

2021 MARINE RESERVES VISITOR INTERCEPT SURVEY: A COMPARATIVE ANALYSIS TO BASELINE 2012 TO 2015 DATA

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EXECUTIVE SUMMARY

INTRODUCTION

When the state of Oregon began a process to establish a limited system of marine reserves within state territorial waters in 2008, the Oregon Department of Fish and Wildlife (ODFW) was designated the lead agency responsible for implementing and managing the system. ODFW oversees the five marine reserve sites at Cape Falcon, Cascade Head, Otter Rock, Cape Perpetua, and Redfish Rocks. Based on the Oregon Ocean Policy Advisory Council policy recommendations (OPAC 2008), the goals of the Oregon Marine Reserve System are:

- Conservation* Conserve marine habitats and biodiversity.
- Research* Serve as scientific reference sites to investigate marine reserve protections and the Oregon territorial seas, to inform nearshore ocean management.
- Communities* Avoid significant adverse impacts to ocean users and coastal communities.

To achieve these goals, ODFW established a program in 2009 for marine reserves implementation and monitoring. In this context, the Marine Reserves Human Dimensions Monitoring Program conducts studies to determine the direct and indirect social, cultural, and economic impacts which result from reserve site implementation. The information collected through this process should be relevant to other marine and coastal natural resource policy issues in Oregon. This paper describes the results of an Oregon coastal visitor survey conducted in 2021 and includes comparisons of these results to baseline data collected between 2012 and 2015.

RESEARCH DESIGN

The purpose of this series of visitor surveys conducted at the reserve sites was to gather information about:

- Demographic and visitation characteristics of the visitor population
- Whether marine reserves affect visitors' trip motives and coastal visitation
- Visitors' awareness, perceived knowledge, and opinion of the marine reserves

Data collected during the 2021 survey were also used to investigate statistical predictors of marine reserve awareness, perceived knowledge, and support for Oregon's marine reserves. In addition, as directed by the Marine Reserves Human Dimensions Monitoring Plan (Murphy et al. 2012, Epperly and Swearingen 2017), data from the 2021 survey were compared with baseline data collected from 2012 through 2015. The purpose was to assess how awareness, perceived knowledge, and opinions of marine reserves may have changed since the reserves were implemented.

Data were collected through in-person intercept interviews of a random sample of visitors along the Oregon coast at sites adjacent to all marine reserves except Redfish Rocks¹. Sample sites for each marine reserve were selected based on visitation frequency and access criteria. Sample sites included frequently visited pull-outs, scenic attractions, and parking areas with beach access in order to

¹ Sites adjacent to Redfish Rocks Marine Reserve were not sampled due to the low number of visitors at this site, the limited access sites adjacent to the reserve where visitors could be sampled, and the time intensive nature of sampling on the southern coast.

intercept visitors engaged in a broad range of activities along the coast. A random rotation of sampling sites within each marine reserve zone by time of day and day of week was employed to achieve a random sample. In addition, a systematically rotating contact procedure (i.e., contact of every Nth visitor) was employed to further ensure a random sample across all sites. Each marine reserve zone was sampled for four hours each day over a total of nine days (36 hours of sampling time per reserve) from June through August 2021.

RESULTS

A total of 1,526 questionnaires were completed in the baseline studies, while 1,482 questionnaires were completed in the comparative study. Demographic characteristics (e.g., residence, age, education, and gender distribution) of respondents were highly consistent between the baseline and comparative studies.

In the 2021 survey, 39.3% of the respondents were visiting the sample location for the first time and 71.0% had not fished or crabbed off the Oregon coast in the past ten years. When asked about their purpose for visiting the coast, recreating on the beach and sightseeing or wildlife viewing were the most commonly chosen responses in both the baseline and comparative studies. Visiting a marine reserve was identified as a purpose for visiting the coast by 181 respondents in 2021 (12.3%), and as an activity they had participated in on the coast by 103 respondents in 2014 and 2015 (12.2%). When asked to state their primary reason for visiting the coast, only 0.6% (n=4) of baseline respondents and 0.4% (n=6) of comparative respondents indicated that visiting a marine reserve was their primary reason for visitation. In the 2021 survey, 2.4% (n=28) of respondents indicated visiting a marine reserve was their secondary reason for visiting the coast, while 6.6% (n=57) indicated it was their tertiary reason.²

Awareness among survey respondents that they were at a marine reserve when contacted significantly increased between the baseline studies and the comparative study from 14.9% in 2012/2013 to 19.7% in 2014/2015 to 40.5% in 2021. When asked about the system as a whole, a majority (60.0%) of the 2021 respondents were aware of the existence of the Oregon Marine Reserve System. In addition, 2021 respondents who had fished off the Oregon coast within the last ten years were significantly more likely to be aware that they were currently at a marine reserve when contacted than non-fishers (53.9% vs. 35.1%). In the 2021 study, over half (55.7%) of respondents did not consider themselves to be knowledgeable about Oregon's marine reserves, and only 2.2% considered themselves to be exceptionally knowledgeable about the reserves.

There was a significant change in degree of support for the marine reserves from the baseline studies to the comparative study. The 2021 study respondents' opinions were more neutral than respondents in the baseline studies. The frequency of visitors who reported a positive opinion of the reserves decreased from 86.6% in the baseline studies to 75.8% in the comparative study. However, the proportion of negative opinions related to the reserves also decreased from 2.3% (n=17) in the baseline studies to 0.1% in the comparative study (one individual out of 1,482 respondents). The 2021 study respondents who had fished off the Oregon coast within the last ten years had more positive opinions of the reserves than non-fishers (79.3% vs. 74.3%).

² The question pertaining to secondary and tertiary reasons for visitation did not appear in the earlier studies. At the time, since awareness of the marine reserves was very low, further investigation of trip motives was not a critical research consideration.

CONCLUSIONS

Results from this ten-year study demonstrate that visitor demographics and activities have not changed since marine reserve implementation. Very few people are coming to the coast specifically to visit a marine reserve. Awareness that they are at a marine reserve site when contacted has increased over the years, but still is less than a majority of the visitors. General awareness of the existence of the Oregon Marine Reserve System is appreciably higher than site-specific awareness. However, most respondents indicated that they are not particularly knowledgeable about the reserves.

In general, opinions of the marine reserves have become more neutral over time. Negative opinions of the reserves among these coastal visitors, never a common sentiment, have almost completely disappeared. Respondents who had fished or crabbed off the Oregon coast within the last ten years were both more aware of the marine reserves and also more supportive of the reserves than those who had not fished or crabbed recently.

INTRODUCTION

In 2008, the state of Oregon began a process to establish a limited system of marine reserves within state waters. Marine reserves are areas in Oregon coastal waters that have been designated for conservation and scientific research. All removal of marine life is prohibited, as is ocean development. Some of the sites also include Marine Protected Areas (MPAs) adjacent to the reserves. In the MPAs, ocean development is still prohibited, but some fishing activities are allowed. State mandates and guidelines for the Oregon marine reserves are provided in Executive Order 08-07 (2008), House Bill 3013 (2009), Senate Bill 1510 (2012), administrative rules adopted by state agencies (OAR 635-012, OAR 141-142, and OAR 736-029), and in the *Oregon Marine Reserve Policy Recommendations* adopted by the Oregon Ocean Policy Advisory Council (OPAC) in 2008. The Oregon Department of Fish and Wildlife (ODFW) was designated the lead agency responsible for implementing and managing the Oregon Marine Reserve System. The OPAC policy recommendations provided the foundation for monitoring of the marine reserves.

During an extensive public engagement process, local communities worked with state officials to site the reserves in areas that would provide ecological benefits, and also avoid significant negative impacts to ocean users and coastal communities, in accordance with Executive Order 08-07. The reserves were to be phased in over several years. With the addition of Cape Falcon Marine Reserve on January 1, 2016, Oregon completed implementation of five marine reserve sites off the Oregon coast, all within 3 nautical miles from shore. The marine reserve sites are named after local natural landmarks, and are located at Cape Falcon, Cascade Head, Otter Rock, Cape Perpetua, and Redfish Rocks.

OREGON MARINE RESERVE GOALS

Based on the OPAC policy recommendations (OPAC 2008), the goals of the Oregon Marine Reserve System are:

- Conservation** Conserve marine habitats and biodiversity.
- Research** Serve as scientific reference sites to investigate marine reserve protections and the Oregon territorial seas, to inform nearshore ocean management.
- Communities** Avoid significant adverse impacts to ocean users and coastal communities.

PROGRAM EVALUATION IN 2023

The Oregon marine reserve legislation included a mandate for an evaluation of the Oregon Marine Reserves Program in 2023. The evaluation will cover all aspects of marine reserve implementation including site management, scientific monitoring, outreach, community engagement, compliance, and enforcement. The Legislature will then consider if and how marine reserves will continue to be used as a management tool in the future.

There is general agreement among the scientific community that this timeframe is too brief for detection of substantive ecological changes due to marine reserve protections. In the Oregon temperate marine ecosystem, scientists project a minimum of 10-15 years after extractive activities have ceased before scientific detection of ecological changes is practical. However, this duration does

provide sufficient time for constructive ecological and human dimensions research that will provide information for marine reserve site evaluation and inform nearshore resource management and policy.

To achieve these goals, ODFW established a program in 2009 for marine reserves implementation and monitoring. In this context, the Human Dimensions Monitoring Program was developed by ODFW staff with collaboration and assistance from external scientists and marine reserve community members. The Oregon Marine Reserves Human Dimension Monitoring and Research Plan (Murphy et al. 2012, Epperly and Swearingen 2017) documents the monitoring program objectives and research purposes. Research results are presented in interim project and summary biennial reports.

To contribute to the evaluation of the marine reserve system, the studies conducted by the ODFW Marine Reserves Program Human Dimensions Project are designed to address the following:

- Determine if marine reserves increase our knowledge of the Oregon nearshore environment, resources, and uses. Ascertain if this information is useful to support nearshore resource management.
- Determine if the marine reserves and associated marine protected areas, and the system as a whole, avoid significant adverse social and economic impacts to ocean users and coastal communities.

Human dimensions research pertaining to the Oregon Marine Reserve System is designed to determine the direct and indirect social, cultural, and economic impacts which result from reserve site implementation. Study subjects include related ocean users, communities of interest, and communities of place. The information collected through this process should be relevant to other marine and coastal natural resource policy issues in Oregon. Thus, the intention is to design a monitoring program that provides area specific data, but also addresses a sufficiently broad scope of research to inform state-wide coastal resource management and policy.

RESEARCH DESIGN

RESEARCH OBJECTIVES

As one aspect of the related human dimensions research, ODFW initiated a study to assess coastal visitors' awareness, perceived knowledge, and support of Oregon's marine reserves and how these factors change over time. Collecting both baseline (2012-2015) and comparative (2021) data was important to determine if visitors' attitudes or knowledge of marine reserves have changed over time. Additional objectives of this research were to collect data about visitors' primary reasons for visiting the coast, their frequency of visitation, and visitor demographics. These data can be used to investigate what factors predict awareness, perceived knowledge, and support of Oregon's marine reserves among the visitor population.

The purpose of the visitor intercept surveys was to gather information about:

- Visitor demographic characteristics
- Frequency of coastal visitation and fishing/crabbing off the Oregon coast
- Primary reasons that visitors come to the Oregon coast and whether marine reserves were a trip motive
- Visitor awareness, perceived knowledge, and opinion of the Oregon Marine Reserve System

INTERVIEW INSTRUMENT DESIGN

The survey instrument used in 2021 was based on the questionnaires used in the prior studies, with limited edits. The questionnaire was brief to minimize response burden among visitors during their recreational activities and to encourage higher rates of participation. It consisted of 12 questions focused on collecting demographic, trip motive, reserve knowledge, awareness, and opinion data (Appendix A). An additional question provided a space for open-ended comments. Most items were closed-ended, multiple choice questions, except residence questions (Q1A and Q1B) that requested respondents provide their state or country and zip code and another that requested respondents provide their age. In addition to collecting data on respondents' residence and age, demographic data collected included information on gender (Q4) and education (Q5). Respondents were also asked about their frequency of visitation to the sampling site (Q2) and their frequency of fishing or crabbing off the Oregon coast within the last ten years (Q8).

To elicit information on trip motives (Q6), the participants were queried about their purposes for their Oregon coast visitation. Response options were a list of seven potential purposes, with an option to write-in another potential reason for their visitation. Respondents were advised to circle all purposes that they felt were relevant to their visitation. They were then asked to indicate their primary purpose for visiting the coast out of the provided list, including the potential open-ended "other" response option (Q7.1). Respondents were subsequently asked to indicate their secondary (Q7.2) and tertiary (Q7.3) purposes for visiting the coast if they thought secondary or tertiary reasons were germane.

Two questions (Q9 and Q10) asked respondents about their awareness of marine reserves in Oregon. The first asked if the respondent was aware Oregon had a marine reserve system (general awareness), while the second question asked if they were aware that they were at a marine reserve when contacted

(site specific awareness). One question (Q11) asked the respondent to rate their perceived knowledge about Oregon's marine reserve system on a four-point scale, from not knowledgeable to highly knowledgeable. The final question, Q12, requested the respondents' opinions of Oregon's marine reserves on a five-point scale, from strongly opposed to strongly supportive, with a neutral option (i.e., no opinion). This self-administered questionnaire was used at all sites during the 2021 survey.

Baseline data collection from 2012 through 2015 used slightly different survey instruments and research designs than the 2021 study (see appendices of Swearingen and Epperly 2016, Swearingen et al. 2017, and Swearingen et al. 2019 for previous survey instruments). The 2012-2013 study was designed as a pilot project to test and evaluate sampling and questionnaire design. A structured interview data collection protocol was used in 2012 and 2013. An interviewer recorded the subjects' responses to open-ended questions on an interview sheet. There were various versions of the interview forms with slightly different formats, but they contained essentially the same questions.

The survey instrument was further refined in 2014 to primarily include closed-ended multiple-choice questions and was designed to be self-administered by the respondents. To reduce respondent burden during this iteration of the research, this survey used a split sample design. The questions were divided into three unique survey instruments, each focusing on a different research objective. All questionnaires included the same basic requests for visitor demographics, party characteristics, and trip characteristics. One version only included these visitor demographics and trip characteristics questions. A second version included additional questions about trip expenditures³, and a third version included additional questions about trip motives and marine reserves awareness and attitudes. The sampling procedure resulted in a split random sample of 1/3 of the respondents completing each version of the survey instrument. These three questionnaire versions were then also used in the 2015 study.

