



Marine Resources Program
Newport, Oregon



2015 CAPE FALCON MARINE RESERVE VISITOR INTERCEPT SURVEY



**2015 VISITOR INTERCEPT SURVEY:
CAPE FALCON MARINE RESERVE**

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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. 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 reviews a study conducted to identify baseline information about existing knowledge of and attitudes about the marine reserves among visitors to Cape Falcon Marine Reserve. The study was conducted during the summer of 2015, just prior to the implementation of this final marine reserve on January 1, 2016. Tourism constitutes a substantial proportion of the economy of many coastal communities in Oregon. How the reserve system may impact coastal visitation can have significant implications for the economies of Oregon coastal communities.

RESEARCH DESIGN

An important aspect of establishing baseline data about marine reserves is determining the uses of the reserve areas. A rapid assessment approach was used to collect reserve site visitor use information by activity type and user demographics. This method, referred to as a pressure count, produces a snapshot of use of the area for a given point in time. A pressure count provides a basic understanding of the type of activities connected to these areas. To gather more detailed data, on-site intercept interviews were conducted among a random sample of reserve visitors. The purpose of the intercept interviews was to understand user knowledge, attitudes, and opinions of reserve areas, expenditures associated with trips to the area, characteristics of trips to the area, and the demographic characteristics of visitors.

The data collected during the pressure count focused on the following questions:

Who are the users of the reserve site?

What are these uses?

The purpose of the visitor intercept interviews at the reserve sites is to gather information about:

Demographic characteristics of the visitor population,

Visitor trip characteristics associated with the reserves (frequency, duration, etc.),

Visitor knowledge, attitudes, and perceptions about the marine reserves,

Expenditures associated with traveling to the marine reserve.

Given this baseline information, replication will allow assessment of change in visitation patterns over time. Such information is central to the mandate of the Marine Reserves Human Dimensions Monitoring Program.

SAMPLE DESIGN

Five sampling locations along the Cape Falcon Marine Reserve were selected for conducting the pressure count. Four of these sites were parking lots, all within Oswald West State Park, overlooking the reserve or with access to the reserve. One site was a beach located adjacent to the reserve, Short Sand Beach at Oswald West State Park.

Pressure count observation (sampling) periods were a specified duration. Observation days were chosen using a random selection procedure. Given the short duration of data collection over the summer tourism season, minor adjustments to this random schedule were made to insure an adequate distribution of sampling days by weekdays and weekends. During data collection, observation periods were systematically rotated between sampling locations. The pressure count was coordinated with both a related intercept visitor survey and a concurrent separate study consisting of observations of fishing activities in the reserve. This rotation achieved a random sample by time of day and allowed pressure counts and intercept surveys to occur three times per day at the relevant locations. During the pressure count, visitor demographic characteristics and the intended activity of all visitors present at these locations during an observation period were recorded on field data sheets.

The protocol for the intercept visitor survey was designed to ensure that the study achieved an accurate random sample. Given the controlled access to the reserve site in Oswald West State Park, a random visitor contact procedure was practical at that location. The contact procedure consisted of contacting every 7th visitor accessing the site along the trails to Short Sand Beach. The study was conducted during the peak summer tourism season at Cape Falcon from June to August, 2015.

Contacted visitors were asked to fill out one of three versions of the survey instrument, which were color coded to identify the questionnaire content. All versions of the questionnaire contained a common series of questions about general trip characteristics and visitor demographics. A second version of the questionnaire added a set of questions about trip expenditures and activities. A third version of the questionnaire also contained the common trip and demographic items plus a set of questions about marine reserve attitudes and perceptions. Every first contacted visitor was asked to fill out the first questionnaire, the next contacted visitor was asked to fill out questionnaire two, and every third contacted visitor was asked to fill out questionnaire three. This procedure resulted in a split random sample of 1/3 of the respondents completing each version of the survey instrument.

RESULTS

Between June 22nd and August 31st of 2015, data were collected for a total of 305 observation periods, 61 observation periods at each sampling location. Observation data were collected for a total of 10,310 visitors. An average of 126 visitors were observed at the beach site, with an approximately equal number of male and female visitors. The largest age cohort of beach visitors (38%) was those visitors between the ages of 31 and 64 years. Seniors were the least common age category (8%) of beach visitors. An average of 10.76 visitors was observed during each observation period at the parking lots. These visitors were 53% male and 47% female visitors

The most common type of visitor activity observed at the parking areas (82%) was categorized as general visitors, which includes visitors that are looking out over the ocean, sitting in their vehicles, taking a group photo, etc. The second most common visitor activity at parking areas (15%) was the category for visitors whose appearance in some manner indicated they planned to engage in board sports while visiting the area. The most common activity observed at the beach site (45%) was board sports. The second most common activity at the beach (43%) was categorized as general beach visitors, those visitors participating in a broad range of activities on the beach, such as swimming/wading, general play, kite flying, etc. Other popular activities include picnicking, pet walking and tidepooling.

For the visitor intercept survey, a total of 585 questionnaires were completed by the respondents at Cape Falcon Marine Reserve. Among the respondents who completed the questionnaire, 43% were female and 57% were male. Just over 50% of the respondents were Oregon residents. Washington residents accounted for 19% of the respondents. International visitors were the next most common visitors (6%), with 4% of the respondents residing in Canada. Visitors from California were 4% of the respondents. Colorado was the next most common U.S. state of residence (2%).

The majority of visitors were staying overnight somewhere during their visit, as 61% of respondents did not come to the reserve from their home on the day they were contacted. Of those overnight visitors, nearly one-quarter (24%) stayed in Manzanita. Other cities where visitors stayed overnight included Cannon Beach (17%), Seaside (13%), Portland (12%), and Rockaway Beach (10%).

Survey respondents were primarily visiting the coast with family (54%) or with friends (20%) or with both family and friends (11%). The majority (67%) of visitor groups tended to be small (2 to 5 people). About two-thirds of the respondents (66%) were repeat visitors, having previously visited the Oregon coast an average of five to six times. However, visitors had most commonly only visited once prior to the trip when they were contacted. A few respondents had visited quite often, which accounts for the higher average number of prior visits. Summer is the most preferred season to visit, followed by spring; winter is the least common season of prior visits.

In terms of demographics, the average age of respondents was 42 years, and most (65%) did not have minor children in their household. The most common visitor occupation was managerial/professional (36%), followed by a service occupation (16%). Most visitors had a high education level; 73% were college graduates or higher. They also had a high income level; 57% had family incomes greater than \$75,000.

A subsample of 196 respondents answered additional questions concerning knowledge of and attitudes about the Oregon Marine Reserve System. Only 16% of respondents were aware that a marine reserve was designated and soon to be implemented at Cape Falcon, the area they were visiting. When asked if reserve designation would impact their visitation, 87% of visitors said reserve designation would either have no impact on visitation (43%) or encourage them to visit more often (43%). A large majority (66%) of visitors felt the reserve would increase their appreciation for the area. In addition, 66% of the respondents consider marine reserves a positive outcome for Oregon.

When asked about activities they pursue while visiting the coast, respondents indicated they predominantly engage in visiting a state park (99%), general beach use (86%), sightseeing (72%),

hiking/camping (69%), and visiting friends or family (51%). They identified the *primary purpose* of their trip as beach use (34%), water sports (23%), and visiting with family and friends (18%).

A subsample of 190 visitors completed a third version of the questionnaire which contained additional questions about visitation and expenditures during their visit. A large majority (66%) stayed overnight on the coast; with visitors nearly equally split between motel/hotel accommodations (25%), an overnight rental house or condo (28%), a campground (24%), and a private accommodation (23%). The average duration of their stay was six nights. Most visitors drove to the coast using a personal vehicle; only 18% (n = 34) used commercial transportation during their trip, spending an average of \$805 on air travel and \$480 on a rental vehicle. Very few visitors (11%) were in parties that had a member planning to fish. In response to a question about expenditure expectations, visitors planned to spend the most amount on lodging (an average of \$1025), followed by dining (\$192), and then retail store purchases (\$186).

CONCLUSIONS

The majority of visitors observed during the beach pressure counts were adults, followed by children, and then seniors. The majority of visitors observed during the parking lot pressure counts were also adults, although slightly more seniors were observed than children. Most visitors in parking lot sites were observed in a range of pursuits which can be described as general visitation. At the beach site, there were slightly more visitors engaged in board sport activities than general beach visitation. Observed visitors were almost equally split by gender at the beach location, with slightly more males observed in the parking lot sites. An average of 11 visitors was observed per parking lot sampling period, and an average of 126 visitors was observed at the beach site.

Most visitors who completed the questionnaire(s) were not local, but overnight visitors. Most respondents reside in Oregon and adjoining states, particularly Washington and California. There are many international visitors, most from Canada. The visitor population tends to have high education and income levels. Most are employed as professionals or in the service sector. They typically have previously visited the area, and summer is the season of most of their trips, followed by spring.

The visitor support for reserves was positive. Although most were not aware they were visiting a recently designated and soon to be implemented reserve, a large majority of the visitors thought marine reserves were a positive outcome for Oregon and felt the reserves increase their appreciation for the area. While 43% of visitors felt reserve designation would not impact their visitation, 43% felt the designation of reserves would encourage them to visit more often. A very small minority (n = 1) of the visitors thought the reserves would negatively impact their visitation.

The activity patterns of questionnaire respondents mirrored the observation data. Visiting a state park was the most frequent activity reported by respondents, which is expected because the interviews were conducted in Oswald West State Park. General beach use was the most frequent activity and the primary trip motive. The opportunity to engage in water sports was the second most common trip motive. Most visitors stayed overnight in commercial facilities (hotel/motel or rented beach house) for an average of six nights. Lodging, restaurant dining, and retail store purchases were the largest expenditure categories.

One should note that since only 16% of the visitors were aware of Cape Falcon's designation and future implementation as a marine reserve, the presence of marine reserves has had little impact to date on

visitation or trip motives. As such, analysis of the economic impacts of marine reserves tourism is currently inappropriate. In fact, given that only 16% of respondents were aware of the reserve, these visitors are at the site for reasons other than the reserve, specifically to visit Oswald West State Park. Nevertheless, the visitor contacts are made at the shoreside edge of a future marine reserve. One cannot assess future change in trip motives and awareness without first obtaining baseline information on the visitor population.

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.

Each of the five Oregon marine reserves is a unique case study with different configurations, site characteristics, and demographics. The 2023 evaluation will provide an opportunity to learn from these five case studies. Comparative examination of research across the five sites should help determine what has or has not worked well, and what has been learned with this research.

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. With Oregon's

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) 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 ODFW 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 ascertain how people use the marine reserves, which includes identifying who the users of the sites are, what they are doing at the reserve sites, and the frequency of these user activities at each site. The primary objective of this research was to collect and analyze data about marine reserve visitor activities, demographics, party characteristics, visitor trip economic information, and visitor attitudes about and knowledge of the reserves. The establishment of this baseline data is important to determine the current patterns of usage of the reserves. Subsequent replication of this research can then provide the data for assessment of how such uses may or may not change over time.

This study consisted of two components with different research designs and purposes. A randomized observation procedure was used to collect data on visitor density, estimated age, gender, and visitor activities at the reserve site. This method, referred to as a pressure count, produces a snapshot of visitation patterns for a given point in time. The purpose of the pressure counts is to obtain a rapid assessment of the usage of each marine reserve site in order to determine:

- Who are the users of the site?
- What are these uses?
- What is the rate of visitation?

Since in-person contact with users can provide more detailed individual data than simple observations, random on-site intercept interviews were also conducted with marine reserve visitors. The purpose of the intercept interviews with users at the reserve site is to gather information about:

- Visitor expenditures associated with traveling to the marine reserve, to assist with future non-market valuations of the marine reserve system,
- Characteristics of visitor trips to the reserve site (frequency, duration, distance traveled, etc.),
- Visitor knowledge, attitudes, and perceptions about the marine reserves,
- Visitor demographic characteristics.

Combining pressure counts with intercept interviews provides data to characterize both broad visitation patterns, observed visitor characteristics and activities, and important additional information on reserve visitor party type, trip motives and expenditures, and individual visitor attitudes and knowledge of the reserves.

SAMPLE DESIGN

Data for these studies were collected at the Cape Falcon Marine Reserve during the summer of 2015. The questionnaire used for the 2015 intercept survey was a refined version of the interview instrument used in prior years. Prior to 2014, the reserve visitor intercept survey had utilized a structured but more open-ended interview. To facilitate more visitor contacts, the 2014 survey and all subsequent

studies have used a closed-ended questionnaire design.¹ Such a questionnaire design allows the respondent to participate in a largely self-administered manner. As a result, the data collected during the 2014 intercept interviews and the current 2015 intercept interviews are not directly comparable to data previously collected at the reserve sites.

Sampling procedures were designed to ensure surveys were conducted in a random manner. A total of 28 days were selected using a randomization procedure. This random selection of days failed to provide an accurate representation of the days of the week by oversampling some days and under sampling others during the short time frame for data collection. Minor adjustments were thus made to the sampling schedule to control for the day of week, to sample across each day of the week with approximately the same frequency. To randomize time of day for observations and visitor contacts, the first sampling period each day occurred at a different sampling location, sequentially rotating the time of the sampling period at each location. Visitor intercept surveys were conducted three times per day, systematically rotated with visitor pressure counts at the parking lot and beach sites. This schedule for rotation by sampling location was also designed to facilitate a separate additional study, observations of fishing activities within the reserve to assess fishing pressure in the reserve prior to implementation of harvesting restrictions set to occur on January 1, 2016. The resulting data are a random sample of reserve visitation between the hours of 8:30AM and 6:30PM from June 22nd to August 20th, 2015. The net effect of this protocol was a random sample of observations and visitor contacts, with the sampling protocol designed to control for location by time of day and day of week.

