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2014

CAPE PERPETUA, OTTER ROCK & CASCADE HEAD MARINE RESERVES

VISITOR INTERCEPT SURVEY

2014 VISITOR INTERCEPT SURVEY: CAPE PERPETUA, OTTER ROCK, AND CASCADE HEAD MARINE RESERVES

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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 Oregon coastal visitors. 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 use 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

The study protocol was designed to ensure that surveys and pressure counts resulted in accurate random samples. The sampling procedure was randomized for location, time of day, and day of week. A visitor contact procedure was also developed to further randomize the visitor sample selected for intercept interviews. The studies were conducted during the peak 2014 summer tourism season at Cape Perpetua, Otter Rock, and Cascade Head Marine Reserves.

Five sampling locations were selected for Cape Perpetua, four locations were selected for Cascade Head, and two locations were selected for Otter Rock. Pressure counts and intercept interviews were performed concurrently during the same observation period for each sampling location. Intercept surveys began immediately after the pressure count was completed at each location. This procedure was repeated at set time intervals for two sample periods for each sampling location per day.

According to the random sample schedule, upon arrival at a sample location, an agency employee first conducted the pressure counts, recording the gender, age, and activities of all visitors observed at the site. Once the pressure count for a given location was completed, the employee could ascertain the appropriate number of intercept interviews to conduct. The study protocol specified that a sample equal to 1/7 of all adult visitors present at that location should be interviewed.

Contacted visitors were handed a clipboard and 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 visitor selected was asked to fill out the first questionnaire, the next selected visitor was asked to fill out questionnaire two, and every third visitor contacted 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

For the visitor pressure count, observation data were collected for a total of 5281 visitors during the 136 observation periods at 11 sampling locations. Of those visitors, detailed activity data were collected for 3325 visitors on the shore or beach, while 1956 visitors were still in the parking areas. Detailed age/gender data were collected for all visitors, including those in the parking areas. Among the visitors for which detailed age and gender data were collected, 52% were female and 48% were male. There was little variance by gender by reserve.

Among all observed visitors at all locations, 31% were children, 55% of the visitors were adults, and 14% of the visitors were seniors (estimated age $\geq$ 65). The most popular observed activities included general beach recreation (sunning, digging, kite flying, etc. - 70%), hiking (10%), and water sports (surfing, etc. - 5%).

A total of 593 questionnaires were completed by the respondents[1]. Fifty percent of the respondents were Oregon residents. Washington residents accounted for 14% of the respondents, and visitors from California were 7% of the respondents. International visitors were the next most common visitors (5%). Idaho was the next most common U.S. state of residence (4%).

The majority of the visitors were staying overnight on the coast during their visit, as 63% of the respondents did not come from home on the day they were contacted. Of those overnight visitors, nearly one-third (32%) stayed in Lincoln City. Other coastal cities where the visitors stayed overnight included Newport (15%), Yachats (11%), Florence (6%), and Depoe Bay (5%).

Survey respondents were primarily visiting the coast with family (73%), with friends (10%), or with both family and friends (6%). The majority (73%) 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 three to four times each year for the past three years. However, visitors had most commonly only visited once each year prior, and 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, while winter is the least preferred season to visit the coast.

In terms of demographics, 61% of the survey respondents were between 31 and 60 years of age, and most (61%) did not have minor children in their household. The most common visitor occupation was managerial/professional (31%), followed by retired (24%). The visitors generally had higher educations; 53% were college graduates or higher. They also had relatively high income levels; 44% had family incomes greater than $75,000.

A subsample of 195 respondents answered additional questions concerning knowledge of and attitudes about the Oregon Marine Reserve System. Only about a quarter of the respondents (24%) were aware that a marine reserve was recently designated in the area they were visiting. When asked if reserve designation would impact their visitation, 91% of the visitors said reserve designation would either have no impact on visitation (58%) or encourage them to visit more often (33%). A large majority (68%) of the visitors felt the reserve would increase their appreciation for the area. In addition, 88% of the respondents consider marine reserves a positive outcome for Oregon.

When asked about activities they pursue while visiting the coast, the respondents indicated they engage in beach visits (92%), sightseeing (84%), visiting a state park (79%), hiking/camping (54%), and tidepooling or agate hunting (52%). They identified the *primary purpose* of their trip as beach use (50%), sightseeing (15%), and visiting with family and friends (12%).

A subsample of 168 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 75% of the visitors staying at a commercial rental (45% at a motel/hotel and 30% at an over-night rental house or condo). The average duration of their stay was 5 nights. Most visitors drive to the coast; only 19% (n = 31) used commercial transportation during their trip, spending an average of $1224 on air travel and $703 on a rental vehicle. Very few visitors (11%) were in parties that had a member planning to fish. In response to a question about expected expenditures for their trip duration, visitors planned to spend the highest amount on lodging (an average of $623), followed by dining ($181), and then groceries ($126) or retail store purchases ($111). Looking only at visitors staying overnight,

[1] With a random sample of 593 visitors, the margin of error for this sample was ±2.05% at the 95% confidence interval.

these number increase slightly: Lodging ($649), dining ($227), groceries ($151), and retail purchases ($130).

CONCLUSIONS

The majority of visitors observed during the pressure counts were adults, followed by children, and then seniors. Most visitors were observed in a range of pursuits which can be described as general beach visitation. Observed visitors were almost equally split by gender with slightly more females, and an average of 35 visitors were observed per sampling location.

Most visitors who completed the questionnaire(s) were not local, but overnight visitors. They reside primarily in Oregon, and adjoining states, particularly Washington and California. Many were international visitors, mostly from Canada. The majority of the visitor population were professionals or retirees with higher education and income levels. 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 generally positive. Although most were not aware they were visiting a recently designated 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 a majority (58%) felt reserve designation would not impact their visitation, one-third of the visitors felt the designation of reserves would encourage them to visit more often. A very small minority (1%) of the visitors thought the reserves would negatively impact their visitation.

The activity patterns of questionnaire respondents mirrored the observation data. General beach use was both the most frequent activity and the primary trip motive. Sightseeing and/or wildlife viewing was the second most common trip motive. Most visitors stayed overnight in commercial facilities for an average of six nights. Lodging, restaurant dining, and groceries were the largest expenditure categories. One should note that since only 24% of the visitors were aware of the reserves, 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.

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. In the Oregon temperate marine ecosystem, scientists project a minimum of 10-15 years after extractive activities have ceased before scientific detection of ecological changes is practical. However, this duration does provide sufficient time for constructive ecological and human dimensions research that will provide information for marine reserve site evaluation and inform nearshore resource management and policy.

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

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

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

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

RESEARCH DESIGN

RESEARCH OBJECTIVES

As one aspect of the related human dimensions research, ODFW initiated a study to 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. Replication of this research can then provide data for assessment of how such uses may 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 sites. 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 personal 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 of users at the reserve sites 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 three marine reserve sites, Otter Rock, Cape Perpetua, and Cascade Head during the summer of 2014.[2] Specific sampling locations at each reserve site were

[2] Although the Redfish Rocks Marine Reserve was implemented in 2012, that location was deemed too far away for this study, as sampling there would require overnight travel and additional personnel. Furthermore, the visitors at Redfish Rocks are mostly stopping at Hwy. 101 pullouts in an elevated setting where attribution of their behaviors to either the beach or reserve visitation could be problematic. Few are actually visiting along the ocean. In the future ODFW is considering use of a camera to monitor visitor behaviors, but this method has not yet been implemented. Any related interviews would have to be conducted by a resident or residential intern based on availability.

selected based on visitation frequency and access criteria. The implementation of the reserves was phased in over several years in part to facilitate baseline data collection at each site prior to harvest restrictions going into effect. Closely related visitor observation data had previously been collected at Otter Rock (since 2011), Cape Perpetua and Cascade Head (since 2012). An example of the data collection instrument used during the pressure counts is located in Appendix D. Each pressure count sheet is site specific to facilitate accuracy during data collection. The pressure count data collection procedure has not been substantially changed since inception.