The 2014 and 2015 studies established that the marine reserves were not a trip motive for the vast majority of visitors. Given that marine reserves were not influencing trip decisions, the tourism-related questions on trip expenditures and trip characteristics were not included in the 2021 survey instrument. However, the question on trip motives was still included in the 2021 survey to ascertain whether there was a change in the number of respondents indicating the marine reserves were a primary purpose for visiting the Oregon coast. Should marine reserves become a commonly cited trip motive, then it would be appropriate to ask additional questions pertaining to trip expenditures and characteristics in future studies. By removing questions that did not provide information immediately relevant to the current research purposes, the 2021 questionnaire was relatively short (12 questions), and there was no need for a split sample design.

SAMPLE DESIGN

Data were collected during in-person interviews of a sample of coastal visitors contacted at sites adjacent to one of the marine reserves. The sampling procedure for intercepting visitors was designed to assure the sample was random. Visitor contacts occurred for a set period of time across various coastal sample sites. Based on a random start date and time by location, a systematic rotation of sampling site by time of day and day of week was employed to achieve the requisite randomization. In

³ The rationale for inclusion of this set of questions was that, should the reserves become a primary trip motive, these items could be used to estimate the regional economic impacts of the reserves on coastal tourism.

addition, the contact procedure mandated that only every Nth potential participant was contacted during the allocated time period at the various sampling sites across each reserve.

Surveys were conducted at four marine reserves: Cape Perpetua, Otter Rock, Cascade Head, and Cape Falcon, between June 18th and August 12th 2021.⁴ Sample sites next to each marine reserve or adjacent marine protected area (MPA) were chosen based on visitation and access (Table 1). Adjoining Cape Perpetua, four access points to the marine reserve or adjacent MPAs were chosen as sampling locations. These were the Cape Perpetua Visitor Center, Devil's Churn Day Use Area, Washburne State Park, and Heceta Head Lighthouse. Two locations were chosen near Otter Rock, the Beach Access Stairs and Devil's Punchbowl State Natural Area. Four sites were selected near Cascade Head and the adjacent MPAs, which were Knight County Park, D-River State Recreation Site, Canyon Drive Park, and the Public Beach Access at 35th street. At Cape Falcon, only Short Sands Beach in Oswald West State Park was a suitable sample site to contact visitors adjacent to the reserve. The sample sites used in 2021 vary slightly from sample sites used in baseline surveys. Some previously used sites were no longer accessible due to construction, while others were excluded due to the low frequency of baseline visitor contacts.

Sampling occurred for 36 days, nine days at each marine reserve. Only sites within one marine reserve were sampled each day. Sampling occurred for a total of four hours on each sample day at the assigned marine reserve, regardless of the number of sample sites for that reserve. There were four sample sites each at Cape Perpetua and Cascade Head; therefore, each of these sites was sampled for one hour each applicable sample day. There were two sample sites at Otter Rock, so each site was sampled for two hours each sample day, rotating between the two sites after each hour. At Cape Falcon there was only one sample site, which was sampled for four hours each sample day.

To achieve a random sample, for each marine reserve area, interviews would start at the same time but at a different sample site each day. This was not applicable for Cape Falcon as this reserve only had one sample site; therefore, sampling began at the same site each day when surveying Cape Falcon visitors. The days each marine reserve site was sampled were also randomly selected using a random number generator. The sample design created with the random number generator was further refined to ensure that each reserve was sampled at least once each day of the week (Monday – Sunday) to capture both weekday and weekend visitors. A systematic rotation by time of day per sample site and reserve was designed to control for potential variable patterns of coastal visitation throughout the day, week, and month.

At each sample location, an access corridor was identified where the majority of visitors would pass and could be contacted. Since the sample location, date, and time were already randomized, this contact procedure should not introduce any discernable bias to the sample.⁵ Upon the arrival of two interviewers at the site, the first visitor to pass the access point was asked to participate in the survey. After the first individual, every fifth person was contacted for the remainder of the sampling period. If a person declined to complete the questionnaire, the next individual passing the access point was asked to participate. If more than five visitors passed the interview site while both surveyors were engaged

⁴ Sites adjacent to Redfish Rocks Marine Reserve were not sampled due to the low number of visitors to this area, the limited number of sites adjacent to the reserve where visitors could be sampled, and the time intensive nature of sampling on the southern coast.

⁵ Although there was no numeric measure of refusal rate, refusals to participate in the study were exceedingly rare.

with other visitors, the next person passing when an interviewer was available would be asked to participate, and the count would resume.

The interviewers conducting the visitor contacts were two interns, both wearing ODFW hats. After exchanging greetings and providing a brief explanation of the purpose of the survey, the individual participant would be handed a clipboard with the 2021 survey attached. If the person was visually impaired or was otherwise unwilling or unable to hold the clipboard, the surveyor would complete the questionnaire while conducting an oral interview with that respondent.

RESULTS

Visitor intercept surveys were conducted at multiple sites adjacent to Cape Perpetua, Otter Rock, Cascade Head, and Cape Falcon in both the baseline and comparative studies (Table 1). A total of 1,526 surveys were completed in the baseline study, while 1,482 surveys were completed in the comparative study.

Table 1. Sample Location and Response Frequency

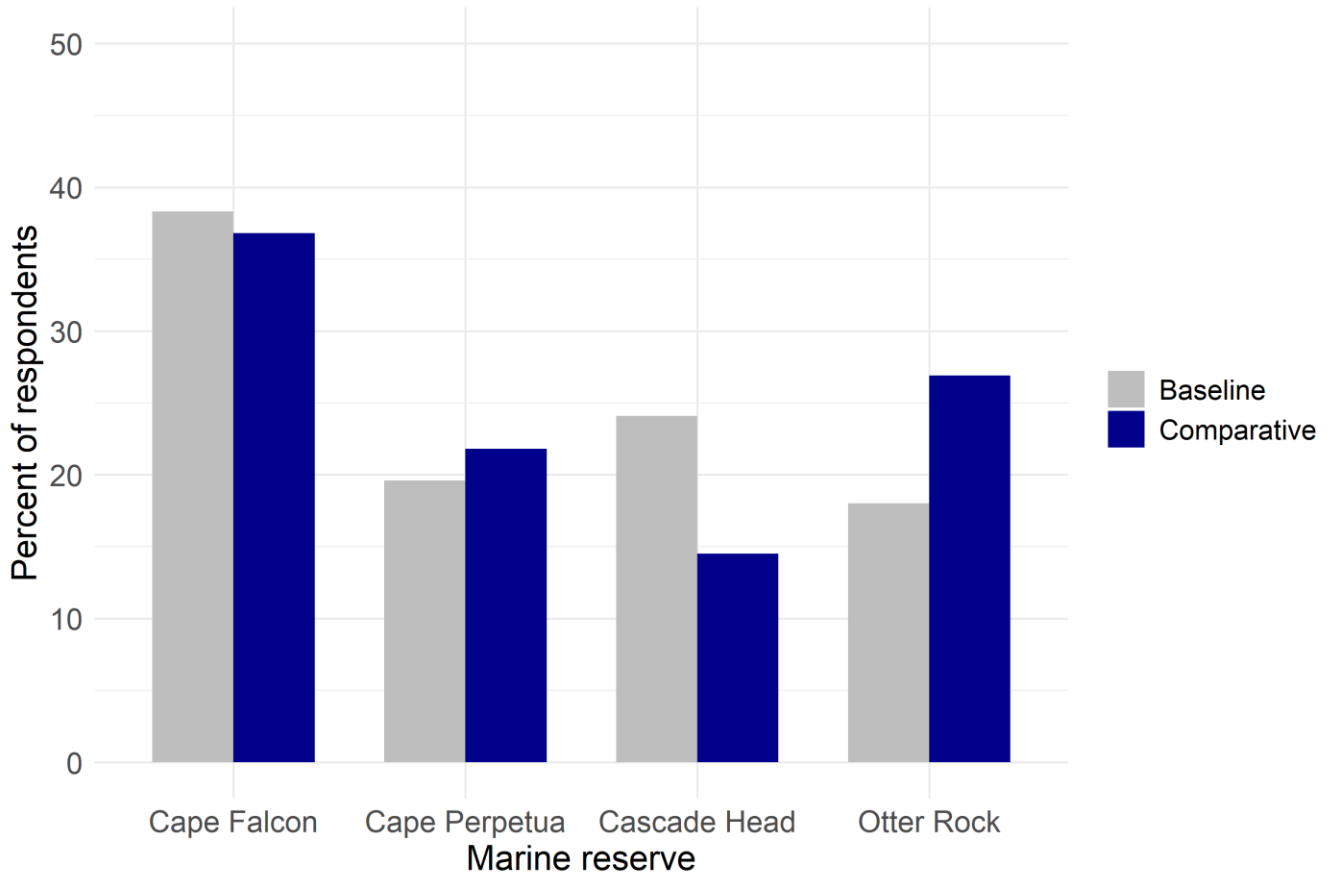
Site	Location	Baseline		Comparative	
		Frequency	Percent	Frequency	Percent
Otter Rock	Devil's Punchbowl	82	7.0%	218	14.7%
	Otter Crest	76	6.5%	0	0%
	Beach Stairs	0	0%	179	12.1%
Cascade Head	D-River	108	9.2%	96	6.5%
	35th Street	35	3.0%	37	2.5%
	Nelscott	40	3.4%	0	0%
	Road's End	66	5.6%	0	0%
	Knight Park	10	0.9%	29	2.0%
	Canyon Drive	0	0%	53	3.6%
Cape Perpetua	Yachats	24	2.0%	0	0%
	Visitor Center	77	6.6%	100	6.8%
	Neptune/Strawberry Hill	5	0.4%	0	0%
	Washburne State Park	63	5.4%	44	3.0%
	Devil's Churn	0	0%	79	5.3%
	Heceta Head Lighthouse	0	0%	101	6.8%
Cape Falcon	Short Sands Beach	585	50.0%	542	36.7%
Total		1171	100.0%	1478	100.0%

Baseline N = 1171, Missing = 355; Comparative N = 1478, Missing = 4

Note: The studies conducted in 2012 and 2013 did not record the individual sampling locations. The 2012 and 2013 interviews were conducted at Otter Rock, Cascade Head, and Cape Perpetua.

The largest proportion of responses came from Cape Falcon in both the baseline (38.3%) and comparative studies (36.8%, Figure 1). Only one site, Short Sands Beach in Oswald West State Park, was used to contact Cape Falcon visitors, and this site receives high visitor traffic in summer⁶. A larger proportion of respondents were interviewed at Otter Rock in the comparative study than the baseline study (26.9% vs. 18.0%). Conversely, a larger proportion of respondents were contacted at Cascade Head in the baseline study than the comparative study (24.1% vs. 14.5%).⁷

Figure 1. Proportion of Survey Responses from each Marine Reserve



Baseline N = 1526, Missing = 0; Comparative N =1476, Missing = 6

⁶ Oswald West is one of the most heavily visited state parks on the Oregon coast.

⁷ Some of this variance might be due to the closure of the heavily visited Knight Park at Cascade Head during the summer of 2021.

SECTION 1 – DEMOGRAPHICS

This first section of this report includes visitor response data for the demographic variables: place of residence, age, gender, and level of formal education. Demographic characteristics were highly similar between respondents in the baseline and comparative studies.

The proportions of visitors coming to the coast from elsewhere in Oregon or from other states was quite similar between the baseline and comparative studies. Nearly half of all respondents in the baseline (48.9%) and comparative (44.4%) studies were from Oregon (Table 2). The bordering states of Washington, California, and Idaho were the second, third, and fourth most common states, respectively, from which visitors resided in both the baseline and comparative studies. Respondents from Canada made up the largest proportion of international visitors in the baseline study, representing 4.0% of all responses (n=61). In the comparative study, respondents from Canada represented only 0.3% of total responses (n=4). This discrepancy was likely due to travel restrictions put in place due to the COVID-19 pandemic, which began in the spring of 2020.

Table 2. State or Country of Residence

State	Baseline 2012-2015		Comparative 2021	
	Frequency	Percent	Frequency	Percent
Oregon	745	48.9%	655	44.4%
Washington	240	15.7%	247	16.7%
California	91	6.0%	110	7.5%
Idaho	41	2.7%	58	3.9%
Utah	32	2.1%	53	3.6%
Other states	285	18.7%	343	23.2%
Canada	61	4.0%	4	0.3%
Other international	29	2.0%	6	0.4%
Total	1524	100.1%	1476	100.0%

Baseline N = 1524, Missing = 2; Comparative N =1476, Missing = 6

To determine their place of residence, respondents were asked to list their five-digit postal code. These zip codes were first used to identify Oregon respondents, and then to further segregate the Oregon respondents by coastal vs. non-coastal Oregon residents. Zip codes in Lincoln, Tillamook, Clatsop, Curry, and Coos counties were categorized as coastal residences. In addition, zip codes in the communities of Winchester Bay in Douglas County, and Florence, Mapleton, and Swisshome in Lane County were categorized as coastal residences. The proportion of respondents who were coastal residents was both relatively low and comparable between the baseline (16.2%) and comparative studies (14.8%, Table 3).

Table 3. Coastal and Non-Coastal Residences among Oregon Respondents

Region	Baseline 2012-2015		Comparative 2021	
	Frequency	Percent	Frequency	Percent
Coastal	120	16.2%	96	14.8%
Non-Coastal	621	83.8%	551	85.2%
Total	741	100.0%	647	100.0%

Baseline N = 741, Missing = 4; Comparative N = 647, Missing = 12

The age distribution of respondents was also fairly similar between the baseline and comparative studies (Table 4). Approximately one-third of respondents in both studies were between the ages of 36 and 50 years. There was a slight decline in the proportion of respondents between 18 and 35 years; from 30.1% in the baseline studies (2012 and 2015) to 25.8% in the 2021 comparative. There was also a slight increase in the proportion of respondents who were 66 or older, from 11.9% in the baseline studies to 14.9% in 2021 study.

