

EXECUTIVE SUMMARY

In order to gain a better understanding of recreation (amount, type, and location) on Oregon's coastal beaches, Oregon Parks and Recreation Department (OPRD) conducted an observation study, on-site survey, and mail-out survey of beach users in 2001. The on-site and mail-out survey forms are presented in Appendices D and E, respectively. The purpose of the observation component was to provide information on user levels, recreation activities, and recreation locations. The purpose of the on-site survey is to provide general and site-specific information on primary user activities, perceptions of crowding and conflict, and methods of beach access. The purpose of the mail-out survey is to provide general information on a variety of subjects related to coastal recreation. This information is needed due to the absence of pre-existing coast-wide recreation data and to support efforts to create a comprehensive Ocean Shore Management Plan (OSMP) and a Habitat Conservation Plan (HCP) for the recovery of the Western Snowy Plover, coastal population. This report presents the methods and results of the observation data collection, on-site survey, and mail-out survey. This report is not intended to make recommendations on potential management actions. Key findings are summarized below.

1. Coast-wide observations made by research technicians resulted in the 33,871 observations of groups or individuals, amounting to 126,826 people. The three most common recreation activities observed included relaxing in a stationary location (43%), walking (25%), and playing in the sand (6%).

2. The Northern coast (Astoria to Lincoln City) accounted for 60% of all observations. The three most common activities observed in this area included relaxing in a stationary location (50%), walking (22%), and swimming/wading (5%).
3. The Central coast (Lincoln City to Coos Bay) accounted for 32% of all observations. The three most common activities observed in this area included relaxing in a stationary location (32%), walking (29%), and playing in the sand (6%).
4. The Southern coast (Coos Bay to Brookings) accounted for 8% of all observations. The three most common activities observed in this area included walking (39%), relaxing in a stationary location (32%) and exercising or walking dogs (6%).
5. Coast-wide 6,467 beach users completed the on-site survey (71% response rate). The three most common primary recreation activities respondents engaged in at the location contacted included walking (37%), relaxing at a stationary location (21%), and scenic enjoyment (12%). Most respondents (69%) did not feel crowded at the location they were contacted. A limited number of respondents (3%) experienced conflicts with other users. In terms of access to the beach, majority of on-site survey respondents used public access (with a parking lot) (65%) followed by private property (owned or rented) (18%), end of a street (13%), and private property (not owned or rented) (5%).
6. The Northern coast accounted for 51% of the on-site survey respondents. The three most common primary activities identified by respondents included walking (38%), relaxing in a stationary location (22%), and scenic enjoyment (11%). The most common method of beach access was public access (59%) followed by private property (owned or rented)

(20%), end of a street (17%), and private property (not owned or rented) (4%). A limited number of respondents in this area experienced conflicts (3%).

7. The Central coast accounted for 35% of the on-site survey respondents. The three most common primary activities identified by respondents included walking (36%), relaxing at a stationary location (23%), and scenic enjoyment (12%). The most common method of beach access was public access (65%) followed by private property (owned or rented) (20%), end of a street (10%), and private property (not owned or rented) (6%). A limited number of respondents in this area experienced conflicts (2%).
8. The Southern coast accounted for 14% of the on-site survey respondents. The three most common primary activities identified by respondents included walking (35%), scenic enjoyment (22%), and relaxing at a stationary location (15%). The most common method of beach access was public access (86%) followed by private property (owned or rented) (5%), private property (not owned or rented) (5%), and end of a street (4%). A limited number of respondents in this area experienced conflicts (3%).
9. Of the on-site respondents who identified all or part of their home address (4,943) the five most common states of origin included Oregon (61%), Washington (18%), California (5%), Idaho (3%), and Canada (2%).
10. Mail-out surveys were received from 3,312 respondents (73% response rate) who had provided their mailing address on the on-site survey. Of these respondents 52% indicated being contacted in the Northern coast, 35% the Central coast, and 13% the Southern coast.

11. The group composition of most mail-out respondents is family (64%) followed by family and friends (26%). The most common group sizes are 2 to 3 people and 4 to 5 people (each 40%). The duration of a coastal visit for most mail-out respondents (76%) was one or more nights. Of those respondents who stayed one or more nights the two most common means of lodging were a hotel or motel (30%) and campgrounds (26%). The distance traveled one way by most respondents (77%) was 120 miles or fewer.
12. Few respondents camp on the beach itself (9%) however, 47% of respondents who currently do not camp on the beach would like to do so.
13. Approximately 7% of respondents or members of the respondent's group had a physical or mental disability. Of those who had a disability 24% experienced recreation access restrictions due to the disability.
14. On average mail-out respondents made 4 visits to the coast during the summer (47% making 1 to 2 visits and 22% making 3 to 4 visits), 2 visits during the fall (45% making 0 visits and 39% making 1 to 2 visits) 1 visit during the winter (54% making 0 visits and 34% making 1 to 2 visits) and 2 visits during the spring (42% making 0 visits and 41% making 1 to 2 visits).
15. Most mail-out respondents felt safe while at the beach; the primary safety concerns included personal property safety (8% feeling unsafe), environmental safety and personal safety (each 2% feeling unsafe), and facility safety (1% feeling unsafe).

16. While a considerable number of respondents (96%) encountered dogs (on-leash, off-leash or both) at the beach, majority (68%) did not feel that the encounter(s) diminished the quality of their visit. Of those respondents who did identify a negative encounter, dog feces left on the beach was the most common problem (28%).
17. Majority of respondents (76%) have not used a motorized vehicle (street legal or non-street legal) on the beach and 57% do not think motorized vehicles should be allowed on the beach while 41% believe they should be allowed but only with restrictions (certain times and or areas). Of those respondents who have used a motorized vehicle on the beach most (59%) do so for sport or personal enjoyment.
18. The three most common Subjects regarding the Oregon coast that respondents were most interested in learning about included whales, seals, and other wildlife (67%), tidepools (65%), and hiking opportunities (59%). The three most common information services visitors would like to have available at the Oregon coast include information and education brochures (62%), trailside exhibits (50%), and roadside exhibits (44%). The three information sites most commonly used by visitors to the Oregon coast include visitor centers 58%, historic buildings and features (45%), and outdoor exhibits (45%). The three most common ways visitors typically obtain information on recreation opportunities available at the Oregon coast include previous visits (65%), friends or relatives (58%), and maps (40%).

19. Snowy Plover restrictions were not familiar to most respondents (76%) and a limited number were affected by use restrictions (5%). Of those were affected by use restrictions, majority (55%) felt that signs were clearly visible and easy to understand.

20. Different methods to promote the conservation and recovery of the snowy plover received varying support from respondents. Seasonally prohibiting certain uses received the greatest support of respondents (76%) followed by using signs only (70%), partial beach closure (62%), fencing nests only (43%), total beach closure (29%), removing plover predators (21%), and bulldozing dunes (20%).

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A. Introduction

The Oregon Shore Recreational Use Study was developed for the Oregon Parks and Recreation Department (OPRD) to gather recreation use and visitor data on Oregon's coastal beaches. This study was needed because of the absence of data required to answer questions regarding the amount, type, and location of recreation use, and the perceptions of recreation users on beaches along the entire Oregon Coast. In addition to developing baseline data, results of this study will be used in the completion of a comprehensive Ocean Shore Management Plan (OSMP) and a Habitat Conservation Plan (HCP) for the recovery of the Western Snowy Plover, coastal population. While previous coastal recreation data does exist, it is limited in scope. This study will serve as a resource for OPRD and other entities concerned with coastal recreation and related resource management responsibilities. This report uses survey and observation data gathered on-site and data collected from a follow-up mailed survey.

B. Study Area

The Oregon Coast is approximately 362 miles long, and contains a diverse landscape ranging from rocky cliffs to large open beaches. This study included all publicly accessible Oregon coastal beaches capable of offering recreation opportunities. Inaccessible coastal beach areas were not included in the study (all of these beaches were small in scale and extremely difficult to access). Using these criteria, a total of 212.5 miles of Oregon beach were included in the study. The study area was determined through consultation with OPRD staff familiar with the resource. While the range of the study included the length of the Oregon coast, the area of study was limited to the portions of

beaches within OPRD's beach jurisdiction (the area from the vegetation or beach zone line out to the low tide line). Use beyond OPRD's upland beach jurisdiction boundary was not included in this study. On the water side of the beach, the survey addressed some selected water-based recreational activities that rely on the beach for access to the water.

C. Methods

Because each beach within the study area is unique in location and potentially has unique use patterns, a data collection method was needed that could capture information about recreational users while they were on the beach, rather than at access parking lots or from other more centralized locations away from the beach (where most surveys have been conducted in the past). This allowed us to develop information accurately describing use levels and activities on all beaches, as well as analyze areas within beach segments in order to identify potential conflicts or problems that need to be addressed.

Two different data collection methods were employed on-site; observation data recording by research technicians, and a self-administered on-site survey completed by visitors.

Research technicians recorded location, time, number of users, and activity on all of the study area beaches, providing detailed and accurate data about use levels and activities at beaches along the Oregon Coast. The on-site survey completed by visitors collected information about recreation activities, crowding, conflict, and access. The on-site survey also offered participants the opportunity to participate in the mail-out survey by giving their names and addresses. All on-site data were collected during a time period between

June 29 and September 3, 2001. This particular time period was selected in order to describe use during the higher-use summer months.

1. Sample Selection

On-site Survey and Observation Data

To collect the data, six research technicians traveled coastal beaches using a prescribed sampling schedule. To provide manageable units for research technicians, the coastal beaches in the study area were divided into six segments (one for each technician). Each segment was further divided into two sub-segments, each one of which could be covered by one technician in a single day.

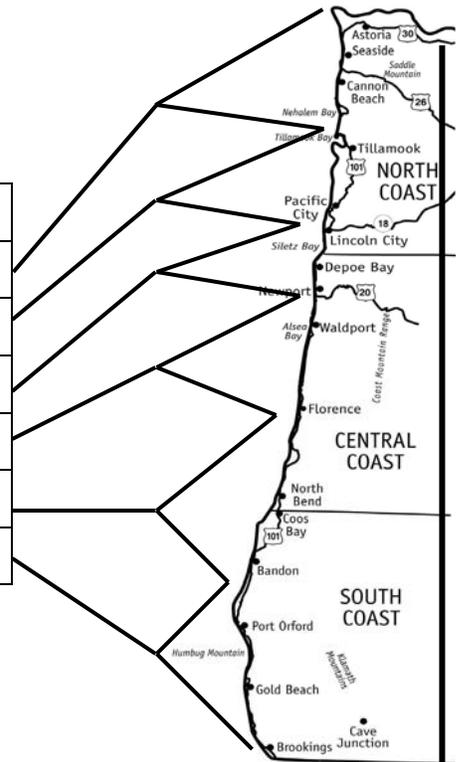
Segments and sub-segments were developed in consultation with OPRD and considered distance, accessibility, and use level. A brief description of each segment is available in Figure 1, and a complete list of segments and sub-segments is covered in Appendix A.

Figure 1. Coastal Study Segments

Segment	Area Covered
Segment 1	Columbia River - Nehalem River
Segment 2	Nehalem River - Cascade Head
Segment 3	Roads End – Yaquina River
Segment 4	South Beach – Umpqua River
Segment 5	Umpqua River – Blacklock Point
Segment 6	Sixes River Mouth – Crissie Field Beaches

Detailed Mapping is available through OPRD

Note: Only sandy beaches within each of the segments depicted in Figure 1 were surveyed.



The sample plan assigned one segment to each research technician. From June 29 to September 3, each sub-segment was sampled every other day, six days a week. Weekdays (Monday through Friday) were the only days sampling did not occur, and days that sampling did not occur rotated from week to week. For example, if during one week sampling did not occur on Monday, sampling would not occur on Tuesday the following week and Wednesday the week thereafter. This was done to provide reliable information on weekday use while allowing the technicians one day off per week. Sampling included all weekend days (Saturday and Sunday) for the duration of the study in order to more accurately capture high-use periods. In addition, all three days of the Labor Day holiday weekend (September 1, 2, and 3) were sampled, along with the Fourth of July holiday.

From the beginning of the study until July 19, sampling was done in a one-directional (north to south) pass through each sub-segment. After July 19, researchers varied the direction of sampling sub-segments. For example, if a researcher sampling sub-segment A on Monday passed north to south, on Wednesday he/she would sample sub-segment A south to north. For an example of the sample plan see Appendix A. By alternating the direction of travel, technicians were able to more accurately represent areas that experience specific daily temporal patterns. Research technicians began sampling at approximately the same time every day, but completed sampling at varying times depending on use levels, weather, and traffic conditions.

Use levels varied between beach segments, sub-segments, and specific beach locations. Factors that affected use levels in any given spot included: weather, distance from access points, proximity to population centers and facilities, difficulty in traveling a section of beach (surface conditions, traffic, tide, etc.), time of the week, and whether it was a holiday or during an event. Observation data were collected for all users. For on-site survey data, however, respondent selection rate depended on use level and visitor movement.