The questionnaire used for the 2014 intercept survey was a refined version of the interview instrument used in prior years. The prior protocol for the visitor intercept survey had utilized a structured but more open-ended interview. To facilitate more visitor contacts, the 2014 study used a closed-ended questionnaire design.[3] Such a questionnaire design allows the respondent to participate in a largely self-administered manner. As a result, the 2014 interview data are not directly comparable to data previously collected at these sites.

Sampling procedures for both the intercept survey and pressure count were performed concurrently at each sampling location. The sampling protocols for each reserve used a systematic and random design. Several of the most visited pull-outs, scenic attractions, and parking areas along each reserve were selected for sampling locations during data collection in prior years. These locations were also used for the 2014 study. The one exception was at Cape Perpetua, where visitors were previously contacted at the Tenmile Creek parking area in 2012 and 2013, but that parking lot was closed for construction in 2014. Data for this research were collected between June 19th and August 10th in 2014, at the height of the tourism season on the Oregon Coast.

To achieve a random sample across all locations, a computer generated random seven digit table of numbers was used, corresponding to the day of the week for data collection, and four days per week were designated as sample days using the random table of numbers. Given the brief summer sampling period, minor adjustments were made to the sampling schedule to achieve a relatively even distribution of days of the week to avoid weekday or weekend sampling bias.

In addition, a systematic rotation by time of day by sampling location was designed to control for potential sampling bias by time of day by location. For this purpose, the sampling protocol was designed with the sampling locations numbered according to their sequential location along the highway from one end of the reserve to the other. The sample design required the individual conducting the survey to start with the next sequential site on the numerical list each day at the same daily start time, so the data collection start time was systematically rotated among sampling locations on each sampling day. The net effect of this protocol was a random sample of observations and visitor contacts across all studied reserves, with the sampling protocol designed to control for variations at each reserve by sampling location, by time of day, and by day of week.

When the ODFW employee conducting the studies arrived at a sample location, data were immediately collected for the pressure count. Intercept surveys began immediately after the pressure count was

[3] The original instrument was an interview with many open-ended responses. The revisions included making almost all 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 employee(s) to also make more contacts and even engage in multiple concurrent contacts with several clipboards containing the revised and self-administered instrument.

completed at that location. The ODFW employee would then proceed to the next sequential sample site. This procedure was repeated across all locations for a total of two sample rotations for each sampling location per day. If there was an especially high number of visitors on a given sampling day (primarily holidays), then the rotation of sampling across sites was only conducted once on that day due to time limitations.

PRESSURE COUNT DATA COLLECTION

The data collected during each pressure count observation included the number of cars at the parking area for each observation point, the number of visitors in the parking area, the number of visitors present on the shore and in the water or intertidal zone of the reserve, and the number and estimated age category of male and female visitors present at the site. Determining the visitor age category required an estimate since the many observations were made from a distance, and the ODFW employee did not know the true age of each visitor. When the ODFW employee first arrived at the site, they immediately counted the number of cars parked in the area, the number of visitors in the parking area, and the number of visitors engaged in each type of activity along the ocean shore. The employee then recorded the estimated gender and age category of all visitors at the site. The goal was to finish the pressure count as quickly as possible to capture a snapshot of the users at a single moment in time. An effort was made to avoid double counting or counting users who arrived at the site after the first general inventory.

To facilitate rapid data collection, the gender and age categories were combined and encoded as:

1) Male children: 0 to 12
2) Male teen: 13 to 19
3) Male young adult: 20-30
4) Male adult: 31-64
5) Male senior: 65 and over
6) Female children: 0 to 12
7) Female teen: 13 to 19
8) Female young adult: 20 to 30
9) Female adult: 31-64
10) Female seniors: 65 and over

Total number of visitors was summed for each age/gender category and activity category. Other data recorded on the observation form during the pressure count included weather, the time of day, and location.

INTERCEPT INTERVIEW DATA COLLECTION

When the pressure count for a given location was complete, the employee then determined the appropriate number of intercept interviews to conduct at that location. Based on previous pressure counts 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 7^{th} person present during an observation period at each location. Thus the total number of visitors observed at the location was divided by seven to determine the number of interviews to be conducted. The employee would then conduct an opportunity sample contacting the requisite number of visitors present at the site. The employee would make contacts with proximate visitors immediately present along the points of access

to the location (i.e., in the parking lot, on beaches or shorelines, and/or on the trails). Since the sample date was already randomized, and time and location systematically rotated, this contact procedure should not introduce any discernable bias to the sample. (Note: Refusals to participate were exceedingly rare.) When the target sample size at that location was achieved, the interviewer would move on to the next sampling location, and begin the process of pressure counts and intercept interviews again.

The employee conducting the visitor contacts was a seasonal female employee wearing an ODFW jacket and hat. After this employee explained the purpose of the study, the contacted visitors were each handed a clipboard, with the relevant version of the survey instrument attached, for their completion. There were three versions of the survey instrument: version 1 contained questions about basic demographics and trip information (Appendix A); version 2 contained the exact 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 completed by a 1/3 split sample of all respondents. A total of 593 questionnaires were completed by the respondents. Each interviewee also received a copy of the Oregon Marine Reserve Frequently Asked Questions brochure when the interview was completed.

RESEARCH RESULTS

2014 PRESSURE COUNT RESULTS

When the ODFW employee first arrived at an observation site, all persons and vehicles in the parking area were counted. Once this preliminary data collection was completed in the parking area, the ODFW employee then moved to shoreside observations to collect data about visitor demographics and activities. Data were collected at eleven sampling locations across the three reserves during a total of 136 observation periods between June 19, 2014 and August 10, 2014. Table 1 illustrates this distribution of observation periods by reserve site and sampling location.

Table 1. 2014 Visitor Pressure Count - Sampling Frequency by Location

LOCATION	FREQUENCY	PERCENT
OR - Punchbowl	16	11.8%
OR – Otter Crest	14	10.3%
CH – 35th Street	12	8.8%
CH – Nelscott	11	8.1%
CH – D-River	12	8.8%
CH – Roads End	13	9.6%
CH – Knight Park	12	8.8%
CP – Yachats	12	8.8%
CP – Perpetua	11	8.1%
CP – Neptune/Strawberry	11	8.1%
CP – Washburn/Heceta	12	8.8%
Total	**136**	**100.0%**

Note: OR = Otter Rock, CH = Cascade Head, CP = Cape Perpetua

For all of the reserves combined, an average of 14.38 persons per observation period (n = 1956) were counted in the parking areas (Table 2). These visitors, classified as general visitors, are not included in the analysis of visitor activities, as their intended activities could not be identified in the parking areas. During the observation periods, an average of 22 vehicles were present in the parking areas of the sampling locations. In 45% of the observation periods, fewer than ten vehicles were parked at each sampling location during the pressure count. Similarly, during 57% of the observation periods, fewer than 10 visitors were observed in the parking areas of sampling locations during the pressure count. These observation data likely reflect weather patterns, since almost half of the observation periods occurred during inclement weather (Table 3).

Table 2. 2014 Visitor Pressure Count - Number of Vehicles and Visitors in Parking Area

Descriptive Statistics	Vehicles	Visitors
Mean	22.18	14.38
Median	14.0	8.0
Mode	2*	0
Range	102	81
Minimum	0	0
Maximum	102	81
Total	2294	1956

N = 2294 vehicles; N = 1956 visitors
*Multiple modes exist. The smallest value is shown.