Table 4. Respondent Age Distribution

Age	Baseline 2012-2015		Comparative 2021	
	Frequency	Percent	Frequency	Percent
18-35	349	30.1%	379	25.8%
36-50	374	32.2%	493	33.6%
51-65	300	25.8%	377	25.7%
66+	138	11.9%	218	14.9%
Total	1161	100.1%	1467	100.0%

Baseline N = 1161, Missing = 365; Comparative N = 1467, Missing = 15

There was not a notable difference in the proportion of respondents that were male or female in the baseline and comparative studies (Table 5). The option to select non-binary was included only in the 2021 comparative study, and therefore, this response option is not comparable to baseline responses.

Table 5. Respondent Gender

Gender	Baseline 2012-2015		Comparative 2021	
	Frequency	Percent	Frequency	Percent
Male	734	48.8%	713	48.7%
Female	769	51.2%	735	50.2%
Non-binary	N/A	N/A	15	1.0%
Total	1503	100.0%	1463	99.9%

Baseline N = 1503, Missing = 23; Comparative N = 1463, Missing = 19

The “Non-binary” option was added to the 2021 survey and was not an option in earlier studies.

The responses for the question pertaining to level of formal education were consistent between the baseline and comparative studies (Table 6). Over half of all respondents in the baseline (62.8%) and comparative (66.2%) studies had completed a bachelor’s degree or higher. The largest proportion of respondents (32.4%) in the baseline studies had an undergraduate degree, whereas more respondents (35.1%) in the comparative study had completed a graduate or professional degree. Those who had not completed high school made up less than 1% of the respondents in both the baseline and comparative studies.

Table 6. Respondent Level of Education

Highest level of formal education	Baseline 2012-2015		Comparative 2021	
	Frequency	Percent	Frequency	Percent
Less than high school	9	0.8%	13	0.9%
High school diploma	132	11.4%	135	9.2%
Some college, no degree	192	16.6%	207	14.2%
Associate’s degree	97	8.4%	139	9.5%
Bachelor’s degree	374	32.4%	455	31.1%
Grad or professional degree	351	30.4%	513	35.1%
Total	1155	100.0%	1462	100.0%

Baseline N = 1155, Missing = 371; Comparative N = 1462, Missing = 20

¹The 2012/2013 study did not have an equivalent question.

SECTION 2 – TRIP FREQUENCY AND MOTIVES

The majority of respondents (60.7%) in the 2021 survey had visited the sample location within the past ten years (Table 7). However, 39.3% were visiting the sample location either for the first time or for the first time within the past ten years.

Table 7. Frequency of Visitation

Response	Frequency	Percent
First trip	577	39.3%
2-10 trips	526	35.8%
11-20 trips	126	8.6%
21+ trips	240	16.3%
Total	1469	100.0%

N=1469; Missing=13

¹An equivalent question was not included in baseline studies.

The majority of respondents (71.0%) in the 2021 survey had not fished or crabbed off the Oregon coast in the past ten years (Table 8). Less than 7% of respondents had fished or crabbed 11 times or more in the past ten years.

Table 8. Fishing and Crabbing Frequency in the Last Ten years

Response	Frequency	Percent
I haven't fished or crabbed	1039	71.0%
1-10 times	324	22.1%
11-20 times	48	3.3%
21+	52	3.6%
Total	1463	100.0%

N=1463; Missing=19

¹An equivalent question was not included in baseline studies.

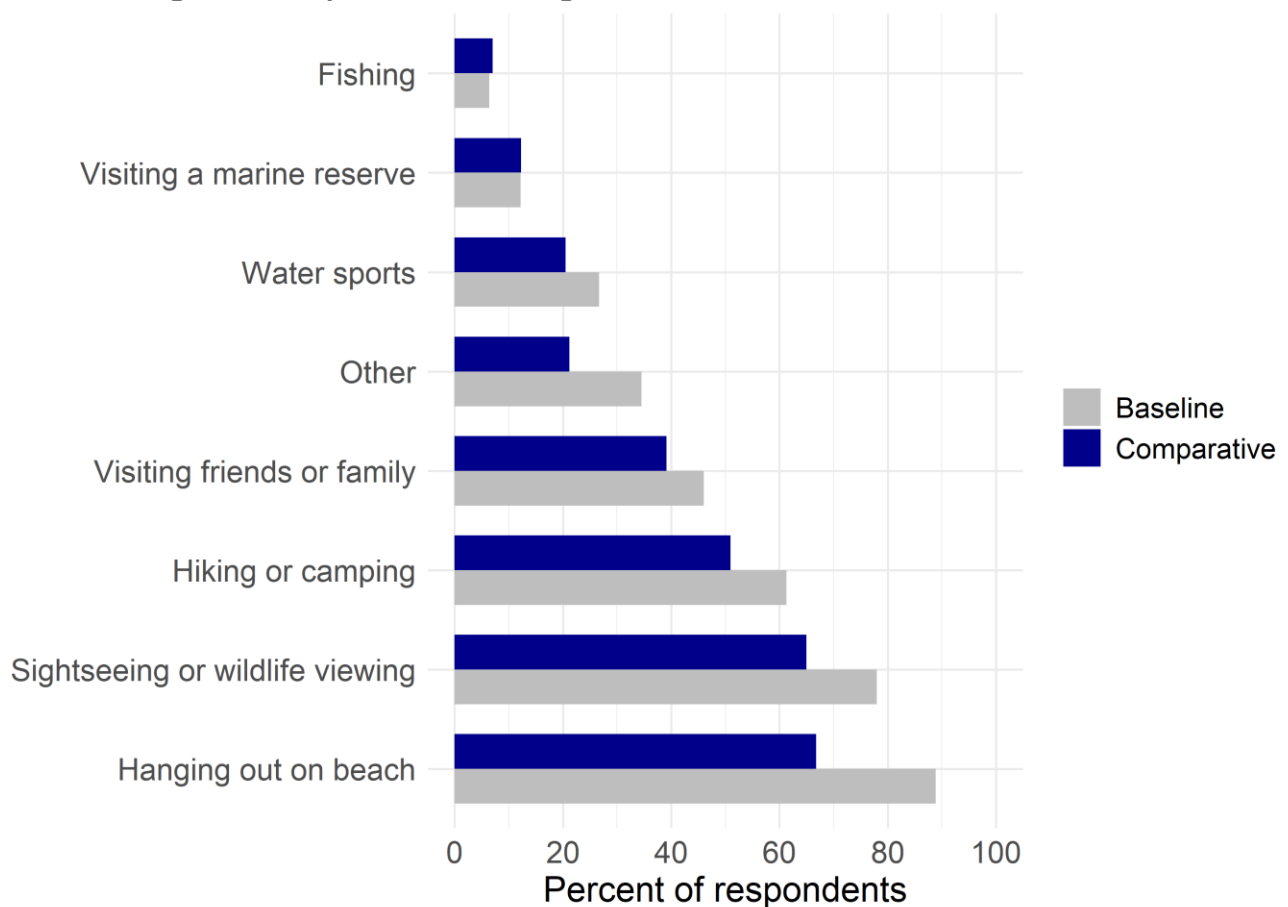
To investigate how marine reserves might be affecting coastal visitation, respondents in the 2021 survey were asked to identify the purpose(s) of their visit to the Oregon coast. A list of potential options was provided with an "other" (fill-in-the-blank) option, and respondents could select all options that applied to them. Rather than asking about trip purpose, the baseline study asked respondents to indicate which activities they had participated in while they were visiting the Oregon coast. While these

questions are different, a comparison between the responses to the studies can establish whether there has been a change in coastal visitors’ trip activities or intentions.

A similar list of potential response options was provided in both the baseline and comparative studies. However, the baseline studies’ response options related to business activities, visiting a state park, biking, and artistic endeavors were removed from the 2021 questionnaire due to low response rates in the baseline studies and to reduce respondent burden. The response option “general beach use” from the baseline surveys was changed to “hanging out on the beach” in the comparative 2021 survey, and these are considered comparable categories.

Hanging out on the beach and sightseeing or wildlife viewing were the most commonly chosen responses in both the baseline and comparative studies (Figure 2). Very few respondents came to the Oregon coast to fish. Visiting a marine reserve was chosen as a purpose for visiting the coast by 181 respondents in 2021 (12.3%), and as an activity they had participated in on the coast by 103 respondents in 2014 and 2015 (12.2%). Therefore, there was not a change in the proportion of visitors coming to the coast specifically to visit a marine reserve.

Figure 2. Purpose(s) for Visiting the Coast or Main Activities on the Coast



Baseline N = 391, Missing = 355; Comparative N = 1477, Missing = 5

¹ Only one of three survey instruments used in 2014 and 2015 contained an equivalent question.

² An equivalent question was not included in the 2012/2013 survey.

In both the comparative and baseline studies, respondents were asked to state their primary reason for visiting the Oregon coast. In the comparative study, the largest proportion of respondents (22.0%) chose visiting friends or family as their primary purpose for visiting the Oregon coast (Table 9). This was an increase of 8.0% compared to the baseline study. In the baseline study, a larger proportion of visitors indicated their primary purpose for coming to the coast was hanging out on the beach or sightseeing/wildlife viewing. Visiting a marine reserve made up the smallest proportion of responses in both the baseline (0.6%) and comparative (0.4%) studies.

Table 9. Primary Purpose for Visit

Purpose	Baseline 2012-2015		Comparative 2021	
	Frequency	Percent	Frequency	Percent
Visiting friends or family	93	14.0%	310	22.0%
Hiking or camping	26	3.9%	219	15.5%
Fishing	17	2.6%	9	0.6%
Participating in a water sport	73	11.0%	155	11.0%
Hanging out on the beach	230	34.6%	301	21.4%
Sightseeing or wildlife viewing	179	27.0%	274	19.4%
Visiting a marine reserve	4	0.6%	6	0.4%
Other	42	6.3%	135	9.6%
Total	664	100.0%	1409	99.9%

Baseline N = 398, Missing = 43; Comparative N = 1409, Missing = 73

¹The options: business related activities (n = 13), visiting a state park (n = 15), tide pooling or agate hunting (n = 5), biking (n = 0), and artistic endeavors (n = 1) were available in the baseline studies but were not included on the 2021 survey.

In the 2021 comparative study only, respondents were also asked to list their secondary trip purpose if they considered this relevant (Table 10). Among respondents who had a secondary purpose for visiting the coast, hanging out on the beach (28.9%) and sightseeing or wildlife viewing (24.8%) were the most frequent responses. Visiting a marine reserve was the secondary trip purpose for 2.4% of respondents.

Table 10. Secondary Purpose for Visit

Purpose	Frequency	Percent
Visiting friends or family	118	10.0%
Hiking or camping	255	21.6%
Fishing	33	2.8%
Participating in a water sport	61	5.2%
Hanging out on the beach	342	28.9%
Sightseeing or wildlife viewing	293	24.8%
Visiting a marine reserve	28	2.4%
Other	52	4.4%
Total	1182	100.1%

N = 1354, Missing = 128, N/A = 172

¹ 172 respondents indicated that they had a primary trip purpose but did not have a secondary trip purpose and were not included in the table.

² An equivalent question was not included in baseline studies.

Again, only in the 2021 comparative study, respondents were asked to list their tertiary trip purpose if they considered this relevant (Table 11). Among respondents who had a third purpose for visiting the Oregon coast, hanging out on the beach (24.1%) and sightseeing or wildlife viewing (28.5%) were the most frequent responses. Visiting a marine reserve was the trip purpose ranked third for 6.6% of respondents.

Table 11. Tertiary Purpose for Visit

Purpose	Frequency	Percent
Visiting friends or family	76	8.8%
Hiking or camping	167	19.3%
Fishing	22	2.5%
Participating in a water sport	39	4.5%
Hanging out on the beach	208	24.1%
Sightseeing or wildlife viewing	246	28.5%
Visiting a marine reserve	57	6.6%
Other	49	5.7%
Total	864	100.0%

N = 864, Missing = 119, N/A = 499

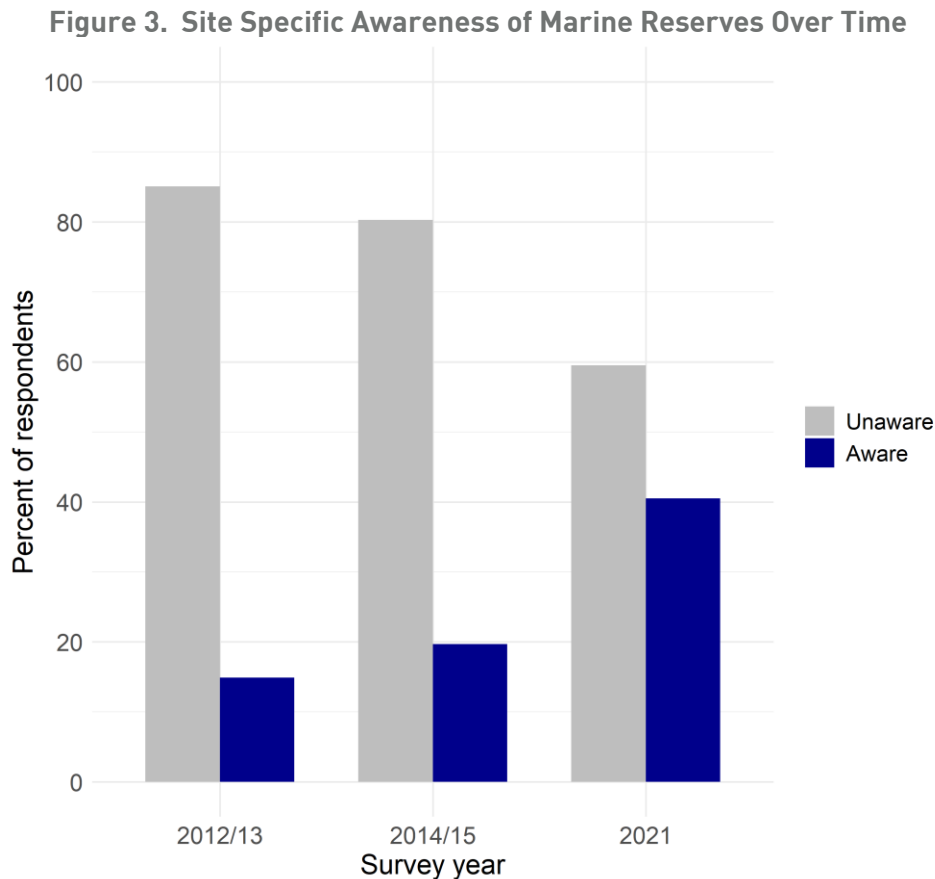
¹ 499 respondents indicated that they had a primary trip purpose but did not have a tertiary trip purpose and were not included in the table.