Ideally, all visitors would be included in the on-site survey. However, use levels vary, visitor movement could not be controlled, and collecting accurate observation data was the paramount objective. When use levels or visitor movement precluded contacting all users, researchers randomly selected visitors for on-site survey participation.

Areas in and around population centers, access points, and adjacent to facilities (campgrounds, visitor centers/exhibits etc.) experienced higher use levels than those located farther away. These factors were present to varying degrees in all segments and were consistent throughout the study period. Factors that varied were events, holidays, and weather. Events particular to a specific area (e.g. a town festival) typically increased use levels in that area. Holidays also affected use levels (Fourth of July and September 2). Poor weather (e.g. rain, high wind, and fog) significantly reduced use levels, but weather was generally good for most of the study.

2. **Contact Procedures**

Observation Data

Collection of observation data did not require personal contact with recreationists. Technicians used a Magellan Map 330 Global Positioning Satellite (GPS) unit to identify the latitude and longitude of recreationists on the beach, and also recorded the numbers and activities of all visitors they observed.

On-site Survey

Research technicians used a standard script to contact visitors. The script informed potential respondents of the sponsor as well as the nature and purpose of the study. The study was described as a comprehensive survey of recreation use and user opinions along the entire Oregon Coast. The script outlined the three purposes of the study:

1. Fulfillment of a mandate requiring OPRD to complete a comprehensive coastal study.
2. Collection of data important to protection of the endangered Western Snowy Plover.
3. Collection of data to aid OPRD in current and future management of its beach jurisdiction.

A copy of the on-site script is provided in Appendix B.

When researchers contacted respondents, they informed them that participation in the study was voluntary. Respondents were then asked to complete a brief on-site questionnaire. Researchers requested that respondents fill out their name and address on the on-site survey so they could receive a more comprehensive mail-out

survey. The respondents were told that participation in the mail-out was voluntary, and not required to make on-site data usable. If asked why two surveys were used, researchers informed respondents that the on-site survey was intentionally brief to limit interference with recreationist activities, increase response, and save time. In addition, researchers informed all respondents that individual responses to both the on-site and mail-out survey would be kept confidential, separate from names and addresses, and addresses would not be released or shared. Finally, researchers informed respondents that participation was important to OPRD's current and future management of the Oregon Shore, and that the information provided for the survey would be analyzed to provide data for the planning processes.

Mail-out Survey

Using Dillman's "Total Design Method" as a template, four different mailings (waves) were used to maximize the response level of mail-out survey recipients (see Appendix C for copies of contact letters and postcard). The first wave was directed to all mail-out survey recipients and consisted of a cover letter, a mail-out survey, and a pre-paid return envelope. The second wave was directed to all mail-out survey recipients and consisted of a postcard reminding recipients to return surveys, while thanking those who had already done so. The third wave was directed only to those who had not yet returned a completed survey; this wave included a letter emphasizing the importance of completing the survey, a mail-out survey, and a pre-paid return envelope. The fourth wave was directed only to those who had not as yet returned a completed survey. The fourth wave contained a letter requesting participation, a mail-out survey, and a pre-paid return envelope. The

timing for sending a mailing was determined by the return rate; as returns slowed, an additional mailing was sent.

3. Survey Development

This study included an on-site and a mail-out survey. The development of both surveys was directed by specific information needs raised by OPRD staff. Prior to this study, a number of questions had arisen regarding beach recreation. These included:

- Specific recreational activities people are participating in
- Where activities are occurring
- The level of current recreation use
- What user conflicts are occurring between recreational participants
- How recreation activities are related to access location and type
- User perspectives on crowding levels and locations

To address these issues, the on-site survey included questions on the types of recreational activities pursued, primary recreation activities, perceived level of crowding, conflicts encountered, and method of access. All questions referred to the location and day contact occurred. The survey also asked respondents to give their name and address so they could be sent a mailed survey. The on-site survey was self-administered, and required approximately 2 – 4 minutes to complete. A copy of the on-site survey is included in Appendix D.

The mail-out survey was developed to collect more general information and included questions on a variety of topics, which included:

- General (primary destination, length of stay, distance traveled, safety)

- Physical disabilities
- Activity importance and primary activity pursued
- Dogs and horses on the beach
- Camping on the beach
- Vehicles on the beach
- Information sources
- Western Snowy Plover
- Demographics

The mail-out survey took about 20 – 30 minutes to complete. A copy of the mail-out survey is included in Appendix E.

4. Response Rates and Sample Sizes

This study resulted in 33,871 observations of groups and individuals, which amounted to 126,826 people (see Table 1). Of the people observed, 9,033 were asked to complete an on-site survey and 6,467 did so (see Table 1). Of the 6,467 on-site surveys collected, 74% (4,800) contained an address for participation in the mail-out survey. Of the 4,808 mail-out surveys sent, a total of 255 (6.2%) were undeliverable and 3,312 were completed and returned for a modified overall response rate of 72.7% (see Table 1).

Table 1. Observation, On-site Survey, and Mail-out Survey Sample Characteristics

	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5	Segment 6
# days visited	55	55	55	45	53	60
# people observed	41344	22474	39011	11360	8353	4284
# people contacted	1377	2686	2649	788	704	903
% completing on-site surveys	65	74	74	66	67	70
# on-site surveys	895	1988	1960	520	472	632
# available mail-out surveys	668	1546	1461	343	272	510
# completing mail-out survey	447	1091	995	248	197	333
% *completing mail-out survey	67	71	68	72	72	65

*completing mail-out survey does not take into account undeliverable surveys

5. Results

Results of the different data collection methods are presented in the following order:

- A. Observation Data Results
- B. On-site Survey Results
- C. Mail-out Survey Results

Results for each data collection method are presented on a coastal level, a segment level, and to some extent individual beach level. Complete individual beach results are available in various appendices.

A. OBSERVATION DATA RESULTS

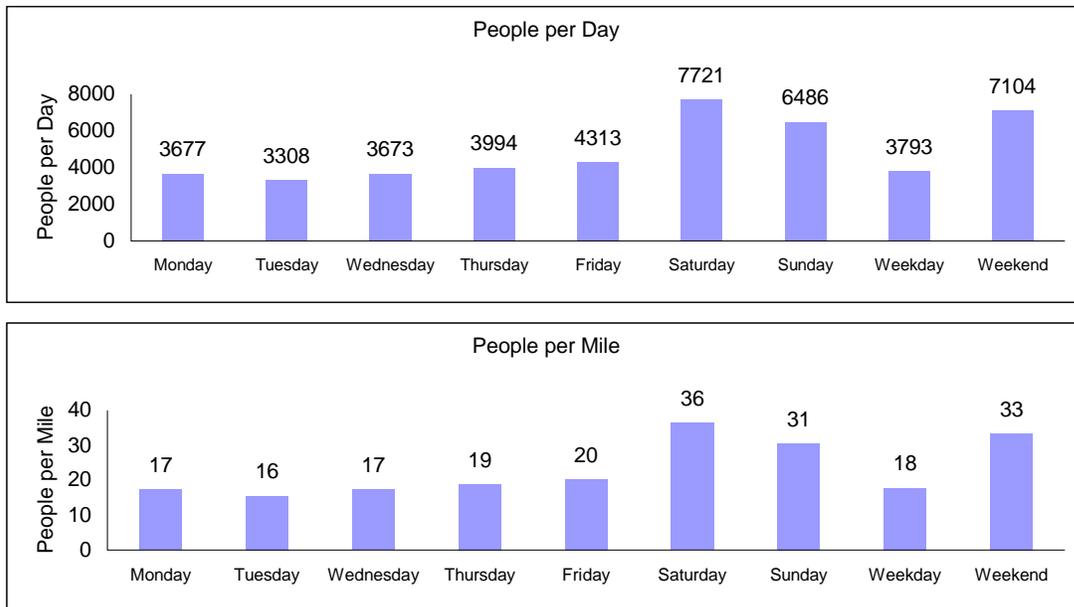
Results for Entire Coast

From the observations made over the course of the study, average coastal visitation was determined for weekdays (Monday through Friday), weekends (Saturday and Sunday), and specific days of the week. Because of the precision with which data were collected, the data set can be used to determine use levels for any particular area.

Weekday, Weekend, and Daily Visitation

On average for the entire coast, 7,104 visitors were observed per day on weekend days and 3,925 visitors were observed per day on weekdays (see Figure 2). Given that the study included 212.5 miles of beach area, the average use levels were 18 visitors per mile on weekdays and 33 visitors per mile on weekends.

Figure 2. Average Daily Use Levels for Entire Coast

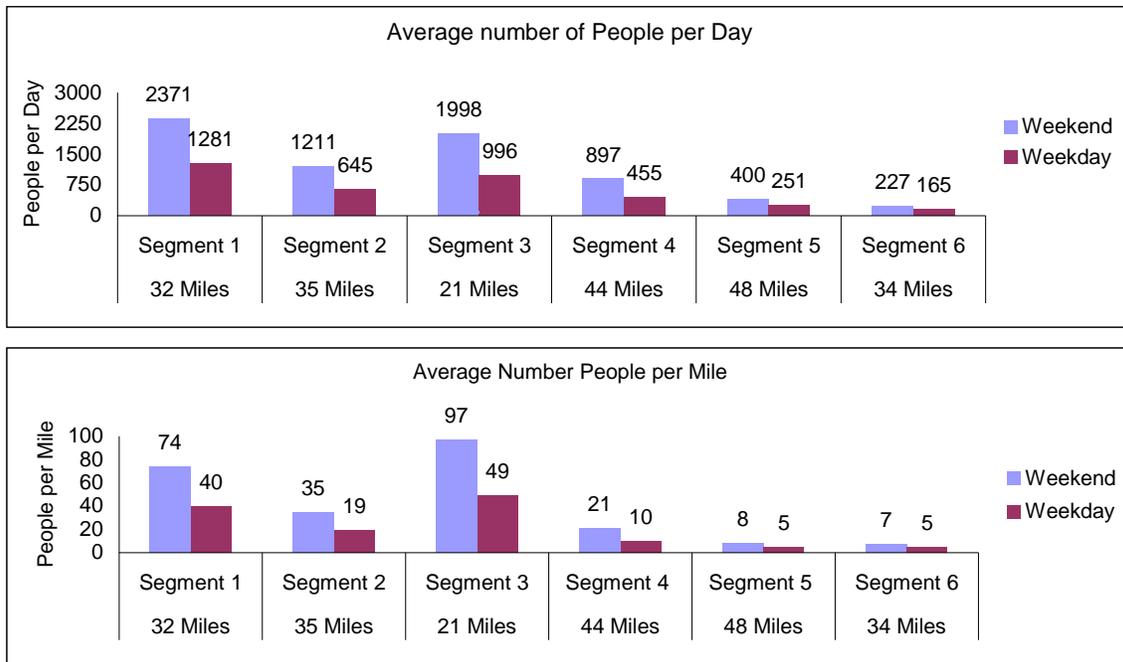


Daily visitation levels varied. Saturday and Sunday show the highest daily levels, with 36 and 31 visitors per mile, respectively. Weekdays were lower but similar to one another,

ranging from 20 to 16 people per mile. Use levels in each segment vary, and these differences are not reflected in Figure 2 values.

Figure 3 identifies the average weekday and weekend use levels for each segment. Figure 3 shows that the northern half of the coast (Newport to the Columbia River, Segments 1, 2, and 3), experiences higher use levels than the southern half of the Coast (South Beach to Brookings, Segments 4, 5, and 6).

Figure 3. Average Daily Use Levels for all Study Area Segments



For the Northern Coast (Newport to Astoria), Segment 3 (which included Lincoln City and Newport) had the highest use level, with 49 visitors per mile on weekdays and 97 visitors per mile on weekends. Segment 1 (which included Astoria, Seaside, and Canon Beach) had the second highest use level, with 40 visitors per mile on weekdays and 74 visitors per mile on weekends. Segment 2 (which included Rockaway Beach, Sandlake, and Cape Lookout) followed with 19 visitors per mile on weekdays and 35 visitors per mile on weekends.

