded*crowd_loving	0.2381	0.0170	0	21	12,531
	Non-Protestors					
uncrowded[1]	Preference for crowding conditions (number of people within sight-picture choice) 5, 15.5, 21	11.0768	0.0648	5	21	11,175
wilderness_loving	Those who don't like crowds (chose picture with zero people) Dummy Variable 1=wilderness loving and 0=not wilderness loving	0.2813	0.0043	0	1	11,175
crowd_loving	Those who prefer crowds (chose picture 4 with highest number of users and would not return to that site if a lower number of people). Dummy variable 1=Loves Crowds 0=doesn't love crowds.	0.0172	0.0012	0	1	11,175
wilderness_crowd	uncrowed*wilderness_loving	3.1298	0.0585	0	21	11,175
crowding_crowd	uncrowded*crowd_loving	0.1969	0.0165	0	21	11,175
	Protestors					
uncrowded[1]	Prefernce for crowding conditions (number of people within sight-picture choice) 5, 15.5, 21	11.0848	0.1858	5	21	1,356
wilderness_loving	Those who don't like crowds (chose picture with zero people) Dummy Variable 1=wilderness loving and 0=not wilderness loving	0.3274	0.0127	0	1	1,356
crowd_loving	Those who prefer crowds (chose picture 4 with highest number of users and would not return to that site if a lower number of people). Dummy variable 1=Loves Crowds 0=doesn't love crowds.	0.0531	0.0061	0	1	1,356
wilderness_crowd	uncrowed*wilderness_loving	3.7010	0.1795	0	21	1,356
crowding_crowd	uncrowded*crowd_loving	0.5778	0.0783	0	21	1,356

1. Low=21 or more set to 21, Medium=11 to 20 set 15.5 and High=0 to 10 set to 5.

Table E.9 Descriptive Statistics for NEP Variables Constructed using the Averaging Method and the variables from the Cluster Analysis used in Model Estimations - Base Sample

NEP Variable	*Description*	*Mean*	*Standard Error*	*Min*	*Max*	*N*[1]
NEP_strong	Dummy Variable: Strong Ecological Worldview	0.2449	0.0038	0	1	1,045
NEP_mod	Dummy Variable: Moderate Ecological Worldview	0.4099	0.0044	0	1	1,045
NEP_anti	Dummy Variable (Reference): Pro Develeopment, Dominant Social Paradigm Worldview	0.3452	0.0042	0	1	1,045
NEP_avg	Average score across all eight NEP questions.	5.1185	0.0092	1.7143	7	1,045
DSP_avg	Average score across all seven DSP questions.	4.3236	0.0107	1	7	1,045
NEP_DSP_Total	NEP_avg + DSP_avg	9.4420	0.0168	3	14	1,045

1. 20 people did not answer any of the questions so sample size reduced from 1,065 to 1,045.

Table E.10 Descriptive Statistics for NEP Variables Constructed using the Averaging Method Estimation - All Observations, Non-protestors and Protestors