PRESSURE COUNT DATA COLLECTION^{2,3}

Pressure count observations were conducted three times per day, systemically rotated with the fishing pressure count and the visitor intercept survey. Observations were made at all the parking lot overlooks along Highway 101 within Oswald West State Park boundaries, at parking lots with pedestrian access to Oswald West, and at Short Sand Beach. The overlooks were chosen as they provide the best viewing of the marine reserve. Vehicle pull-outs located on the opposite side of the road from the ocean, where visitors commonly stopped to berry pick, and pull-outs that led to the Oregon Coast Trail were not included in this study, as individuals at these locations were not visiting the marine reserve during that observation period. The parking lots and beach were chosen as sampling locations because these places provide the best access for the public to view and interact with the marine reserve.

At the parking lot sites, data were collected during each observation period on the number of visitors and vehicles in the parking areas. At the beach site, data were collected on the number of visitors using the shore adjacent to the reserve site, visitors in the water of the reserve, and in the picnic area directly above the beach. The gender and estimated age of each individual, and his or her intended activity were recorded. The intended activities at the parking lot sites included general visitor (looking across the ocean, taking group photos, eating etc.), board sports, pet walking, and wildlife viewing

¹ The original instrument was an interview with many potential open-ended responses. The revisions included making most of the questions closed-ended (quantitative, nominal categories, etc.). Additional data on several topics were collected (see Appendices). Given these instrument revisions, the interview protocol was then adapted to allow self-administered questionnaire responses by the subjects. This protocol allowed the ODFW employees to also make more contacts and even engage in multiple concurrent contacts with several clipboards containing the revised and self-administered instrument.

² The observation forms used for pressure counts data collection at the beach site and parking lots can be found in Appendices D and E, respectively.

³ Limitations to the pressure count methods are described in Appendix F.

(binoculars). The observed activities at the beach site included general beach goer (swimming, wading, picnicking, general play, kite flying), board sports (surfing, kite surfing, stand-up paddle boarding, skim/boogie boarding), fishing (shellfish collection, shore fishing), wildlife viewing and photography, boating and motor boating, pet walking, and tidepooling. The estimated age of each individual was recorded as a category (range of ages) since observations were made from a distance. Picnickers in the elevated forested area just above the entrance to Short Sand Beach were recorded first. After the tally of picnickers, the observers counted the number of visitors participating in board sports that were currently in the ocean. These observations were done from the elevated picnic area as it provided a better vantage point for counting. Board sport participants currently in the ocean were not classified by age or gender because of the difficulty in determining those categories due to distance and wetsuits. In an attempt to reduce double counting and missing individuals, observations were done in a linear manner across the beach. Two ODFW employees walked the length of the beach; one identified visitor activity, age and gender, while the other recorded the observations.

INTERCEPT INTERVIEW DATA COLLECTION⁴

Visitor intercept surveys were conducted in Oswald West State Park, 0.5 miles down the Short Sand Beach Trail in the forested picnic area just above the entrance to Short Sand Beach. Picnickers, beach-goers, and hikers going to the Cape Falcon trail passed through this area and were included in the sample. The employees conducting the visitor contacts were seasonal employees wearing an ODFW hat. At the onset of the sampling period for conducting visitor contacts, the time was recorded, and the first person to pass through the area was asked to complete a survey. Based on previous parking area traffic counts⁵ and pilot data collection in the field, the number of interviews necessary to achieve the target sample size for this study was approximately equal to an interview of every 7th person present during a data collection period. If a visitor was unwilling to complete a survey, then the immediate next person passing through was interviewed. To assess potential nonresponse bias, refusals to participate in the survey were recorded for six sampling days by noting that individual's intended activity (board sports or general beach goers), gender, and approximate age. The nonresponse rate is discussed in greater detail at the end of the results section.

Upon engaging potential subjects, they were asked to participate in the survey.⁶ If the visitor was willing to participate, they were handed a clipboard with the appropriate survey instrument (See Appendices A, B and C). Before the visitors began to fill in the self-administered survey, participants were given basic information about the marine reserve purposes⁷.

There were three versions of the survey instrument: version 1 contained questions about basic demographics and trip information (Appendix A); version 2 contained the same demographic questions, plus trip expenditure economic questions (Appendix B); version 3 also contained the same demographic questions, plus visitor attitudes and perceptions questions (Appendix C). These three versions of the questionnaire were sequentially rotated among all visitor contacts, and each version was thus

⁴ Limitations to the intercept survey methods are described in Appendix G.

⁵ These traffic counts were conducted by Oregon Department of Parks and Recreation.

⁶ The contact script: "Hello, I'm working with the Oregon Department of Fish and Wildlife. There will be a marine reserve implemented here on January 1st, 2016, and we are asking visitors to fill out a brief survey. Do you have a few minutes to fill one out?"

⁷ Basic information script: "Oregon marine reserves are areas set aside for habitat protection and research which would prohibit fishing, shell fishing, crabbing, and marine development."

completed by a 1/3 split sample of all respondents. A total of 585 questionnaires were completed by the respondents. After the respondent completed the questionnaire, the ODFW employee would add additional details about the interview (date, time, sampling location, identification number, and marine reserve site⁸). Brochures on Oregon's marine reserves, Oswald West State Park Trail Maps, and tide tables were available for participants after the interviews were completed.

⁸ The 2015 study was exclusively conducted at Cape Falcon.

RESEARCH RESULTS

2015 PRESSURE COUNT RESULTS

The five data collection locations selected for the pressure count were areas that overlooked the reserve, a parking lot with access to the reserve, and the shoreside beach area next to the reserve.⁹ When the ODFW employee first arrived at a parking lot or overlook observation site, all vehicles in the parking area were counted. The employee next recorded data about visitor demographics (age and gender categories) and activities. To impute anticipated visitor activities while still in the parking areas, visitors in the parking area were recorded in the water sport category if a surf or boogie board was present, in the dog walker category if a dog was present, in the picnicking category if they were eating at a picnic table, and in the wildlife viewing category if they were using binoculars. For those lacking such cues, all other visitors in the parking areas were classified as general visitors. Between June 22nd and August 31st of 2015, data were collected for a total of 305 observation periods, 61 observation periods at each location.

An average of 126 visitors were observed at the beach site, with an approximately equal number of male and female visitors (Table 1). The largest age cohort of beach visitors (38%) was those visitors between the ages of 31 and 64 years (Table 2). Seniors were the least common age category (8%) of beach visitors. An average of 10.76 visitors was observed during each observation period at the parking lots (combined). These visitors were 53% male and 47% female visitors (Table 1). Similarly to the beach visitors, the largest proportion of visitors observed in parking lots (44%) was the age category between 31 and 64 years. However, the lowest proportion of visitor ages observed in the parking lots (6%) was between 13 and 19 years (Table 2). In both settings, most visitors are adults between 20 and 64 years of age, with a roughly equal distribution of males and females.

Table 1. 2015 Visitor Pressure Count – Observed Visitors by Gender

Gender	Beach			Parking Lot		
	Average	N	Percent	Average	N	Percent
Male	62.90	3837	49.93%	22.95	1400	53.33%
Female	63.08	3848	50.07%	20.08	1225	46.67%

N = 10310

Table 2. 2015 Visitor Pressure Count – Observed Visitors by Age

Age	Beach			Parking Lot		
	Average	N	Percent	Average	N	Percent
0-12 yrs	22.75	1388	18.06%	1.10	269	10.25%
13-19 yrs	14.79	902	11.74%	0.66	160	6.10%
20-30 yrs	30.48	1859	24.19%	2.47	603	22.97%
31-64 yrs	48.31	2947	38.35%	4.68	1142	43.50%
65+ yrs	9.66	589	7.66%	1.85	451	17.18%

N = 10310

⁹ For the purpose of this discussion the parking lot data and beach data have been disaggregated in most sections.

The average number of vehicles observed at each parking lot site was 27 vehicles (no table). As is characteristic of the Oregon Coast in midsummer, the majority of observation periods occurred during sunny weather, while the next most common weather during the observations was cloudy (Table 3).¹⁰

Table 3. 2015 Visitor Pressure Count – Weather Conditions during Observation Periods

Weather	Frequency	Percent
Cloudy	27	22.70%
Rainy	3	2.50%
Foggy	16	13.40%
Sunny	73	61.30%
Total	119	100.00%

N = 119; Missing = 3

Note: Includes observations from parking lots (N=61) and the beach (N=61).

The most common type of visitor activity observed at the parking areas (82%) was categorized as general visitors, which includes visitors that are looking out over the ocean, sitting in their vehicles, taking a group photo, etc. (Table 4). Note that this category includes all visitors whose primary recreational activity or purpose related to their visit could not be ascertained by observation. The second most common visitor activity at parking areas (15%) was the category for visitors whose appearance in some manner indicated they planned to engage in board sports while visiting the area.¹¹

Table 4. 2015 Visitor Pressure Count – Observed Visitor Activity at Parking Lot Sites

Observed Visitor Activity	Frequency	Percent	Mean
Picnicking	8	0.30%	0.03
General Visitor	2152	81.98%	8.82
Board Sports	386	14.70%	1.59
Wildlife Viewing	4	0.15%	0.02
Pet Walking	71	2.70%	0.29
Other	4	0.15%	0.02
Total	2625	100.00%	10.76

N = 2625 (244 observation periods)

The most common activity observed at the beach site (45%) was board sports (Table 5). The second most common activity at the beach (43%) was categorized as general beach visitors, those visitors participating in a broad range of activities on the beach, such as swimming/wading, general play, kite flying, etc. Other popular activities include picnicking, pet walking and tidepooling.¹² While many

¹⁰ Since parking lot observation data was collected within 20 minutes, the weather was recorded at the start of the data collection period and used for all parking lot sites. Weather was recorded separately at the beach site.

¹¹ While visitors were not actually engaged in board sports while in the parking lots, visitors were counted in this category if they had a board used for water sports (i.e. surf board, boogie board) either on or in their vehicle, or were carrying one.

¹² Visitors were placed in only one activity category to avoid double counting. It was left to the discretion of the ODFW employee to discern which activity was the visitor's primary activity should the visitor be participating in more than one activity (i.e. walking a dog while tidepooling).

visitors certainly engage in a range of activities during their visit, these data represent a brief snapshot of the distribution of visitor activities during the observation period.

Table 5. 2015 Visitor Pressure Count – Observed Visitor Activity at Beach Site

Observed Visitor Activity	Frequency	Percent	Mean
Picnicking	359	3.32%	5.89
General Beach Visitor	4601	42.55%	75.43
Board Sports	4864	44.98%	79.74
Surf Fishing	0	0.00%	0.00
Wildlife Viewing	19	0.18%	0.31
Motor Boat	4	0.04%	0.07
Non-motorized Boat	2	0.02%	0.03
Pet Walking	482	4.46%	7.90
Tidepooling	405	3.75%	6.64
Hiking	70	0.65%	1.15
Other	7	0.06%	0.11
Total	10813	100.00%	177.26

N = 10813 (61 observation periods)

2015 VISITOR INTERCEPT SURVEY – VISITOR PARTY AND TRIP CHARACTERISTICS

During the summer of 2015, 585 visitors completed one of three versions of the intercept interview questionnaire; results of those questionnaire responses follow. As previously described, all respondents completed the same set of questions about visitor demographics and basic trip characteristics.¹³ These questions are on the version of the instrument in Appendix A and also appear on all other versions of the instrument. Alternately, 1/3 of the visitors completed a version of the questionnaire that contained additional questions pertaining to either attitudinal variables (Appendix C) or economic data (Appendix B). The first data presented are drawn from responses to the questions that all visitors completed.

The majority (52%) of all respondents contacted during their visit to the marine reserves were from Oregon (Table 6; Figure 1). The next most common states of residence were the adjoining coastal states of Washington (19%) and California (4%). There were more Canadian visitors (4%) than residents of any other single state in the United States. International visitors were 6% of the respondents. Colorado (2%) was the next most common state of residence among respondents from the United States.

¹³ With a random sample of 585 visitors, the margin of error for this sample was $\pm 1.99\%$ at the 95% confidence interval. The confidence interval for the entire sample was calculated as though all respondents responded to a true/false question with an equal (50%) probability of choosing either response. The standard error for the subsamples completing the attitudinal (n = 196) and expenditures (n = 190) versions of the questionnaire would be higher, 3.57% and 3.63% respectively.

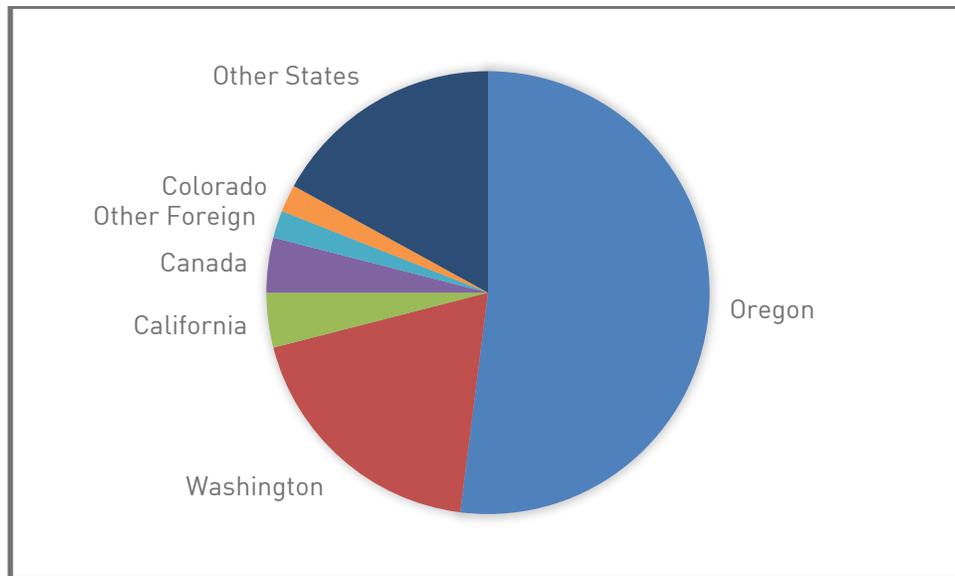
Table 6. Residence of Marine Reserve Visitors

Q1. Please list your state or country and zip code below.