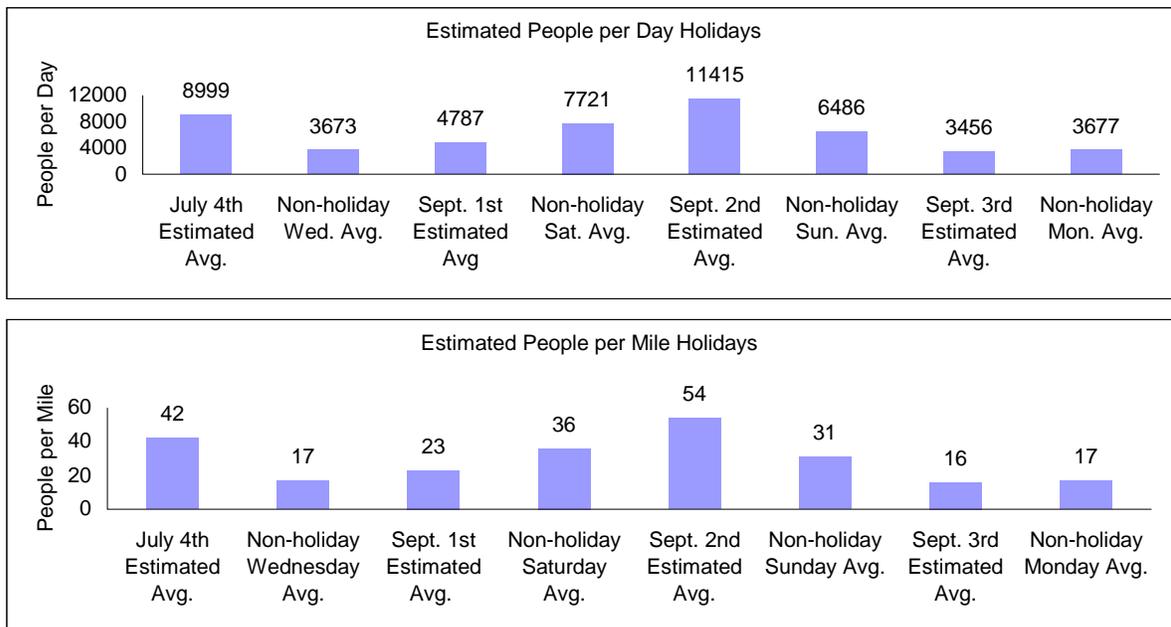
Segments 4, 5, and 6, located in the Southern Coast area (Newport to Brookings), had lower use levels. On weekdays Segment 4 had 10 visitors per mile, while Segments 5 and 6 had 5. On weekends Segment 4 had 21 visitors per mile, while Segments 5 and 6 had 8 and 7 visitors per mile, respectively.

Holiday Use Levels

Observations made on July 4th (Wednesday) and the three days of the Labor Day weekend (Saturday, Sunday, and Monday) were not included in the values reported in Table 2 or 3.

On July 4th, observations were taken at sub-segments 1a, 2a, 3b, 4b, 5a, and 6a (see Appendix A for a description of these sub-segments). Together these July 4th observations totaled 2,957 visitors, a 245% increase over the non-holiday average (1,209) made at these sub-segments. Assuming that a similar increase occurred at other sub-segments on July 4th, the coast total would equal approximately 8,999 visitors (see Figure 4), with an average of 42 visitors per mile.

Figure 4. Coast Holiday Observations

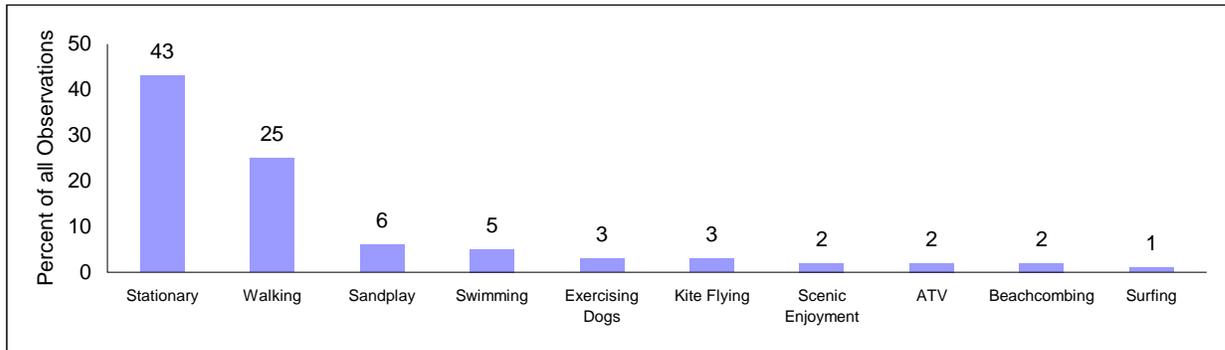


On Saturday September 1st, observations were taken at sub-segments 1b, 2a, 3b, 4a, 5a, and 6a. Together these holiday observations totaled 2,620 visitors, a 38% decrease from the non-holiday average (4,257) made at these sub-segments. Assuming that a similar decrease occurred at other sub-segments on September 1st, the coast total would equal approximately 4,787 visitors (see Figure 4), an average of 23 visitors per mile. On Sunday September 2nd, observations were taken at sub-segments 1a, 2b, 3a, 4b, 5b, and 6b (see Appendix A for a description of these sub-segments). Together these holiday observations totaled 5,890 visitors, a 76% increase over the non-holiday average (3,333) made at these sub-segments. Assuming a similar increase occurred at other sub-segments on September 2nd, the coast total would equal approximately 11,415 visitors (see Figure 4), an average of 54 visitors per mile. On Monday September 3rd, observations were taken at sub-segments 1b, 2a, 3a, 4a, 5a, and 6a. Together these holiday observations totaled 2,169, a 5% decrease over the non-holiday average (2,307) made at these sub-segments (see Table 4). Assuming a similar decrease occurred at other sub-segments on September 3rd, the coastal total would equal approximately 3,456, an average of 16 visitors per mile.

Observed Activities

The most common activities observed along the coast were relaxing in a stationary location (43%) and walking (25%, see Figure 5). No other activity accounted for more than 6% of the observations.

Table 5. Coast Top Ten Activities Observed



Of the 34 activities observed over the course of the study, the ten most frequently observed activities (reported in figure 5) account for 92% of the activities observed. For a complete list of activities and their frequency of observation, see Appendix F. The top ten activities observed by researchers shows a fair level of agreement with the “primary” activities identified by respondents in the on-site survey (see Table 2). Because some activities appear similar to one another (e.g. stationary relaxing, scenic enjoyment, or walking and beachcombing) and visitors’ stated primary activities could reasonably be different from the activities they were engaged in when they were observed, we would not expect complete congruence here.

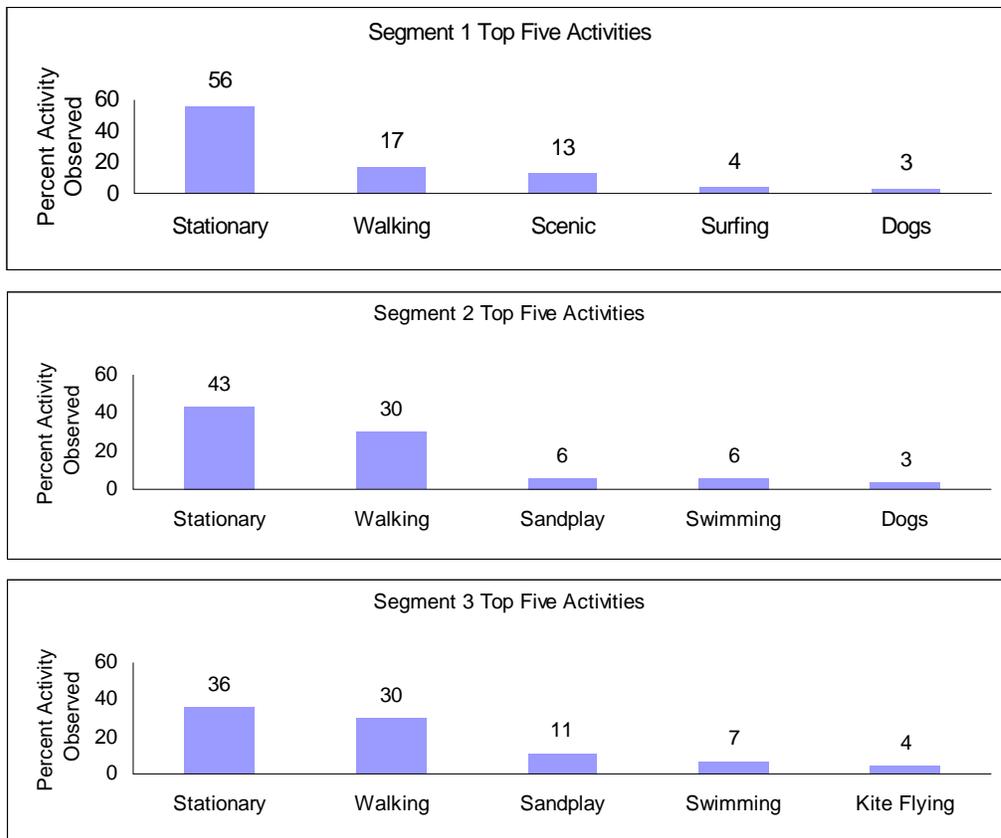
Table 2. Comparison between Observed Activities and On-site Survey Activities

Observed Activities	%	Reported “Primary” Activities	%
Stationary relaxing	42	Walking	37
Walking	27	Stationary relaxing	21
Sandplay	6	Scenic enjoyment	12
Swimming	5	Exercising dogs	4
Exercising Dogs	4	Beachcombing	3
Kite Flying	3	Kite Flying	3
Scenic Enjoyment	3	Exercise	3
ATV	2	Sandplay	2
Beachcombing	2	Camping	2
Surfing	2	Surfing	2

Observed Activities by Segment

The type and frequency of activities observed varied from segment to segment. In the more heavily used central to northern coast (Columbia River to Newport Segments 1, 2, and 3), the primary activity observed was relaxing in a stationary location, followed by walking. Other activities account for about 30% of the observations, and reflect more specialized pursuits such as surfing, kite flying, and sandplay (see Figure 6). The segments in this region showed five predominant activities that accounted for most (88% or more) of the activities observed. For a complete list of the activities and frequency of observation in Segments 1, 2, and 3 see Appendix F.

Figure 6. Observed Activity Frequency Coastal Study Segments 1, 2, and 3



In the less heavily used central to southern coast (South Beach to Crissie Fields Beaches Segments 4, 5, and 6), the primary activity observed is walking, followed by relaxing in a stationary location (see Figure 7). This is a reversal from the top two activities reported in the central to northern coast region. Here other activities account for about 40% of the observations and reflect some different specialized activities such as ATV use and exercise. For a complete list of the activities and frequency of observation in Segments 4, 5, and 6 see Appendix F.

Figure 7. Observed Activity Frequency Coastal Study Segments 4, 5, and 6



Individual Beaches

A total of 57 different beaches were surveyed over the course of the study. Each beach is unique in terms of its distance from access points, proximity to population centers and facilities, beach surface conditions, and recreation opportunities. As a result, use levels

and activities vary considerably between beaches. Segment level reporting does not reflect the uniqueness of individual beaches. The fifteen beaches with the highest weekend use levels are reported in Table 3, and Tables 4 through 9 report use levels for the individual beaches found within each segment. Primary activities from the on-site survey are also given for the fifteen highest use beaches.

Table 3. Fifteen Highest Weekend Use Level Beaches

Beach	Avg. # People/Mile Weekend Day	Avg. # People/Mile Weekday	Avg. # People Weekend Day	Avg. # People Weekday	% reporting some crowding	Primary Activity	Segment
Short Sands Beach	465	184	232	92	73	Walking	1
Chapman Pt. to Humbug Pt.	242	142	726	427	48	Stationary	1
Necanicum River to Tillamook Head	233	113	466	226	51	Stationary	1
Indian and Ecola Beaches	214	73	214	73	63	Stationary	1
Roads End to Siletz River	156	75	1089	527	33	Walking	3
Yaquina Head to Yaquina River	126	53	442	184	31	Walking	3
Pt. Maxwell to Netarts River	120	43	181	65	36	Walking	2
Humbug Pt. to Hug Pt	117	37	117	37	31	Stationary	1
Harris Beach	108	103	54	52	42	Stationary	6
Bastendorf Beach	98	38	98	38	16	Walking	5
Sutton Creek to Siuslaw River	86	19	259	56	41	Stationary	4
Cape Kiwanda to Nestucca River	74	43	295	170	56	Walking	2
Siletz River to Boiler Bay	70	37	279	148	23	Walking	4
Hug Pt. to Arch Cape	67	82	101	124	41	Stationary	1
South Beach	48	35	73	53	13	Walking	4

See Appendix G for a complete list of all beaches sorted by the average number of people per mile per weekend day and all beaches sorted by the percent reporting some crowding.

Segment 1 Beaches

Short Sands Beach, Chapman Point to Humbug Point, Necanicum River to Tillamook Head, and Indian and Ecola Beaches all had weekend use levels that exceeded 200 people per mile (see Table 4).