Variable	*Description*	*Mean*	*Standard Error*	*Min*	*Max*	*N*
	All Observations	0.2449	0.0038	0	1	12,531
NEP_strong	Dummy Variable: Strong Ecological Worldview	0.4099	0.0044	0	1	12,531
NEP_mod	Dummy Variable: Moderate Ecological Worldview	0.3452	0.0042	0	1	12,531
NEP_anti	Dummy Variable (Reference): Pro Develeopment, Dominant Social Paradigm Worldview	5.1185	0.0092	1.7143	7	12,531
NEP_avg	Average score across all eight NEP questions.	4.3236	0.0107	1	7	12,531
DSP_avg	Average score across all seven DSP questions.	9.4420	0.0168	3	14	12,531
NEP_DSP_Total	NEP_avg + DSP_avg					
	Non-Protestors					
NEP_strong	Dummy Variable: Strong Ecological Worldview	0.2639	0.0042	0	1	11,175
NEP_mod	Dummy Variable: Moderate Ecological Worldview	0.4231	0.0047	0	1	11,175
NEP_anti	Dummy Variable (Reference): Pro Develeopment, Dominant Social Paradigm Worldview	0.3130	0.0044	0	1	11,175
NEP_avg	Average score across all eight NEP questions.	5.1982	0.0092	2.1429	7	11,175
DSP_avg	Average score across all seven DSP questions.	4.4087	0.0111	1	7	11,175
NEP_DSP_Total	NEP_avg + DSP_avg	9.6069	0.0169	3.1429	14	11,175
	Protestors					
NEP_strong	Dummy Variable: Strong Ecological Worldview	0.0885	0.0077	0	1	1,356
NEP_mod	Dummy Variable: Moderate Ecological Worldview	0.3009	0.0125	0	1	1,356
NEP_anti	Dummy Variable (Reference): Pro Develeopment, Dominant Social Paradigm Worldview	0.6106	0.0132	0	1	1,356
NEP_avg	Average score across all eight NEP questions.	4.4616	0.0334	1.7143	7	1,356
DSP_avg	Average score across all seven DSP questions.	3.6217	0.0316	1	6.8333	1,356
NEP_DSP_Total	NEP_avg + DSP_avg	8.0833	0.0571	3	13.5	1,356

Table E.11 Descriptive Statistics for Income, Price and Use Variables: All Observations, Non-Protestors and Protestors

Variable	*Description*	*Mean*	*Standard Error*	*Min*	*Max*	*N*
	All Observations					
inc_value	Annual Household Income @ Mid-point of intervals	79,043.70	424.6451	2,500	200,000	12,531
hhsize	Number of People in Household	2.7455	0.0123	1	10	12,531
per_capita_Income	inc_value/hhsize	34,460.08	221.9363	500	200,000	12,531
per_capita_Income_1000	per_capita_income/ 1,000	34.46008	0.2219	0.5	200	12,531
price	Annual cost per household	148.0038	1.7867	0	700	12,531
price_1000	Annual cost per household thousands $	0.1480	0.0018	0	0.7	12,531
First_time	Dummy: 1=First time visitor	0.1331	0.0030	0	1	12,531
	Non-Protestors					
inc_value	Annual Household Income @ Mid-point of intervals	79,390.81	448.8884	2,500	200,000	11,175
hhsize	Number of People in Household	2.7576	0.0131	1	10	11,175
per_capita_Income	inc_value/hhsize	34,700.32	237.0845	500	200,000	11,175
per_capita_Income_1000	per_capita_income/ 1,000	34.70032	0.2371	0.5	200	11,175
price	Annual cost per household	147.3271	1.8889	0	700	11,175
price_1000	Annual cost per household thousands $	0.1473	0.0019	0	0.7	11,175
First_time	Dummy: 1=First time visitor	0.1353	0.0032	0	1	11,175
	Protestors					
inc_value	Annual Household Income @ Mid-point of intervals	76,183.15	1,307.16	2,500	200,000	1,356
hhsize	Number of People in Household	2.646	0.0341	1	6	1,356
per_capita_Income	inc_value/hhsize	32,480.23	621.2129	1,250.00	112,500	1,356
per_capita_Income_1000	per_capita_income/ 1,000	32.4802	0.6212	1.25	112.5	1,356
price	Annual cost per household	153.5804	5.5041	0	700	1,356
price_1000	Annual cost per household thousands $	0.1536	0.0055	0	0.7	1,356
First_time	Dummy: 1=First time visitor	0.1150	0.0087	0	1	1,356

Table E.12 Statistical Tests between Protestors and Non-protestors for Model Categorical Variables