Table 3. 2014 Visitor Pressure Count – Weather Conditions during Observation Periods

Weather	Frequency	Percent
Cloudy	38	28%
Rainy	16	12%
Foggy	12	9%
Sunny	70	51%
Total	**136**	**100%**

Henceforth in this paper, all discussions about visitor activities refer to the shoreside visitors observed after the traffic and visitor count in the parking areas. The visitors observed in the parking areas are included in the analyses of age and gender categories. As might be expected, across all reserves sites, the population of visitors was almost equally split between males (48%) and females (52%, Table 4). For all of the reserves combined, the average number of females and males present during an observation period was 18 and 17 visitors, respectively.[4]

Table 4. 2014 Visitor Pressure Count – Average Number of Visitors by Gender

Gender	Males	Females
Mean	17.04	18.43
Median	11.0	11.5
Range	101	84
Minimum	0	0
Maximum	101	84
Total	**2317 (48%)**	**2507 (52%)**

N = 4824

[4] A total of 457 visitors could not be classified by age and/or gender due to poor visibility and/or distance. The unclassified category also contains an error adjustment to reconcile the N for the age/gender observation category (4824) with the N for observed shoreside activities plus visitors observed in the parking lots (3325 + 1956). There were 5281 total visitor observations.

Among visitors of all ages, both Cascade Head and Cape Perpetua showed similar patterns of visitation with slightly more females present than males. Otter Rock was the only site where the average number of males exceeded the average number of females observed (Table 5). These variances were minor and not of substantive importance.

Table 5. 2014 Visitor Pressure Count – Observed Visitor Gender by Reserve Site

Gender	Cape Perpetua	Otter Rock	Cascade Head	All Locations
Male	905 (48.3%)	518 (50.9%)	894 (46.3%)	2317 (48%)
Avg. males/ obs. period	19.67	17.27	14.90	17.04
Female	969 (51.7%)	500 (49.1%)	1038 (53.7%)	2507 (52%)
Avg. females/ obs. period	21.07	16.67	17.30	18.43
Total	**1874 (100%)**	**1018 (100%)**	**1932 (100%)**	**4824 (100%)**

N = 4824, Cape Perpetua n = 1874, Otter Rock n = 1018, Cascade Head n = 1932
Note: observation period by location: Cape Perpetua = 46; Otter Rock = 30; Cascade Head = 60

An analysis of the variance in the distribution of age and gender categories did not reveal statistically significant differences (@ $p \leq .001$) between the reserve sites across most of the age and gender categories. The primary differences occurred among senior visitors of both genders ($F = 12.343$; $p < .001$). Seniors constituted nearly twice as large a proportion of the observed visitor population at Cape Perpetua than at the other reserve sites. Table 6 illustrates these differences.

Table 6. 2014 Visitor Pressure Count – Observed Visitor Age by Marine Reserve Site

Age Group	Cape Perpetua	Otter Rock	Cascade Head	All Locations
Children/Teens	557 (29.7%)	273 (26.8%)	679 (35.1%)	1509 (31.3%)
Avg. children/ teens/obs. period	12.11	9.10	11.32	11.10
Adults	935 (49.9%)	631 (62.0%)	1062 (55.0%)	2628 (54.5%)
Avg. adults/ obs. period	20.33	21.03	17.70	19.32
Seniors	382 (20.4%)	114 (11.2%)	191 (9.9%)	687 (14.2%)
Avg. seniors/ obs. period	8.30	3.80	3.18	5.05
Total	1874 (100%)	1018 (100%)	1932 (100%)	4824 (100%)

N = 4824, Cape Perpetua n = 1874, Otter Rock n = 1018, Cascade Head n = 1932
Note: observation period by location: Cape Perpetua = 46; Otter Rock = 30; Cascade Head = 60

The most common type of visitor activity observed at all sites was categorized as general beach visitors, those participating in swimming/wading, general play, kite flying, etc. This was also the most common observed visitor activity at each of the individual reserves (Tables 7 and 8). Hiking was the second most popular activity at both Cascade Head and Cape Perpetua, and water sports were the second most common activity at Otter Rock. While many visitors engage in a range of activities during their visit, these data represent a brief snapshot of average visitor activities during the observation period.

Table 7. 2014 Visitor Pressure Count – Average Number of Participants by Activity and by Marine Reserve Site

Observed Visitor Activity	Cape Perpetua	Otter Rock	Cascade Head	All Locations (N)
General Beach Goer	12.37	12.50	22.83	17.01 (2314)
Hiking and/or Camping	5.48	0.03	1.42	2.49 (338)
Water Sports	0.15	4.23	0.78	1.33 (181)
Tidepooling	2.91	0.90	0.02	1.19 (162)
Picnic	0.67	1.23	0.42	0.68 (93)
Wildlife Viewing and/or Photography	1.00	0.70	0.05	0.51 (70)
Other	1.26	3.40	0.12	1.23 (167)

N = 3325, Cape Perpetua n = 1097, Otter Rock n = 690, Cascade Head n = 1538
Note: This N (3325) does not include the 1956 visitors observed in the parking lots because their intended activity could not be discerned.

Table 8. 2014 Visitor Pressure Count – Proportion of Visitor Participation by Activity and by Marine Reserve Site

Observed Visitor Activity	Cape Perpetua	Otter Rock	Cascade Head	All Locations
Beach Goer	51.9%	54.5%	89.1%	69.6%
Hiking and/or Camping	23.0%	0.1%	5.5%	10.2%
Water Sports	0.6%	18.4%	3.1%	5.4%
Tidepool	12.2%	3.9%	0.1%	4.9%
Picnic	2.8%	5.4%	1.6%	2.8%
Other	5.3%	14.8%	0.5%	5.0%
Wildlife Viewing and/or Photography	4.2%	3.0%	0.2%	2.1%
Total	100.0%	100.1%	100.1%	100.0%

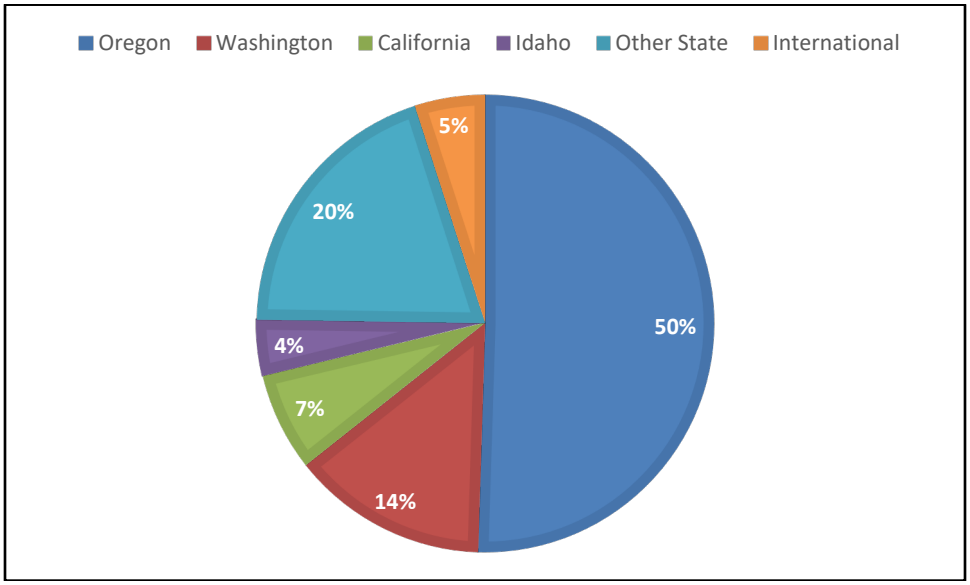
N = 3325, Cape Perpetua n = 1097, Otter Rock n = 690, Cascade Head n = 1538

2014 VISITOR INTERCEPT SURVEY – VISITOR PARTY AND TRIP CHARACTERISTICS

During the summer of 2014, 593 visitors completed one of three versions of the intercept interview questionnaire; results of those questionnaire responses follow. As previously described, all respondents completed the demographic and basic trip characteristics questions[5]. 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 below are drawn from responses to the questions that all visitors completed.