Table 4. Segment 1 Individual Beach Use Levels – North to South

Beach	Avg. # People/Mile Weekend Day	Avg. # People/Mile Weekday	Avg. # People Weekend Day	Avg. # People Weekday	% reporting some crowding
Columbia River to Necanicum River	17	9	277	150	32
Necanicum River to Tillamook Head	233	113	466	226	51
Indian and Ecola Beaches	214	73	214	73	63
Chapman Pt. to Humbug Pt.	242	142	726	427	48
Humbug Pt. to Hug Pt	117	37	117	37	31
Hug Pt. to Arch Cape	67	82	101	124	41
Arch Cape to Cape Falcon	4	6	7	9	0
Short Sands Beach	465	184	232	92	73
Neahkanie Mt. To Nehalem River	23	26	128	141	37

Short Sands Beach had the highest weekend use levels for Segment 1 (see Table 4). Short Sands Beach is 0.5 miles long. A total of 74 on-site surveys were completed at Short Sands Beach. The primary activities accounting for 10% or more of on-site survey responses included walking (26%), relaxing in a stationary location (22%), and surfing (20%).

Chapman Point to Humbug Point had the second highest weekend use levels for Segment 1 (see Table 4). This beach is approximately 1 mile long. A total of 36 on-site surveys were completed at this location. The primary activities accounting for 10% or more of on-site survey responses included relaxing in a stationary location (47%), walking (28%), and scenic enjoyment (11%).

Necanicum River to Tillamook Head had the third highest weekend use levels for Segment 1 (see Table 4). This beach is approximately 2 miles long. A total of 213 on-site surveys were completed at this location. The primary activities accounting for 10% or more of on-site survey responses included relaxing in a stationary location (37%), walking (35%), and scenic enjoyment (8%).

Indian and Ecola Beach had the fourth highest weekend use levels for Segment 1 (see Table 4). This beach is approximately 1 mile long. A total of 92 on-site surveys were completed at this location. The primary activities accounting for 10% or more of on-site survey responses included relaxing in a stationary location (34%), scenic enjoyment (18%), walking (17%), and surfing (11%).

Humbug Point to Hug Point had the fifth highest weekend use levels for Segment 1 (see Table 4). This beach is approximately 1 mile long. A total of 36 on-site surveys were completed at this location. The primary activities accounting for 10% or more of all on-site survey responses included relaxing in a stationary location (47%), walking (28%), and scenic enjoyment (11%).

Hug Point to Arch Cape had the sixth highest weekend use levels for Segment 1 (see Table 4). This beach is approximately 1.5 miles long. A total of 83 on-site surveys were completed at this location. The primary activities accounting for 10% or more of on-site survey responses included relaxing in a stationary location (40%), walking (27%), and scenic enjoyment (14%).

Segment 2 Beaches

Point Maxwell to Netarts River reported the highest weekend use levels however, Cape Kiwanda had the highest crowding (56%) reported by on-site survey respondents (see Table 5).

Table 5. Segment 2 Individual Beach Use Levels – North to South

Beach	Avg. # People/Mile Weekend Day	Avg. # People/Mile Weekday	Avg. # People Weekend Day	Avg. # People Weekday	% reporting some crowding
Nehalem River to Tillamook Bay	42	27	337	216	23
Bayocean Spit	21	8	84	30	21
Pt. Maxwell to Netarts River	120	43	181	65	36
Netarts River to Cape Lookout	22	13	119	72	40
North Sand Lake Spit	22	12	33	19	37
Sand Lake to Cape Kiwanda	13	10	77	62	21
Cape Kiwanda to Nestucca River	74	43	295	170	56
Nestucca River to Cascade Head	21	19	85	76	15

Point Maxwell had the highest weekend use level for Segment 2 (see Table 5). This beach is approximately 1.5 miles. A total of 330 on-site surveys were completed at this location. The primary activities accounting for more than 10 % of on-site survey responses included walking (41%), relaxing in a stationary location (20%), and scenic enjoyment (13%).

Cape Kiwanda to Nestucca River had the second highest weekend use level for Segment 2 (see Table 5). This beach is approximately 4 miles. A total of 386 on-site surveys were completed at this location. Primary activities accounting for more than 10% of on-site survey responses included walking (33%), relaxing in a stationary location (25%), and scenic enjoyment (12%).

Segment 3 Individual Beaches

Segment 3 beaches had relatively high use levels when compared to other Segments however, on-site survey respondents at these beaches reported relatively low levels of crowding (see Table 6). As previously mentioned, this could be the result of Segment 3 visitors expecting high use levels prior to visiting and consequently not feeling crowded.

Table 6. Segment 3 Individual Beach Use Levels

Beach	Avg. # People/Mile Weekend Day	Avg. # People/Mile Weekday	Avg. # People Weekend Day	Avg. # People Weekday	% reporting some crowding
Roads End to Siletz River	156	75	1089	527	33
Siletz River to Boiler Bay	70	37	279	148	23
Devil's Punchbowl to Schooner Pt.	31	27	187	159	34
Yaquina Head to Yaquina River	126	53	442	184	31

Roads End to Siletz River had the highest weekend use levels for Segment 3 (see Table 6).

This beach is approximately 7 miles long. A total of 863 on-site surveys were completed at this location. The primary activities accounting for more than 10% of all on-site survey responses included walking (37%), relaxing in a stationary location (28%), and scenic enjoyment (13%).

Yaquina Head to Yaquina River had the second highest weekend use levels for Segment 3 (see Table 6). This beach is approximately 4 miles long. A total of 413 on-site surveys were completed at this location. The primary activities accounting for more than 10% of on-site survey responses included walking (40%), relaxing in a stationary location (27%), and scenic enjoyment (10%).

Siletz River to Boiler Bay had the third highest weekend use levels for Segment 3 (see Table 6). This beach is approximately 6 miles long. A total of 224 on-site surveys were completed at this location. The primary activities accounting for more than 10% of on-site survey responses included walking (34%), relaxing in a stationary location (20%), and scenic enjoyment (11%).

Segment 4 Individual Beaches

Segment 4 experienced lower use levels than most of the beaches located in Segments 1, 2, and 3. Moreover, with the exception of Sutton Creek to Siuslaw River, no beach in Segment 4 reported weekend use level in excess of 48 visitors per mile or on-site survey crowding in excess of 33% (see Table 7).

Table 7. Segment 4 Individual Beach Use Levels

Beach	Avg. # People/Mile Weekend Day	Avg. # People/Mile Weekday	Avg. # People Weekend Day	Avg. # People Weekday	% reporting some crowding
South Beach	48	35	73	53	13
Collins Creek to Alsea River	15	12	60	50	10
Alsea River to Starr Creek	37	22	220	132	16
Rocky Knoll to Heceta Head	18	12	55	36	25
Lily Lake area to Sutton Creek	5	3	16	8	33
Sutton Creek to Siuslaw River	86	19	259	56	41
Siuslaw River to Siltcoos River	16	8	163	79	27
Siltcoos River to Takenitch Cr.	5	2	25	8	9
Takenitch Cr. to Threemile Cr.	11	2	34	7	9
Threemile Cr. to Umpqua River	2	1	8	7	30

Sutton Creek to Siuslaw River and South Beach reported the highest weekend use levels (86 and 48 visitors per mile respectively) for Segment 4 (see Table 7). Sutton Creek to Siuslaw River is approximately 3 miles long. A total of 96 on-site surveys were completed at this location. The primary activities accounting for more than 10% of on-site survey responses included relaxing in a stationary location (25%), walking (24%), and kite flying (10%).

South Beach is approximately 1.5 miles long. A total of 83 on-site surveys were collected at this location. The primary activities accounting for more than 10% of on-site survey responses included walking (30%), beachcombing (12%), and camping (11%).

Segment 5 Individual Beaches

With the exception of Bastendorf Beach, Segment 5 beaches experienced relatively low weekend use levels (2 to 13 visitors per mile) and crowding (0 to 23%) (see Table 8).

Table 8. Segment 5 Individual Beach Use Levels

Beach	Avg. # People/Mile Weekend Day	Avg. # People/Mile Weekday	Avg. # People Weekend Day	Avg. # People Weekday	% reporting some crowding
Umpqua River to Tenmile Cr.	9	6	64	39	16
Tenmile Cr. to Coos Bay	4	3	60	38	23
Bastendorf Beach	98	38	98	38	16
Sacchi Beach	4	4	4	4	0
Agate Beach to Fivemile Pt.	2	2	6	5	7
Fivemile Pt. to Coquille River	10	9	57	54	12
Face Rock to New River	13	10	90	71	12
New River to Blacklock Pt.	4	1	34	5	0

Bastendorf Beach had the highest weekend use level for Segment 6 (see Table 14). This beach is approximately 1 mile long. A total of 57 on-site surveys were completed at this location. The primary activities accounting for more than 10% of on-site survey responses included walking (26%), scenic enjoyment (23%), relaxing in a stationary location (16%), and exercising dogs (12%).

Segment 6 Individual Beaches

With the exception of Harris Beach, Segment 6 beaches experienced relatively low weekend use levels (1 to 36 visitors per mile) and crowding (8% to 30%) (see Table 9).

Harris Beach had the highest weekend use level for Segment 6 (see Table 9). This beach is approximately 0.5 miles long. A total of 135 on-site surveys were completed at this location. The primary activities accounting for more than 10% of on-site survey responses

included relaxing in a stationary location (30%), walking (29%), and scenic enjoyment (22%).

Table 9. Segment 6 Individual Beach Use Levels – North to South

Beach	Avg. # People/Mile Weekend Day	Avg. # People/Mile Weekday	Avg. # People Weekend Day	Avg. # People Weekday	% reporting some crowding
Sixes River mouth	22	7	22	7	8
Cape Blanco to Elk River	1	2	3	4	16
Elk River to Pt. Orford Head	5	4	19	14	21
Battle Rock to Humbug Pt.	3	3	12	12	15
Devil's Backbone to Nesika Beach	1	1	4	6	21
South of Humbug	0	0	0	0	0
Otter Pt. to Rogue River	2	2	5	5	12
Rogue River to Cape Sebastian	4	3	21	15	16
Cape Sebastian to Pistol River	4	3	15	9	30
Pistol River to Crook Pt.	2	2	3	3	14
Whaleshead Beach	19	8	19	8	23
Harris Beach	108	103	54	52	42
Harbor Beach	36	26	36	26	25
Winchuck and Crissie Fields Beaches	16	5	16	5	15

B. ON-SITE SURVEY RESULTS

Results are presented in the following order:

1. Results Entire Coast
2. Results by Segment

1. Results Entire Coast

Beach Recreation Activities

To identify which activities respondents participate in while at the beach respondents were asked, “Which of the following activities have you participated in while on this beach? (Please check all that apply).” Results, as shown by the data summarized in Table 10, indicate that Oregon beach users typically pursue multiple activities while on the beach.

Table 10. Recreation Activities Pursued on Oregon Beaches

Activity	%	Activity	%	Activity	%
Walking	91	Bicycle	7	*Spiritual	0.5
Scenic enjoyment	73	Special event	7	*Reading	0.5
Stationary relaxing	57	Fishing	6	*Wildlife viewing	0.3
Exercise	37	Surfing	6	Hang gliding	0.3
Kite flying	32	Clamming	6	*Skim Board	0.2
Exercising dogs	26	Crabbing	5	*Artistic	0.2
Swimming	25	*Sandplay	5	*Rock climbing	0.2
Other	20	Horseback	3	*Beach cleanup	0.1
Fires	19	Kayaking	2	*Kissing	0.1
Camping	19	*ATV	2	*Paragliding	0.1
Collect driftwood	14	*Family	1	*RC cars and planes	0.1
Birding	11	Wind surfing	1	*Land sailing	0.1
Fireworks	9	*Sports	1	*Doryfishing	0.1
*Beachcombing	9	*Tidepooling	1	*Jetskiing	<0.1
Boogie boarding	8	*Photography	0.5	*Kiteboarding	<0.1

* Identifies activities not listed on on-site survey form

n = 6467

Several activities stand out as being pursued by a majority of users, including walking for pleasure (91%), scenic enjoyment (73%), and relaxing at a stationary location (57%).

These activities require no specialized equipment, can be pursued by nearly all visitors,

and can occur in conjunction with other activities. In addition to the 23 activities listed on the survey form, this question gave respondents the opportunity to identify other activities they pursue. About 20% of respondents reported additional activities, (labeled with an asterisk in Table 10) beyond those on the on-site survey. It should be noted that “Other” is the selection made by respondents who participate in activities that were not listed on the on-site survey. See Appendix H for a complete description of activities.

Primary Recreation Activity

To identify the primary activity respondents participated in, a second question asked, “Of the activities listed above (in question 1), please circle the primary activity you have participated in today while on this beach.” Results (see Table 11) indicate that Oregon beach users’ primary activities are varied.