² An equivalent question was not included in baseline studies.

SECTION 3 – MARINE RESERVE PERCEIVED KNOWLEDGE, AWARENESS, AND SUPPORT

MARINE RESERVE AWARENESS

Site specific marine reserve awareness among survey respondents significantly increased between the baseline studies and the comparative study (p-value < 0.001). In 2012 and 2013, only 14.9% of respondents were aware that a marine reserve was being implemented in the area at Cascade Head, Cape Perpetua, or Otter Rock (Figure 3). This increased slightly in the 2014 and 2015 study, when 19.7% of the respondents were aware that a marine reserve was being implemented in the area at Cape Falcon or had been implemented in the area where they were contacted at Otter Rock, Cascade Head or Cape Perpetua. By 2021, all of Oregon’s marine reserves had been implemented for at least five years. Therefore, the comparative 2021 survey asked participants at the reserve sites if they were aware that they were currently at one of Oregon’s marine reserves when they were contacted. Of the 2021 survey respondents, 40.5% were aware that they were at a marine reserve.



Baseline 2012/13 N = 343, Missing = 7; Baseline 2014/15 N = 390, Missing = 1;
Comparative N = 1470, Missing = 12

Chi-square statistic = 120.07, p-value < 0.001

¹ These awareness questions were site specific, asking respondents whether they were aware that a marine reserve had been (comparative) or would be (baseline) implemented in that area.

Respondents' awareness that they were at a marine reserve increased at all marine reserve sites from the baseline to comparative studies (Table 12). Site specific awareness increased most at Cape Perpetua (12.7% to 42.7%) and least at Otter Rock (28.1% to 42.0%). In the 2021 comparative study, awareness that they were at a marine reserve was between 40-43% at all sites except Cascade Head (34.3%).

Table 12. Site Specific Marine Reserve Awareness Disaggregated by Reserve

Marine Reserve	Baseline 2012-2015			Comparative 2021		
	Aware	Not Aware	Total	Aware	Not Aware	Total
Cape Perpetua	23 (12.7%)	158 (87.3%)	181 (100.0%)	137 (42.7%)	184 (57.3%)	321 (100.0%)
Otter Rock	47 (28.1%)	120 (71.9%)	167 (100.0%)	166 (42.0%)	229 (58.0%)	395 (100.0%)
Cascade Head	27 (14.3%)	162 (85.7%)	189 (100.0%)	72 (34.3%)	138 (65.7%)	210 (100.0%)
Cape Falcon	31 (15.8%)	165 (84.2%)	196 (100.0%)	218 (40.3%)	323 (59.7%)	541 (100.0%)

Among respondents of the 2021 survey, those who had fished off the Oregon coast in the last ten years were significantly more likely to be aware that they were currently at a marine reserve when they were contacted than those who had not fished off the Oregon coast recently (53.9% vs. 35.1%, p-value < 0.001, Table 13).

Table 13. Awareness of Being at a Marine Reserve Among Fishers

Awareness	Fished in the last 10 years		Did not fish in the last 10 years	
	Frequency	Percent	Frequency	Percent
Aware	228	53.9%	365	35.1%
Not Aware	195	46.1%	674	64.9%
Total	423	100.0%	1039	100.0%

N = 1463, Missing = 19

Chi-square statistic = 43.16, p-value < 0.001

¹An equivalent fishing question was not included in baseline studies.

In addition to a site specific question inquiring whether the respondents were aware that they were at a marine reserve when contacted, the 2021 survey also contained a more general question examining whether the respondents were aware that Oregon has a marine reserve system. The majority of respondents (60.0%) indicated that they were aware of Oregon’s marine reserve system (Table 14).

Table 14. Awareness of the Oregon Marine Reserve System

Awareness	Frequency	Percent
Aware	883	60.0%
Not Aware	588	40.0%
Total	1471	100.0%

N = 1471, Missing = 11

¹An equivalent question was not included in baseline studies.

As would be expected, Oregon residents were significantly more likely to be aware of the Oregon Marine Reserve System than visitors from out of state (73.0% vs. 49.6%, $p < 0.001$, Table 15).

Table 15. Awareness of Marine Reserve System by Residence

Awareness	Oregon		Other States and International	
	Frequency	Percent	Frequency	Percent
Aware	476	73.0%	407	49.7%
Not Aware	176	27.0%	412	50.3%
Total	652	100.0%	819	100.0%

N = 1482, Missing = 11

Chi-square statistic = 81.25, p-value < 0.001

To better understand the nuances of respondents site specific awareness that they were at a marine reserve compared to general awareness of the Oregon Marine Reserve System, responses to both awareness questions were compared (Table 16). As expected, a large majority (94.9%) of visitors who were not aware that Oregon has a marine reserve system also reported being unaware that they were at a marine reserve. The majority (64.1%) of those who were aware of the marine reserve system were also aware that they were at a marine reserve. Interestingly, there were 30 respondents who indicated that they were not aware that Oregon has a marine reserve system, but they were aware that they were at a marine reserve.

Table 16. General Awareness of Marine Reserve System Compared to Site Specific Awareness

	Aware that Oregon has a marine reserve system			
	Yes		No	
Aware at a marine reserve	Frequency	Percent	Frequency	Percent
Yes	565	64.1%	30	5.1%
No	317	35.9%	557	94.9%
Total	882	100.0%	587	100.0%

N = 1469, Missing = 13

¹An equivalent awareness of reserve system question was not included in baseline studies.

MARINE RESERVE PERCEIVED KNOWLEDGE

In the 2021 comparative survey, a question was added to assess visitors' perceived knowledge of Oregon's marine reserves (Table 17). Over half (55.7%) of the participants considered themselves not knowledgeable about Oregon's marine reserves, and only 2.2% of the respondents considered themselves highly knowledgeable.

Table 17. Perceived Knowledge of Marine Reserves

Purpose	Frequency	Percent
Not knowledgeable	816	55.7%
Slightly knowledgeable	445	30.4%
Moderately knowledgeable	172	11.7%
Highly knowledgeable	32	2.2%
Total	1465	100.0%

N = 1465, Missing = 17

¹An equivalent question was not included in baseline studies.

A comparison of the relationship between general marine reserves awareness and perceived marine reserve knowledge is presented in Table 18. As would be expected, the majority (92.7%) of those who were not aware of the Oregon Marine Reserve System (92.7%) reported being not knowledgeable about Oregon’s marine reserves. The largest proportion of those who were aware of the marine reserve system (46.2%) reported feeling slightly knowledgeable about marine reserves.

Table 18. Perceived Knowledge and Awareness of Oregon Marine Reserve System

Knowledge	Aware		Not Aware	
	Frequency	Percent	Frequency	Percent
Not knowledgeable	270	30.8%	545	92.7%
Slightly knowledgeable	405	46.2%	40	6.8%
Moderately knowledgeable	169	19.3%	3	0.5%
Highly knowledgeable	32	3.7%	0	0.0%
Total	876	100.0%	588	100.0

N = 1464, Missing = 18

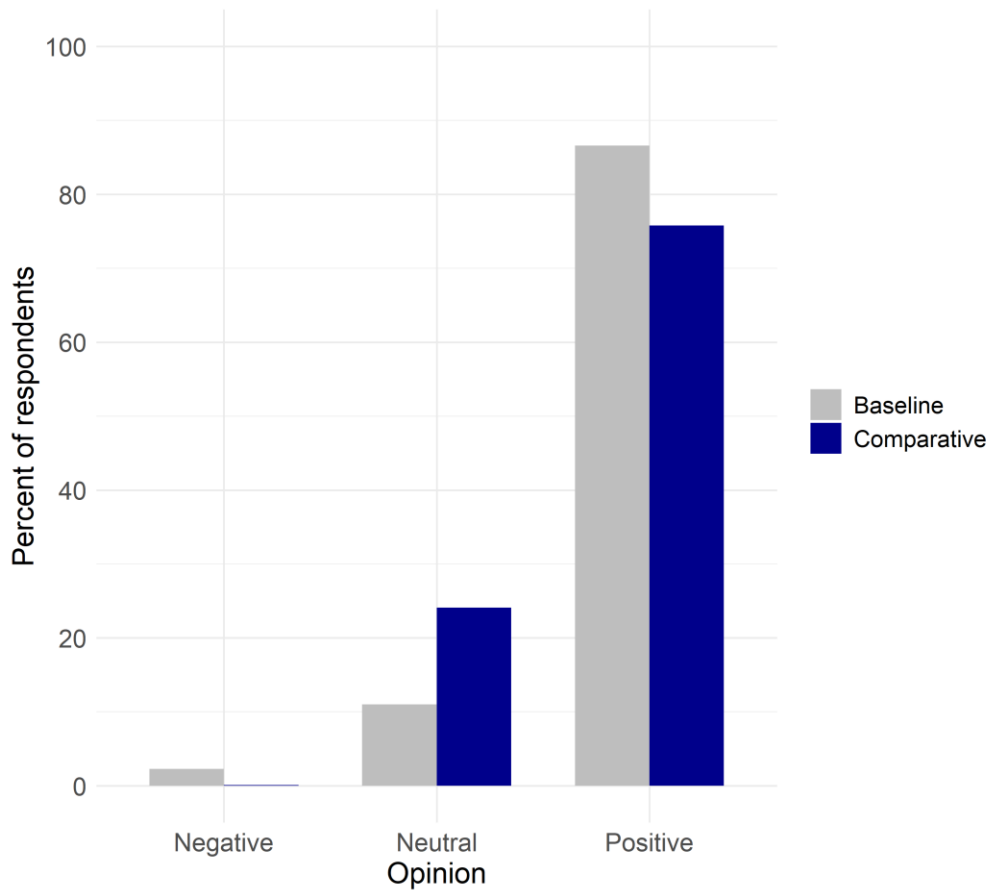
¹ An equivalent perceived knowledge question was not included in baseline studies.

MARINE RESERVE SUPPORT

A question was included in each study to assess visitors’ opinion of marine reserves. In the baseline study, respondents were asked if they felt marine reserves were a “good thing” for Oregon with the options to respond yes, no, or not sure. This was later deemed to be a leading question and revised in the 2021 study. The comparative 2021 study assessed respondents’ opinions of Oregon’s marine reserves with the response options on a five-point scale from strongly supportive to strongly opposed. To investigate visitor support for the marine reserves between the baseline and comparative studies, the response categories were recoded. From the comparative study, responses of “strongly supportive” and “slightly supportive” were both recoded as aggregated positive support, “neutral” and “no opinion” were interpreted as neutral, and “slightly opposed” and “strongly opposed” were recoded as opposition. From the baseline survey, responses of “yes” (i.e., marine reserve are good) were interpreted as positive support, responses of “no” (i.e., marine reserve are not good) were interpreted as opposition, and responses of “not sure” were interpreted as neutral.

There was a significant change in support for the marine reserves from the baseline studies to the comparative study (p-value < 0.001). A large majority of visitors in both the baseline and comparative studies reported a positive opinion of marine reserves (Figure 4). A larger proportion (24.1%) of respondents in the comparative study reported a neutral opinion compared to the baseline study (11.0%). The frequency of visitors who reported a positive opinion decreased from 86.6% in the baseline studies to 75.8% in the comparative study. The proportion of respondents in opposition to the reserves also decreased from 2.3% (n=17) in the baseline studies to 0.1% (n=1) in the comparative study.

Figure 4. Support for Oregon Marine Reserves



Baseline N = 734, Missing = 7; Comparative N = 1460, Missing = 22

¹The baseline survey asked if marine reserves were “good, this wording was changed in the comparative survey as the original language might influence response.

Fisher’s exact test p-value < 0.001

To assess whether marine fishers have a different opinion of Oregon’s marine reserves than general visitors to the coast, opinions of respondents to the 2021 study who had fished off the Oregon coast within the last ten years were compared to all other respondents (Table 19). There was not a statistically significant difference in opinion between fishers and the other respondents (p-value = 0.075). Interestingly, however, the majority of recent fishers had a marginally more positive opinion of marine reserves (79.3%) than other coastal visitors (74.3%). The single negative opinion of the marine reserves among all 2021 survey respondents was from a coastal visitor who had not fished off the Oregon coast within the last ten years.

Table 19. Marine Reserve Support Among Fishers

Opinion	Fished in the last 10 years		Did not fish in the last 10 years	
	Frequency	Percent	Frequency	Percent
Positive	334	79.3%	766	74.3%
Neutral	87	20.7%	264	25.6%
Negative	0	0.0%	1	0.1%
Total	421	100.0%	1031	100.0%

N = 1452, Missing = 30
 Fisher’s exact test p-value = 0.075

MULTIVARIATE ANALYSES

A series of additional analyses were conducted to further investigate visitors’ knowledge of and support for the reserves. Chi-squared tests revealed that respondents’ awareness of Oregon’s marine reserve system did not differ among reserve sites. Similarly, respondents’ awareness that they were at a marine reserve when they were contacted for the 2021 survey did not significantly differ among reserve sites.

Generalized linear models were conducted with these dependent variables: marine reserve awareness, perceived knowledge, and support, with a range of relevant predictor variables (Table 20). A binomial distribution was used for both awareness variable models and the support model (see more details for support below). A Gamma distribution with a log link was used for the perceived knowledge model given the right skewed nature of the data. Three predictor variables were categorized as rank ordered factors, 1. frequency of visitation to the Oregon coast, 2. education, and 3. frequency of fishing/crabbing off the Oregon coast. For each model, linear, quadratic, and cubic trends between each ordered factor and the dependent variable were tested. A non-significant value for the linear trend test indicates there is no linear trend (i.e., a flat line), a non-significant value for the quadratic trend test indicates there is no quadratic trend (i.e., a straight line), and a non-significant value for the cubic test indicates there is no cubic trend (i.e., a straight or quadratic line). Only linear, not quadratic or cubic, trends were found to be significant in these models.