Approximately half (50%) of all respondents contacted during their visit to the marine reserves were from Oregon (Figure 1). The next most common states of residence were the adjoining coastal states of Washington (14%) and California (7%). There were more international visitors (5%) than residents of any other single state in the United States. The adjoining state of Idaho (4%) was the next most common state of residence among respondents from the United States.

Figure 1. Residence of Marine Reserve Visitors



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 9). For the entire sample across all reserves, 63% of respondents began their trip from a location other than their home.

There was a significant difference ($p < .001$) between trip origins among visitors to the three marine reserve sites. Visitors at Cascade Head were more likely to have started their trip from home than the

[5] With a random sample of 593 visitors, the margin of error for this sample was ±2.05% 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 = 195) and expenditures (n = 168) versions of the questionnaire would be higher, 3.58% and 3.86% respectively.

respondents at the other two reserve sites. Among the subsample of respondents contacted at Cascade Head (n = 258), only 49% of the participants started their trip from a location other than home. A much larger portion of the respondents at Cape Perpetua (70%) and Otter Rock (76%) began their trip away from home.

Table 9. Visitor Trip Origin by Marine Reserve Site

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

Origin of Trip	Cape Perpetua	Otter Rock	Cascade Head	All Locations
Home	51 (30%)	38 (24%)	131 (51%)	220 (37%)
Different Location	119 (70%)	122 (76%)	127 (49%)	368 (63%)
Total	173 (100%)	160 (100%)	258 (100%)	588 (100%)

N = 588, Missing = 5

Chi-Square = 36.4; p ← .001

Those visitors who had not traveled to the reserve sites from home on the day of contact had stayed overnight at some other location within reasonable driving distance of the coast. Not surprisingly, more than half (58%) of those respondents stayed in three coastal communities in close proximity to the reserves (Table 10). Those towns were Lincoln City (32%), Newport (15%), and Yachats (11%).

Table 10. City Where Trip Originated

Q3. Where did you start your trip from today?

City	Frequency	Percent
Lincoln City	115	32.3%
Newport	54	15.2%
Yachats	38	10.7%
Florence	21	5.9%
Depoe Bay	19	5.3%
Portland	16	4.5%
Otter Rock	15	4.2%
Salem	9	2.5%
Waldport	4	1.1%
Eugene	7	2.0%
All Other Trip Origins	58	16.3%
Total	**356**	**100.0%**

N = 356, Missing = 12

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. Across all reserves, a large majority (73%) of the respondents indicated that they were visiting the area with their family (Table 11). This visitation pattern was also consistently found at each individual reserve.

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	430	73%
Friends	59	10%
Individual	52	9%
Family & Friends	32	6%
Other Groups[1]	14	2%
Total	587	100%

N = 587, Missing = 6

[1]Only one respondent identified the group as an organized youth group.

Visitors were asked about the size of the group that they were with while visiting the marine reserve. In the response, visitors indicated the number of visitors in their group who were adults, children and seniors (Table 14, discussed below). These responses were summed to facilitate the discussion of total group size. The average group size after accounting for outliers ($\rightarrow$ 25) was 3.89 visitors (Table 12). Across all reserves, the majority (73%) of the respondents indicated that they were visiting the area in a small group of between two and five people (Table 13). Larger groups of six to ten people accounted for 14% of all visitation. Only a small proportion of all respondents (9%) visited the reserves alone. This visitation pattern was also consistently found at each individual reserve site.

Table 12. Total Number of People in Group

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

Mean	3.89
Median	3.00
Std. Deviation	2.82

N = 587, Missing = 0

Responses over 25 people were excluded as outliers (n = 5)

Table 13. Size Categories of Marine Reserve Visitor Groups

Group Size	Frequency	Percent
Individual	55	9%
Small Group (2-5 people)	433	73%
Medium Group (6-10 people)	80	14%
Large Group (11+ People)	25	4%
Total	**593**	**100%**

N = 593, Missing = 0

As mentioned above, respondents indicated the number of visitors in their group who were adults, children and seniors. Less than half of the respondents (46%) were in parties with children. Parties included an average of 2.53 adults, 1.21 children, and 0.25 seniors.

Table 14. Distribution of Visitor Ages within Groups

Age Category	# Adults	# Children	# Seniors
# of Responses	563	273	79
None in Category	29	318	514
Mean	2.53	1.21	0.25
Median	2.00	0.00	0.00
Maximum	18	17	6

N = 590, Missing = 0

Responses over 25 people in each category were excluded as outliers (n = 3)

Contacted visitors were asked if the current visit was their first visit to that location (Table 15). A majority (66%) of all marine reserve visitors were repeat visitors. This circumstance was also true across each of the individual reserves.

Table 15. First Time and Repeat Visitation among Marine Reserve Visitors

Q6. Is this your first visit to this location?

Response	Frequency	Percent
Yes	200	34%
No	391	66%
Total	591	100%

N = 591, Missing = 2

The visitors were also asked to indicate their number of visits during the last three years, including the current visit. Only the respondents who indicated the current visit was not their first to the area are included in the following Tables 16 and 17. Among repeat visitors, the average number of visits per year was between 8 and 10 visits (Table 16). However, a very small number of respondents indicated they visited the area daily or even more frequently (note the maximum for each year). While that may be accurate for some local residents, these few responses inflate the average number of visits per year (note that the median number of repeat visits is only one for all three years).

Table 16. Repeat Visitation by Year

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

Year of Visitation	2014	2013	2012
# of Responses	372	349	336
Mean	8.47	10.08	10.08
Median	1.00	1.00	1.00
Std. Deviation	35.97	47.29	49.72
Range	364	600	600
Minimum	1	0	0
Maximum	365	600	600

Respondents who indicated that the current visit was their first visit to the area are excluded.

To more accurately represent patterns of repeat visitation to the reserve sites, the analysis was rerun excluding as outliers the handful of respondents (n = 30) who indicated they visit at least 60 times each year. These results are presented in Table 17. Among repeat visitors (who did not visit $\geq$ 60 times per year), the average number of visits per year was between 3 and 4 visits over the prior three years. Most respondents had previously only visited the area once per year.

Table 17. Repeat Visitation by Year (adjusted to exclude outliers)

Year of Visit	2014	2013	2012
# of Responses	362	339	326
Mean	3.42	3.68	3.17
Median	1.00	1.00	1.00
Std. Deviation	6.88	7.84	6.93
Range	49	52	52
Minimum	1	1	1
Maximum	50	52	52

Respondents who indicated that the current visit was their first visit to the area are excluded.

Responses over 60 times in each year were excluded as outliers (n = 30)

The respondents were asked which season of the year they most often visited the area (Table 18). The following table excludes all first time visitors, who by definition would have visited the area for the first time during the summer of 2014. 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 (90%). Visitation during other seasons ranged from a low of roughly a quarter (23%, winter) to almost one third (31%, 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 fall and spring, here with nearly equal visitation.

Table 18. Seasonal Visitation Patterns

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

Season	Fall	Winter	Spring	Summer
Yes	115 (30%)	93 (25%)	123 (33%)	332 (89%)
No	263 (70%)	285 (75%)	254 (67%)	41 (11%)
Total	378 (100%)	378 (100%)	377 (100%)	373 (100%)

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

2014 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. At all locations, the majority (61%) of respondents fell within two age categories, between the ages of 31 to 45 years (31%) and 46 to 60 years of age (30%, Table 19). In addition, almost 27% of visitors were over the age of 60. At all locations, the majority of the respondents were female (Table 20).

Table 19. Respondent Age

Q9. What is your age?