Table 11. Primary Recreation Activities Pursued on Oregon Beaches

Activity	%	Activity	%	Activity	%
Walking	37	*Family	0.7	Fireworks	0.1
Stationary relaxing	21	Crabbing	0.5	Birding	0.1
Scenic enjoyment	12	*Sports	0.5	*Skim board	0.1
Exercising dogs	4	Fires	0.4	*Paragliding	0.1
*Beachcombing	3	*Tidepooling	0.4	*Wildlife	0.1
Kite Flying	3	Collect driftwood	0.3	*Kissing	0.1
Exercise	3	Bicycle	0.3	Hang gliding	0.1
*Sandplay	2	Kayaking	0.2	*Land sailing	<0.1
Camping	2	*Reading	0.2	*Jetskiing	<0.1
Surfing	2	Special events	0.2	*Doryfishing	<0.1
Swimming	2	Clamming	0.2	*Litter pickup	<0.1
*ATV	1	*Spiritual	0.2	*RC cars and planes	<0.1
Boogie boarding	0.9	Horseback	0.2	*Rock climbing	<0.1
Fishing	0.9	*Artistic	0.2	*Kiteboarding	<0.1
Wind Surfing	0.7	*Photography	0.2		

* Identifies activities not listed on on-site survey form

n = 6467

Three activities stand out as being pursued by a majority of users, including walking for pleasure (37%), relaxing (21%), and scenic enjoyment (12%). Table 11 also shows that

the rest of the activities respondents listed as primary occurred in very low percentages.

A comparison of Tables 10 and 11 shows interesting results. Most visitors primarily come to the beach to participate in either walking, relaxing, or scenic enjoyment, but also participate in one or more additional activities.

Of the top ten activities reported in response to questions 1 (see Table 10) and 2 (see Table 11), seven were shared, and the top three activities (walking, stationary relaxing, and scenic enjoyment) were the same. However, beachcombing and sandplay (both unlisted on the on-site survey) were in the top 10 primary activities (3% and 2% respectively) in question 2, but not in question 1. In addition, many respondents who volunteered “unlisted” activities in question 1 also identified them as their primary activity.

Beachcombing, sandplay, and ATV use were the top three “unlisted” activities in questions 1 and 2.

It is also interesting to note that 25% of respondents were exercising dogs while at the beach, but did not come to the beach primarily for that purpose. The large percentage of visitors exercising dogs at the beach could be due to the beach being one of the few public places where dogs are allowed off-leash either officially or unofficially.

Crowding

Crowding is a negative perception of user density in a recreation setting, and should not be confused with density (the number of people on a given area of beach at one time) itself.

The actual degree to which density on a beach is perceived as “crowded” is affected by a number of factors, including the kind of activity the visitor is going to the beach for and

expectations of social interaction, as well as past experience and personal level of tolerance for encountering others on the beach. For instance, someone going to the beach to be a part of a large festival is going to see a lot of people in a small area, but may not characterize that experience as “crowded” because they were there to enjoy the social experience. Someone else who is visiting the same beach for relaxation or solitude, and does not know that the festival will be there that day, may feel quite crowded. The survey asks visitors to report their “perception” of crowding that day on that stretch of beach.

To identify user perceptions of crowding, the on-site survey provided respondents with a single 9-point scale (from “not at all crowded” to “extremely crowded”) that has been used in many studies to identify users’ perceptions of crowding. Two recent Northwest studies which employ this method include, Hall and Shelby, *Recreational Users of Lake Billy Chinook and Lake Simtustus and Shelby and Whittaker, General Recreation Findings from Hells Canyon NRA*.

The question used to identify respondent perception of crowding on the on-site survey is given below:

“Thinking about today at this beach, how crowded would you say the area is? (Circle one number)”

1-----	2-----	3-----	4-----	5-----	6-----	7-----	8-----	9-----
Not at all		Slightly		Moderately			Extremely	
Crowded		Crowded		Crowded			Crowded	

The typical use of the scale is to give the percent of respondents reporting some degree of crowding (3 through 9 on the scale).

Table 12 reports the percent of respondents feeling crowded (3 or greater) for the entire Oregon coast.

Table 12. Crowding Levels for Entire Coast

Crowding level		%
Not at all Crowded	1	48
	2	21
Slightly Crowded	3	11
	4	8
	5	4
Moderately Crowded	6	6
	7	2
	8	1
Extremely Crowded	9	< 1
% Feeling Crowded		31

N = 6467

For the entire coast, 31% of respondents felt some crowding. Only 9% felt there was moderate to extreme levels of crowding. Through analysis of prior studies employing crowding, five categories of crowding levels have been identified. These categories are used as an indicator of whether a resource is experiencing levels of “crowding” that may need to be addressed by a resource manager.

The five crowding categories are:

- Under 35%** No crowding: Relatively unique low-density experiences
- 36 to 50%** Low normal: Unlikely to be a problem
- 51 to 65%** High normal: experiences approaching capacity; consider studies
- 66 to 80%** Over capacity: studies and management probably needed
- Over 80%** Greatly over capacity: manage for high density; sacrifice area?

Considering that coast-wide results show 31% of respondents expressing any perception of crowding, and the “Under 35%” category above, there would appear to be no coast-wide need to address crowding levels. However, crowding is generally an issue that is more meaningfully addressed for smaller geographic areas. The segment-based analysis portion of this report will present the crowding situation for each beach.

Conflicts

Respondents were asked, “Thinking about today at this beach, have you experienced any conflicts with other beach users?” Of the 6,467 respondents 3.1% (200) said “yes.” Those who answered “yes” were asked to “specify the conflicting user group,” and 86% (172) of respondents did so (see Table 13).

Table 13. Conflicting User Groups for Oregon Coast

Conflict Group	%	# of Conflicts
Dogs off leash	43	74
Dog feces	17	29
Other people	16	28
Vehicles on beach	16	28
Horses	4	8
Litter	2	5
Lack of restrooms	1	2

n = 172

Dogs off leash (43%) and the presence of dog feces (17%) were the most common sources of conflict. Together dogs represent the primary source of conflict (60%). The remaining conflict groups include other people (16%), vehicles on the beach (16%), horses (4%), litter (2%), and lack of restrooms (1%).

As mentioned in regard to crowding, addressing conflicts is often more meaningfully done for smaller geographic areas. Conflicts are addressed in the segment-based portion of this report.

Access

The next question on the on-site survey asked respondents to “Please indicate how you accessed the beach today“ Results are shown in Table 14.

Table 14. Methods of Beach Access for Oregon Coast

Access Method	%
Public access (with a parking lot)	65
Private property (owned or rented)	18
End of street	13
Private property (not owned or rented)	5

n = 6467

Most respondents (65%) use a public access site with a parking lot, while others (17%) use private property (owned or rented) or the end of a public street (13%). Only 4% of users are accessing the beach through “private property not owned or rented” (it should be noted that those identifying this type of access may have the permission of the property owner).

Visitor Origin

The on-site survey asked respondents to “please list your name and mailing address” so they could receive a mail-out survey. A total of 4,943 respondents (76%) provided their state or country of residence. Not surprisingly, most respondents (61%) were Oregon residents (see Table 15).

Table 15. On-Site Survey Respondent Origin for Oregon Coast

Origin	%	Origin	%	Origin	%
OR	61	GA	<1	Scotland	<1
WA	18	IA	<1	NC	<0.1
CA	5	OH	<1	TN	<0.1
ID	3	SD	<1	England	<0.1
Canada	2	AK	<1	Italy	<0.1
CO	1	CT	<1	KY	<0.1
UT	1	KS	<1	LA	<0.1
AZ	1	MD	<1	NB	<0.1
TX	1	MO	<1	OK	<0.1
MT	1	ND	<1	SC	<0.1
NV	1	NE	<1	VT	<0.1
IL	<1	VA	<1	WV	<0.1
MN	<1	NJ	<1	Austria	<0.1
MI	<1	AR	<1	Azerbaijan	<0.1
PA	<1	HI	<1	Guam	<0.1
MA	<1	IN	<1	Ireland	<0.1
NY	<1	ME	<1	Mexico	<0.1
Germany	<1	WI	<1	Singapore	<0.1
WY	<1	France	<1	South Africa	<0.1
NM	<1	DC	<1	Spain	<0.1
FL	<1				

n = 4943

The next most common visitor origins were Washington (18%), California (5%), Idaho (3%) and Canada (2%). There were 58 other states and countries of origin, but none accounted for more than 1% of coast visitors.

Table 16 reports the frequencies for the cities of origin in Oregon that were greater than or equal to 1% for the 2,960 identified “Oregonians.” A complete list of frequencies for the 247 Oregon cities is available in Appendix 1. It should be noted that frequencies identified in Table 16 are determined based on the 2,960 respondents identifying Oregon as their place of residence.

Table 16. Cities of Origin for Oregonian On-site Survey Respondents (1% or Greater)

City	%	City	%	City	%
Portland	21	Lake Oswego	1	Hood River	1
Salem	5	West Linn	1	Clackamas	1
Eugene	4	Aloha	1	Lebanon	1
Beaverton	3	Tualatin	1	Wilsonville	1
Hillsboro	3	Roseburg	1	Klamath Falls	1
Corvallis	2	Brookings	1	Port Orford	1
Gresham	2	Newberg	1	Pacific City	1
Tigard	2	Lincoln City	1	Dallas	1
Milwaukie	2	Springfield	1	Sandy	1
Oregon City	2	Canby	1	Rockaway Beach	1
Bend	2	Bandon	1	Coos Bay	1
Medford	2	Keizer	1	Troutdale	1
Grants Pass	2	Forest Grove	1	Gold Beach	1
Newport	1	Ashland	1	Florence	1
Tillamook	1	Albany	1	Central Point	1
McMinnville	1	Sherwood	1		

n = 2960

2. Results by Segment

Beach Recreation Activities

Table 17 shows the percentage of respondents who participated in the activities listed for question one of the on-site survey.

Table 17. Top 15 Recreation Activities Pursued by Segment

Segment 1		Segment 2		Segment 3		Segment 4		Segment 5		Segment 6	
Activity	%										
Walking	90	Walking	91	Walking	93	Walking	89	Walking	93	Walking	89
Scenic	70	Scenic	72	Scenic	74	Scenic	72	Scenic	82	Scenic	64
Picnicking	61	Picnicking	55	Picnicking	61	Picnicking	59	Picnicking	57	Picnicking	45
Exercise	37	Exercise	40	Kites	38	Exercise	35	Exercise	51	Camping	29
Kites	33	Kites	31	Exercise	35	Camping	34	Other	47	Exercise	28
Swimming	30	Dogs	29	Swimming	25	Kites	34	Beachcomb	38	Dogs	24
Dogs	22	Swimming	25	Dogs	22	Dogs	26	Dogs	35	Swimming	21
Fires	21	Fires	22	Fires	19	Other	26	Driftwood	26	Kites	17
Bicycle	14	Camping	20	Other	17	Swimming	25	Birding	24	Driftwood	16
Camping	14	Other	20	Driftwood	15	Fires	17	Kites	22	Other	15
Boogie	13	Driftwood	13	Camping	12	Driftwood	11	Camping	17	Fires	12
Surfing	11	Birding	11	Birding	11	Birding	9	Swimming	15	Birding	10
Other	10	Fireworks	11	Fireworks	10	ATV	8	Events	13	Surfing	9
Birding	8	Boogie	10	Beachcomb	7	Fishing	8	Fires	12	Fishing	9
Fireworks	8	Bicycle	9	Boogie	6	Beachcomb	7	Fishing	10	Fireworks	8
n = 895		n = 1988		n = 1960		n = 520		n = 472		n = 632	

When results for each of the six different segments were compared, the most notable result is the similarity of activities pursued by the majority of respondents (see Table 17). While segments differ to some extent, the most common activities (walking, scenic enjoyment, and picnicking) are shared between all six segments. Exercising was either number four or five in the six segments. This would suggest that despite distinct differences (towns, weather, geography, etc.) between the segments, the most common activities within each segment remain similar.

Differences of note include:

Camping percentages were about double that of other segments for Segments 4 and 6. “Other” activities for Segment 5 were 47%, of which 15% was ATV users.

The percentage of respondents exercising their dogs in each segment was very close to the overall number for that activity, except for Segment 5 where dog exercise was done by 35%. Flying kites was significantly lower in Segments 5 (2%) and 6 (3%) than in the other segments. Birding was significantly higher in Segment 5 than the other segments. Surfing use showed up mostly in Segments 1 (3%) and 6 (2%). Beach fishing showed up mostly in Segments 5 (2%) and 6 (1%). See Appendix J for a complete listing of all activities pursued by segment.

Primary Recreation Activity

The primary recreation activities pursued within each segment show similarities and differences (see Table 18). Although the top activities reported within each segment are fairly similar, the less common activities show distinct differences.