Results demonstrated that many of the same predictor variables significantly predicted marine reserve awareness, perceived knowledge, and support (Table 21). Respondent awareness of the Oregon Marine Reserve System was significantly and positively predicted by state residence (95% CI 0.208 – 0.742), frequency of visitation to the Oregon coast (95% CI 0.694 – 1.323), age (95% CI range 0.08 – 0.024), gender (95% CI 0.095 – 0.558), and frequency of fishing/crabbing off the Oregon coast (95% CI 0.217 – 1.725). Respondents who visited the Oregon coast more frequently, were older, were male, and fished or crabbed more often off the Oregon coast were significantly more likely to be aware that Oregon has a marine reserve system, and that they were at one of Oregon's marine reserves when contacted for the study. Not surprisingly, Oregon residents were also significantly more likely to be aware that Oregon has a marine reserve system.

Respondents' perceived knowledge about Oregon's marine reserves was also significantly and positively predicted by Oregon state residence (95% CI 0.020 – 0.124), frequency of visitation to the Oregon coast (95% CI 0.205 – 0.315), age (95% CI 0.003 – 0.006), and frequency of fishing/crabbing off the Oregon coast (95% CI 0.193 – 0.380, Table 21). Again, quite intuitively, respondents who resided in Oregon, visited the Oregon coast more frequently, were older, and fished or crabbed more often off the Oregon coast were significantly more likely to perceive themselves as more knowledgeable about Oregon's marine reserves.

Additional data recoding was necessary to analyze marine reserves support. Given that only one respondent indicated that they opposed Oregon's marine reserves, that respondent was excluded from the analysis. In addition, most respondents were either neutral in opinion (24%) or strongly supported the reserves (70%), and only 6% were slightly supportive. Therefore, to avoid bimodality in the response variable, slightly and strongly supportive were combined into one support category to create a binary variable for support (neutral/support). Respondents' support of Oregon's marine reserves was significantly and positively predicted by age (95% CI 0.007 – 0.025), education (95% CI 0.453 – 2.174), awareness of Oregon's marine reserve system (95% CI 0.408 – 1.092), awareness they were at a marine reserve when contacted (95% CI 0.046 0.864), and perceived knowledge about Oregon's marine reserve (95% CI 0.633 – 1.307, Table 21). Respondents who were older, more educated, were aware of Oregon's marine reserve system (general awareness), were aware that they were contacted at a marine reserve (site specific awareness), and had a higher degree of perceived marine reserves knowledge were significantly more likely to support Oregon's marine reserves (Table 21).

Table 20. Multivariate Analysis Variable List

Variable	X/Y	Type (#)	Measurement
Aware of MR system	X + Y	Binary (2)	0 = not aware; 1 = aware
Aware at a MR	X + Y	Binary (2)	0 = not aware; 1 = aware
MR perceived knowledge	X + Y	Continuous (4)	1 = not knowledgeable; 2 = slightly knowledgeable; 3 = moderately knowledgeable; 4 = highly knowledgeable
MR support	Y	Binary (2)	0 = neutral/no opinion; 1 = support
Residence	X	Binary (2)	0 = non-Oregonian; 1 = Oregonian
Visitation	X	Rank ordered categorical (4)	1 = first trip; 2 = 2-10 trips; 3 = 11-20 trips; 4 = 21+ trips
Age	X	Continuous	Years
Gender	X	Binary (2)	0 = female, 1 = male
Education	X	Rank ordered categorical (6)	1 = ← high school; 2 = high school diploma; 3 = some college, no degree; 4 = associate degree; 5 = bachelor's degree; 6 = grad/professional degree
Fishing frequency	X	Rank ordered categorical (4)	1 = 0 times; 2 = 1-10 times; 3 = 11-20 times; 4 = 21+ times

¹X = predictor variable; Y = dependent variable.

²MR = marine reserve.

³The variables awareness of MR system, awareness at a MR, and MR perceived knowledge were used as predictor variables for MR support.

⁴There were too few (n=14) non-binary respondents to include in analysis.

Table 21. Multivariate Analysis Beta Coefficients and Standard Errors

Dependent variables								
	Aware of MR system		Aware at a MR		MR perceived knowledge		MR support	
Predictors	β	S.E.	β	S.E.	β	S.E.	β	S.E.
Residence	0.456*	0.137	0.118	0.134	0.075*	0.027	-0.027	0.164
Visitation	0.999*	0.161	1.012*	0.143	0.260*	0.028	0.076	0.195
Age	0.016*	0.004	0.013*	0.004	0.005*	0.001	0.016*	0.005
Gender	0.320*	0.119	0.337*	0.116	0.037	0.023	-0.184	0.139
Education	0.047	0.424	-0.040	0.395	0.067	0.076	1.303*	0.434
Fishing frequency	0.871*	0.377	0.536*	0.250	0.278*	0.048	-0.076	0.383
Aware of MR system							0.747*	0.174
Aware at a MR							0.452*	0.208
MR perceived knowledge							0.961*	0.172

¹* = significant at $p < 0.05$.

²MR = marine reserve.

³The variables awareness of MR system, awareness at a MR, and MR perceived knowledge were used as predictor variables for MR support.

⁴Only showing linear trends for rank ordered factors because they were the only significant trends.

CONCLUSIONS

These visitor intercept surveys were a ten-year research effort to document Oregon coastal visitors' characteristics, knowledge of, and support for marine reserves.⁸ Results from the most recent 2021 study demonstrate a remarkable degree of continuity with the baseline studies in reference to some important yardsticks. Notably, visitor demographics and coastal activities have not changed since marine reserve implementation. In addition, very few individuals are currently or have previously visited the Oregon coast explicitly because there is a system of marine reserves. Therefore at present, it is not necessary to investigate related visitor trip expenditures to impute regional economic impacts of tourism related to the marine reserves. This conclusion could change in the future should coastal visitors consider the existence of the Oregon Marine Reserve System a primary trip motive.

Marine reserve awareness has increased over time, although the proportion of respondents with site-specific awareness (i.e., aware that they are at a marine reserve) is still less than a majority of respondents. More visitors are aware of the existence of an Oregon Marine Reserve System (i.e., general reserves awareness) than are aware of site-specific marine reserve locations. Most visitors indicated that they are not knowledgeable about the Oregon marine reserves. Unsurprisingly, respondents who visit the Oregon coast more often or live on the coast are significantly more likely to be aware of the Oregon Marine Reserve System and consider their knowledge of the reserves to be higher than less frequent visitors, as has been documented in other studies (Guest et al. 2015, Heck et al. 2016). These respondents are more likely to encounter interpretive signs about the marine reserves, visit an information center (e.g., the USFS Cape Perpetua Visitor Center), or speak with a local educator, interpreter, or guide about marine reserves. Some may even have been aware of or participated in the original reserve planning meetings.

Opinions of the marine reserves have become slightly more neutral over time. The baseline studies were conducted just prior to or directly after marine reserve implementation. During this time, people may have had stronger opinions, either positive or negative, related to their expectations for the reserves. In the subsequent years, expectations may have changed, resulting in visitors having more nuanced opinions towards the reserves. Respondents previously aware of the marine reserves and those with greater perceived knowledge of the reserves are significantly more likely to support the reserves, suggesting a potentially important link between knowledge and support. In corroboration of this observation, more highly educated respondents are significantly more likely to support the marine reserves. This result is intuitive because those who have higher levels of education typically have greater environmental knowledge and higher levels of environmental concern (Umuhire & Fang 2016).

Interestingly, increasing age was significantly correlated with increasing marine reserve awareness, perceived knowledge, and support. This may be explained by the observation that older generations generally possess more information about the environment (Dean et al. 2016). Pro-environmental behavior also tends to increase with age (Wiernik et al. 2013, Otto & Kaiser, 2014), though this is not always the case (Daigle et al. 2016).

In the comparative 2021 survey, a question was included regarding marine fishing frequency, which allowed additional analyses of the opinions of the [recent] marine fishing subsample of respondents.

⁸ Results of these studies are hereafter disaggregated in this report in appendices pertaining to each marine reserve. The purpose is to provide local information of relevance to coastal communities and community teams.

This cohort of respondents indicated that they had fished or crabbed off the Oregon coast within the prior ten years. These respondents were more aware that they were at a marine reserve when interviewed than all other respondents. This is an intuitive result given that marine fishers must be aware of fishing regulations and marine closures to maintain regulatory compliance. Interestingly, coastal visitors who were marine fishers were also more supportive of marine reserves than all other respondents. No respondent who had fished along the Oregon coast within the last ten years opposed the marine reserves. These results indicate that the marine reserves have not been a substantive or salient concern for Oregon coastal visitors who fish off the coast.

Moving forward, ODFW will continue to monitor three key variables among some communities of interest, particularly Oregon coast residents and visitors: marine reserve awareness, knowledge, and support, over time to assess change. Coastal visitation motives are another critical construct of interest among coastal tourists. These research efforts will be conducted independently or in collaboration with other state agencies or research partners with related research interests or monitoring responsibilities.

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**APPENDIX A:
2021 Visitor Intercept Survey**



ODFW Marine Reserves Visitor Survey

- Please list your state or country and zip code below:
A. STATE/COUNTRY _____ B. ZIP CODE _____
- How many trips have you made to this location in the last ten years?
A. First trip C. 11 – 20 trips
B. 2 – 10 trips D. 21+ trips
- What is your age? _____ years
- What is your gender? A. Male B. Female C. Non-binary
- What is the highest year of formal education you have completed?
A. Less than high school D. Associate degree
B. High school diploma E. Bachelor's degree
C. Some college, no degree F. Grad or professional degree
- What is(are) your purpose(s) for visiting the Oregon coast? (circle all that apply)
A. Visiting friends and family
B. Hiking or camping
C. Fishing
D. Participating in a water sport (e.g., surfing, kayaking, etc.)
E. Hanging out on the beach
F. Sightseeing or wildlife viewing (e.g., tidepools)
G. Visiting a marine reserve
H. Other _____
- Which of the above activities is(are) your main purpose(s) for visiting the coast? (write in corresponding LETTER from choices above from most to least important)
1. _____ (write the LETTER for your MOST important trip purpose here)
2. _____ (IF you have a SECOND purpose, write the LETTER here)
3. _____ (IF you have a THIRD purpose, write the LETTER here)

PLEASE CONTINUE ON BACK

- How often have you fished or crabbed off the Oregon coast in the last ten years?
A. I haven't fished/crabbed off the Oregon coast in the last ten years
B. 1 – 10 times
C. 11 – 20 times
D. 21+ times
- Were you aware that Oregon has a marine reserve system?
A. Yes B. No
- Were you aware that you are at one of Oregon's marine reserves?
A. Yes B. No
- How knowledgeable do you feel about Oregon's marine reserves?
A. Not knowledgeable C. Moderately knowledgeable
B. Slightly knowledgeable D. Highly knowledgeable
- What is your opinion of Oregon's marine reserves?
A. Strongly supportive D. Slightly opposed
B. Slightly supportive E. Strongly opposed
C. Neutral (not opposed or supportive) F. No opinion
- Is there anything else you would like to tell us about your visit?

ODFW USE ONLY	
1. ID No. _____	5. Sampling Location: _____
2. Date _____	
3. Time _____	
4. Reserve: 1. Redfish Rocks 2. Cape Perpetua 3. Otter Rock 4. Cascade Head 5. Cape Falcon	

**APPENDIX B:
Results by Marine Reserve**

Results were compiled for surveys conducted at each marine reserve separately for the benefit of communities and community teams. This appendix is organized by marine reserve. Baseline surveys were conducted at Cape Perpetua in 2012 and 2014, at Otter Rock in 2013 and 2014, at Cascade Head in 2012 and 2014, and at Cape Falcon in 2015.

Cape Perpetua

Table B1. Cape Perpetua: State or Country of Residence

State	Baseline 2012-2014		Comparative 2021	
	Frequency	Percent	Frequency	Percent
Oregon	100	33.7%	121	37.6%
Washington	31	10.4%	36	11.2%
California	36	12.1%	41	12.7%
Idaho	8	2.7%	9	2.8%
Utah	16	5.4%	15	4.7%
Other states	77	25.9%	99	30.7%
Canada	16	5.4%	0	0.0%
Other international	13	4.4%	1	0.3%
Total	297	100.0%	322	100.0%

Baseline N = 297, Missing = 2; Comparative N = 322, Missing = 0

Table B2. Cape Perpetua: Coastal and Non-Coastal Oregonian Respondents

	Baseline 2012-2014		Comparative 2021	
Region	Frequency	Percent	Frequency	Percent
Coastal	13	13.1%	12	9.9%
Non-Coastal	86	86.9%	109	90.1%
Total	99	100.0%	121	100.0%

Baseline N = 99, Missing = 1; Comparative N = 121, Missing = 0

Table B3. Cape Perpetua: Age Distribution

	Baseline 2012-2014		Comparative 2021	
Age	Frequency	Percent	Frequency	Percent
18-35	27	15.8%	56	17.6%
36-50	46	26.9%	79	24.8%
51-65	62	36.3%	110	34.6%
66+	36	21.1%	73	23.0%
Total	171	100.1%	318	100.0%

Baseline N = 171, Missing = 128; Comparative N = 318, Missing = 4

Table B4. Cape Perpetua: Gender

Gender	Baseline 2012-2014		Comparative 2021	
	Frequency	Percent	Frequency	Percent
Male	131	44.3%	156	49.2%
Female	165	55.7%	158	49.8%
Non-binary	N/A	N/A	3	0.9%
Total	296	100.0%	317	99.9%

Baseline N = 291, Missing = 3; Comparative N = 317, Missing = 5

Table B5. Cape Perpetua: Education

Highest level of formal education	Baseline 2012-2014		Comparative 2021	
	Frequency	Percent	Frequency	Percent
Less than high school	2	1.2%	1	0.3%
High school diploma	18	10.5%	28	8.8%
Some college, no degree	26	15.1%	49	15.3%
Associate's degree	16	9.3%	29	9.1%
Bachelor's degree	50	29.1%	91	28.4%
Grad or professional degree	60	34.9%	122	38.1%
Total	172	100.1%	320	100.0%

Baseline N = 172, Missing = 127; Comparative N = 320, Missing = 2

¹The 2012/2013 survey did not ask about education.

Table B6. Cape Perpetua: Frequency of Visitation

Response	Frequency	Percent
First trip	153	47.8%
2-10 trips	113	35.3%
11-20 trips	26	8.1%
21+ trips	28	8.8%
Total	320	100.0%

N = 320, Missing = 2

¹An equivalent question was not included in baseline studies.