State/Country	Frequency	Percent
Oregon	308	52%
Washington	114	19%
California	24	4%
Canada	21	4%
Other Foreign	10	2%
Colorado	11	2%
Other States	97	17%
Total	585	100%

N = 585; Missing = 0

Figure 1. Residence of Marine Reserve Visitors



N = 585; Missing = 0

Using both zip codes and country of origin information, the approximate distance that all respondents traveled to visit the reserve site was calculated (Table 7). The average distance visitors had traveled to the reserve site was 568 miles; one visitor had traveled over 8000 miles. There were 10 international visitors. Seven of the international visitors from Australia, Europe and Japan had traveled an average of nearly 6000 miles each (a total of 41,812 miles), which would tend to exaggerate the distance most visitors traveled. Removing these outliers from the analysis, the average distance North American visitors¹⁴ had traveled to the reserve site was 473 miles. Few of the Canadian visitors had travelled great distances; the visitor who had traveled 3314 miles was actually from south Florida.

¹⁴ U.S. and Canada only. There were no visitors from Mexico among the contacted visitors.

Table 7. Miles from Residence of Visitors

Statistic	All Visitors	North America Residents
Mean	568	473
Median	115	110
Mode	91	91
Minimum	0	0
Maximum	8017	3314
Number of Valid Responses	578	568

All Visitors: N = 578; Missing = 7

North America Residents: N = 568; Missing = 0

As one indication of the proportion of visitors who are tourists rather than local residents or residents in close proximity to the coast, respondents were asked whether their trip originated at home or elsewhere on the day of contact (Table 8). Sixty-one percent of respondents began their trip from a location other than their home.

Table 8. Start Location of Visitor Trip

Q2. Did you start your trip today from home or a different location?

Origin of Trip	Frequency	Percent
Home	229	39%
Different Location	354	61%
Total	583	100%

N = 583; Missing = 2

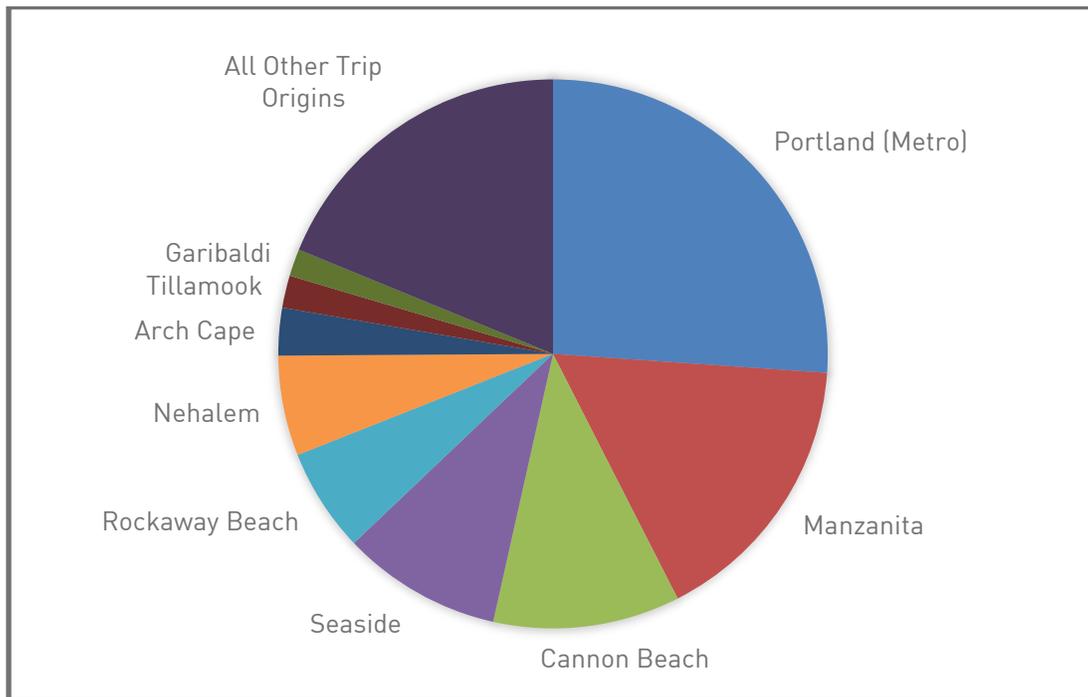
Regardless of whether they came from home or a different location, all visitors were asked where their trip originated (i.e., from what city). The Portland area was the trip origin for 26% of the respondents (Table 9; Figure 2). Thereafter, as would be expected, many visitor trips originated in the communities closest to the Cape Falcon Marine Reserve: Manzanita (16%), Cannon Beach (11%), Seaside (9%), Rockaway Beach (6%), and Nehalem (6%).

Table 9. City Where Trip Originated (All Respondents)
Q3. Where did you start your trip from today?

City	Frequency	Percent
Portland (Metro)	150	26.1%
Manzanita	94	16.4%
Cannon Beach	63	11.0%
Seaside	54	9.4%
Rockaway Beach	35	6.1%
Nehalem	34	5.9%
Arch Cape	16	2.8%
Tillamook	11	1.9%
Garibaldi	9	1.6%
All Other Trip Origins	108	18.8%
Total	574	100.0%

N = 574; Missing = 11

Figure 2. City Where Trip Originated (All Respondents)



N = 574; Missing = 11

Those visitors who had not traveled to the reserve site from home on the day of contact (n = 354) had stayed overnight at some other location within reasonable driving distance of the coast. Not surprisingly, more than half (54%) of those respondents stayed in three coastal communities in close proximity to the reserve (Table 10; Figure 3). Those towns were Manzanita (24%), Cannon Beach (17%),

and Seaside (13%). Other towns in close proximity to the reserve were the trip origins for 26% of these visitors, and only 8% of these respondents stayed in other places. Visitors arriving from Portland were 12% (n = 42) of these respondents. Thus, of all Portland area visitors (Table 9, n = 150), the vast majority (n = 108; 72%) started from their Portland residence and had driven to the reserve site on the day of contact.

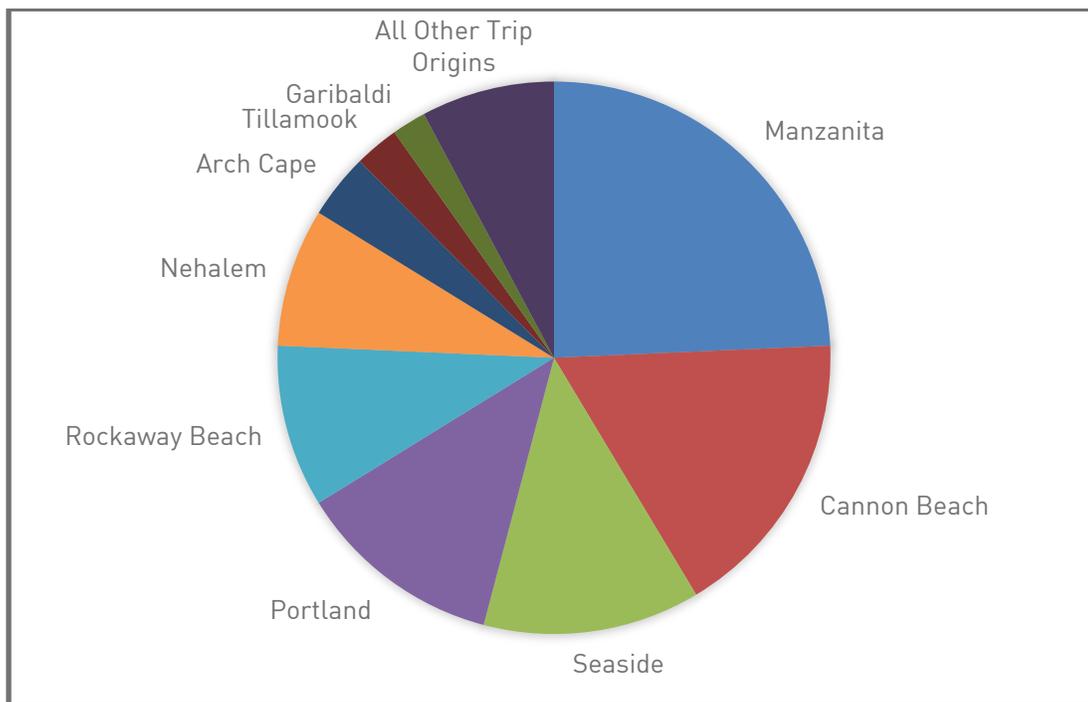
Table 10. City Where Trip Originated (Trips Originating Away from Home)
Q3. Where did you start your trip from today?

City	Frequency	Percent
Manzanita	84	24.3%
Cannon Beach	59	17.1%
Seaside	44	12.7%
Portland	42	12.1%
Rockaway Beach	33	9.5%
Nehalem	28	8.1%
Arch Cape	13	3.8%
Tillamook	9	2.6%
Garibaldi	7	2.0%
All Other Trip Origins	27	7.8%
Total	346	100.0%

N = 346; Missing = 8

Note: Table excludes those respondents who started their trip from home.

Figure 3. City Where Trip Originated (Trips Originating Away from Home)



N = 346; Missing = 8

Note: Table excludes those respondents who started their trip from home.

Respondents were asked what type of group they were with while visiting the marine reserve (Table 11). A large majority (85%) of the respondents indicated that they were visiting the area with either their family (54%), friends (20%), or a mixed group of friends and family (11%). Only 13% of the respondents were visiting the reserve site as individuals.

Table 11. Type of Marine Reserve Visitor Group
Q4. What is the type of group you are visiting this area with?

Group Type	Frequency	Percent
Family	311	53.7%
Friends	114	19.7%
Individual	77	13.3%
Family & Friends	62	10.7%
Other Groups ¹	15	2.6%
Total	579	100.0

N = 579; Missing = 6

¹Only seven respondents identified the group as an organized (n = 6) or youth (n = 1) group.

Visitors were asked about the size of the group that they were with while visiting the marine reserve (Table 12). In their response, visitors indicated the number of people in their group who were adults, children and seniors (age 65 years and up). The vast majority (98%) of visitor parties contained adults. Less than half of the respondents (37%) were in parties with children, and only 8% of the parties contained seniors. The average visitor party contained about three adults, one child, and less than one (0.17) senior. The sum of these responses is the average group size. The average group size was 4.17 visitors, the median party size was three, and the most common party size (mode) was two persons. Parties ranged in size from one to 35 visitors.

Table 12. Distribution of Visitor Ages within Groups
Q5. Including yourself, how many people are visiting this site with you?

Age Category	Adults	Children	Seniors	Total
Valid Responses	580	581	581	580
Some in Category	566 (97.6%)	212 (36.5%)	45 (7.7%)	
None in Category	14 (2.4%)	369 (63.5%)	536 (92.3%)	
Average per Party	2.97	1.03	0.17	4.17
Median	2	0	0	3
Mode	2	0	0	2
Minimum	0	0	0	1
Maximum	21	25	4	35

N = 580, 581, 581, and 580; Missing = 5, 4, 4, and 5 (per column)

Visitors were asked to indicate the size of their party (Table 13). The majority (67%) of the respondents indicated that they were visiting the area in a small group of between two and five people. Individuals and medium sized groups (6 to 10 persons) were both 14% of all visitor groups. Larger groups accounted for only 5% of all visitation.

Table 13. Size Categories of Marine Reserve Visitor Groups

Q5. Including yourself, how many people are visiting this site with you?

Group Size	Frequency	Percent
Individual	81	14.0%
Small Group (2-5 people)	386	66.8%
Medium Group (6-10 people)	81	14.0%
Large Group (11+ People)	30	5.2%
Total	578	100%

N = 578; Missing = 7

Contacted visitors were asked if the current visit was their first visit to Oswald West State Park (Table 14). A majority (66%) of all visitors were repeat visitors.

Table 14. First Time and Repeat Visitation among Marine Reserve Visitors

Q6. Is this your first visit to this location?

Response	Frequency	Percent
Yes	198	33.8%
No	387	66.2%
Total	585	100.0%

N = 585; Missing = 0

The visitors were also asked to indicate their number of visits during the last three years, including the current visit (Q7). Only the 387 respondents who indicated the current visit was not their first to the area (Q6) are included in the following Tables 15 and 16. Among repeat visitors the average number of visits per year was between 8 and 9 visits (Table 15). However, a very small number of respondents indicated they visited the area quite frequently (note the maximum for each year in contrast to the small median and mode values). While that can be accurate for some local visitors, these few responses tend to inflate the average number of visits per year among all visitors (note that the median number of repeat visits is only one or two for all three years).

Table 15. Repeat Visitation by Year

Q7. How many trips have you made to this location in the last three years?

Year of Visitation	2015	2014	2013
# of Responses	384	384	383
Mean	8.41	8.54	7.86
Median	2	1	1
Mode	1	0	0
Minimum	1	0	0
Maximum	180	200	200

N = 384, 384, and 383; Missing = 3, 3, and 4 per column

To more accurately represent patterns of repeat visitation among the majority of all visitors to the reserve site, the analysis was rerun excluding as outliers the handful of respondents (n = 12) who indicated they visit exceptionally often. These results are presented in Table 16. Among repeat visitors (who do not visit \geq 100 times per year) the average number of visits per year was between 5 and 6 visits over the prior three years. Most respondents had previously only visited the area once or twice.