Age Range	Frequency	Percent
18 to 30 years	73	13%
31 to 45 years	178	31%
46 to 60 years	176	30%
61 + years	155	27%
Total	582	100%

N = 582, Missing = 11

Table 20. Gender of Respondents

Q10. What is your gender?

Gender	Frequency	Percent
Male	238	41%
Female	349	59%
Total	587	100%

N = 587, Missing = 6

The majority (61%) of visitors completing the survey did not have children under the age of 18 residing in their household (Table 21).

Table 21. Respondent Households with Children

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

Children?	Frequency	Percent
Yes	229	39%
No	356	61%
Total	585	100%

N = 585, Missing = 8

The most common occupational category among the respondents at all locations was managerial and/or professional (31%, Table 22). The second most common occupation status among respondents was retired.

Table 22. Respondent Occupations

Q12. What is your occupation?

Occupations	Frequency	Percent
Managerial, Professional	179	31%
Retired	140	24%
Service Occupation	74	13%
Technical, Sales, Administrative Support	62	11%
Homemaker	49	8%
Student	25	4%
Operator, Fabricator, Laborer	22	4%
Precision Production, Craft, Repair	17	3%
Farming, Forestry, Fishing	8	1%
Other	8	1%
Military	2	0.30%
Total	586	100%

N = 586, Missing = 7

The majority of the respondents (53%) had a bachelor's degree or higher, and a quarter of the respondents had graduate degrees (Table 23). Only 18% of the visitors had not attended college, and 29% had some college or an associate's degree.

Table 23. Respondent Education

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

Education Categories	Frequency	Percent
Less than high school	8	1%
High school diploma	98	17%
Some college, no degree	110	19%
Associate's degree	60	10%
Bachelor's degree	167	28%
Grad degree	144	25%
Total	587	100%

N = 587, Missing = 6

An optional question requested information about the annual family income of the visitors, and 64% of the contacted visitors (n = 382) responded to this question (Table 24). The majority (69%) of the respondents indicated their family has an income of greater than $50,000 annually. A substantial portion of the respondents (44%) indicated their family was relatively affluent with a family income of more than $75,000, and one quarter of visitors reported a family income of greater than $100,000.

Table 24. Respondent Annual Family Income

Q14. What is your family's annual income level?

Income Levels	Frequency	Percent
Under $10,000	6	2%
$10,001 to $20,000	20	5%
$20,001 to $30,000	18	5%
$30,001 to $40,000	38	10%
$40,001 to $50,000	35	9%
$50,001 to $75,000	96	25%
$75,001 to $100,000	73	19%
More than $100,001	96	25%
Total	382	100%

N = 382, Missing = 211

2014 VISITOR INTERCEPT SURVEY - KNOWLEDGE, ATTITUDES, AND PERCEPTIONS

The general demographic and trip characteristics questions discussed above were contained in all three versions of the survey questionnaire (see Appendices A, B and C). 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). This contact procedure was followed at all three locations, and a total of 195 respondents completed this version of the questionnaire.

The visitors were asked whether they were aware that the state had recently created a marine reserve at the interview location, and a large majority (76%) of respondents at all three locations were not aware there was a marine reserve at the location where they were interviewed (Table 25).

There was a statistically significant difference between reserve sites by awareness of the reserve ($p = 0.028$). The largest disparity in visitor responses between the reserve sites occurred at Cascade Head (Figure 2). A larger proportion of the respondents at Cascade Head (85%) were unaware that they were visiting a marine reserve site than at the other two sites (75% and 65% at Cape Perpetua and Otter Rock, respectively).[6]

Table 25. Respondent Awareness of Reserve Designation

Q15. Were you aware that the State recently implemented a marine reserve in this area?

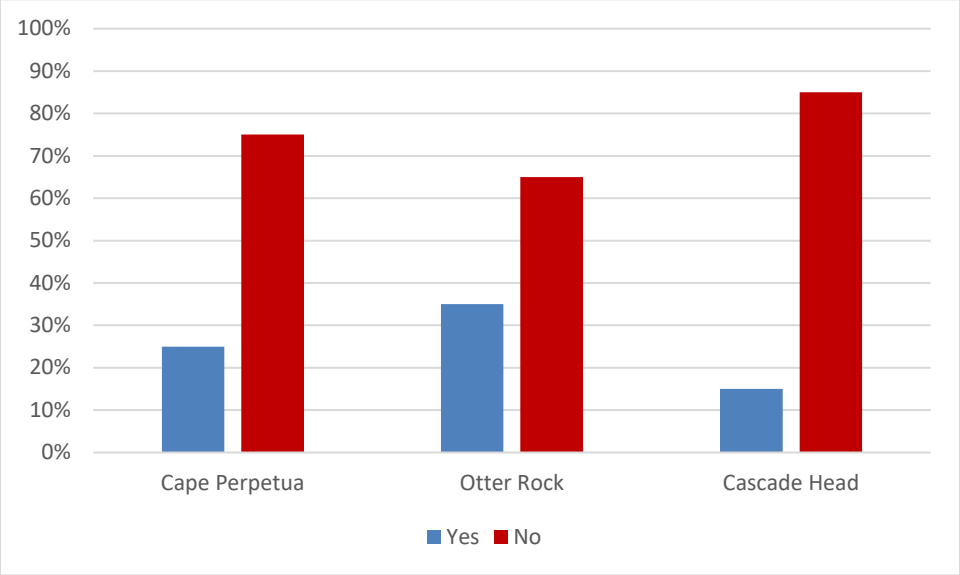
Aware of Reserve	Cape Perpetua	Otter Rock	Cascade Head	All Locations
Yes	14 (25%)	19 (35%)	13 (15%)	46 (24%)
No	42 (75%)	35 (65%)	71 (85%)	148 (76%)
Total	56 (100%)	54 (100%)	84 (100%)	194 (100%)

N = 194, Missing = 1
Chi-Square = 7.13; p = 0.028

[6] This study was conducted before interpretive information was available on-site at the reserves.

Figure 2. Comparison of Visitor Awareness of Reserves by Reserve Site

Q15. Were you aware that the state recently implemented a marine reserve in this area?



Visitors were asked if the designation of a marine reserve in the area would impact their visitation in any manner (Table 26). The large majority (91%) of the respondents indicated that the designation of the reserve would encourage them to visit more frequently (33%) or would have no impact on their visitation to the reserve site (58%). Sixteen respondents (8%) did not know if reserve designation would impact their visitation. Only 1% of visitors thought they would be discouraged from visiting or would visit another location.

Comparing expectations of visitation across the three reserve sites, the majority of visitors at all three reserves felt designation would not impact their visitation. Very few visitors at any of the sites felt designation would discourage visitation or would cause them to visit another area. These differences in expectations across reserve sites were not statistically significant (p = .066).