Table 18. Top 15 Primary Recreation Activities Pursued by Segment

Segment 1		Segment 2		Segment 3		Segment 4		Segment 5		Segment 6	
Activity	%										
Walking	38	Walking	39	Walking	37	Walking	29	Walking	34	Walking	35
Picnicking	27	Picnicking	18	Picnicking	26	Picnicking	21	Scenic	16	Scenic	18
Scenic	12	Scenic	10	Scenic	13	Scenic	9	Picnicking	13	Picnicking	16
Dogs	4	Dogs	5	Kites	4	Camping	6	Beachcomb	10	Wind surf	7
Surfing	3	Exercise	4	Dogs	4	ATV	5	Dogs	6	Beachcomb	4
Sandplay	3	Beachcomb	3	Beachcomb	3	Kites	5	ATV	5	Kites	3
Exercise	2	Kites	3	Sandplay	3	Dogs	4	Exercise	2	Swimming	2
Kites	2	Sandplay	3	Exercise	2	Exercise	4	Camping	2	Camping	2
Swimming	2	Camping	2	Surfing	1	Beachcomb	4	Kites	2	Exercise	2
Boogie	2	Swimming	2	Crabbing	1	Sandplay	3	Fishing	2	Surfing	2
Camping	1	Surfing	2	Swimming	1	Swimming	2	Driftwood	1	Dogs	1
Beachcomb	1	ATV	2	Camping	1	Fishing	2	Horses	1	Sandplay	1
Bicycle	1	Fishing	1	Boogie	1	Fires	1	Sandplay	1	Family	1
Family	<1	Boogie	1	Family	1	Surfing	1	Swimming	<1	Clamming	1
Kayak	<1	Family	1	Fishing	1	Boogie	1	Fires	<1	Fishing	1
n = 895		n = 1988		n = 1960		n = 520		n = 472		n = 632	

For example, Segment 5 offers a large area for ATV recreation (in the Oregon Dunes National Recreation Area) compared with most of the other segments. In contrast,

Segment 1 offers lengthy beach driving opportunities, but without adjacent extensive dry sand areas for ATV use. Segment 5 shows much higher ATV recreation, even though beach driving in Segment 1 occurs and is mostly done for access for clamming, fishing, or other activities. The timing of this survey may have missed some peak use periods that occur in the off season. See Appendix J for a complete listing of all primary recreation activities pursued by segment.

Crowding

There are distinct differences between segments in terms of crowding (see Table 19).

This makes sense, given that each segment offers different attractions and recreation opportunities. For example, Segment 1 contains Cannon Beach and Seaside, both popular towns located directly adjacent to the beach, which concentrate high user density around them. Segment 1 visitors report the highest crowding levels (48%) among all segments. Segment 2 (Tillamook, Sandlake) and Segment 3 (Lincoln City, Newport) report lower levels of crowding (33% and 31% respectively). Segments 4 and 6 (Bandon, Brookings) report 21% and 25% respectively, while Segment 5 appears to be the least crowded (15%).

Table 19. Crowding Level by Segment

Crowding Level		Segment 1	Segment 2	Segment 3	Segment 4	Segment 5	Segment 6
Not at all Crowded	1	32	46	47	59	69	55
	2	20	21	22	21	16	20
Slightly Crowded	3	13	12	12	6	6	11
	4	12	8	9	7	4	7
	5	8	3	3	1	2	2
Moderately Crowded	6	10	6	5	4	2	4
	7	3	2	1	2	<1	<1
	8	1	1	1	1	<1	<1
Extremely Crowded	9	1	1	<1	<1	0	<1
% Feeling Crowded (3 or more)		48	33	31	21	15	25
		n = 895	n = 1988	n = 1960	n = 520	n = 472	n = 632

Looking at crowding ratings for specific areas within segments, it appears that problems are limited to a small number of beaches (see Table 20).

Table 20. Crowding by Beaches in Relation to other Recreation Sites in Oregon

% feeling crowded	Resource
Greatly over capacity: Should be managed for high densities	
100	Deschutes River – Weekend boaters
97	Deschutes River – Lower river weekend boaters
88	Deschutes River – Weekday boaters
84	Deschutes River – Upper river day
Over capacity: Studies and management likely needed to preserve quality	
77	Marina at The Cove Palisades State Park
75	Deschutes River – Lower river day
70	Crooked River – Day Use Area at The Cove Palisades State Park
70	Short Sand Beach at Oswald West State Park
67	Pelton Park at Lake Billy Chinook
67	Crooked River – Campground at The Cove Palisades State Park
67	Perry South near Lake Billy Chinook
66	Indian and Ecola beaches at Ecola State Park
High Normal: Should be studied if use increases expected; managers might anticipate problems	
64	Deschutes – Campground at The Cove Palisades State Park
63	Chinook Island at Lake Billy Chinook
62	Indian Park – Campground at Lake Billy Chinook
58	Three Rivers at Lake Billy Chinook
52	Cape Kiwanda to Neskowin River
51	Necanicum River to Tillamook Head
50	Hells Canyon reservoir
Low Normal: Unlikely to be a problem; may offer unique low density experiences	
49	Eagle Cap Wilderness – backpackers
48	Chapman pt. To Humbug pt.
48	Oxbow Reservoir, Snake River
42	Harris Beach at Harris Beach State Park
42	Lake Simtustus – RV park
41	Sutton Creek to Siuslaw River
40	Hug Point to Arch Cape
40	Netarts River to Cape Lookout
37	North Sand Lake Spit
37	Sand Lake to Cape Kiwanda
37	Brownlee Reservoir, Snake River
36	Point Maxwell to Netarts
No Crowding: No problem; may offer unique low-density experiences	
34	Roads End to Siletz River
34	Devils Puchbowl to Schooner Bay

33	Columbia River to Necanicum River
31	Humbug Point to Hug Point
31	Yaquina Head to Yaquina River
30	Cape Sebastian to Pistol River
27	Siuslaw River to Siltcoos River
26	Illinois River – Rafters
25	Harbor Beach
24	Nehalem River to Tillamook Bay
24	Rocky Knoll to Heceta Head
23	Temile Creek to Coos Bay
23	Whaleshead Beach
22	Neahkanie Mountain to Nehalem Mountain
21	Siletz River to Boiler Bay
20	Round Butte Observatory, Lake Billy Chinook
19	Bay Ocean Spit
16	Alsea River to Star Creek
16	Bastendorf Beach
16	Umpqua River to Tenmile Creek
16	Rogue River to Cape Sebastian
15	Nestucca River to Cascade Head
15	Battle Rock to Humbug Mountain
14	South Beach
12	Face Rock to New River
11	Fivemile Point to Coquille River
11	Winchuck and Chrissie Fields, California Border
10	Collins Creek to Alsea River

Bolded: non-beach resources from previous studies

Conflicts and Conflict Groups

It was expected that the number of conflicts experienced by users might vary from segment to segment. However, the results do not support this speculation (see Table 21).

Table 21. Conflict Frequency by Segment

Segment	% Experiencing Conflict	# of Conflicts	n
1	3	29	895
2	4	73	1988
3	3	51	1960
4	3	13	520
5	4	18	472
6	3	16	632

Instead, all six segments reported similar levels of conflict, with Segment 1 at 3.2%, Segment 2 at 3.7%, Segment 3 at 2.6% Segment 4 at 2.5%, Segment 5 at 3.8%, and Segment 6 at 2.5%. This may be because even though the different segments offer different recreation opportunities, visitors seek those activities which suit them, and also become accustomed to conditions in locations they frequent. For example, a visitor at Cannon Beach expects a large number of people, and while a high density of visitors may be present, conflict is not perceived due to the expectation of large numbers of visitors. Similarly, visitors at Sandlake (Segment 2) expect few people to be walking on the beach, but a large proportion of ATV users; as a result there is little conflict with ATV users.

The conflicts identified by users between segments are similar, in that dogs represent the most common problems in all segments (see Table 22). Differences occur between segments in the remaining categories, particularly vehicles and people. In Segments 1, 3, 5, and 6 people are identified as the third most common conflict group, while Segments 2 and 4 report vehicles on the beach as the third most common offenders. This difference is likely due to differences in user densities and the types of recreation in the different segments. Litter, horses, and lack of restrooms were the least common conflicts in all segments.

Table 22. Conflicting User Groups by Segment

Conflict Group	Segment 1 % Conflict	Segment 2 % Conflict	Segment 3 % Conflict	Segment 4 % Conflict	Segment 5 % Conflict	Segment 6 % Conflict
Dogs off leash	30	33	49	80	75	31
Dog feces	22	17	24	10	6	13
Cars	11	33	5	0	0	13
People	30	10	14	0	13	38
Litter	0	0	5	10	0	6
Restrooms	4	2	0	0	0	0
Horses	4	5	5	0	6	0
n	29	73	51	13	18	16

Access

Access type varies between segments (see Table 23). Segments 1, 2, and 3 show similarities in terms of public access, access at the end of a street, and private property (owned or rented) access, with public access being the most common method. Segments 4, 5, and 6 differ in that public access with a parking lot is more common, while end of street access and privately owned property are less common. This may be due to the fact that Segments 4, 5, and 6 have fewer and smaller towns on the beach than Segments 1, 2, and 3. The six segments are similar in the low level of access through private property (not owned or rented).

Table 23. Methods of Beach Access by Segment

Access Type	Segment 1 %	Segment 2 %	Segment 3 %	Segment 4 %	Segment 5 %	Segment 6 %
Public access	56	60	57	76	87	87
End of a public street	24	15	13	8	2	5
Private property (owned or rented)	16	22	23	13	5	5
Private property (not owned or rented)	4	4	7	4	6	4
n	895	1988	1960	520	472	632

C. MAIL-OUT SURVEY RESULTS

For the mail-out survey, questions were grouped by topic and presented in the following order:

1. A typical visit to the Oregon coast
2. Dogs and horses on the beach
3. Camping on the beach
4. Vehicles on the beach and general information questions
5. Snowy plovers
6. Demographics

Results are reported for the coast as a whole.

1. A typical visit to the Oregon Coast

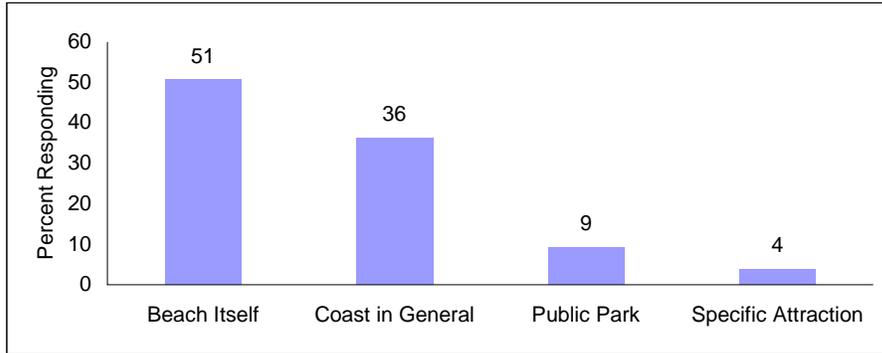
This section of the mail-out survey directed respondents to answer a variety of specific questions regarding coastal visits. The questions asked (primary coastal destination, duration of stay, distance traveled, group size and type, disability complications, safety concerns, and activity interests) were developed in an attempt to better categorize and understand coastal visitors' and residents' perceptions, interests, and activities on a typical visit to the coast.

Primary Destination

Question 1 asked respondents, "When you go to the Oregon Coast, what is usually your primary destination?" Of the four choices available, the majority of respondents (51%)

identified the beach itself as the primary coastal destination (see Figure 8), followed by the Coast in general (36%), a public park (9%), and a specific attraction (4%).

Figure 8. Primary Destination of Oregon Coast Visitors



n = 3251

Given that all respondents to the mail-out survey were contacted on the beach, it is not surprising that the beach itself is identified as the primary coastal destination. However, it should be noted that the beach is a secondary destination for 49% of visitors. This also is not surprising given the variety of potential destinations available to coastal visitors and residents.

Typical Visit Duration

Question 2 asked respondents, “On a typical trip, how long do you usually stay at the coast?” On average, the duration of a coastal visit for the majority (76%) of respondents is one or more nights, followed by day trip only visitors (15%), and permanent residents (9%, see Table 24).

Table 24. Typical Duration of an Oregon Coast Visit

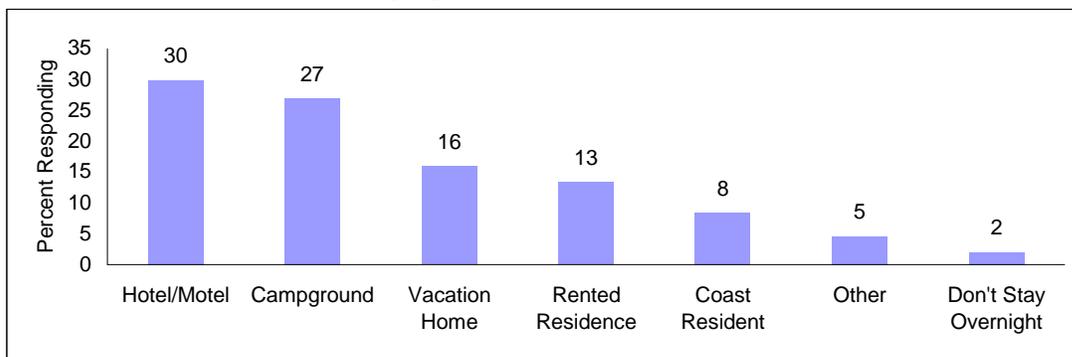
Duration of Stay	%
One or More Nights	76
Day Trip	15
Coast Resident	9

n = 3265

Overnight Lodging

For respondents who typically stay one or more nights, Question 3 asked, “When you stay overnight at the coast, where do you usually spend the night?” The majority of respondents (30%) identified a hotel or motel as their usual lodging (see Figure 9), followed by campgrounds (27%), privately owned vacation homes (16%), rented residences or time shares (13%), and other lodging types (5%). Permanent coast residents accounted for 8% of responses and 2% of respondents do not stay overnight.