Table B7. Cape Perpetua: Fishing and Crabbing Frequency in the Last Ten years

Response	Frequency	Percent
I haven't fished or crabbed	240	75.2%
1-10 times	66	20.7%
11-20 times	5	1.6%
21+	8	2.5%
Total	319	100.0%

N = 319, Missing = 3

¹An equivalent question was not included in baseline studies.

Table B8. Cape Perpetua: Purpose(s) for Visiting the Coast or Main Activities on the Coast

Purpose	Baseline 2012-2014		Comparative 2021	
	Frequency	Percent	Frequency	Percent
Visiting friends or family	25	44.6%	107	33.2%
Hiking or camping	40	71.4%	203	63.0%
Fishing	2	3.6%	17	5.3%
Participating in a water sport	4	7.1%	10	3.1%
Hanging out on the beach	48	85.7%	193	59.9%
Sightseeing or wildlife viewing	52	92.9%	238	73.9%
Visiting a marine reserve	23	41.1%	43	13.4%
Other	0	0.0%	61	18.9%

Baseline N = 56, Missing = 126; Comparative N = 322, Missing = 0

- ¹ Baseline surveys asked respondents if they engaged in any of the listed activities while the current survey asked which of the listed activities were reasons they visited the coast.
- ² The options of business-related activities, visiting a state park, tide pooling or agate hunting, biking, and artistic endeavors were removed from the 2021 survey due to low response rate and to reduce response burden.
- ³ Respondents could choose all options that applied.
- ⁴ The option “general beach use” from baseline surveys was equated with “hanging out on the beach” from the current survey.
- ⁵ An equivalent question was not present on the 2012/2013 survey.

Table B9. Cape Perpetua: Primary Purpose for Visit

Purpose	Baseline 2012-2014		Comparative 2021	
	Frequency	Percent	Frequency	Percent
Visiting friends or family	22	13.0%	56	18.3%
Hiking or camping	6	3.6%	82	26.8%
Fishing	6	3.6%	1	0.3%
Participating in a water sport	2	1.2%	2	0.7%
Hanging out on the beach	27	16.0%	39	12.7%
Sightseeing or wildlife viewing	97	57.4%	97	31.7%
Visiting a marine reserve	0	0.0%	1	0.3%
Other	9	5.3%	28	9.2%
Total	169	100.1%	306	100.0%

Baseline N = 169, Missing = 10; Comparative N = 306, Missing = 16

¹The options business-related activities (n=2), visiting a state park (n=1), tide pooling or agate hunting (n=0), biking (n=0), and artistic endeavors (n=0) were available in the baseline study but were not included on the 2021 survey.

Table B10. Cape Perpetua: Secondary Purpose for Visit

Purpose	Frequency	Percent
Visiting friends or family	17	6.7%
Hiking or camping	67	26.5%
Fishing	5	2.0%
Participating in a water sport	3	1.2%
Hanging out on the beach	73	28.9%
Sightseeing or wildlife viewing	72	28.5%
Visiting a marine reserve	6	2.4%
Other	10	4.0%
Total	253	100.2%

N = 253, Missing = 30

¹ 40 respondents did not have a secondary trip purpose and were not included in the table.

¹ An equivalent question was not included in baseline studies.

Table B11. Cape Perpetua: Tertiary Purpose for Visit

Purpose	Frequency	Percent
Visiting friends or family	15	8.5%
Hiking or camping	33	18.6%
Fishing	2	1.1%
Participating in a water sport	1	0.6%
Hanging out on the beach	54	30.5%
Sightseeing or wildlife viewing	50	28.2%
Visiting a marine reserve	13	7.3%
Other	9	5.1%
Total	177	99.9%

N = 177, Missing = 29

¹ 116 respondents did not have a third trip purpose and were not included in the table.

¹ An equivalent question was not included in baseline studies.

Table B12. Cape Perpetua: Awareness of Being at a Marine Reserve

Awareness	Baseline 2012-2014		Comparative 2021	
	Frequency	Percent	Frequency	Percent
Aware	23	12.7%	137	42.7%
Not Aware	158	87.3%	184	57.3%
Total	181	100.0%	321	100.0%

Baseline N = 181, Missing = 1; Comparative N = 321, Missing = 1

Table B13. Cape Perpetua: Awareness of Marine Reserve System

Awareness	Frequency	Percent
Aware	186	57.9%
Not Aware	135	42.1%
Total	321	100.0%

N = 321, Missing = 1

¹An equivalent question was not included in baseline studies.

Table B14. Cape Perpetua: Perceived Knowledge of Marine Reserves

Knowledge Level	Frequency	Percent
Not Knowledgeable	179	56.1%
Slightly Knowledgeable	100	31.4%
Moderately Knowledgeable	32	10.0%
Highly Knowledgeable	8	2.5%
Total	319	100.0%

N = 319, Missing = 3

¹An equivalent question was not included in baseline studies.

Table B15. Cape Perpetua: Opinion of Oregon Marine Reserves

Opinion	Baseline 2012-2014		Comparative 2021	
	Frequency	Percent	Frequency	Percent
Positive	156	86.2%	243	76.4%
Neutral	18	9.9%	74	23.3%
Negative	7	3.9%	1	0.3%
Total	181	100.0%	318	100.0%

Baseline N = 181, Missing = 1; Comparative N = 318, Missing = 4

¹The baseline survey asked if marine reserves were “good,” a response of “yes” was interpreted as positive, “no” was interpreted as negative, and “not sure” was interpreted as neutral.

²The current survey had 6 possible answers, “strongly supportive” and “slightly supportive” were interpreted as positive, “neutral” and “no opinion” were interpreted as neutral, and “slightly opposed” and “strongly opposed” were interpreted as negative.

Otter Rock

Table B16. Otter Rock: State or Country of Residence

State	Baseline 2013-2014		Comparative 2021	
	Frequency	Percent	Frequency	Percent
Oregon	116	42.3%	152	38.4%
Washington	45	16.4%	68	17.2%
California	13	4.7%	36	9.1%
Idaho	12	4.4%	17	4.3%
Utah	4	1.5%	14	3.5%
Other states	66	24.1%	105	26.5%
Canada	14	5.1%	2	0.5%
Other international	4	1.5%	2	0.5%
Total	274	100.0%	396	100.0%

Baseline N = 274, Missing = 0; Comparative N = 396, Missing = 1

Table B17. Otter Rock: Coastal and Non-Coastal Oregonian Respondents

	Baseline 2013-2014		Comparative 2021	
Region	Frequency	Percent	Frequency	Percent
Coastal	21	18.1%	27	17.9%
Non-Coastal	95	81.9%	124	82.1%
Total	116	100.0%	151	100.0%

Baseline N = 116, Missing = 0; Comparative N = 151, Missing = 1

Table B18. Otter Rock: Age Distribution

	Baseline 2013-2014		Comparative 2021	
Age	Frequency	Percent	Frequency	Percent
18-35	34	21.8%	107	27.3%
36-50	52	33.3%	147	37.5%
51-65	52	33.3%	93	23.7%
66+	18	11.5%	45	11.5%
Total	156	99.9%	392	100.0%

Baseline N = 156, Missing = 118; Comparative N = 392, Missing = 5

Table B19. Otter Rock: Gender

Gender	Baseline 2013-2014		Comparative 2021	
	Frequency	Percent	Frequency	Percent
Male	122	45.5%	188	48.0%
Female	146	54.5%	201	51.3%
Non-binary	N/A	N/A	3	0.8%
Total	268	100.0%	392	100.1%

Baseline N = 268, Missing = 6; Comparative N = 392, Missing = 5

Table B20. Otter Rock: Education

Highest level of formal education	Baseline 2013-2014		Comparative 2021	
	Frequency	Percent	Frequency	Percent
Less than high school	0	0.0%	5	1.3%
High school diploma	21	13.4%	41	10.6%
Some college, no degree	27	17.2%	67	17.3%
Associate's degree	13	8.3%	43	11.1%
Bachelor's degree	59	37.6%	116	30.0%
Grad or professional degree	37	23.6%	115	29.7%
Total	157	100.1%	387	100.0%

Baseline N = 157, Missing = 117; Comparative N = 387, Missing = 10

¹The 2012/2013 survey did not ask about education.

Table B21. Otter Rock: Frequency of Visitation

Response	Frequency	Percent
First trip	195	49.4%
2-10 trips	123	31.1%
11-20 trips	27	6.8%
21+ trips	50	12.7%
Total	395	100.0%

N = 395, Missing = 2

¹An equivalent question was not included in baseline studies.

Table B22. Otter Rock: Fishing and Crabbing Frequency in the Last Ten years

Response	Frequency	Percent
I haven't fished or crabbed	288	73.5%
1-10 times	71	18.1%
11-20 times	15	3.8%
21+	18	4.6%
Total	392	100.0%

N = 392, Missing = 5

¹An equivalent question was not included in baseline studies.

Table B23. Otter Rock: Purpose(s) for Visiting the Coast or Main Activities on the Coast

Purpose	Baseline 2013-2014		Comparative 2021	
	Frequency	Percent	Frequency	Percent
Visiting friends or family	21	40.4%	149	37.5%
Hiking or camping	32	61.5%	178	44.8%
Fishing	6	11.5%	34	8.6%
Participating in a water sport	14	26.9%	79	19.9%
Hanging out on the beach	48	92.3%	239	60.2%
Sightseeing or wildlife viewing	48	92.3%	277	69.8%
Visiting a marine reserve	21	40.4%	67	16.9%
Other	5	9.6%	88	22.2%

Baseline N = 52, Missing = 118; Comparative N = 397, Missing = 0

- ¹ Baseline surveys asked respondents if they engaged in any of the listed activities while the current survey asked which of the listed activities were reasons they visited the coast.
- ² The options of business-related activities, visiting a state park, tide pooling or agate hunting, biking, and artistic endeavors were removed from the 2021 survey due to low response rate and to reduce response burden.
- ³ Respondents could choose all options that applied.
- ⁴ The option “general beach use” from baseline surveys was equated with “hanging out on the beach” from the current survey.
- ⁵ An equivalent question was not present on the 2012/2013 survey.

Table B24. Otter Rock: Primary Purpose for Visit

Purpose	Baseline 2013-2014		Comparative 2021	
	Frequency	Percent	Frequency	Percent
Visiting friends or family	18	11.9%	86	22.9%
Hiking or camping	3	2.0%	48	12.8%
Fishing	6	4.0%	3	0.8%
Participating in a water sport	25	16.6%	41	10.9%
Hanging out on the beach	38	25.2%	53	14.1%
Sightseeing or wildlife viewing	45	29.8%	109	29.1%
Visiting a marine reserve	4	2.6%	2	0.5%
Other	12	7.9%	33	8.8%
Total	151	100.0%	375	99.9%

Baseline N = 151, Missing = 11; Comparative N = 375, Missing = 22

¹The options business-related activities (n=2), visiting a state park (n=5), tide pooling or agate hunting (n=1), biking (n=0), and artistic endeavors (n=0) were available in the baseline study but were not included on the 2021 survey.

Table B25. Otter Rock: Secondary Purpose for Visit

Purpose	Frequency	Percent
Visiting friends or family	32	10.2%
Hiking or camping	60	19.2%
Fishing	11	3.5%
Participating in a water sport	18	5.8%
Hanging out on the beach	78	24.9%
Sightseeing or wildlife viewing	82	26.3%
Visiting a marine reserve	14	4.5%
Other	18	5.6%
Total	313	100.0%

N = 313, Missing = 35

¹ 49 respondents did not have a secondary trip purpose and were not included in the table.

¹ An equivalent question was not included in baseline studies.

Table B26. Otter Rock: Tertiary Purpose for Visit

Purpose	Frequency	Percent
Visiting friends or family	15	6.8%
Hiking or camping	37	16.7%
Fishing	9	4.1%
Participating in a water sport	6	2.7%
Hanging out on the beach	62	27.9%
Sightseeing or wildlife viewing	55	24.8%
Visiting a marine reserve	27	12.2%
Other	11	5.0%
Total	222	100.2%

N = 222, Missing = 31

¹ 144 respondents did not have a third trip purpose and were not included in the table.

¹ An equivalent question was not included in baseline studies.

Table B27. Otter Rock: Awareness of Being at a Marine Reserve

Awareness	Baseline 2012-2015		Comparative 2021	
	Frequency	Percent	Frequency	Percent
Aware	47	28.1%	166	42.0%
Not Aware	120	71.9%	229	58.0%
Total	167	100.0%	395	100.0%

Baseline N = 167, Missing = 3; Comparative N = 395, Missing = 2

Table B28. Otter Rock: Awareness of Marine Reserve System

Awareness	Frequency	Percent
Aware	237	60.0%
Not Aware	158	40.0%
Total	395	100.0%

N = 395, Missing = 2

¹An equivalent question was not included in baseline studies.

Table B29. Otter Rock: Perceived Knowledge of Marine Reserves

Knowledge Level	Frequency	Percent
Not Knowledgeable	212	54.1%
Slightly Knowledgeable	121	30.9%
Moderately Knowledgeable	48	12.2%
Highly Knowledgeable	11	2.8%
Total	392	100.0%

N = 392, Missing = 5

¹An equivalent question was not included in baseline studies.

Table B30. Otter Rock: Opinion of Oregon Marine Reserves

Opinion	Baseline 2013-2014		Comparative 2021	
	Frequency	Percent	Frequency	Percent
Positive	156	92.3%	292	74.1%
Neutral	11	6.5%	102	25.9%
Negative	2	1.2%	0	0.0%
Total	169	100.0%	394	100.0%

Baseline N = 169, Missing = 1; Comparative N = 394, Missing = 3

¹The baseline survey asked if marine reserves were “good,” a response of “yes” was interpreted as positive, “no” was interpreted as negative, and “not sure” was interpreted as neutral.

²The current survey had 6 possible answers, “strongly supportive” and “slightly supportive” were interpreted as positive, “neutral” and “no opinion” were interpreted as neutral, and “slightly opposed” and “strongly opposed” were interpreted as negative.