Table 16. Repeat Visitation by Year (adjusted to exclude outliers)

Year of Visit	2015	2014	2013
# of Responses	372	372	372
Mean	5.56	5.65	4.92
Median	2.00	1.00	1.00
Mode	1	0	0
Std. Deviation	10.046	11.281	10.769
Range	89	90	90
Minimum	1	0	0
Maximum	90	90	90

N = 372

The respondents were asked which season of the year they most often visited the area (Table 17; Figure 4). The following table excludes all first time visitors (n = 198), who by definition would have visited the area for the first time during the summer of 2015. Thus respondents, as repeat visitors, could potentially have visited during more than one season. The summer was cited as the season with the most visitation (94%). Visitation during other seasons ranged from a low of 20% during winter to more than one third (35%, 37%) during fall and spring. This is a common tourism visitation pattern, particularly for coastal regions, with the least visitation during the winter, the peak during the summer, and shoulder seasons occurring during the other seasons (fall and spring, here with nearly equal visitation).

Table 17. Seasonal Visitation Patterns

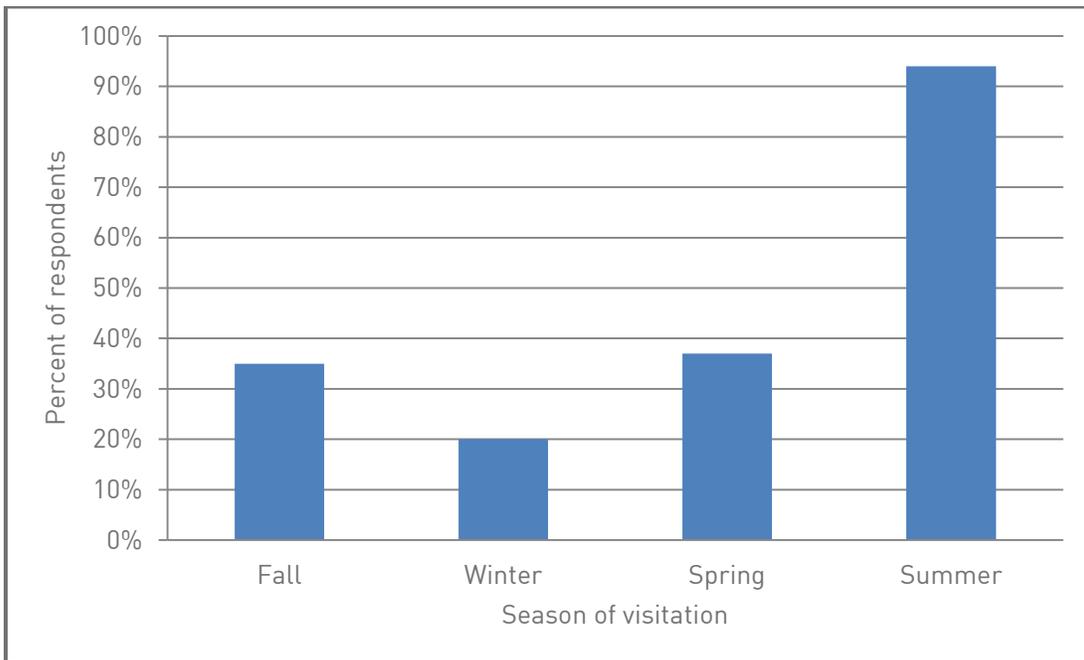
Q8. What time of the year do you most often visit this area?

Season	Fall	Winter	Spring	Summer
Yes	135 (35%)	75 (20%)	140 (37%)	358 (94%)
No	247 (65%)	307 (80%)	242 (63%)	24 (6%)
Column Totals	382 (100%)	382 (100%)	382 (100%)	382 (100%)

N = 382; Missing = 5, all columns

Note: Respondents could choose more than one season for their prior visit(s), so row totals would exceed 100% and are omitted.

Figure 4. Season Respondents Visit Reserve Site Most Frequently



N = 382; Missing = 5

Note: Respondents could choose more than one season for their prior visit(s), so total percentages sum to more than 100%.

2015 VISITOR INTERCEPT SURVEY – DEMOGRAPHIC DATA

The demographic section of the universal questions assessed a range of descriptive variables to characterize the visitor population, including respondent age, gender, household composition, education, occupation and income. Respondents ranged in age from 18 to 81, and the average age of all respondents was 42 years of age (Table 18). The largest age category of the respondents was those visitors between the ages of 31-45 years (37%; Figure 5). There were more respondents age 45 and younger (63%) than over age 45 (37%). In addition, 16% of the visitors were over the age of 60. The majority of the respondents (57%) were male (Table 19).

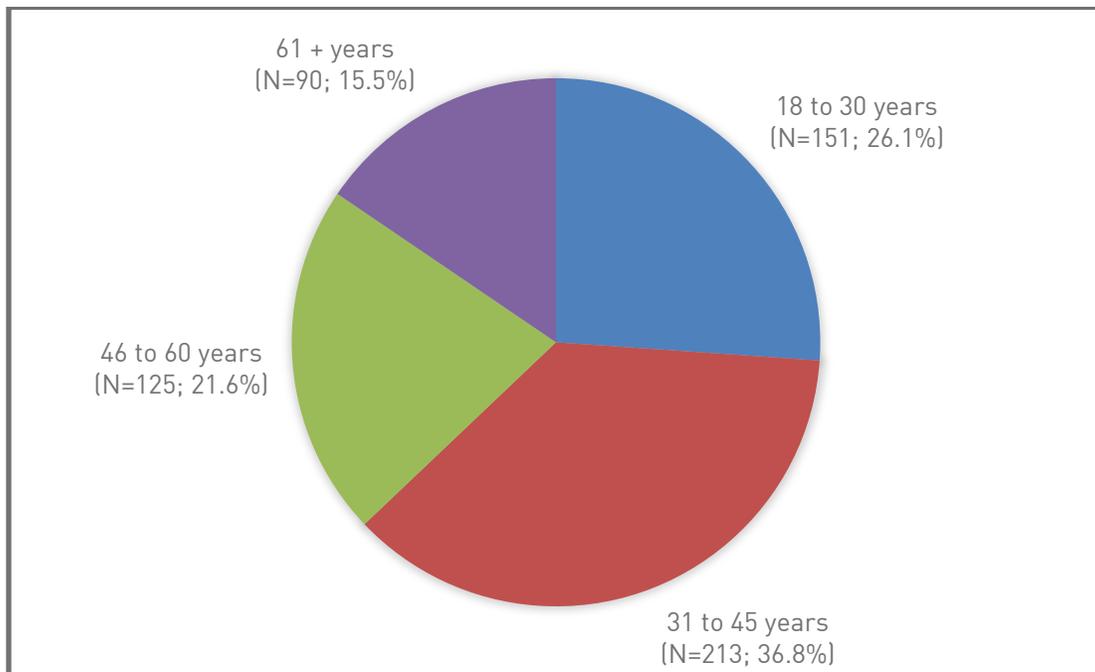
Table 18. Age of Respondents

Q9. What is your age?

# of Responses	579
Mean	42.18
Median	40.00
Mode	40
Range	63
Minimum	18
Maximum	81

N = 579; Missing = 6

Figure 5. Respondent Age



N= 579; Missing = 6

Table 19. Gender of Respondents

Q10. What is your gender?

Gender	Frequency	Percent
Male	331	57%
Female	248	43%
Total	579	100%

N = 579; Missing = 6

The majority (65%) of visitors who completed the survey did not have children under the age of 18 currently residing in their household (Table 20).

Table 20. Respondent Households with Children

Q11. Do you have any children under the age of 18 residing in your household?

Children?	Frequency	Percent
Yes	205	35%
No	374	65%
Total	579	100%

N = 585; Missing = 6

The most common occupational category among respondents was managerial and/or professional (36%, Table 21). The second most common occupation among respondents was in the service industry (16%), followed by respondents who were retirees (15%).

Table 21. Respondent Occupations

Q12. What is your occupation?

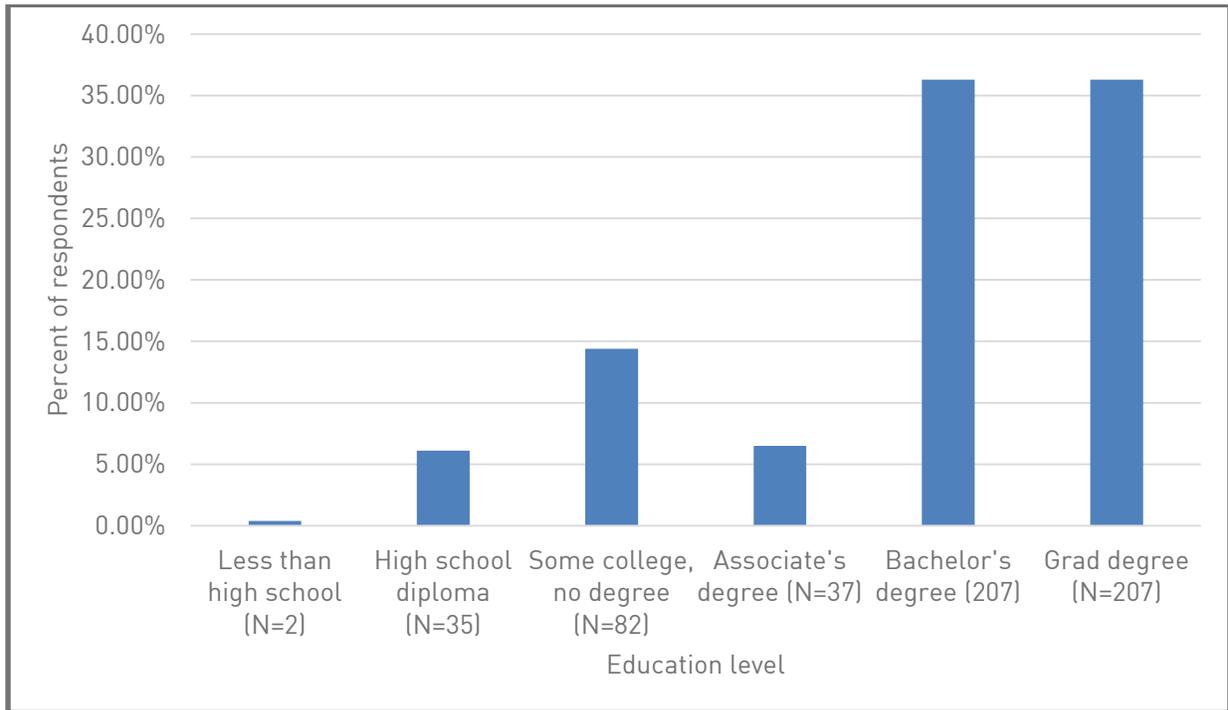
Occupation	Frequency	Percent
Managerial, Professional	206	36.20%
Service Occupation	88	15.50%
Retired	85	14.90%
Technical, Sales, Administrative Support	48	8.40%
Student	45	7.90%
Precision Production, Craft, Repair	30	5.30%
Homemaker	26	4.60%
Operator, Fabricator, Laborer	20	3.50%
Farming, Forestry, Fishing	11	1.90%
Military	10	1.80%
Total	569	100.00%

N = 569; Missing = 16

The questionnaire respondents tended to have a high level of education. The majority of respondents (73%) had a Bachelor’s degree or higher, and over one-third (36%) had graduate degrees (Figure 6). Only 7% of visitors had not attended college, and 21% had some college or an associate degree.

Figure 6. Respondent Education

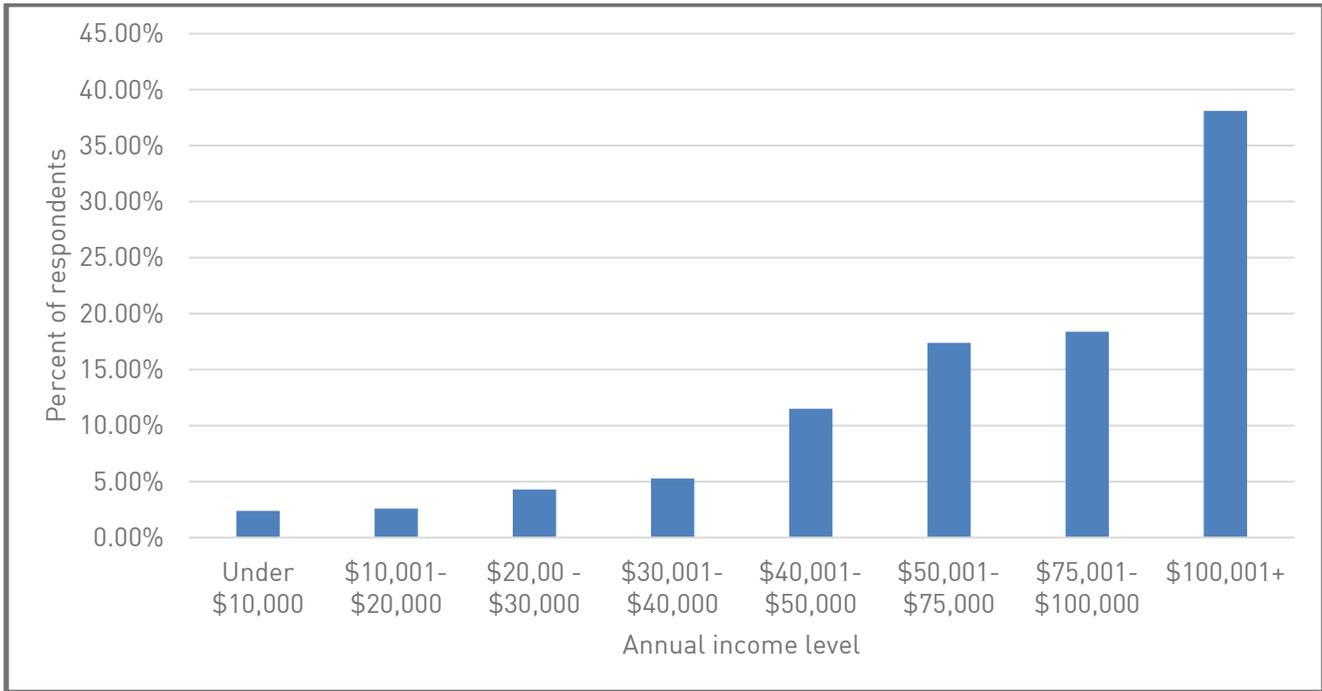
Q13. What is the highest year of formal education you have completed?