Figure 9. Usual Means of Lodging at the Coast



n = 2916

Of those who identified “Other” the three most common responses included staying with family or friends (58%), a private campground (19%), and a recreational vehicle (12%, see Table 25).

Table 25. Description of “Other“ Overnight Lodging

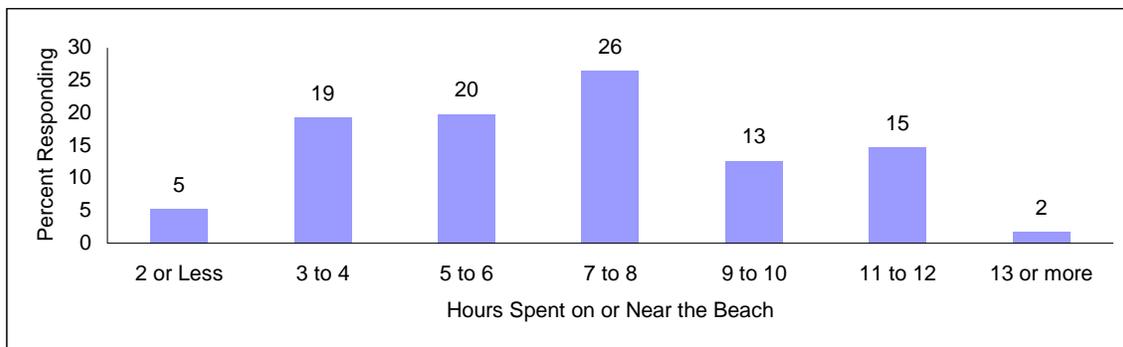
Lodging Type	%
Personal relations residence; relative or friend	58
Private campground; Thousand Trails, Private RV Campgrounds, Organization Campgrounds	19
Recreational vehicle; Motor-home; Camper, Trailer	12
Bed and breakfast	7
Unofficial campground; beach, Forest Service land, State or County forest land	5

n = 152

Time Spent on or Near the Water

Considering the variety of recreation opportunities available at the coast, both on and off the beach, the time visitors actually spend on the beach varies. To identify the time visitors spend on the beach, Question 4 asked respondents, “When you go to the beach, how long do you usually spend on or near the sand or water?” The majority of respondents (26%) spend seven to eight hours on or near the sand or water (see Figure 10).

Figure 10. Usual Amount of Time Spent on or Near the Beach



n = 2937

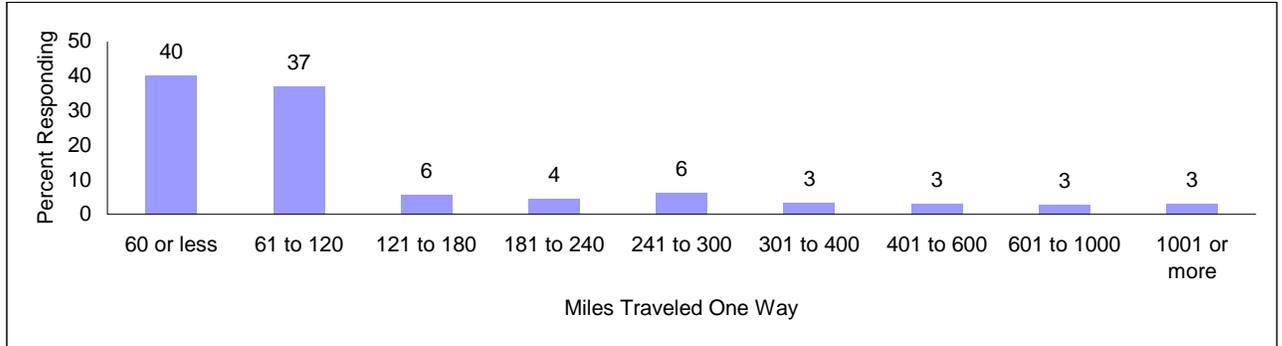
Twenty percent of respondents identified five to six hours on the beach, followed by three to four hours (19%), eleven to twelve hours (15%), nine to ten hours (13%), and less than two hours (5%). A limited number of respondents reported spending thirteen or more hours on the beach (2%). The average time spent on the beach by visitors was 5 hours.

Distance Traveled

The on-site survey showed the Oregon Coast as a destination for visitors from Oregon and other states and countries. To identify how far visitors typically travel to reach the Oregon Coast, Question 5 asked, “Approximately how many miles (one way) do you travel to

reach the beach?” The most common distances traveled one way by respondents were 60 miles or less (40%) and 61 to 120 miles (37%, see Figure 11).

Figure 11. Approximate Distance Traveled One Way to Reach the Beach



n = 2981

The third most common distance traveled is 121 to 180 and 241 to 300 miles each 6%.

The average distance traveled was 184 miles.

Group Size and Type

Questions 6 and 7 asked respondents to identify the group size and type they are typically with when visiting the Oregon Coast. Specifically, Question 6 asked, “When you visit the beach, how many people are typically in your immediate group, including yourself?” The three most common responses include four people (29%), two people (27%), and three people (13%). The average group size based on all responses is 4 (see Table 26).

Table 26. Typical Coastal Visitor Group Size

Group Size	%
1 Person	3
2 People	27
3 People	13
4 People	29
5 People	11
6 People	7
7 People	2
8 People	3
9 People	1
10 People or more	3

n = 3263

Question 7 asked respondents, “How would you describe the group you are typically with?” The most common group type is family (64%), followed by family and friends (26%), and friends (6%, see Table 27).

Table 27. Typical Coastal Visitor Group Type

Group Type	%
Family	64
Family and Friends	26
Friends	6
Alone	3
Other	1

n = 3272

Of the 21 respondents who identified the “Other, group type,” 43% were an instruction oriented group such as a tour or school group, 33% were a personal interest group such as a church group, and 24% were a sports or recreation oriented group such as windsurfers or crabbers.

Disabilities

Physical disabilities can affect beach access and use. To identify the number of visitors affected by physical disabilities, Question 8 asked respondents, “On the day you were surveyed, did you or any member of your group have a disability?” The majority (93%) were not affected by a disability (see Table 28).

Table 28. Individuals or Groups with a Disability

Have a Disability	%
No	93
Yes	7

n = 3258

Those respondents who identified themselves or group members as having a disability were asked in Questions 9 and 10 to identify the nature of their disability and impact on

recreational access. Specifically, Question 9 asked respondents to, “Please identify the type of disability.” The most common disability identified by Question 9 respondents is mobility (78%), followed by mental (13%), deafness (5%), and blindness (4%, see Table 29).

Table 29. Nature of Disability

Disability Type	%
Mobility	78
Mental Disability	13
Deafness	5
Blindness	4

n = 227

Question 10 asked, “Did you or any member of your group encounter any recreational access restrictions as a result of the disability?” The majority (76%) of respondents did not experience access problems as a result of their disability (see Table 30).

Table 30. Coastal Visitors Experiencing Access Restrictions Due to Disability

Experience Restriction	%
No	76
Yes	24

n = 308

For those respondents who experienced recreational access restrictions, Question 11 asked, “In general, what type of access were you seeking, but did not experience?” The most common access denied was dry sand (33%), followed by access to water (25%), access to wet sand (21%), and access to viewpoints from an upland point (20%, see Table 31).

Table 31. Nature of Access Restriction due to Disability

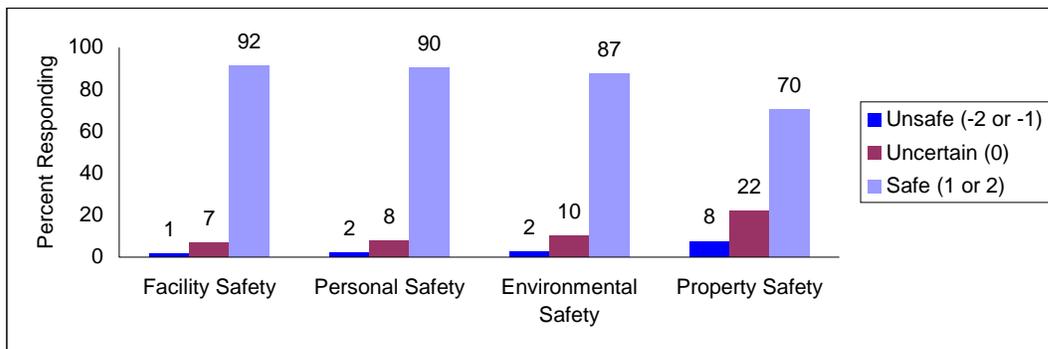
Type of Access	%
Access to dry sand	33
Access to water	25
Access to wet sand	21
View ocean from upland	20

n = 108

Perceptions of Safety

The Oregon Coast encompasses a large area containing a variety of landscapes, from semi-wilderness to busy communities. It attracts a range of visitors and residents, and is subjected to ocean waves and weather. Maintaining the safety of Oregon Coast visitors and residents is a consideration for agencies which manage Oregon beaches. To evaluate respondent perceptions of safety, Question 12 asked respondents, “On the scale below, please circle the number that indicates how safe you generally feel at the beach” as it relates to environmental safety (safe from waves, logs), personal safety (safe from other people), property safety (safe from theft, etc.), and facility safety (safe from hazardous structures, e.g. structurally unsound bathrooms). The scale ranged from – 2 (Extremely Unsafe) to 2 (Extremely Safe). Respondents felt least safe in regards to Property safety (8%) and most safe in terms of Facility safety (92%, see Figure 12).

Figure 12. Perceptions of Facility, Personal, Environmental, and Property, Safety at the Coast



Facility n = 3237 Personal n = 3257 Environmental n = 3260 Property n = 3249

Environmental and personal safety were similarly perceived by visitors in terms of being unsafe each 2% and safe (10% and 8%, respectively).

Question 12 also asked, “If you feel unsafe at the beach (circled -1 or -2 for any category), please explain why.” Among the relatively small number of respondents who felt unsafe and answered this question (394 responses) the three most common concerns were

personal property (21%), ocean oriented danger such as; logs, undertow, sneaker waves (19%), and car security (16%, see Table 32).

Table 32. Safety Concerns or Incidents Described by Respondents

Safety Concern or Incident	%
Personal property general ; general property concern home, campground, beach	21
Ocean oriented dangers ; sneaker waves, logs, undertow, desolation on beach	19
Vehicle security general ; concerned about safety of vehicle	16
Personal safety ; concerned about other people or experienced incidents	14
Vehicle security incident ; vehicle broken into or damaged	7
Personal property incident ; items stolen, home, campground, or beach	6
Vehicles on beach ; pose potential danger	6
Facility ; bathroom unclean, in disrepair, or isolated	5
Environmental safety ; quality of water; refuse on beach; degraded paths	3
Dogs on beach ; actual incidents or threatening situations	3

n = 394

Regional Coast Visitation

The Oregon Coast offers visitors and residents a variety of attractions and recreation opportunities. Question 13 asked, “The day you were surveyed, on what part of the Oregon Coast did you spend most of your time?” The majority of respondents (51%) spent most of their time in the North Coast (Astoria to Lincoln City), followed by the Central Coast (36%) (Lincoln City to Coos Bay), and the South Coast (13%) (Coos Bay to Brookings, see Table 33).

Table 33. Respondent Coastal Region Destination

Coastal Region	%
North Coast (Astoria to Lincoln City)	51
Central Coast (Lincoln City to Coos Bay)	36
South Coast (Coos Bay to Brookings)	13

n = 3248

The results presented in Table 44 are consistent with those of the on-site survey and observation data.

Recreation Activity Importance

The on-site survey and observation data identified the frequency of activities, but not importance (from a visitor perspective). Question 14 asked respondents, “In general when you visit the Oregon Coast, how important is each of the following activities on the beach itself?” Using responses from the on-site survey, 28 activities were listed along with a scale ranging from 1 (not important) to 5 (very important). For respondents the three most important activities were scenic enjoyment (91%), relaxing in a stationary location (88%), and walking (87%, see Table 34).