Cascade Head

Table B31. Cascade Head: State or Country of Residence

State	Baseline 2012-2014		Comparative 2021	
	Frequency	Percent	Frequency	Percent
Oregon	221	60.1%	133	62.1%
Washington	50	13.6%	29	13.6%
California	18	4.9%	8	3.7%
Idaho	12	3.3%	9	4.2%
Utah	4	1.1%	2	0.9%
Other states	51	13.9%	31	14.5%
Canada	10	2.7%	0	0.0%
Other international	2	0.5%	2	0.9%
Total	368	100.1%	214	99.9%

Baseline N = 368, Missing = 0; Comparative N = 214, Missing = 0

Table B32. Cascade Head: Coastal and Non-Coastal Oregonian Respondents

	Baseline 2012-2014		Comparative 2021	
Region	Frequency	Percent	Frequency	Percent
Coastal	35	15.9%	23	17.8%
Non-Coastal	185	84.1%	106	82.2%
Total	220	100.0%	129	100.0%

Baseline N = 220, Missing = 1; Comparative N = 129, Missing = 4

Table B33. Cascade Head: Age Distribution

	Baseline 2012-2014		Comparative 2021	
Age	Frequency	Percent	Frequency	Percent
18-35	66	25.9%	57	26.8%
36-50	77	30.2%	58	27.2%
51-65	77	30.2%	54	25.4%
66+	35	13.7%	44	20.7
Total	255	100.0%	213	100.1%

Baseline N = 255, Missing = 113; Comparative N = 213, Missing = 1

Table B34. Cascade Head: Gender

Gender	Baseline 2012-2014		Comparative 2021	
	Frequency	Percent	Frequency	Percent
Male	150	41.7%	104	48.8%
Female	210	58.3%	107	50.2%
Non-binary	N/A	N/A	2	0.9%
Total	360	100.0%	213	99.9%

Baseline N = 360, Missing = 8; Comparative N = 213, Missing = 1

Table B35. Cascade Head: Education

Highest level of formal education	Baseline 2012-2014		Comparative 2021	
	Frequency	Percent	Frequency	Percent
Less than high school	5	2.0%	5	2.4%
High school diploma	58	22.7%	40	19.0%
Some college, no degree	57	22.3%	44	20.9%
Associate's degree	31	12.1%	22	10.4%
Bachelor's degree	58	22.7%	48	22.7%
Grad or professional degree	47	18.4%	52	24.6%
Total	256	100.2%	211	100.0%

Baseline N = 256, Missing = 112; Comparative N = 211, Missing = 3

¹The 2012/2013 survey did not ask about education.

Table B36. Cascade Head: Frequency of Visitation

Response	Frequency	Percent
First trip	50	23.8%
2-10 trips	88	41.9%
11-20 trips	23	11.0%
21+ trips	49	23.3%
Total	210	100.0%

N = 210, Missing = 4

¹An equivalent question was not included in baseline studies.

Table B37. Cascade Head: Fishing and Crabbing Frequency in the Last Ten years

Response	Frequency	Percent
I haven't fished or crabbed	139	66.5%
1-10 times	49	23.4%
11-20 times	8	3.8%
21+	13	6.2%
Total	209	99.9%

N = 209, Missing = 5

¹An equivalent question was not included in baseline studies.

Table B38. Cascade Head: Purpose(s) for Visiting the Coast or Main Activities on the Coast

Purpose	Baseline 2012-2014		Comparative 2021	
	Frequency	Percent	Frequency	Percent
Visiting friends or family	33	39.3%	86	40.4%
Hiking or camping	30	35.7%	71	33.3%
Fishing	9	10.7%	24	11.3%
Participating in a water sport	20	23.8%	19	8.9%
Hanging out on the beach	79	94.0%	160	75.1%
Sightseeing or wildlife viewing	60	71.4%	123	57.7%
Visiting a marine reserve	22	26.2%	25	11.7%
Other	6	7.1%	61	28.6%

Baseline N = 84, Missing = 109; Comparative N = 213, Missing = 1

- ¹ Baseline surveys asked respondents if they engaged in any of the listed activities while the current survey asked which of the listed activities were reasons they visited the coast.
- ² The options of business-related activities, visiting a state park, tide pooling or agate hunting, biking, and artistic endeavors were removed from the 2021 survey due to low response rate and to reduce response burden.
- ³ Respondents could choose all options that applied.
- ⁴ The option “general beach use” from baseline surveys was equated with “hanging out on the beach” from the current survey.
- ⁵ An equivalent question was not present on the 2012/2013 survey.

Table B39. Cascade Head: Primary Purpose for Visit

Purpose	Baseline 2012-2014		Comparative 2021	
	Frequency	Percent	Frequency	Percent
Visiting friends or family	20	12.0%	47	23.5%
Hiking or camping	0	0.0%	23	11.5%
Fishing	4	2.4%	4	2.0%
Participating in a water sport	3	1.8%	4	2.0%
Hanging out on the beach	102	61.1%	72	36.0%
Sightseeing or wildlife viewing	26	15.6%	18	9.0%
Visiting a marine reserve	0	0.0%	1	0.5%
Other	12	7.2%	31	15.5%
Total	167	100.1%	200	100.0%

Baseline N = 167, Missing = 14; Comparative N = 200, Missing = 14

¹The options business-related activities (n=9), visiting a state park (n=3), tide pooling or agate hunting (n=0), biking (n=0), and artistic endeavors (n=0) were available in the baseline study but were not included on the 2021 survey.

Table B40. Cascade Head: Secondary Purpose for Visit

Purpose	Frequency	Percent
Visiting friends or family	23	14.9%
Hiking or camping	19	12.3%
Fishing	7	4.5%
Participating in a water sport	3	1.9%
Hanging out on the beach	49	31.8%
Sightseeing or wildlife viewing	43	27.9%
Visiting a marine reserve	1	0.6%
Other	9	5.8%
Total	154	99.7%

N = 154, Missing = 23

¹ 37 respondents did not have a secondary trip purpose and were not included in the table.

¹ An equivalent question was not included in baseline studies.

Table B41. Cascade Head: Tertiary Purpose for Visit

Purpose	Frequency	Percent
Visiting friends or family	9	8.3%
Hiking or camping	18	16.7%
Fishing	2	1.9%
Participating in a water sport	5	4.6%
Hanging out on the beach	20	18.5%
Sightseeing or wildlife viewing	36	33.3%
Visiting a marine reserve	9	8.3%
Other	9	8.3%
Total	108	99.9%

N = 108, Missing = 24

¹82 respondents did not have a third trip purpose and were not included in the table.

¹An equivalent question was not included in baseline studies.

Table B42. Cascade Head: Awareness of Being at a Marine Reserve

Awareness	Baseline 2012-2014		Comparative 2021	
	Frequency	Percent	Frequency	Percent
Aware	27	14.3%	72	34.3%
Not Aware	162	85.7%	138	65.7%
Total	189	100.0%	210	100.0%

Baseline N = 189, Missing = 4; Comparative N = 210, Missing = 4

Table B43. Cascade Head: Awareness of Marine Reserve System

Awareness	Frequency	Percent
Aware	131	61.8%
Not Aware	81	38.2%
Total	212	100.0%

N = 212, Missing = 2

¹An equivalent question was not included in baseline studies.

Table B44. Cascade Head: Perceived Knowledge of Marine Reserves

Knowledge Level	Frequency	Percent
Not Knowledgeable	112	53.1%
Slightly Knowledgeable	71	33.6%
Moderately Knowledgeable	26	12.3%
Highly Knowledgeable	2	0.9%
Total	211	99.9%

N = 211, Missing = 3

¹An equivalent question was not included in baseline studies.

Table B45. Cascade Head: Opinion of Oregon Marine Reserves

Opinion	Baseline 2012-2014		Comparative 2021	
	Frequency	Percent	Frequency	Percent
Positive	161	85.2%	149	72.0%
Neutral	21	11.1%	58	28.0%
Negative	7	3.7%	0	0.0%
Total	189	100.0%	207	100.0%

Baseline N = 189, Missing = 4; Comparative N = 207, Missing = 7

¹The baseline survey asked if marine reserves were “good,” a response of “yes” was interpreted as positive, “no” was interpreted as negative, and “not sure” was interpreted as neutral.

²The current survey had 6 possible answers, “strongly supportive” and “slightly supportive” were interpreted as positive, “neutral” and “no opinion” were interpreted as neutral, and “slightly opposed” and “strongly opposed” were interpreted as negative.

Cape Falcon

Table B46. Cape Falcon: State or Country of Residence

State	Baseline 2015		Comparative 2021	
	Frequency	Percent	Frequency	Percent
Oregon	308	52.6%	247	45.7%
Washington	114	19.5%	113	20.9%
California	24	4.1%	25	4.6%
Idaho	9	1.5%	23	4.3%
Utah	8	1.4%	22	4.1%
Other states	91	15.6%	108	20.0%
Canada	21	3.6%	2	0.4%
Other international	10	1.7%	1	0.2%
Total	585	100.0%	541	100.2%

Baseline N = 585, Missing = 0; Comparative N = 541, Missing = 2

Table B47. Cape Falcon: Coastal and Non-Coastal Oregonian Respondents

	Baseline 2015		Comparative 2021	
Region	Frequency	Percent	Frequency	Percent
Coastal	50	16.4%	34	13.9%
Non-Coastal	255	83.6%	210	86.1%
Total	305	100.0%	244	100.0%

Baseline N = 305, Missing = 3; Comparative N = 244, Missing = 3

Table B48. Cape Falcon: Age Distribution

	Baseline 2015		Comparative 2021	
Age	Frequency	Percent	Frequency	Percent
18-35	222	38.3%	159	29.3%
36-50	199	34.4%	208	38.4%
51-65	109	18.8%	118	21.8%
66+	49	8.5%	57	10.5%
Total	579	100.0%	542	100.0%

Baseline N = 579, Missing = 6; Comparative N = 542, Missing = 1

Table B49. Cape Falcon: Gender

Gender	Baseline 2015		Comparative 2021	
	Frequency	Percent	Frequency	Percent
Male	331	57.2%	263	48.9%
Female	248	42.8%	268	49.8%
Non-binary	N/A	N/A	7	1.3%
Total	579	100.0%	538	100.0%

Baseline N = 579, Missing = 6; Comparative N = 538, Missing = 5

Table B50. Cape Falcon: Education

Highest level of formal education	Baseline 2015		Comparative 2021	
	Frequency	Percent	Frequency	Percent
Less than high school	2	0.4%	2	0.4%
High school diploma	35	6.1%	26	4.8%
Some college, no degree	82	14.4%	47	8.7%
Associate's degree	37	6.5%	45	8.3%
Bachelor's degree	207	36.3%	199	36.8%
Grad or professional degree	207	36.3%	222	41.0%
Total	570	100.0%	541	100.0%

Baseline N = 570, Missing = 15; Comparative N = 541, Missing = 2

Table B51. Cape Falcon: Frequency of Visitation

Response	Frequency	Percent
First trip	178	32.9%
2-10 trips	201	37.2%
11-20 trips	50	9.2%
21+ trips	112	20.7%
Total	541	100.0%

N = 541, Missing = 2

¹An equivalent question was not included in baseline studies.

Table B52. Cape Falcon: Fishing and Crabbing Frequency in the Last Ten years

Response	Frequency	Percent
I haven't fished or crabbed	371	68.7%
1-10 times	138	25.6%
11-20 times	18	3.3%
21+	13	2.4%
Total	540	100.0%

N = 540, Missing = 3

¹An equivalent question was not included in baseline studies.

Table B53. Cape Falcon: Purpose(s) for Visiting the Coast or Main Activities on the Coast

Purpose	Baseline 2015		Comparative 2021	
	Frequency	Percent	Frequency	Percent
Visiting friends or family	99	50.8%	235	43.4%
Hiking or camping	134	68.7%	301	55.5%
Fishing	30	15.4%	28	5.2%
Participating in a water sport	95	48.7%	194	35.8%
Hanging out on the beach	168	86.2%	392	72.3%
Sightseeing or wildlife viewing	141	72.3%	319	58.9%
Visiting a marine reserve	37	19.0%	45	8.3%
Other	14	7.2%	104	19.2%

Baseline N = 195, Missing = 1; Comparative N = 542, Missing = 1

- ¹ Baseline surveys asked respondents if they engaged in any of the listed activities while the current survey asked which of the listed activities were reasons they visited the coast.
- ² The options of business-related activities, visiting a state park, tide pooling or agate hunting, biking, and artistic endeavors were removed from the 2021 survey due to low response rate and to reduce response burden.
- ³ Respondents could choose all options that applied.
- ⁴ The option “general beach use” from baseline surveys was equated with “hanging out on the beach” from the current survey.

Table B54. Cape Falcon: Primary Purpose for Visit

Purpose	Baseline 2015		Comparative 2021	
	Frequency	Percent	Frequency	Percent
Visiting friends or family	33	18.6%	120	22.9%
Hiking or camping	17	9.6%	66	12.6%
Fishing	1	0.6%	1	0.2%
Participating in a water sport	43	24.3%	107	20.4%
Hanging out on the beach	63	35.6%	136	25.9%
Sightseeing or wildlife viewing	11	6.2%	50	9.5%
Visiting a marine reserve	0	0.0%	2	0.4%
Other	9	5.1%	43	8.2%
Total	177	100.0%	525	100.1%

Baseline N = 177, Missing = 8; Comparative N = 525, Missing = 18

¹The options business-related activities (n=0), visiting a state park (n=6), tide pooling or agate hunting (n=4), biking (n=0), and artistic endeavors (n=1) were available in the baseline study but were not included on the 2021 survey.

Table B55. Cape Falcon: Secondary Purpose for Visit

Purpose	Frequency	Percent
Visiting friends or family	46	10.0%
Hiking or camping	109	23.7%
Fishing	10	2.2%
Participating in a water sport	37	8.1%
Hanging out on the beach	140	30.5%
Sightseeing or wildlife viewing	95	20.7%
Visiting a marine reserve	7	1.5%
Other	15	3.3%
Total	459	100.0%

N = 459, Missing = 38

¹ 46 respondents did not have a secondary trip purpose and were not included in the table.

¹ An equivalent question was not included in baseline studies.

Table B56. Cape Falcon: Tertiary Purpose for Visit

Purpose	Frequency	Percent
Visiting friends or family	37	10.5%
Hiking or camping	79	22.3%
Fishing	9	2.5%
Participating in a water sport	27	7.6%
Hanging out on the beach	72	20.3%
Sightseeing or wildlife viewing	103	29.1%
Visiting a marine reserve	7	2.0%
Other	20	5.6%
Total	354	99.9%

N = 354, Missing = 32

¹ 157 respondents did not have a third trip purpose and were not included in the table.