N = 570; Missing = 15

An optional question requested information about the annual family income of the visitors, and 84% of the contacted visitors (n = 494) responded to the question (Figure 7). The majority (74%) of the respondents indicated their family had an income of greater than \$50,000 annually. A smaller majority of the respondents (57%) indicated their family had a relatively family income of more than \$75,000, and 38% of visitors had an income of greater than \$100,000.

Figure 7. Respondent Annual Family Income
 Q14. What is your family's annual income level?



N = 494; Missing = 91

2015 VISITOR INTERCEPT SURVEY - KNOWLEDGE, ATTITUDES, AND PERCEPTIONS

The questions about visitor demographics and trip characteristics previously discussed were contained in all three versions of the survey questionnaire (see all Appendices). From the sample of all visitors contacted, a subsample of 1/3 of the visitors (every third respondent) was asked to complete a version of the questionnaire which included additional questions pertaining to their perceptions and awareness of the reserves (Appendix C). A total of 196 respondents completed this version of the questionnaire.

When the interviews were conducted during the summer of 2015, the Cape Falcon Marine Reserve had not yet been implemented. Formal implementation occurred at Cape Falcon on January 1, 2016. The visitors were asked whether they were aware that the state would be implementing a marine reserve at the interview location, and a large majority (84%) of respondents were not aware there was to be a marine reserve at the location where they were interviewed (Table 22).

Table 22. Respondent Awareness of Reserve Implementation

Q15. Were you aware that the state will be implementing a marine reserve in this area?

Awareness	Frequency	Percent
Yes	31	15.80%
No	165	84.20%
Total	196	100.00%

N = 196; Missing = 0

Visitors were asked if the designation of a marine reserve in the area would impact their visitation in any manner (Table 22; Figure 8). The large majority (87%) of respondents indicated that the designation of the reserve would encourage them to visit more frequently (43%) or would have no impact on their visitation to the reserve site (43%). Twenty respondents (10%) did not know if reserve designation would impact their visitation. Only 6 visitors (3%) thought they would be discouraged from visiting or would visit another location.

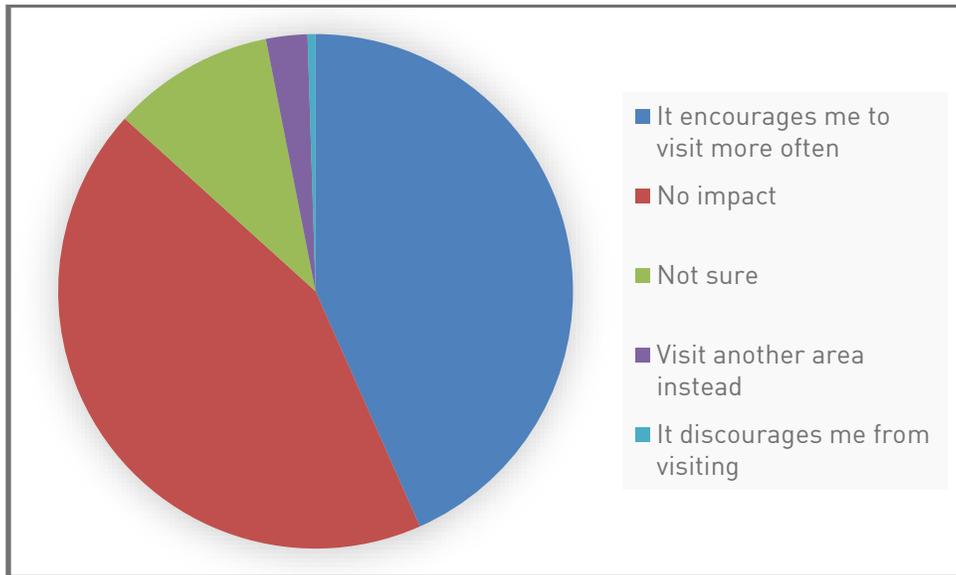
Table 22. Expectations of Visitation in Response to Reserve Designation

Q16. How will the designation of this area as a marine reserve impact your visits?

Impact on Visitation	Frequency	Percent
It encourages me to visit more often	85	43.40%
No impact	85	43.40%
Not Sure	20	10.20%
Visit another area instead	5	2.60%
It discourages me from visiting	1	0.50%
Total	196	100.00%

N = 196; Missing = 0

Figure 8. Expectations of Visitation in Response to Reserve Designation



N = 196; Missing = 0

Of the five visitors who said they would visit another area in response to reserve designation, only one answered the supplemental question: Q16E2. “If you no longer visit here, will you visit another OR coastal area instead?” That respondent indicated they would not visit another Oregon coastal area.

When asked if a marine reserve in the area would increase their appreciation for the area, the majority (66%) of respondents responded affirmatively (Table 23). An appreciable number of visitors (28%) were unsure what impact the reserve might have on their appreciation of the area, and only 6% of the respondents thought the presence of the reserve would not increase their appreciation of the area.

Table 23. Impact of Marine Reserves on Visitor Appreciation of Area

Q17. Would a marine reserve in this area increase your appreciation for this area?

Appreciation	Frequency	Percent
Yes	129	66.20%
No	11	5.60%
Not Sure	55	28.20%
Total	195	100.00%

N = 195; Missing = 1

Survey participants were asked if they felt that marine reserves were a positive outcome (“a *good thing*”) for Oregon. The majority (66%) of respondents considered the reserves to be a positive outcome for Oregon (Table 24). A small number of visitors (28%) were not sure of the outcome, and only 6% of visitors felt that the marine reserves represent a negative outcome for the state of Oregon.

Table 24. Visitors Opinions Concerning Impact of Reserves for Oregon

Q18. In your opinion, do you feel marine reserves are a good thing for Oregon?

Response	Frequency	Percent
Yes (Positive outcome)	129	66.20%
No (Negative outcome)	11	5.60%
Not sure	55	28.20%
Total	195	100.00%

N = 195; Missing = 1

In the final series of questions for this subsample of visitors, the subjects were asked to characterize their trip activities during their trip to the Oregon coast (Table 25; Figure 9). A large majority (99%) cited state park visitation.¹⁵ The majority (86%) of respondents also indicated that they engaged in general beach use. Sightseeing and/or wildlife viewing were the next most common activities (72%). Other popular activities in descending order of popularity, were hiking and camping (69%), visiting with family and friends (51%), and water sports (49%). Concerning the latter activity, a large portion of the visitors at this location are surfers.

Table 25. Visitor Engagement in a Range of Activities during Their Visit

Q19. Did you engage in the following activities during your trip to the Oregon Coast?

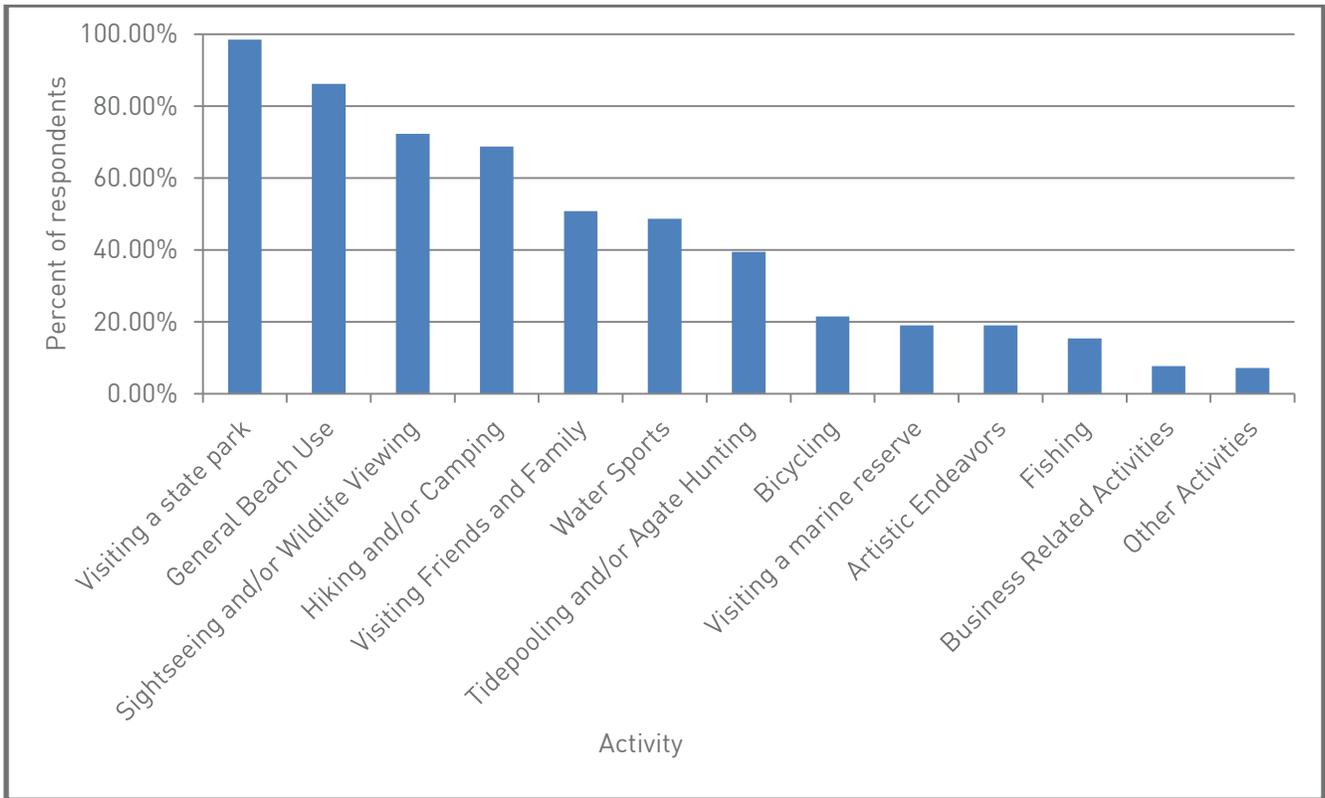
Type of Activities	Percent (N)
Visiting a state park	98.5% (193)
General Beach Use	86.2% (168)
Sightseeing and/or Wildlife Viewing	72.3% (141)
Hiking and/or Camping	68.7% (134)
Visiting Friends and Family	50.8% (99)
Water Sports	48.7% (95)
Tidepooling and/or Agate Hunting	39.5% (77)
Bicycling	21.5% (42)
Visiting a marine reserve	19.0% (37)
Artistic Endeavors	19.0% (37)
Fishing	15.4% (30)
Business Related Activities	7.7% (14)
Other Activities	7.2% (15)

N = 195; Missing = 1 across all categories except state park

Note: Respondents could specify any number of activities.

¹⁵ Note: This response is intuitive as the contacts were made inside a well-known state park.

Figure 9. Visitor Engagement in a Range of Activities during Their Visit



N = 195; Missing = 1 across all categories except state park
 Note: Respondents could specify any number of activities.

Visitors were then asked to identify their primary purpose for visiting the coast (Table 26). Obviously, visitors engage in a wide range of actual activities (Table 25), whereas the second question asked them to identify a single primary motive for visitation, so the results of the two questions are not directly comparable. The primary purpose for visitation was use of the beaches (34%), followed by water sports (23%). Visiting with family and friends (18%) and hiking/camping (9%) were other commonly cited primary trip purposes.

Table 26. Activities as Primary Purpose of Visit

Q20. Which of the above activities was your primary purpose for visiting the coast?

Primary Purpose	Percent (N)
General Beach Use	33.5% (63)
Water Sports	22.9% (43)
Visiting Friends and Family	17.6% (33)
Hiking and/or Camping	9.0% (17)
Sightseeing and/or Wildlife Viewing	5.9% (11)
Other	4.8% (9)
State Park	3.2% (6)
Tidepooling and/or Agate Hunting	2.1% (4)
Fishing	0.5% (1)
Artistic Endeavor	0.5% (1)
Total	100% (188)

N = 188; Missing = 8

2015 VISITOR INTERCEPT SURVEY – TRIP EXPENDITURES

From the total sample of visitors contacted, a subsample of 1/3 of the contacted visitors completed a third version of the survey instrument which contained questions pertaining to their trip expenditures (Appendix B). Trip expenditures data were collected from 190 respondents who completed this version of the questionnaire.

The majority of respondents (66%) were staying overnight on the Oregon coast during the trip on which they were interviewed (Table 27). Of these overnight visitors, 25% were staying at hotel or motels, 28% were staying at a rented beach house/condo, 23% at private accommodations, and 24% at campgrounds (Figure 10).