Variable	*Test*	*Chi-Square*	*Significance*[1]	
Natural Resource Attributes				
MARINE_M	Chi-square	0.1491	0.9882	
SEABIRDS	Chi-square	0.5002	0.7787	
PREDATOR	Chi-square	1.7551	0.4158	
TIDE_POO	Chi-square	3.7859	0.1506	
TIDE_POA	Chi-square	0.7674	0.6813	
CLEAN_WA	Chi-square	0.0319	0.9842	
SHORELIN	Chi-square	3.0775	0.2146	
HABS	Chi-square	2.1278	0.3451	
DEVELOPM	Chi-square	0.0234	0.9884	
Other Factors				Protestors Higher= + and Lower= -
Wilderness_crowd	Chi-square			
Crowding_crowd	Chi-square			
NEP_Strong	Chi-square	201.1674	**<.0.0001**	-
NEP_Mod	Chi-square	74.6601	**<0.0001**	-
NEP_Anti	Chi-square	473.7964	**<0.0001**	+
first_time	Chi-square	4.3006	**0.0381**	-
price	Chi-square	4.3762	0.6259	no difference
hhincome	Chi-square	259.33	**0.0000**	-

1. Statistically significant if less than 0.05. Significant differences in bold.

Table E.13 Statistical Tests between Protestors and Non-protestors for Model Numeric interval Variables

Variable	*Test (T-test)*	*T-value*	*Significance*[1]	*Protestors Higher= + and Lower= -*
Natural Resource Attributes				
tdpl_num	Pooled equal variance	-1.48	0.1376	+
tdpl_acc	Pooled equal variance	-0.85	0.3956	+
debris	Pooled equal variance	-1.01	0.3113	+
bch_open	Pooled equal variance	-1.44	0.1504	+
Other Factors				
price	Pooled equal variance	-1.09	0.2770	+
per_capita_income	Satterthwaite unequal variance	3.34	**0.0009**	-
NEP_avg	Pooled equal variance	25.53	**<0.0001**	-
DSP_avg	Satterthwaite unequal variance	23.49	**<0.0001**	-
NEP_DSP_Total	Pooled equal variance	20.02	**<0.0001**	-

1. Statistically significant if less than 0.05. Significant differences in bold.

Table E.14 Descriptive Statistics for Species Scored using the Likeability Scale-All Observations[1]

Variable	*Mean*	*Standard Error*	*Min*	*Max*	*N*	*Rank*
puffins	5.9087	0.0112	1	7	11,367	10
ducks	5.7885	0.0101	1	7	12,339	11
hawks	6.1301	0.0101	1	7	12,315	7
plovers	5.4889	0.0134	1	7	8,751	15
sandpipers	5.6909	0.0117	1	7	10,959	13
seagulls	4.6124	0.0157	1	7	12,282	18
terns	5.3811	0.0132	1	7	9,714	16
eagles	6.4681	0.0086	1	7	12,291	3
seals	6.1392	0.0108	1	7	12,267	6
dolphins	6.5264	0.0080	1	7	12,231	2
whales	6.5496	0.0078	1	7	12,243	1
orcas	6.4568	0.0089	1	7	12,255	4
otters	6.4003	0.0087	1	7	12,267	5
urchins	5.6269	0.0120	1	7	12,207	14
starfish	6.0501	0.0100	1	7	12,207	8
sharks	5.0875	0.0160	1	7	12,171	17
corals	5.9254	0.0106	1	7	12,183	9
anemones	5.7155	0.0116	1	7	12,051	12

1. Species scored using a seven-point Likert scale. Total sample size of 12,531. Don't know was coded equal to eight (8) and set to missing for statistical summary. Plovers and terns had high proportions of Don't knows.