Table 26. Expectations of Visitation in Response to Reserve Designation

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

Expectations	Cape Perpetua	Otter Rock	Cascade Head	All Locations
No Impact	27 (48%)	29 (54%)	57 (68%)	113 (58%)
More Often	21 (38%)	21 (39%)	21 (25%)	63 (33%)
Not Sure	8 (14%)	4 (7%)	4 (5%)	16 (8%)
Less or No Longer Visit	0 (0%)	0 (0%)	2 (2%)	2 (1%)
Total	56 (100%)	54 (100%)	84 (100%)	194(100%)

N = 194, Missing = 1

Chi-Square = 8.79; p = 0.066

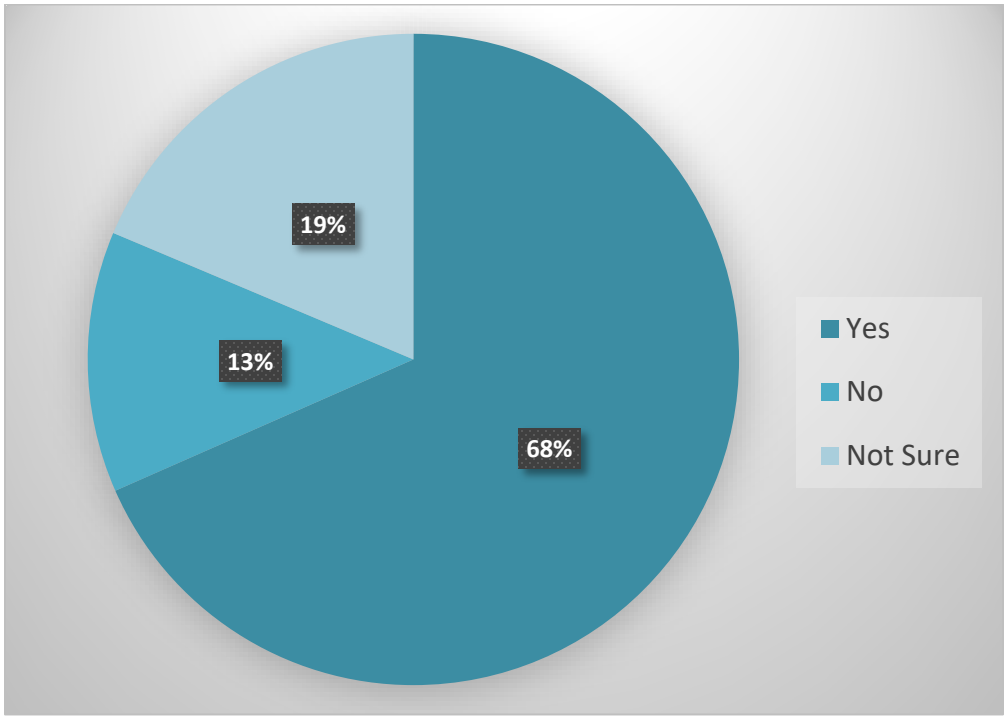
When asked if a marine reserve in the area would increase their appreciation for the area, the majority (68%) of the respondents responded affirmatively (Table 27, Figure 3). A modest number of visitors (19%) were unsure what impact the reserve might have on their appreciation of the area, and only 13% of the respondents thought the presence of the reserve would not increase their appreciation of the area.

Table 27. Impact of Marine Reserves on Visitor Appreciation of Area
Q17. Would a marine reserve in this area increase your appreciation for this area?

Appreciation	Cape Perpetua	Otter Rock	Cascade Head	All Locations
Increase	43 (77%)	40 (75%)	49 (58%)	132 (68%)
No	7 (13%)	6 (11%)	12 (14%)	25 (13%)
Not Sure	6 (11%)	7 (13%)	23 (27%)	36 (19%)
Total	56 (100%)	53 (100%)	84 (100%)	193 (100%)

N = 193; Missing =2
Chi-Square = 8.61; p = 0.072

Figure 3. Impact of Marine Reserves on Visitor Appreciation of Area
Q17. Would a marine reserve in this area increase your appreciation for this area?



Comparing responses by reserve site, there was not a statistically significant difference between the reserves for change in visitor appreciation due to reserve designation (p = 0.072).

Survey participants were asked if they felt that marine reserves were a positive outcome (a *good thing*) for Oregon. A large majority (88%) of respondents at all sites considered the reserves to be a positive

outcome for Oregon (Table 28). A small number of visitors (10%) were not sure of the outcome, and only 2% of the visitors felt that the marine reserves represent a negative outcome for the state of Oregon.

In comparing the patterns of responses to this question across the three reserve sites, a large majority of visitors at every site (80-93%) felt the reserves are a positive outcome for the state of Oregon. There was a statistically significant difference between sites for visitor appreciation ($p = .033$). More respondents at Cape Perpetua and Otter Rock thought that marine reserves were a positive outcome while more respondents at Cascade Head were unsure if marine reserves were a positive outcome. Extremely few respondents at any of the sites felt the reserves represent a negative outcome for the state.

Table 28. Visitors Opinions Concerning Impact of Reserves for Oregon

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

Reserves Good for Oregon?	Cape Perpetua	Otter Rock	Cascade Head	All Locations
Yes	52 (93%)	51 (94%)	67 (80%)	170 (88%)
No	1 (2%)	0 (0%)	3 (4%)	4 (2%)
Not Sure	3 (5%)	3 (6%)	14 (17%)	20 (10%)
Total	56 (100%)	54 (100%)	84 (100%)	194 (100%)

N = 194, Missing = 1

Chi-Square = 6.85; p = 0.033

In the final series of questions for this subsample of visitors, the subjects were asked to characterize their trip activities during their current trip to the Oregon coast (Table 29). The majority (92%) of respondents indicated that they engaged in general beach use, a result which is consistent with the observations of visitor activities during the pressure counts. Sightseeing and/or wildlife viewing were the second most common activities (84%) at all sites. State park visitation ranked as the third most popular visitor activity across all sites. Other popular activities, in descending order of popularity, were hiking and camping, tidepooling, and visiting with family and friends. A greater proportion of respondents at Cape Perpetua and Otter Rock indicated they would be hiking/camping and tidepooling/agate hunting than at Cascade Head.

Table 29. 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	Cape Perpetua	Otter Rock	Cascade Head	All Locations
General Beach Use	48 (87%)	48 (92%)	79 (94%)	175 (92%)
Sightseeing and/or Wildlife Viewing	52 (95%)	48 (92%)	60 (71%)	160 (84%)
Visiting a state park	51 (93%)	43 (83%)	56 (67%)	150 (79%)
Hiking and/or Camping	40 (73%)	32 (62%)	30 (36%)	102 (54%)
Tidepooling and/or Agate Hunting	35 (64%)	35 (67%)	30 (36%)	100 (52%)
Visiting Friends and Family	25 (45%)	21 (40%)	33 (39%)	79 (41%)
Visiting a marine reserve	23 (42%)	21 (40%)	22 (26%)	66 (35%)
Artistic Endeavors	17 (31%)	17 (33%)	22 (26%)	56 (29%)
Water Sports	4 (7%)	14 (27%)	20 (24%)	38 (20%)
Bicycling	6 (11%)	6 (12%)	7 (8%)	19 (10%)
Fishing	2 (4%)	6 (12%)	9 (11%)	17 (9%)
Other	0 (0%)	5 (9%)	6 (7%)	11 (6%)
Business Related Activities	1 (2%)	3 (6%)	6 (7%)	10 (5%)

N = 191, Missing = 4, Cape Perpetua n = 55, Otter Rock n = 52, Cascade Head n = 84

Note: Respondents could specify any number of activities.

Visitors were asked to identify their primary purpose for visiting the coast (Table 30). As seen in the responses to question 19 (Table 29), visitors engage in a wide range of actual activities. However, question 20 asked respondents to identify a single primary motive for visitation, so the results of the two questions are not directly comparable. The primary purpose for visitation at Otter Rock and Cascade Head was use of the beaches, which is consistent with observations across these studies. Sightseeing / wildlife viewing and visiting with family and friends were the other primary trip purposes at all locations. Many of the other trip purposes had a minimal number of citations, and thus interpretation of these data is tenuous, and further confounded when viewing the responses by individual reserve site.

Table 30. Activities as Primary Purpose of Visit

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

Primary Purpose	Cape Perpetua	Otter Rock	Cascade Head	All Locations
General Beach Use	10 (22%)	19 (43%)	53 (72%)	82 (50%)
Sightseeing and/or Wildlife Viewing	15 (33%)	4 (9%)	5 (7%)	24 (15%)
Friends and/or Family	6 (13%)	6 (14%)	8 (11%)	20 (12%)
Fishing	5 (11%)	5 (11%)	2 (3%)	12 (7%)
Hiking and/or Camping	6 (13%)	3 (7%)	0	9 (6%)
Other	2 (4%)	2 (5%)	4 (5%)	8 (5%)
Water Sport	2 (4%)	4 (9%)	0	6 (4%)
Tidepooling and/or Agate Hunting	0	1 (2%)	0	1 (0.6%)
State Park	0	0	1 (1%)	1 (0.6%)
Business	0	0	1 (1%)	1 (0.6%)
Total	46 (100%)	44 (100%)	74 (100%)	164 (100%)

N = 164, Missing = 31, Cape Perpetua n = 46, Otter Rock n = 44, Cascade Head n = 74
Note: Table excludes all respondents who listed more than one choice.