Table 27. Proportion of Overnight Stays

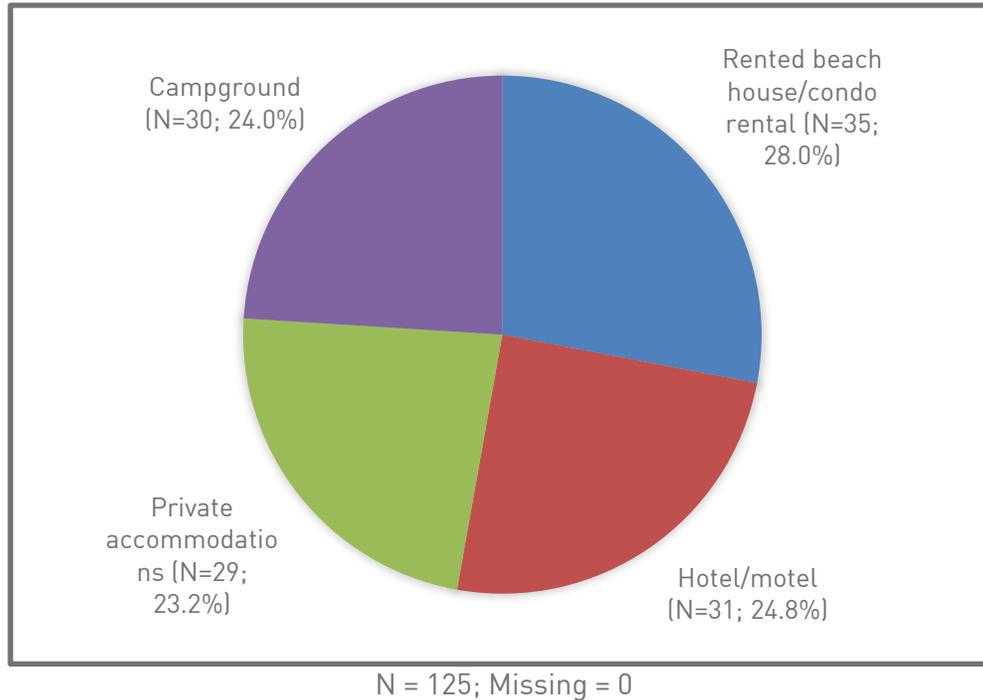
Q15. Is your group staying overnight on the Oregon coast during this trip?

Response	Frequency	Percent
Yes	125	65.80%
No	65	34.20%
Total	190	100.00%

N = 190; Missing = 0

Figure 10. Type of Overnight Accommodations

Q16. If your group is staying overnight on the coast, where are you staying?



Those visitors staying at campgrounds (n = 30) were asked to specify what type of campground they were using (Table 29). Most (81%) were staying at state parks. The few additional respondents were camping at a US Forest Service campground (12%) or at commercial campgrounds (8%).

Table 29. Type of Campground
Q16b.a. Which type of campground?

Response	Frequency	Percent
State Park	21	80.8%
US Forest Service	3	11.5%
Commercial Campground	2	7.7%
Total	26	100.0%

N = 26; Missing = 4

Visitors were asked about the duration of their visit to the coast (Table 30). For those respondents who were staying overnight at the coast, the average length of stay was six nights, and the most common length of stay (mode) was two nights. Three of these respondents were staying long term (40 to 60 days), so the analysis was run again to check for the effect of these outliers. Excluding these long-term visitors, for the balance of all other overnight visitors, the average length of stay was five nights. The median length of stay and most common length of stay remained the same under both analyses.

Table 30. Duration of Overnight Stays

Q17. How many nights will your group stay on the coast this trip?

Statistic	Any # Nights	Nights \leq 40
Average Length of Stay	5.83	4.60
Median	3.00	3.00
Mode	2	2
Minimum	1	1
Maximum	60	30
Responses	119	116

N = 119; Missing = 6

Visitors were asked if they traveled by any type of commercial transportation at any time during their trip (Table 31). Only 18% of visitors used any commercial transportation mode.

Table 31. Modes of Visitor Travel

Q18. Did your group travel by any of the following during your trip?

Response	Frequency	Percent
Yes	34	17.90%
No	156	82.10%
Total	190	100.00%

N = 190; Missing = 0

Table 32 presents the estimated expenditures of those respondents who did use some mode of commercial travel and also provided estimates of their expenditures. The average expenditure for air travel (n = 24) was \$805, and the average rental vehicle expenditure (n = 18) was \$480. Only one respondent mentioned using either a commercial bus or train.

Table 32. Expenditures by Modes of Commercial Travel

Statistic	Air Travel Expenditure	Rental Vehicle Expenditure
Number of Responses	24	18
Mean	\$804.92	\$480.06
Median	\$750	\$500
Mode	\$1500	\$500
Minimum	\$30	\$80
Maximum	\$1800	\$900

N = 24, 18

Only a small number of visitors (11%) indicated that someone in their group was planning to fish during their trip to the Oregon coast (Table 33). Of those respondents, 56% said they were planning on fishing from the shore or dock (Table 34; note the small number of respondents).

Table 33. Proportion of Visitors Fishing During Trip

Q19. Will anyone in your group go fishing during your trip to the coast?

Response	Frequency	Percent
Yes	20	10.70%
No	167	89.30%
Total	187	100.00%

N = 187; Missing = 3

Table 34. Types of Fishing during Trip

Q20. What type of fishing?

Type of Fishing	Frequency	Percent
Shore or dock	10	55.50%
Private boat or kayak	3	16.70%
Charter company	2	11.10%
Other	3	16.70%
Total	18	100.00%

N = 18; Missing = 2

Visitors were asked how much they were planning to spend on seven categories of expenditures during their visit to the Oregon coast (Table 35, Figure 11). About 62% of all respondents who answered the economic section of the questionnaire (n = 190) provided some expenditure estimates. These visitors reported that they planned to spend the most money on lodging, an average of \$1025. The second highest average expected expenditures were for dining out (\$192), followed by retail store purchases (\$186). Only a few respondents (n = 20; \$166) planned to rent gear. A larger portion of the respondents planned trip expenditures for groceries (\$158) and fuel (\$133).

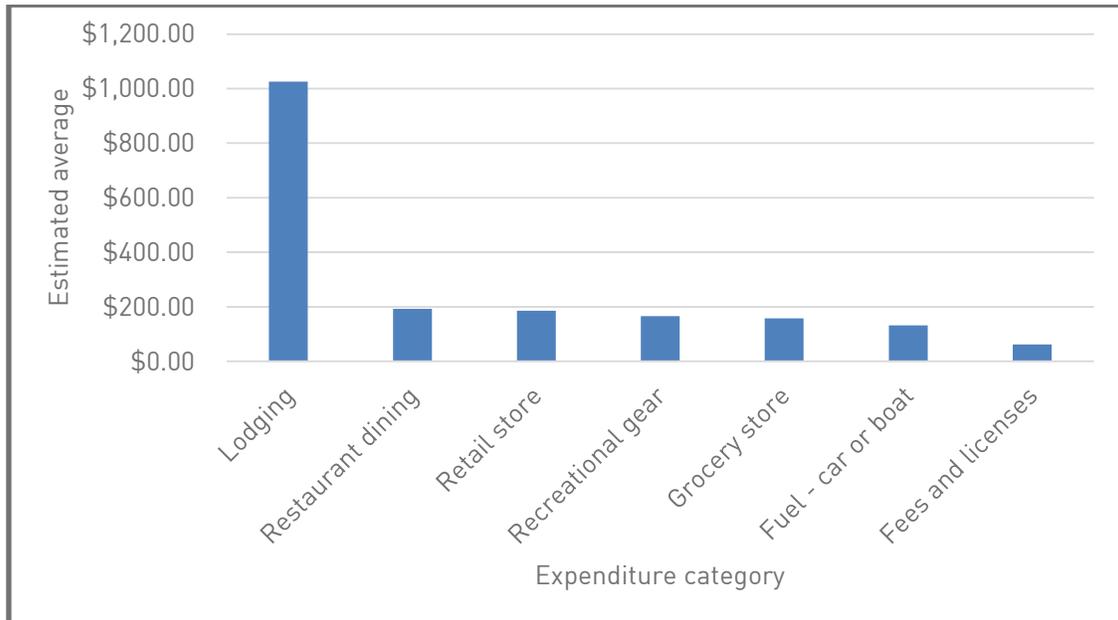
Table 35. Expected Trip Expenditures

Q21-27. List of Expenditure Categories

Expenditure Category	Valid Responses	Estimated Average
Lodging	78	\$1025.37
Restaurant dining	114	\$192.37
Retail store	64	\$185.78
Recreational gear	20	\$165.65
Grocery store	115	\$157.89
Fuel - car or boat	117	\$132.52
Fees and licenses	28	\$62.14

N varies for each expenditure category

Figure 11. Expected Trip Expenditures



2015 VISITOR INTERCEPT SURVEY – VISITOR COMMENTS

For all three versions of the intercept interview questionnaire, respondents were asked to make open ended comments upon completion of the survey. The question number varied by questionnaire version (Q15 – generic; Q28 – economic/expenditures; Q21 – attitudes), but all versions contained the same question. The specific response option stated:

Q15. Is there anything else you would like to tell us about your visit to Cape Falcon?

Please use this space for your comments. We appreciate your cooperation. Your comments will help us improve the quality and your enjoyment of Cape Falcon.

A total of 125 visitors (21% of all respondents) offered additional comments. Many of these comments were quite brief, but some did contain suggestions or concerns relevant to management. Most comments pertained to a single topic, but several comments did have content on more than one topical. A brief content analysis was performed to categorize the frequency of the most common visitor comments. The results of this content analysis are presented in Table 36. Almost half of all comments were a general positive reaction to the area (Great! Beautiful! Wonderful!). The next most common visitor comment was a request for or praise for the preservation and protection of the area. Given the location at Oswald West State Park, surfing was the most common activity mentioned by a large number of visitors. Other specific comments pertained to the beauty of the beach and forest, the visitors’ patterns of repeat visitation (included intergenerational visitation), and the suitability of the location for families and hiking. Marine reserves were only mentioned by five visitors (three positive comments, one mixed, and one negative comment). One visitor mentioned they had been coming to the area for 68 years!

Table 36. General Visitor Open Ended Comments

Content	# of Responses	Percent
General Positive¹	59	47%
Preserve and Protect²	24	19%
Surfing³	11	9%
Beach⁴	9	7%
Repeat Visitors⁵	7	6%
Walking/Hiking⁶	5	4%
Family Place⁷	5	4%
Marine Reserves⁸	5	4%
Forest Appreciation⁹	4	3%

Examples:

¹ Beautiful! Wonderful! Love this place!

² Beautiful place, love to see it protected. Keep it pristine. We love it – please take care of it!

³ We are here to surf. Love to surf and visit.

⁴ Awesome beach. Love this beach.

⁵ Come every year! Coming here for at least 25 years.

⁶ Very nice trail. Love the beautiful walk.

⁷ Great family beach. Great place for children.

⁸ Great project. Protect it! Concerns about small scale harvesting.

⁹ Love the beauty and trees (old). The forest is beautiful.

Several visitors made specific comments pertaining to concerns about area management. None of these comments related to marine reserves, but to the general area and park facilities (Table 37).

Table 37. Facility Specific Open Ended Comments

Content	# of Responses
Miss the Camping	7
Love the Trails	5
Crowding Concerns	4
Facilities Additions¹	4

¹Trash and recycling at the beach. Thanks for the restrooms. Fees for trail and restroom maintenance.

At the conclusion of the interview, visitors were asked if they had any specific comments related to the state park. A total of 17 visitors (about 3% of all respondents) made additional comments. These comments are summarized below:

VISITOR OPEN ENDED PARK COMMENTS:

Better trail markers

Bring back camping

Camping

Guided tidepool tours

Put a map of the trails in at the South parking lot and have better trail markers coming from the south lot to Short Sand Beach

Soap in bathrooms and a shower to rinse off in by the lower bathrooms

Both interpretive signs and guided tidepool walks

Shower by the lower bathrooms

Interactive

Keep trails accessible and good signage

Better interpretive signs

Concerned about sewage pipe at bathroom and wants pavement

More tidepool walking tours

Overnight parking, like Timberline Lodge has patrolled. Tidepool interp signs.

Parking in lot should be extended back to 11pm please!

Love it! Set up a lost and found procedure. Please repair/replace look-out trail at Ecola State Park. I realize erosion is a problem but feel there are some workable options. I really miss looking out in that particular area - other than the Haystack direction.

Toilets freeze in the winter, is there anything that can be done about this?

CONCLUSIONS

The majority of visitors observed during the beach pressure counts were adults, followed by children, and then seniors. The majority of visitors observed during the parking lot pressure counts were also adults, though slightly more seniors were observed than children. The lower numbers of seniors observed at the beach site could be attributed to the physical difficulty required to reach the beach. Short Sand Beach is a half mile hike downhill, followed by a steep decline with sand-covered stairs to actually reach the beach. In contrast, at many of the overlook sites visitors did not even need to exit their vehicle in order to observe the view, thereby making this option more viable for those with limited mobility.

Observed visitors in parking lot sites were comprised of slightly more males than females, with an average of 11 visitors per parking lot sampling location. Most visitors in parking lot sites were observed in a range of pursuits which can be described as general visitation. The most common activities observed at sites overlooking the reserve that are included in the general visitor category were looking out across the ocean and taking photographs of friends and/or family. At the parking lot site with direct access to Short Sand Beach, more visitors were observed with water sport boards, indicating that they intended to engage, or previously engaged, in water sport activities at the beach, and there were a higher number of visitors observed who were walking their dogs than at the other parking lot sites. The ocean is not visible from the parking lot site with access to the beach, therefore eliminating sightseeing and picture taking at this site. Visitors at this site were typically preparing to go down to the beach, or were packing up after being at the beach previously. At the actual beach site, there were slightly more visitors engaged in board sport activities than general beach visitation. Short Sand Beach is an exposed break beach, which offers both left and right hands waves consistently throughout the year, making this one of Oregon's most popular surfing locations. Observed visitors were almost equally split by gender at the beach location, with an average of 126 visitors observed.