Table E.15 Descriptive Statistics for Species Scored using the Likeability Scale-Non-Protestors Observations[1]

Variable	*Mean*	*Standard Error*	*Min*	*Max*	*N*	*Rank*
puffins	5.9557	0.0116	1	7	10,167	10
ducks	5.8100	0.0105	1	7	11,019	11
hawks	6.1437	0.0106	1	7	10,983	7
plovers	5.5341	0.0138	1	7	7,875	15
sandpipers	5.7226	0.0122	1	7	9,831	13
seagulls	4.6573	0.0165	1	7	10,950	18
terns	5.4202	0.0138	1	7	8,754	16
eagles	6.4845	0.0090	1	7	10,935	4
seals	6.2037	0.0106	1	7	10,911	6
dolphins	6.5561	0.0081	1	7	10,887	2
whales	6.5866	0.0080	2	7	10,899	1
orcas	6.4938	0.0092	1	7	10,899	3
otters	6.4419	0.0088	1	7	10,923	5
urchins	5.6574	0.0126	1	7	10,875	14
starfish	6.0796	0.0104	1	7	10,851	8
sharks	5.1301	0.0169	1	7	10,863	17
corals	5.9826	0.0108	1	7	10,863	9
anemones	5.7635	0.0120	1	7	10,743	12

1. Species scored using a seven-point Likert scale. Total sample size of 11,175. Don't know was coded equal to eight (8) and set to missing for statistical summary. Plovers and terns had high proportions of Don't knows.

Table E.16 Descriptive Statistics for Species Scored using the Likeability Scale-Protestors Observations[1]

Variable	*Mean*	*Standard Error*	*Min*	*Max*	*N*	*Rank*
puffins	5.5100	0.0382	1	7	1,200	10
ducks	5.6091	0.0354	1	7	1,320	9
hawks	6.0180	0.0335	1	7	1,332	6
plovers	5.0822	0.0471	1	7	876	15
sandpipers	5.4149	0.0397	1	7	1,128	12
seagulls	4.2432	0.0517	1	7	1,332	18
terns	5.0250	0.0445	1	7	960	16
eagles	6.3363	0.0291	1	7	1,356	1
seals	5.6195	0.0442	1	7	1,356	8
dolphins	6.2857	0.0306	1	7	1,344	2
whales	6.2500	0.0291	1	7	1,344	3
orcas	6.1593	0.0310	1	7	1,356	4
otters	6.0625	0.0325	1	7	1,344	5
urchins	5.3784	0.0386	1	7	1,332	13
starfish	5.8142	0.0340	1	7	1,356	7
sharks	4.7339	0.0494	1	7	1,308	17
corals	5.4545	0.0367	1	7	1,320	11
anemones	5.3211	0.0395	1	7	1,308	14

1. Species scored using a seven-point Likert scale. Total sample size of 1,356. Don't know was coded equal to eight (8) and set to missing for statistical summary. Plovers and terns had high proportions of Don't knows.

Table E.17 Descriptive Statistics for Species Scored using the Likeability Scale-Model Sample Observations[1]

Variable	*Mean*	*Standard Error*	*Min*	*Max*	*N*	*Rank*
puffins	5.9899	0.0122	1	7	8,586	10
ducks	5.8179	0.0111	1	7	9,306	11
hawks	6.1731	0.0112	1	7	9,270	7
plovers	5.5507	0.0150	1	7	6,450	15
sandpipers	5.7516	0.0131	1	7	8,262	13
seagulls	4.5907	0.0180	1	7	9,258	18
terns	5.4203	0.0149	1	7	7,281	16
eagles	6.5494	0.0089	1	7	9,234	4
seals	6.2281	0.0114	1	7	9,234	6
dolphins	6.6063	0.0082	1	7	9,198	2
whales	6.6358	0.0079	2	7	9,210	1
orcas	6.5581	0.0093	1	7	9,198	3
otters	6.4847	0.0091	2	7	9,222	5
urchins	5.6609	0.0136	1	7	9,174	14
starfish	6.1157	0.0110	1	7	9,150	8
sharks	5.1289	0.0181	1	7	9,150	17
corals	6.0098	0.0114	2	7	9,150	9
anemones	5.7823	0.0130	1	7	9,066	12

1. Species scored using a seven-point Likert scale. Total sample size of 9,438. Don't know was coded equal to eight (8) and set to missing for statistical summary. Plovers and terns had high proportions of Don't knows.

AMERICA'S UNDERWATER TREASURES