2014 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 expenditure data were collected from visitors at all three locations, and 168 respondents 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 31). Of these overnight visitors, 45% of the respondents were staying at hotel or motels, 30% were staying at a rented beach house/condo, 13% at private accommodations, and 12% staying at campgrounds (Figure 4). Those visitors staying at campgrounds (n = 12) were asked to specify what type of campground they were using. Most (7; 59%) were staying at state parks, and four visitors (33%) were staying at commercial campgrounds (Due to the small sample size, a table was not created for the campground variable). Only one visitor stated they were camping at a U.S. Forest Service campground.

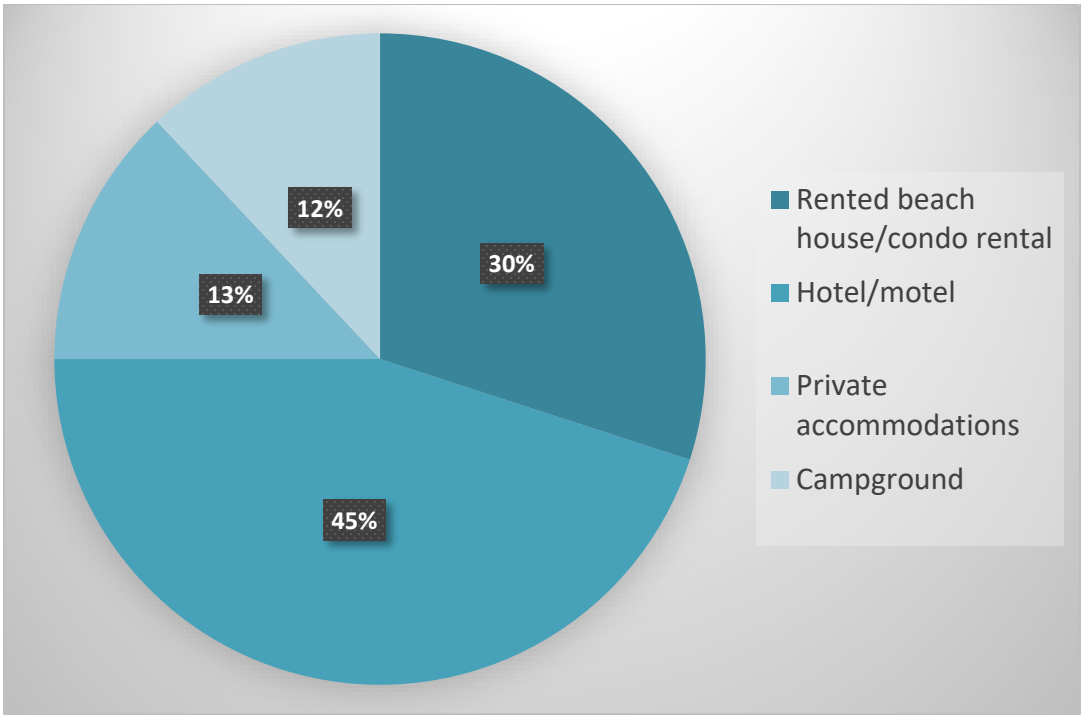
Table 31. Proportion of Overnight Stays
Q15. Is your group staying overnight on the Oregon coast during this trip?

Response	Frequency	Percent
Yes	108	66%
No	57	34%
Total	165	100%

N = 165, Missing = 3

Figure 4. Type of Overnight Accommodations

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



N = 102, Missing = 6

For those respondents who were staying overnight at the coast, the average length of stay for visitors at all three of the reserve sites was five nights (Table 32). Among these respondents, Cape Perpetua visitors tended to stay longer than visitors contacted at the other reserve sites.

Table 32. Duration of Overnight Stay

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

Location	Cape Perpetua	Otter Rock*	Cascade Head	All Locations
Average Duration of Stay	6.11	4.85	4.26	5.09

N = 97, Missing = 11, Cape Perpetua n = 35, Otter Rock n = 27, Cascade Head n = 35

* Removed one outlier of 100 nights

Visitors were asked if they traveled by any type of commercial transportation at any time during their trip (Table 33). Only 19% of the visitors used transportation modes other than private automobiles.

Table 33. Modes of Visitor Travel

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

Response	Frequency	Percent
Yes	31	19%
No	134	81%
Total	165	100%

N = 165, Missing = 3

Table 34 presents the estimated expenditures of those respondents (n = 31) who did use some mode of commercial travel. Note that visitors could have used more than one type of commercial travel, so the total number of responses to this question can exceed total affirmative responses to the prior question. The average expenditure for air travel (n = 18) was $1224, and the average rental vehicle expenditure (n = 16) was $703. Only one respondent mentioned using either a commercial bus or train. Among these respondents, Cape Perpetua visitors tended to spend slightly more on commercial transportation than visitors contacted at the other reserve sites.

Table 34. Expenditures by Modes of Commercial Travel

Estimated Expenditures By Travel Mode	Cape Perpetua Mean (N)	Otter Rock Mean (N)	Cascade Head Mean (N)	All Locations Mean (N)
Air Travel Estimate	$1417 (6)	$808 (5)	$1357 (7)	$1224 (18)
Rental Vehicle Estimate	$838 (8)	$302 (3)	730 (5)	$703 (16)

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 35). Of those respondents, 59% said they were planning on fishing from the shore or dock (Table 36; note the small number of respondents).

Table 35. Proportion of Visitors Fishing During Trip

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

Response	Frequency	Percent
Yes	17	11%
No	144	89%
Total	161	100%

N = 161, Missing = 7

Table 36. Types of Fishing during Trip

Q20. What type of fishing?

Type of fishing	Frequency	Percent
Shore or dock	10	59%
Private boat or kayak	5	29%
Charter company	1	6%
Other	1	6%
Total	17	100%

N = 17, Missing = 0

Visitors were asked how much they were planning to spend on seven categories of expenditures during their visit to the Oregon coast (Table 37). Respondents reported that they planned to spend the most money on lodging, an average of $623. The second highest average expected expenditures were for dining out ($181), followed by grocery store purchases ($126). Otter Rock visitors estimated the largest expected lodging expenditures, followed by Cascade Head visitors.

Table 37. Expected Trip Expenditures
Q21-27. List of Expenditure Categories

Expenditure Category	Cape Perpetua Mean (N)	Otter Rock Mean (N)	Cascade Head Mean (N)	All Locations Mean (N)
Lodging	$385 (25)	$799 (23)	$685 (31)	$623 (79)
Restaurant dining	$178 (39)	$224 (28)	$153 (40)	$181 (107)
Grocery store	$125 (28)	$123 (25)	$130 (30)	$126 (83)
Retail store	$62 (23)	$112 (20)	$161 (22)	$111 (65)
Fuel - car or boat	$96 (36)	$108 (27)	$87 (34)	$96 (97)
Recreational gear	$31 (6)	$50 (3)	$86 (3)	$49 (12)
Fees and licenses	$17 (21)	$37 (9)	$133 (5)	$39 (35)

CONCLUSIONS

The majority of visitors observed during the pressure counts were adults, followed by children, and then seniors. The proportion of senior visitors at Cape Perpetua was approximately double the proportions observed at Cascade Head and Otter Rock. Most visitors were observed in a range of pursuits which can be described as general beach visitation. The vast majority of visitors at Cascade Head (89%) fell under the general beach goer category, whereas this percentage was around 50% for Cape Perpetua and Otter Rock. There was a greater diversity of activities observed at Cape Perpetua and Otter Rock than Cascade Head. Cape Perpetua contains some of Oregon's best tidepools, therefore it could be expected that Cape Perpetua would have the highest proportion of visitors engaged in tidepooling. Otter Rock is considered an ideal location for beginner surfers due to a headland protecting the beach from wind and massive swells. Nearly one fifth of observed visitors were engaged in water sports at Otter Rock, which is six times greater than the proportion observed at Cascade Head, and 31 times greater than at Cape Perpetua. Observed visitors were almost equally split by gender, with slightly more females, and an average of 39 visitors were observed per sampling location.