¹ An equivalent question was not included in baseline studies.

Table B57. Cape Falcon: Awareness of Being at a Marine Reserve

Awareness	Baseline 2015		Comparative 2021	
	Frequency	Percent	Frequency	Percent
Aware	31	15.8%	218	40.3%
Not Aware	165	84.2%	323	59.7%
Total	196	100.0%	541	100.0%

Baseline N = 196, Missing = 0; Comparative N = 541, Missing = 2

Table B58. Cape Falcon: Awareness of Marine Reserve System

Awareness	Frequency	Percent
Aware	327	60.6%
Not Aware	213	39.4%
Total	540	100.0%

N = 540, Missing = 3

¹An equivalent question was not included in baseline studies.

Table B59. Cape Falcon: Perceived Knowledge of Marine Reserves

Knowledge Level	Frequency	Percent
Not Knowledgeable	312	57.8%
Slightly Knowledgeable	152	28.1%
Moderately Knowledgeable	65	12.0%
Highly Knowledgeable	11	2.0%
Total	540	99.9%

N = 540, Missing = 3

¹An equivalent question was not included in baseline studies.

Table B60. Cape Falcon: Opinion of Oregon Marine Reserves

Opinion	Baseline 2015		Comparative 2021	
	Frequency	Percent	Frequency	Percent
Positive	163	83.6%	421	78.3%
Neutral	31	15.9%	117	21.7%
Negative	1	0.5%	0	0.0%
Total	195	100.0%	538	100.0%

Baseline N = 195, Missing = 1; Comparative N = 538, Missing = 5

¹The baseline survey asked if marine reserves were “good,” a response of “yes” was interpreted as positive, “no” was interpreted as negative, and “not sure” was interpreted as neutral.

²The current survey had 6 possible answers, “strongly supportive” and “slightly supportive” were interpreted as positive, “neutral” and “no opinion” were interpreted as neutral, and “slightly opposed” and “strongly opposed” were interpreted as negative.

APPENDIX C:
Open Ended Comments from 2021 Survey

Very nice place to visit
Love the beach!
Have a nice day
I love the Oregon Coast!! Camping and the Ocean
Underage
Very clean, lots of fun.
Beautiful area
Don't vote republican
Beautiful sights
Beautiful!
←3 the Oregon Coast
Oregon is Beautiful
Love the Oregon Coast - Like coming home.
The natives should be able to fish seal and sea lions.
We love Cascade Head!
Happy to meet interns, Happy that there is an internship.
Must preserve!
Leave no trace ←3
Clean and Beautiful Place
Underage
Beautiful
←3 marine reserve
Love the cool coast!
Have a good day!
We have no game plan-just a random visit-don't know anything. But it's beautiful!!
Open visitors center.
Love that Oregon takes such great care of their recreation sites
Visitors center open please
It is beautiful here.
Great trash maintenance
Nice hike-beautiful day
23 years ago I rode my bike down the Oregon Coast
Very well maintained, conservation of nature, forestry and sea. Keep up the good work.
Something I would support. The view is spectacular.
Always love to come to the coast with friends and family.
Live and let live
I am not leaving!
Beautiful State
Sightseeing driving tours
Beautiful views
It's so great!
Beautiful Coastline
Enjoy this place
PROTECT IT ALL!!
Love visiting central Oregon coast. It is magnificent

Amazing opportunities on our coast, thanks to preservation efforts!
Love the coast!
Amazing
This place is great, 11/10
I love Yachats + Cape Perpetua
Love the weather + fantastic views.
Love that the coast is open to the public for us to enjoy our public lands
Love it!
Love Oregon
I'm very thankful for Oregon's commitment to preserving nature.
Its very beautiful!
Thank you for doing this.
Beautiful place! Intern were very pleasant.
Love Public Beaches!
Wonder fauna and Flora.
Keep spreading the word and knowledge about marine reserves.
Wonderful
I've been coming to the Oregon coast for over 30 years. I love it!
No, family trip for July 4
The best part of Oregon is the limited development along the coast.
Cool hats
We love and appreciate the OR coast. Now I want to learn about the marine reserve system.
Place signs in parking lot.
thank you keep our earth healthy ←3
Thanks for your time in surveys :)
We visited Pacific City then Cannon Beach. We love the various state parks.
Thank you !
Gorgeous!
No thank you
No thank you
Thank you for taking care of such beautiful places :)
Protect nature with my tax dollars
We noticed how clean the trail was. RESPECTED by locals and visitor
Thanks Oregon!
Love this place. I appreciate all the hard work
Anticipating how many people are going to be coming here, and not letting that ruin the environment.
Thanks
Thanks for supporting the reserve/marine
I'm in a wheelchair - can only access with a helper to push a specialized "trail" wheelchair.
Would like better access, ADA compliant trail.
Thank you!
nice park! appreciated!
Glad to be here!
Thank you!

Great job!
preserving natural habitat areas is very important
Thank you!
It's amazing here
Love this state's natural beauty!
More camping on the coast!
Thanks! Keep up the good work!
Nice walk
Oswald west is my favorite place in Oregon
Slow down traffic in summer near short sands parking lot.
:)
always a good experience
Thanks!
Favorite beach in the country right here.
Thanks!
Beautiful forests
My soul lives on the Oregon Coast ←3
Love it here, clean trash and poop
keep up the good work!
UNDERAGE
I love it!
Thank you for getting the public's opinion
Oregon Coast is better than California
We just love coming and seeing everything beautiful!
Everything is wonderful
Nice place, people.
Love it here
Have a good day, stay safe.
Keep it up!
Great Park!
Beautiful here
Awesome!
thanks!
Cool!
was awesome!
people from fish and wildlife are friendly.
The value of Oregon is that coastline is underdeveloped, keep it that way please :)
I feel I've been to many time but not known
Love it!
Love Oregon. Love its support of the ocean and marine life.
Thank you!
Fun times
Having a great time
It was awesome!!

Clam chowder, shrimp cocktail.
Protect it!
Thank you
I want to go home
Oregon people are so nice.
Thanks for all these state parks on the coast!
Fun beach, clean and thanks for the portipotties.
Heceta Bank
Oregon's cloudy
Best spot on the central coast
Enjoyed the natural beauty!
Beautifully done
Need more camping spots.
It's beautiful here.
It's been very nice.
Beautiful. 10/10! Will visit again!
Love the Oregon coast for state and its campgrounds.
Thank you for your service to us!
Thanks, we love your state!
Preserve it all!
More reserves, less RVs, See bicycles, Have bike and hike Campgrounds.
Oregon is great.
Beautiful
Love to visit!
We come to cool off.
It's absolutely beautiful here!
It's a great place
So happy to be here!
Great Place
Pleasantly surprised by the views!
I was told to go into a tide pool @ low tide to check out star fish etc.
Oregon Coast is beautiful
I love it here!
We love it here!
Protect the beautiful and important resources - need more funding and education.
Love what you do
Protect wildlife and land
Thanks for all your great work!
Love the area :)
Haven't seen a ny whales yet. Beautiful area though.
Good Work! Thanks so much!
From Nebraska, nice ocean better than cornfields
Best of luck getting financial support to continue with your efforts.
IT'S BEAUTIFUL, MORE SHOULDERS ON ROADS.

We're moving here one day.
Would love to return!
Enjoy coming to Oregon! (We're on our way to Washington)
We love the beach and the fact that your beaches can not be owned.
Thanks for keeping it open to visitors
Although I know nothing of the Oregon Marine Reserves, I support all attempts to make our natural planet healthier.
Beautiful hike
Love my neighborhood!! ←3
Thank you for the work you do!
Beautiful!
It's beautiful here
it a great time love every bit.
great beach - great access point
I come to the area for peace.
Love coming to this spot.
Having a great time. Beautiful.
Lovely.
Our Oregon State Parks are wonderful. Keep up the good work.
Nice beach!
Very Pretty.
Great Scenery & People
Thanks.
It was beautiful.
Financial support resources you care about.
Routine Visit
Thanks for preserving a beautiful place!
Keep up the good work!
Beautiful clean state, we are only here for 10 days, but are already planning a return trip.
Such a beautiful place. Very glad to see healthy tide pools, unlike Canon Beach.
Thanks for your work.
Absolutely Loved! Thank you!
I love the public beach access in Oregon!
Excited to explore!
Beautiful
Please lobby to ban logging.
So glad its here and available. Thank you!
I love smooth sands
I like it here!
Love the OR Coast
The woods are beautiful! Really appreciate bathrooms + trash cans near the beach to keep things clean. Want to see this more often.
We need to grow and strengthen the marine reserve.
We'd love more access to info about how to keep the OR coast safe w/ climate change + human behavior that is harmful to the environment.

Always a wonderful place to visit-ran or shine.
Could be 10 degrees warmer w/ no wind
I don't want to leave.
Wish more people would pick up their dog poop bags!
thanks
Love Oregon! Keep it pristine!
Thank you for the work you do!
We love Oregon
Lovely area!
beautiful coast + scenery
I love short sands!
Amazing Place
Really pretty!
Having marine reserves is a great opportunity for people to enjoy the public lands. I am from
th east coast where the land is all private owned.
Good luck
This is one of the best beaches!
This is the most beautiful coastline in the world.
Beautiful day very clean beach
Enjoyed the tide pools at hug point, hiking at eda + cannon beach.
Love it here!
Love short sands - Oregon hiking
Love this place!
Keep up the good work
1913 law outlawing private ownership below high tide line is visionary!!!
We love nature and your hat
We are having a fun time
Love it beautiful
Keep areas open to public use.
Lovely area.
Its important
OR doing a great job preserving natural reefs! Please continue!
no but love the coast
Have a nice day :)
Post more report violation signs w/ the number.
Too many tourist, but I'm a local.
Totally rad, love coming out every time
We love it!
Nothing like the Oregon coast
It's sunny! Could we have more sun?
Lovely places
:)
Love these interns.
Love it!
Always a great atmosphere.

Thanks for doing this survey!
Everyone is having a good time
The Oregon coast is beautiful.
Good job.
Had a great time!
←3
Keep up the good work!
Don't know enough
Can you minimize traffic/ make west of C Ave pedestrian only, please
Oregon coast stunningly beautiful.
Post more signs. Increase enforcement presence, more LEOs.
Love the Oregon Coast
Keep up the good work
Nope. Enjoying our visit.
Better than any therapy.
Thank you for fighting for preservation of important ecosystems!
Thank you for protecting and getting support for our Marine Reserves!
The ladies providing the survey are friendly - "Outise"
Great Time At Beach
Loving it!
I would like to know what kind of black rocks those are down below. Thanks for all the trails
and informative signs.
Intern was fabulous!
Keep on keepin on
Beautiful - Keep preserving nature!
Beautiful state
Enjoy the beach, caves and wild life.
Oregon Coast Is One of My Favorite Places on Earth!
It is a beautiful coastal place
more awareness, wishing tourist would respect the area
Friendly intern
Hella Cold
I love the Oregon Coast
I would ask the tide pools be observed and maintained to minimize human impact.
Love the beaches
Beautiful
Love the Oregon Coast
Great intern - Jessica
much love!! Keep iT real 'N Send iT
I had a great time.
It's a beautiful beach at Beverly Beach.
We have loved our visit. We can't wait to come back.
I love being here
Oregon needs to invest in the state parks, they are overrun. More info needs to be available.
:]

escalator
Love the ocean
Be-A-U-Tiful! and wet
Having a great time!
Fav beach spot in Oregon better than WA beaches.
fun!!
We need to learn more! :)
Visiting w/ family from Texas
Beautiful park!!!
I like whales SAVE THE WHALES!
More crowded than I remember.
Here mainly to photograph
marine reserves are awesome!
:) Nice
would be curious to see info on indigenous history of the land more publicly available.
Thanks for doing what you do.
Keep urchin populations!
Love it here!
Fix the stairs
Love the scenery
Very enjoyable :)
Thank you
There should be more educational opportunities. Hopefully something can be done about
waste, especially during tourist season.
It's been raining for the last two days.
Nice sunshine today.
Thanks for helping keep this place wild and special.
thank you
I love living here, I love our public coast law, Thank you for protecting all of this ←3 ←3 ←3
Please bring back camping at Oswalds
Drove 6,000 miles to get here. Great way to end the trip.
Beautiful place that should be preserve.
Thanks!
I'd like to learn more about marine reserves.
Good luck!
Family vacation with 3 generations, visiting from GA and TX.
Beautiful State
Beautiful area, hope folks keep it clean.
New to Oregon ←1 year
Love it
Keep up the great work. This is my favorite place in the world! ←3
I definitely appreciate that there is a protected marine reserve here that allows recreation.
The time we visit family and do things together.
Awesome!
Thanks for your important work.

Heard accident at top of road as we were walking down. Please pass to ODOT if possible.
Changes need to be made for safety!
Lovely place. I hope it can stay that way :)
Thanks!
it is pretty
Love the Coast!
Extend the marine reserve
I like this park a good deal. My sister likes to go tide pooling here too.
My favorite place in the US
Beautiful!
Keep Oregon Oregon
Its been nice
This place is great. Pay your interns more money!
Perfect
How do we make people use these bathrooms less? :)
Thank you for your work!
No, We love the coast
Keep this place beautiful
Go Vegan!
I came here a year ago and fell in love. Came back after a year. In the future I will be more
mindful of the reservation.
:)
This is a beautiful beach! Definitely coming here again.
Nice "voliters. " Great coast keep it nice :)
This is our anniversary
To people who live close by: Don't take it for granted!!
We love the open, accessible beaches.
It is wonderful to be back! Your park system is amazing.
It's just beautiful here and the young lady volunteers were great ←3
Came here at 12 years old several times.
I love Oregon!
Oregon is an amazing example of what NR management should be - teach Michigan!
Fun!
Thank you for asking.
Better hiking signs.
escaping the heat wave!
Where are all the animals that used to live in the tide pools?
Have a great time
I was impressed with the cleanliness of each area we have visited.
Thanks!
Good work on the survey!
It's beautiful.
Lovely beach :)
Beautiful
So beautiful, we feel blessed, thank you ODFW!!

Thanks
Happy to see markings