Most visitors who completed the questionnaire(s) were not local, but overnight visitors. As one might expect, they reside primarily in Oregon, and adjoining states, particularly Washington and California. There are many foreign visitors, most from Canada. Many Portland visitors make day trips to Oswald West State Park as this drive only takes approximately 90 minutes and is therefore one of the closest beaches, particularly surf beaches, to Portland. The visitor population tends to be well educated and affluent professionals or employed in the service industry. The high level of education and income among visitors to Short Sand Beach may be explained in part by over one-quarter of the population coming from the Portland area. Visitors typically have previously visited the area, with 12 visitors indicating that they visit Short Sand Beach more than 100 times each year. These high rates of visitation are potentially explained by the abundance of surfers. Many visitors engaged in board sport activities frequent the beach often for short durations to surf before or after work. Some surfers indicated that they come to Short Sand Beach every weekend for surfing. Additionally, because of the geology which allows for Short Sand Beach to have good surfing waves year-round, many surf enthusiasts utilize all four seasons. In regards to all visitors, summer is the season of most of their trips, with over one-third of visitors indicating they also frequently visit the Oregon coast in both spring and fall.

The visitor support for reserves was quite positive. Although most were not aware they were visiting a recently designated and soon to be implemented (within six months) reserve, a large majority of the visitors thought marine reserves were a positive outcome for Oregon and felt the reserves increase their appreciation for the area. While 43% of visitors felt Cape Falcon reserve designation would not

impact their visitation, 43% felt the designation of reserves would encourage them to visit more often. Only one visitor thought that the reserve would negatively impact their visitation. Over one quarter of visitors indicated they were unsure whether Cape Falcon's marine reserve designation would increase their appreciation of the area or whether marine reserves in general were a good thing for Oregon. This high proportion of undecided visitors indicates that greater education is needed to inform the public on marine reserves, so that the public can form an informed opinion on the subject,

The activity patterns of questionnaire respondents mirrored the observation data. Visiting a state park was the most frequent activity reported by respondents, which is expected because the surveys were given in Oswald West State Park. The state park visitation category can be assumed to be 100% since all visitors that completed the survey were indeed visiting a state park. General beach use was the second most frequent activity and also the highest indicated primary trip motive. General beach use includes a wide variety of activities such as picnicking on the sand, tanning, swimming, flying a kite, and reading a book. Water sports was the second most common trip motive. Since visitors could only indicate one activity as their primary trip motive, visitors with board sports typically indicated that their primary activity was water sports.

Most visitors stayed overnight in commercial facilities (hotel/motel or rented beach house) for an average of six nights. Approximately one-quarter of visitors stayed at a campground. Oswald West State Park does not have campsites, thus, those camping still had to drive to the park to access the beach. The lack of campsites at Oswald West State Park was an often heard grievance of visitors since the park previously did host campers, but removed this option because of safety concerns regarding the surrounding trees. Lodging, restaurant dining, and retail store purchases were the largest expenditure categories. The fourth largest expenditure was recreational gear, which is likely referring to purchases linked to water sport activities.

One should note that since only 16% of the visitors were aware of Cape Falcon's designation and future implementation as a marine reserve, the presence of marine reserves has had little impact to date on visitation or trip motives. As such, analysis of any marine reserves tourism economic impacts is currently inappropriate. In fact, given only 16% awareness of the reserve, these visitors are at the site for reasons other than the reserve, specifically Oswald West State Park. Nevertheless, the contacts are made at the shoreside edge of a future marine reserve. One cannot assess change in trip motives and awareness without first obtaining baseline information on the visitor population.

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Appendix A

Questionnaire Version 1 Visitor Demographics, Party and Trip Characteristics Questionnaire



2015 ODFW Marine Reserves Visitor Survey

1. Please list your state or country and zip code below:

A. STATE/COUNTRY _____ B. ZIP CODE _____
2. Did you start your trip today from home or a different location? (Circle correct letter)
A. HOME (Go to question 4)
B. DIFFERENT LOCATION (Go to next question)
3. Where did you start your trip from today? (Circle correct letter)
A. NEHALEM
B. MANZANITA
C. GARIBALDI
D. SEASIDE
E. CANNON BEACH
F. PORTLAND
G. ROCKAWAY
H. CORVALLIS
I. OTHER _____
4. What is the type of group you are visiting this area with? (Circle correct letter)
A. INDIVIDUAL (Go to Q-6)
B. FAMILY
C. FRIENDS
D. FAMILY & FRIENDS
E. ORGANIZED TOUR GROUP
F. YOUTH GROUP (Church group, scouts. Etc)
G. OTHER GROUP
5. Including yourself, how many people are visiting this site with you?
A. _____ ADULTS B. _____ CHILDREN C. _____ SENIORS
6. Is this your first visit to this location?
A. YES (Go to 9, on back)
B. NO (Go to next question)
7. How many trips have you made to this location in the last three years?
(Please specify the number of trips including this trip.)
A. 2015 B. 2014 C. 2013
Number of trips: _____
8. What time of the year do you most often visit this area? (Circle all that apply)
A. FALL
B. WINTER
C. SPRING
D. SUMMER

PLEASE CONTINUE ON BACK

9. What is your age? _____ years
10. What is your gender? A. Male B. Female
11. Do you have any children under the age of 18 residing in your household? (Circle correct letter)
 A. YES (Please list the number of children under 18 in your household _____)
 B. NO
12. What is your occupation? (Circle correct letter)
- | | |
|---------------------------------|------------------------------------------------|
| A. Retired | F. Operator, fabricator, or Laborer |
| B. Homemaker | G. Precision, production, craft, or repair |
| C. Student | H. Service occupation |
| D. Military | I. Technical, sales, or administrative support |
| E. Farming, forestry or fishing | J. Managerial or professional |
13. What is the highest year of formal education you have completed? (Circle correct letter)
- | | |
|----------------------------|--------------------------------|
| A. Less than high school | D. Associate's degree |
| B. High school diploma | E. Bachelor's degree |
| C. Some college, no degree | F. Grad or professional degree |
14. Optional: What is your family's annual income level? (Circle Correct Number)
- | | |
|-------------------------|---------------------------------|
| 1. Under \$10,001 | 5. \$40,001 to \$50,000 |
| 2. \$10,001 to \$20,000 | 6. \$50,001 to \$75,000 |
| 3. \$20,001 to \$30,000 | 7. \$75,001 to \$100,000 |
| 4. \$30,001 to \$40,000 | 8. More than \$100,001 per year |
15. Is there anything else you would like to tell us about your visit to Cape Falcon?
 Please use this space for your comments. We appreciate your cooperation. Your comments will help us improve the quality and your enjoyment of Cape Falcon.

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

Questionnaire Version 2 Visitor Demographic and Trip Expenditure Questionnaire



2015 ODFW Marine Reserves Visitor Survey

1. Please list your state or country and zip code below:

A. STATE/COUNTRY _____ B. ZIP CODE _____
2. Did you start your trip today from home or a different location? (Circle correct letter)
A. HOME (Go to question 4)
B. DIFFERENT LOCATION (Go to next question)
3. Where did you start your trip from today? (Circle correct letter)
A. NEHALEM
B. MANZANITA
C. GARIBALDI
D. SEASIDE
E. CANNON BEACH
F. PORTLAND
G. ROCKAWAY
H. CORVALLIS
I. OTHER _____
4. What is the type of group you are visiting this area with? (Circle correct letter)
A. INDIVIDUAL (Go to Q-6)
B. FAMILY
C. FRIENDS
D. FAMILY & FRIENDS
E. ORGANIZED TOUR GROUP
F. YOUTH GROUP (Church group, scouts. Etc)
G. OTHER GROUP
5. Including yourself, how many people are visiting this site with you?
A. _____ ADULTS B. _____ CHILDREN C. _____ SENIORS
6. Is this your first visit to this location?
A. YES (Go to 9, on back)
B. NO (Go to next question)
7. How many trips have you made to this location in the last three years?
(Please specify the number of trips including this trip.)
A. 2015 B. 2014 C. 2013
Number of trips: _____
8. What time of the year do you most often visit this area? (Circle all that apply)
A. FALL
B. WINTER
C. SPRING
D. SUMMER

9. What is your age? _____ years
10. What is your gender? A. Male B. Female
11. Do you have any children under the age of 18 residing in your household? (Circle correct letter)
 A. YES (Please list the number of children under 18 in your household _____)
 B. NO
12. What is your occupation? (Circle correct letter)
- | | |
|---------------------------------|------------------------------------------------|
| A. Retired | F. Operator, fabricator, or Laborer |
| B. Homemaker | G. Precision, production, craft, or repair |
| C. Student | H. Service occupation |
| D. Military | I. Technical, sales, or administrative support |
| E. Farming, forestry or fishing | J. Managerial or professional |
13. What is the highest year of formal education you have completed? (Circle correct letter)
- | | |
|----------------------------|--------------------------------|
| A. Less than high school | D. Associate's degree |
| B. High school diploma | E. Bachelor's degree |
| C. Some college, no degree | F. Grad or professional degree |
14. Optional: What is your family's annual income level? (Circle Correct Number)
- | | |
|-------------------------|---------------------------------|
| 1. Under \$10,001 | 5. \$40,001 to \$50,000 |
| 2. \$10,001 to \$20,000 | 6. \$50,001 to \$75,000 |
| 3. \$20,001 to \$30,000 | 7. \$75,001 to \$100,000 |
| 4. \$30,001 to \$40,000 | 8. More than \$100,001 per year |

Section 2: Group Expenditures and Activities on the Oregon Coast

15. Is your group staying overnight on the Oregon coast during this trip? (Circle correct letter)
 A. YES (Go to next question) B. NO (Go to Q-18)
16. If your group is staying overnight on the coast, where are you staying? (Circle correct letter)
- | | |
|---------------------------------------|---------------------------|
| A. Rented beach house or condo rental | C. Private Accommodations |
| B. Campground | D. Hotel or Motel |
- a. Which type of campground?
- | | | |
|----------------|----------------------|---------------|
| 1. State Parks | 2. US Forest Service | 3. Commercial |
|----------------|----------------------|---------------|

17. How many nights will your group stay on the coast on this trip? _____ nights

18. Did your group travel by any of the following during your trip? (circle all that apply)

<u>Type</u>	<u>Estimated dollar amount spent</u>
A. AIR	\$ _____
B. BUS	\$ _____
C. Train	\$ _____
D. Rental vehicle	\$ _____
E. Other	\$ _____

19. Will anyone in your group go fishing during your trip to the coast?

A. YES (Go to next question) B. NO (Go to question 21)

20. What type of fishing? (Circle all that apply)

A. Fish from a shore or dock
B. Fish with a charter company
C. Fish from a private boat or kayak
D. Other

How much will your group spend on the following items during your trip to the coast?

(Please circle the correct letter and list the estimated amount spent for your entire group)

	<u>Estimated dollar amount spent</u>
21. Grocery store purchases?	A. No B. Yes \$ _____
22. Lodging	A. No B. Yes \$ _____
23. Restaurant dining?	A. No B. Yes \$ _____
24. Fuel for a car or boat?	A. No B. Yes \$ _____
25. Fees and licenses (Day-use, fishing, parking, etc)	A. No B. Yes \$ _____
26. Items at a retail store (Souvenirs, clothing, etc.)?	A. No B. Yes \$ _____
27. Rec. gear rentals (kayak, bikes, surfboard, etc.)?	A. No B. Yes \$ _____

28. Is there anything else you would like to tell us about your visit to Cape Falcon?

Please use this space for your comments. We appreciate your cooperation. Your comments will help us improve the quality and your enjoyment of Cape Falcon.

PLEASE CONTINUE ON BACK

Future Participation

Are you willing to participate in future surveys on the marine environment and other natural resource issues? If so, please fill out the following:

First Name: _____ Last Name: _____

Phone: _____ Email: _____

Mailing Address: _____

City _____ State _____ Zip _____

Confidentiality Statement: ODFW will maintain confidentiality of personal and trade secret information provided in response to this survey to the extent permitted by law

ODFW USE ONLY

6. ID No. _____

5. Sampling Location: _____

7. Date _____

8. Time _____

9. Reserve: 1. Redfish Rocks 2. Cape Perpetua 3. Otter Rock 4. Cascade Head

10. Cape Falcon

Appendix C

Questionnaire Version 3 Visitor Demographic, Knowledge, and Attitudes Questionnaire

9. What is your age? _____ years
10. What is your gender? A. Male B. Female
11. Do you have any children under the age of 18 residing in your household? (Circle correct letter)
 A. YES (Please list the number of children under 18 in your household _____)
 B. NO
12. What is your occupation? (Circle correct letter)
- | | |
|---------------------------------|------------------------------------------------|
| A. Retired | F. Operator, fabricator, or Laborer |
| B. Homemaker | G. Precision, production, craft, or repair |
| C. Student | H. Service occupation |
| D. Military | I. Technical, sales, or administrative support |
| E. Farming, forestry or fishing | J. Managerial or professional |
13. What is the highest year of formal education you have completed? (Circle correct letter)
- | | |
|----------------------------|--------------------------------|
| A. Less than high school | D. Associate's degree |
| B. High school diploma | E. Bachelor's degree |
| C. Some college, no degree | F. Grad or professional degree |
14. Optional: What is your family's annual income level? (Circle Correct Number)
- | | |
|-------------------------|---------------------------------|
| 1. Under \$10,001 | 5. \$40,001 to \$50,000 |
| 2. \$10,001 to \$20,000 | 6. \$50,001 to \$75,000 |
| 3. \$20,001 to \$30,000 | 7. \$75,001 to \$100,000 |
| 4. \$30,001 to \$40,000 | 8. More than \$100,001 per year |

Section 3: Marine Reserve Attitudes and Perceptions

15. Were you aware that the state will be implementing a marine reserve in this area?
 A. Yes B. No

A Marine Reserve (MR) or Marine Protected Area (MPA) prohibits certain types of activities for various reasons. In Oregon, one of the main objectives is to use the areas for research in the nearshore environment.