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 were many international visitors, mostly from Canada. At Cape Perpetua and Otter Rock the majority of respondents were overnight visitors. However, the respondents at Cascade Head were nearly equally split between locals and visitors. This information suggests that Cape Perpetua and Otter Rock may be greater tourist attractions, perhaps for their outstanding tidepools and ideal surf conditions, respectively. The majority of visitors were at the coast with their families, and most were in small groups of two to five people. The visitor population tends to be professionals or retirees with higher education and income levels. They typically have previously visited the area, and summer is the season of most of their trips, followed by spring. Across the entirety of the Oregon coast the highest tourism traffic is observed in the summer months, therefore this data is consistent with previous tourism studies.

The visitor support for reserves was generally positive. Although most were not aware they were visiting a recently designated 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. Visitors of Cape Perpetua were the most likely to respond that a marine reserve in the area would increase their appreciation of the area. While 68% of all visitors indicated a reserve would increase their appreciation of the area, 88% of all respondents believe marine reserves in general are good for Oregon, and 10% are unsure. This study was conducted in the summer of 2014, only six months after Cascade Head and Cape Perpetua were officially implemented as marine reserves. Interestingly, although Otter Rock was implemented the earliest in 2012, this location had the highest proportion of visitors that were unaware of that location designation as a marine reserve. No interpretive information was available at the sites during the time of these surveys, which was likely a factor in visitors' lack of awareness. While a majority (58%) felt reserve designation would not impact their visitation, one-third of the visitors felt the designation of reserves would encourage them to visit more often. Only two respondents, both located at Cascade Head, indicated they thought the reserves would negatively impact their visitation. These data suggest that visitors respond positively or are unsure how to feel about marine reserves in their visiting location, yet the vast majority believes marine reserves are good for Oregon.

The activity patterns of questionnaire respondents mirrored the observation data. General beach use was both the most frequent activity and the primary trip motive. Sightseeing and/or wildlife viewing was

the second most common trip motive. Many respondents indicated that they participate in a variety of activities while on the coast. Two-thirds of visitors stayed overnight on the coast during their trip, with the majority staying in commercial facilities for an average of six nights. The average trip duration at Cape Perpetua was longer than at Cascade Head or Otter Rock. Only 9% of visitors indicated that someone in their party expected to go fishing during their trip, with the majority of fishing occurring from the shore or a dock. Lodging was the largest expenditure for visitors, with restaurant dining and grocery purchases coming in second and third respectively. One should note that since only 24% of the visitors were aware of the reserves, 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.

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APPENDIX A

Questionnaire Version 1
Visitor General Demographic Questionnaire

2014 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. NEWPORT
   B. FLORENCE
   C. LINCOLN CITY
   D. YACHATS
   E. WALDPORT
   F. PORTLAND
   G. EUGENE
   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 <u>including this trip</u>.)

	A. 2014	B. 2013	C. 2012
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 Perpetua?

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

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 Expenditure Questionnaire

2014 ODFW Marine Reserves Visitor Survey

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

   B. 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. NEWPORT
   B. FLORENCE
   C. LINCOLN CITY
   D. YACHATS
   E. WALDPORT
   F. PORTLAND
   G. EUGENE
   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 <u>including this trip</u>.)

	A. 2014	B. 2013	C. 2012
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-19)

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)

Type	Estimated dollar amount spent
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) 2. NO (Go to question 22)

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)

		Estimated dollar amount spent
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 Perpetua? Please use this space for your comments. We appreciate your cooperation. Your comments will help us improve the quality and your enjoyment of Cape Perpetua.

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 information provided in response to this survey to the extent permitted by law.

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 C

Questionnaire Version 3
Visitor Demographic and Attitudes Questionnaire

2014 ODFW Marine Reserves Visitor Survey

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

   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. NEWPORT
   B. FLORENCE
   C. LINCOLN CITY
   D. YACHATS
   E. WALDPORT
   F. PORTLAND
   G. EUGENE
   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 <u>including this trip</u>.)

	A. 2014	B. 2013	C. 2012
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
B. Homemaker
C. Student
D. Military
E. Farming, forestry or fishing
F. Operator, fabricator, or Laborer
G. Precision, production, craft, or repair
H. Service occupation
I. Technical, sales, or administrative support
J. Managerial or professional

13. What is the highest year of formal education you have completed? (Circle correct letter)

A. Less than high school
B. High school diploma
C. Some college, no degree
D. Associate's degree
E. Bachelor's degree
F. Grad or professional degree

14. Optional: What is your family's annual income level? (Circle Correct Number)

1. Under $10,001
2. $10,001 to $20,000
3. $20,001 to $30,000
4. $30,001 to $40,000
5. $40,001 to $50,000
6. $50,001 to $75,000
7. $75,001 to $100,000
8. More than $100,001 per year

Section 3: Marine Reserve Attitudes and Perceptions

15. Were you aware that the state recently implemented 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 does the designation of this area as a marine reserve impact your visits?

A. It encourages me to visit more often
B. It causes me to visit this site less often
C. No impact
D. Not sure
E. I will no longer visit this area.

E2. If you no longer visit here, will you visit another 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
E.	Sightseeing or wildlife viewing	1. Yes	2. No
F.	Tidepooling/agate hunting	1. Yes	2. No
G.	Hiking/Camping	1. Yes	2. No
H.	Bicycling	1. Yes	2. No
I.	Artistic endeavors	1. Yes	2. No
J.	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 Perpetua? Please use this space for your comments. We appreciate your cooperation. Your comments will help us improve the quality and your enjoyment of Cape Perpetua.

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 information provided in response to this survey to the extent permitted by law.

ODFW USE ONLY

5. ID No._____ 5. Sampling Location: _____
6. Date_____
7. Time _____
8. Reserve: 1. Redfish Rocks 2. Cape Perpetua 3. Otter Rock 4. Cascade Head 5. Cape Falcon

APPENDIX D

Pressure Count Data Collection Form

Pressure Count - Cape Perpetua

Weather: cloudy (1) rainy (2) foggy (3) sunny (4)							
Date:	Yachats (2) Time:	Perpetua (3) Time:	Neptune / Straw Hill Time:	Tenmile	Washburn / Heceta Time:	**TOTAL**	Codes
Vehicles							Participant Identifier: 1. Male child (0-12) 2. Male teen (13-19) 3. Male young adult (20-30) 4. Male adult (30-65) 5. Male senior (65+) 6. Female child 7. Female teen (13-19) 8. Female young adult (20-30) 9. Female adult (30-65) 10. Female senior (65+)
General Visitor (Parking Lot)							
Tidepooling/ Agate Hunter							
Beach Goer							Beach Goer: swimmer/wader, picnicing, general play, kite flying,
Water Sports							Board Sports: surfer, kite surfer, paddle
Shore/Shell-fishing							
Wildlife Viewer/Photographer							Binoculars,camera. Etc
Hiker/Camper							
Picnicking							
Other							Biking, artistic endeavors
Boater (motorized)							Within 3nm (3.5miles)
Boater (non-motorized)							Within 3nm (3.5miles)