16. How will the designation of this area as a marine reserve impact your visits?
- A. It encourages me to visit more often
 - B. It discourages me from visiting
 - C. No impact
 - D. It causes me to visit another area instead
 - E. Not sure
 - E2. If you no longer visit here, will you visit another OR coastal area instead?
 - A. No
 - B. Yes _____ Estimated distance to alternative area

17. Would a marine reserve in this area increase your appreciation for this area?
- A. Yes
 - B. No
 - C. Not sure

18. In your opinion, do you feel marine reserves are a good thing for Oregon?
- A. Yes
 - B. No
 - C. Not sure

19. Did you engage in any of the following activities during your trip to Oregon Coast?
- | | | | |
|----|---------------------------------|--------|-------|
| A. | Business-related activities | 1. Yes | 2. No |
| B. | Visiting friends and family | 1. Yes | 2. No |
| C. | Visiting a marine reserve | 1. Yes | 2. No |
| D. | Visiting a state park | 1. Yes | 2. No |
| E. | Fishing (from shore or boat) | 1. Yes | 2. No |
| F. | Water sport | 1. Yes | 2. No |
| G. | General Beach use | 1. Yes | 2. No |
| H. | Sightseeing or wildlife viewing | 1. Yes | 2. No |
| I. | Tidepooling/agate hunting | 1. Yes | 2. No |
| J. | Hiking/Camping | 1. Yes | 2. No |
| K. | Bicycling | 1. Yes | 2. No |
| L. | Artistic endeavors | 1. Yes | 2. No |
| M. | Other _____ | | |

20. Which of the above activities was your primary purpose for visiting the coast?
 _____ (write the corresponding LETTER from ONE choice above)

21. Is there anything else you would like to tell us about your visit to Cape Falcon?
 Please use this space for your comments. We appreciate your cooperation. Your comments will help us improve the quality and your enjoyment of Cape Falcon.
-
-

PLEASE CONTINUE ON BACK

Future Participation

Are you willing to participate in future surveys on the marine environment and other natural resource issues? If so, please fill out the following:

First Name: _____ Last Name: _____

Phone: _____ Email: _____

Mailing Address: _____

City _____ State _____ Zip _____

Confidentiality Statement: ODFW will maintain confidentiality of personal and trade secret information provided in response to this survey to the extent permitted by law

ODFW USE ONLY

11. ID No. _____

5. Sampling Location: _____

12. Date _____

13. Time _____

14. Reserve: 1. Redfish Rocks 2. Cape Perpetua 3. Otter Rock 4. Cascade Head

15. Cape Falcon

Appendix D

Beach Pressure Count Data Collection Form

Weather: (1) Cloudy, (2) Rainy (3) Foggy (4) Sunny		CAPE FALCON: PRESSURE COUNT BEACH FORM										
Time:												
Date:	Beach 1		Beach 2		Beach 3		Beach 4		Total	Code:		
Picnicking at Tables											ID: MALE 1. Child (0-12) 2. Teen (13-19) 3. Young adult (20-30) 4. Adult (31-64) 5. Senior (65+)	ID: FEMALE 1. Child (0-12) 2. Teen (13-19) 3. Young adult (20-30) 4. Adult (31-64) 5. Senior (65+)
General Beach Goer	1	6	1	6	1	6	1	6	1	2		
	2	7	2	7	2	7	2	7	3	3		
	3	8	3	8	3	8	3	8	4	4		
	4	9	4	9	4	9	4	9	5	5		
	5	10	5	10	5	10	5	10	6	6		
Board Sports	1	6	1	6	1	6	1	6	1	7	Beach Goer: Swimmer/wading, picnic, general play, kite flying	
	2	7	2	7	2	7	2	7	2	3		
	3	8	3	8	3	8	3	8	3	4		
	4	9	4	9	4	9	4	9	4	5		
	5	10	5	10	5	10	5	10	5	6		
Shore/Fishing											Shellfishing, shore fishing	
Wildlife Viewer/ Photographer											Binoculars, camera	
Boater (motorized)												
Boater (non-motorized)												
Pet Walking												
Tidepooling												
Other												

Appendix E

Parking Lot Pressure Count Data Collection Form

Weather: (1) Cloudy, (2) Rainy (3) Foggy (4) Sunny				CAPE FALCON: PRESSURE COUNT PARKING LOT FORM									
Date:	Overlook Time:		South Lot Time:		Main Lot Time:		North Lot Time:		Total	Code:			
Picnicking at Tables										ID: MALE 1. Child (0-12) 2. Teen (13-19) 3. Young adult (20-30) 4. Adult (31-64) 5. Senior (65+)	ID: FEMALE 1. Child (0-12) 2. Teen (13-19) 3. Young adult (20-30) 4. Adult (31-64) 5. Senior (65+)		
Vehicles													
Campers													
General Visitor (ParkingLot) Goer	1	6	1	6	1	6	1	6	1	Beach Goer: Swimmer/wading, picnic, general play, kite flying			
	2	7	2	7	2	7	2	7	2				
	3	8	3	8	3	8	3	8	3				
	4	9	4	9	4	9	4	9	4				
	5	10	5	10	5	10	5	10	5				
Board Sports	1	6	1	6	1	6	1	6	1			Board Sports: Surfer, kite surfer, paddle boarder, skim/boogie boarder	
	2	7	2	7	2	7	2	7	2				
	3	8	3	8	3	8	3	8	3				
	4	9	4	9	4	9	4	9	4				
	5	10	5	10	5	10	5	10	5				
Wildlife Viewer/ Photographer										Binoculars, camera			
Pet Walking													
Other													

Appendix F
Pressure Count Limitations

PRESSURE COUNT LIMITATIONS

Observations of visitor traffic in the space between the picnic area, which is slightly uphill, and the beach were not recorded, as the constant traffic and uncertainty of intended activities made this impractical. During times of high visitor traffic, observers would have been recording incoming visitors for a long duration, negating the concept of a brief snapshot of visitation. Since the observers were moving during the observation periods, recording while traversing the steep slope also posed a safety concern.

Recording visitation activities and visitor characteristics on a large beach with constant activity was difficult. There was continual movement into an out of the observation area. As the observers walked the length of the beach recording visitation patterns, some board sport participants (boarders) exited the ocean, while others concurrently entered the ocean. Visitors exiting the ocean were recorded even though they were previously counted in the total boarders in the ocean category. It was assumed that some boarders would be missed as they entered the ocean, and this would offset potential double counting. During the count of boarders currently in the water, the demographic characteristics (age and gender) of those individuals could not be determined due to their use of full-body wetsuits.

During parking lot and overlook lot observations, the cars and people entering the lots during the pressure count were not included, as the intent was to provide visitor use in a brief snapshot of visitation patterns at a precise moment in time. Visitors sitting within their cars in lots were included, though visitors sitting in backseats of cars with tinted windows were occasionally too difficult to identify. The only intended activities that could be ascribed to visitors within parking lots were board sports, if the visitor was seen with a board, pet-walking, and general beach-goer.

Hikers accessing the Cape Falcon Trail, which has a trailhead visible from the survey intercept site, were not included in the sample until the 7th sample day. In an attempt to capture this activity in the observation data, observers would roll a die every other day to determine which of the three hour-long visitor intercept survey periods that day would include observing hikers. The slope of the Cape Falcon hike made it possible to view hikers from the lower picnic area where the visitor intercepts occurred. It is possible that during busy periods, hikers were missed, as both observers were concurrently administering intercept surveys. In an attempt to record hiking data more accurately, a test data collection effort was made by completing the hike while recording hiking visitation patterns, but this method proved impractical due to time constraints.

Appendix G

Intercept Interview Limitations

INTERCEPT INTERVIEW LIMITATIONS

INTERCEPT SURVEY NONRESPONSE BIAS CHECK

On a random number of days, a tally was maintained of visitors who declined to participate in the intercept survey. On these six days of monitoring, the refusals ranged from a low of 14% to a high of 36% of those visitors who were contacted. The average rate of refusal was 29.5%. Thus the response rate was approximately 71% of all visitors contacted. Upon refusal, the next available visitor was then contacted. A total of 52 visitors declined to participate in the survey over six days (Table 38). The age, gender and intended activity of each visitor who refused to participate in the survey was recorded. The observation of intended activity of the visitor was limited to board sports, pet walking, or general visitors since the visitors were not yet engaged in their intended beach activity at the time of the intercept survey contact. No visitors with pets refused to participate in the survey during any of the sample days when nonrespondents' characteristics were recorded. The nonresponse rate among board sport participants was 46%, while the nonresponse rate among general visitors (including all potential picnickers, wildlife viewers, hikers and tidepool enthusiasts) was 54%. The proportion of visitors engaged in board sports, drawn from the pressure count data at the beach site, was 45% (Table 5). Thus the sample is reasonably representative of the two most common types of visitors when categorized by visitor activities.

Table 38. Nonrespondent Tally (Estimated Age Categories)

Age and Gender	General Visitor	Board Sports	Total
Male Young Adult	2	8	10
Male Adult	16	12	28
Male Senior	3	0	3
Female Young Adult	0	0	0
Female Adult	6	4	10
Female Senior	1	0	1
Total	28	24	52

N = 52

Seventy-nine percent of visitors who declined to participate in the survey were male, while only 50% of the observed beach population were male (Table 1). However, 57% of all survey respondents were male (Table 19), so males could actually be slightly overrepresented in the intercept survey sample. To further compare the questionnaire refusals to the observation data, the distribution of age categories among adults was recalculated (Table 39) so both data sets covered the same populations (i.e. excluding children who could not complete the questionnaire). The proportion of young adult visitors that refused to participate in the survey (n = 10, 19%, Table 38) was lower than the proportion of young adults observed at the beach site (34%, Table 39). The proportion of seniors who declined to participate in the survey (n = 4, 8%) was also lower than the proportion of seniors in the beach observation data (11%, Table 39). A larger proportion of adults (n = 38, 73%) declined to participate in the survey than the

proportion of adults observed on the beach (55%, Table 39). Based on the estimated ages of observed nonrespondents in comparison to the observations of beach visitors, adult respondents might potentially be underrepresented in the questionnaire data.

Table 39. 2015 Visitor Pressure Count – Observed Visitors by Age; Counts Adjusted for Ages of Adult Questionnaire Respondents Only

Age Category (Age)	Frequency	Percent
Young Adult (20-30)	1859	34.5%
Adult (31-64)	2947	54.6%
Seniors (65+)	589	10.9%
Total	5395	100.0%

N = 5395; table excludes teens and children

Questionnaire respondents had provided their numerical age (Q9, Table 18, Figure 5). For further consideration of response rates among the visitor population, the respondents' ages were recoded into age categories using the same age ranges as the estimated ages of beach visitors recorded during the observation period. The proportion of young adults observed at the beach site was 34% (Table 39), whereas young adults were 26% of all respondents (Table 40). The proportion of adults observed at the beach site was 55%, whereas adults were 64% of all respondents. The proportion of seniors observed at the beach site was 11%, whereas seniors were 10% of all respondents.

Table 40. Respondent Age Category (Recoded by Observation Criteria)

Age Category	Males (Percent)	Females (Percent)	Total (Percent)
Young Adult*	93 (28.2%)	58 (23.5%)	151 (26.1%)
Adult	202 (61.2%)	166 (67.2%)	369 (63.7%)
Seniors	35 (10.6%)	23 (9.3%)	59 (10.2%)
Total	330 (100.0%)	247(100.0%)	579 (100.0%)

* Category excludes 12 teen respondents (ages 18 to 19). These individuals would have been not have been classified as young adults in the observation data.

While there was some nominal variance between the estimated ages of nonrespondents, estimated ages of beach visitors, and the self-reported ages of respondents, these figures were reasonably correlated. Given the high response rate, the sample size, and the random contact procedure, the sample should be considered representative of the visitor population.

SAMPLING PROTOCOL DETAILS

Some minor adjustments to the sampling schedule occurred following the first few days of pilot field work. Initially every tenth person was sampled, but after the second sampling day this was

increased to every 7th person to ensure a sample size of approximately 600 would be met. The first two Tuesdays of sampling consisted of two rounds instead of three due to time restrictions.

Occasionally, the seventh person would hand off the survey to the next person in their group. This was seen as a refusal. However, the sampling protocol called for the surveyor to hand the survey instrument to the next available visitor entering the beach area regardless. These situations would not introduce significant bias in the sample because the exchange among the visitors within the same party does not affect the party data, but does influence some of the individual demographic information.

Beginning in early-mid July, the surveyors became aware of an additional entrance to Short Sand Beach via the north parking lot of Oswald West State Park. There was potential for missing a different demographic that accessed Short Sand Beach from the north parking lot, though this trail was not heavily utilized by visitors. To account for visitor use at the other trail, every other day, during one sampling hour, one surveyor would hand out surveys at the beach end of the north parking lot trail. A die was rolled to determine which sampling hour in the rotation, first, second or third, the second surveyor would be located at the other trail. Furthermore, on days with unusually high visitor traffic, the surveyor located at the end of the Short Sand Beach Trail was not always able to capture the seventh person in the population.

In mid-July brochures on the marine reserves were put in the information kiosk in the main parking lot for visitors to take. This new access to information could have potentially affected the amount of exposure to and knowledge of marine reserves that visitors had prior to taking the survey.