Table 34. Respondent Rating of Recreation Activity Importance

Activity	Not Important	Important	Very Important	Don't Know	n	*Average Score
Scenic Enjoyment	3	6	91	1	3273	5
Relaxing	1	10	88	1	3285	5
Walking	3	10	87	1	3294	5
Beachcombing	14	19	66	1	3268	4
Tidepool exploration	16	20	63	1	3255	4
Playing in the Sand	23	19	57	1	3249	4
Exercise	24	25	50	1	3251	3
Picnicking	16	35	47	2	2629	3
Swimming/wading	32	24	43	1	3240	3
Other	11	1	12	77	1245	3
Photography	35	28	36	1	3242	3
Bird Watching	50	25	24	1	3244	3
Visitor centers/exhibits	45	29	24	2	3233	3
Kite Flying	51	22	26	1	3240	3
Camping	56	14	29	2	3229	3
Exercising dogs	57	12	30	2	3239	2
Driftwood Fires	58	16	24	2	3237	2
Bicycling	68	16	15	2	3228	2
Crabbing from beach	73	12	14	2	3229	2
Clamming/Mussels	73	11	14	2	3229	2
Fishing from beach	73	11	13	2	3227	2
Ranger-led programs	70	16	10	4	3222	2
Fireworks	75	11	11	2	3225	2
Horseback riding	78	11	9	2	3227	2
Boogie boarding	78	8	11	3	3224	2
Surfing	81	6	10	2	3224	2
Driving car on beach	87	6	6	2	3230	1
Motorcycles/ATVs	88	4	6	2	3224	1
Windsurfing	89	4	4	3	3222	1

*Average Score is the average based on the scale 1 (not important) to 5 (very important)

Among the relatively small number of respondents who identified “Other” activities (189 responses) the five most common responses were sports (20%), ocean events (17%), nature appreciation, family (13%), and wildlife viewing (10%, see Table 35).

Table 35. Description of “Other” Recreation Activities

Activity	%
Sports; golf, frisbee, softball, climbing, hiking, sandboard, football	19
Ocean events; dory fishing, jet-ski, kayaking, kiteboarding, scuba	17
Nature appreciation; solitude, sound, air	17
Family; gathering, reunion, trip, grandchildren, place to bring guests	13
Wildlife viewing; whales, sealions, seals	10
Focused beachcombing; agates, gold, driftwood, fossils, litter	9
Sightseeing; shopping, lighthouses, other attractions	6
Artistic pursuits; painting, photography	3
Spiritual pursuit; meditation, praying	3
Hang gliding or para gliding	3
Reading	2

n = 189

To identify the primary activity pursued by respondents, Question 15 asked, “On a typical visit to an Oregon beach, what is your primary reason for visiting?” Of the 2,738 responses, the six most commonly identified primary activities are relaxing in a stationary location (37%), scenic enjoyment (15%), walking (13%), playing in the sand (9%), beachcombing (7%), and camping (4%); all other activities accounted for 2% or less of all responses. For a complete list of all activities, see Appendix K.

2. Dogs and Horses on the Beach

This section of the mail-out survey asked specific questions regarding dogs and horses on the beach. The questions asked (if and how many dogs are taken to the beach, use of leashes, nature or lack of dog and horse encounters and incidents) were developed in an attempt to better understand issues about dogs and horses on the beach.

Bringing Dogs to the Beach

Question 1 asked respondents, “When you visit the beach, do you typically bring one or more dogs?” The majority of respondents (65%) did not bring a dog to the beach (see Table 36).

Table 36. Percent of Respondents who Bring Dog(s) to the Beach

Bring Dogs	%
No	65
Yes	35

n = 3294

For those respondents who did bring a dog, Question 1 asked how many dogs were brought. The average number of dogs taken to the beach is 1 (see Table 37).

Table 37. Number of Dogs Typically Taken to the Beach

# of Dogs	%
1	72
2	24
3	3
4	1
5	< 1
6	< 1

n = 1134

Leash Use

Unleashed dogs were identified on the on-site survey as a common contributor to conflict on the beach. Question 2 asked, “When you visit the beach with your dog(s), do you use a leash?” Forty five percent of respondents identified using a leash 50% of the time or less (see Table 38). The second most common response to Question 2 is using a leash 100% of the time (39%) followed by no leash use (16%).

Table 38. Amount of Dog Leash Use While at the Beach

Amount of Leash Use	%
100% of the Time	39
100% to 50%	0
50% or less	45
No leash use	16

n = 749

Dog Encounters

The on-site survey identified dog encounters as the primary source of conflict on the beach. To identify the frequency and nature of dog encounters, Question 3 asked, “While at the beach, have you encountered any dogs belonging to others not in your group?” The most common response was encountering both on and off-leash dogs (70%), followed by encountering off-leash dogs (22%) and on-leash dogs (4%, see Table 39). Respondents who did not encounter any dogs totaled 4%.

Table 39. Type of Dog Encounters (On and Off-leash) at the Beach

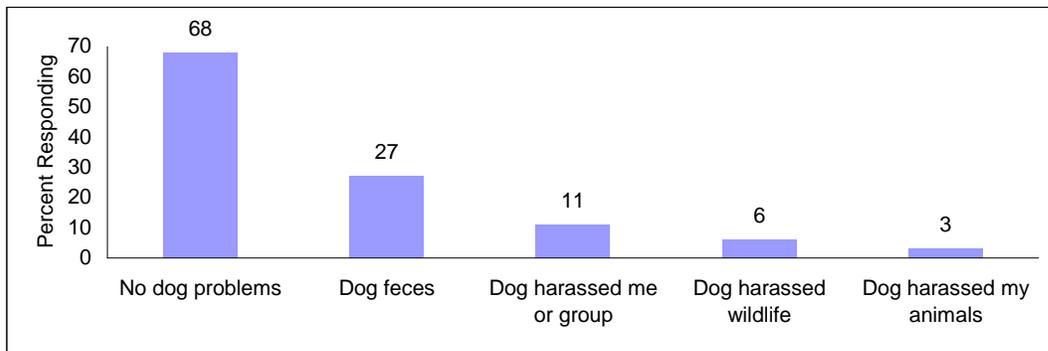
Type of Encounter	%
Both on and off-leash dogs	70
Off-leash dogs	22
On-leash dogs	4
No dog encounters	4

n = 3209

Dog Incidents

The manner in which dogs create conflict varies, Question 4 asked, “Has the presence of dogs on the beach decreased the quality of your visit?” The most commonly encountered dog problem is dog feces left on the beach (27%), followed by dogs harassing individuals (11%), dogs harassing wildlife (6%), and dogs harassing respondent’s animals (3%). However, the majority of respondents (68%) did not experience a dog problem (see Figure 13).

Figure 13. Nature of Dog Encounters on the Beach that Decreased Visit Quality



n = 3256

Horseback Riding

Horseback riding is a common activity in certain areas along the Oregon Coast. Question 5 asked, “When you visit the beach, do you typically ride horses?” The majority of respondents (93%) don’t ride horse at the beach (see Table 40). Of those who ride horses at the beach 6% rent or borrow a horse and 1% own their horse.

Table 40. Percent of Respondents who Typically Ride Horses at the Beach

Ride Rent or Borrow a Horse	%
I don't ride horses	93
I rent or borrow a horse	6
I own a horse	1

N = 3291

Horse Encounters

Like encounters with dogs, horses on the beach may be a source of conflict. To identify the frequency with which horses are encountered, Question 6 asked, “While at the beach, have you encountered horses belonging to others not in your group?” There were nearly an equal number of respondents experiencing encounters with horses (49%) as no encounters with horses (51%, see Table 41).

Table 41. Respondents Encountering Horses on the Beach

Encounter Horse	%
No	51
Yes	49

n = 3291

Horse Conflicts

For respondents encountering horses, Question 7 asked, “Has the presence of horses decreased the quality of your visit?” Most respondents (87%) experienced no horse problem (see Table 42). For respondents who did experience horse problems, the most common incident was encountering horse feces left on the beach (13%), followed by horses conflicting with travel along the beach (3%).

Table 42. Nature of Horse Encounters on the Beach that Decreased Visit Quality

Nature of Conflict	%
No horse problems	87
Encounter horse feces	13
Horse conflicted with travel	3
Horse harassed wildlife	< 1
Horse harassed me or group	< 1
Horse harassed my animal	< 1

n = 3178

3. Camping on the beach

This section of the mail-out survey asked about camping on the beach. The questions (whether people camp on the beach, want to camp on the beach, and or have been unable to camp on the beach) were developed in an attempt to better understand beach camping.

Although a number of private, state, and federal campgrounds are located along the coast, visitors continue to camp on the beach. Furthermore, a number of visitors have expressed interest in camping on the beach, but are not familiar with restrictions regarding this activity. To identify how many respondents camp on the beach, Question 1 asked, “While at the beach, did you camp on the beach itself?” The majority of respondents did not camp on beach (93%, see Table 43). For those respondents who did not camp on the beach, Question 2 asked, “Would you like to camp on the beach?” The majority of respondents (57%) would not like to camp on the beach (see Table 43). For those who would like to camp on the beach, but may have been restricted, Question 3 asked, “Are there places on the beach that you would like to camp that are closed to camping?” The majority of respondents (76%) were not restricted from camping on the beach (see Table 43).

Table 43. Camping on the Beach

Camp on the Beach	%	Want to Camp on the Beach	%	Restricted from Camping on the Beach	%
No	93	No	57	No	76
Yes	7	Yes	43	Yes	24
n = 3292		n = 2427		n = 2998	

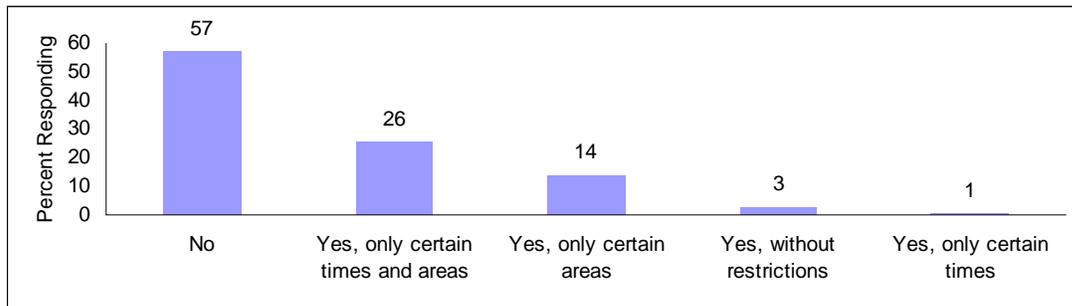
4. Vehicles on the beach and general information questions

This section of the mail-out survey directed respondents to answer a variety of specific questions regarding vehicles on the beach, general information, and methods of travel and information gathering. The questions regarding vehicles (should vehicles be on the beach, should street and or non-street legal vehicles be allowed, reasons for driving on the beach, regulating vehicles, and vehicle impact) were developed in an attempt to better understand perceptions of vehicles on the beach. General information questions (visitation frequency, subjects of interest, information services, information services used, and potential information services) were asked to better understand visitor interests and means of information gathering.

Vehicles on the Beach

The presence of vehicles on the beach is a contentious issue. Question 1 asked, “Do you think motorized vehicles should be allowed on the beach?” The majority of respondents (57%) did not think motorized vehicles should be on the beach (see Figure 14).

Figure 14. Perception of allowing Motorized Vehicles on the Beach



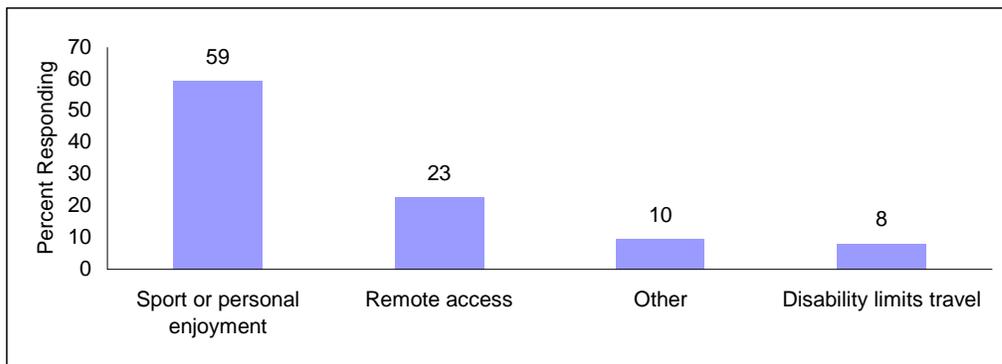
n = 3298

A total of 41% of respondents felt vehicles should be allowed on the beach with restrictions (only certain times and or in certain areas), but only 3% thought vehicles should be allowed without restrictions.

Primary Reason For Driving on Beach

For respondents who have used a motorized vehicle on the beach, Question 4 asked, “What was your primary reason for using a motorized vehicle on the Oregon beaches?” Fifty nine percent of respondents use vehicles for sport or personal enjoyment (see Figure 16). The second most common reason is access to a remote location (23%), followed by “Other” reasons,” (10%), and “a disability limits travel” (8%).

Figure 16. Reason to Use a Motorized Vehicle on Oregon Beaches



n = 833

Of the 102 respondents who identified “Other,” the three most common reasons to drive were convenience or equipment movement (37%), because it is allowed (26%), access to recreation (12%, see Table 45).

Table 45. Description of “Other” Reasons to Drive on the Beach

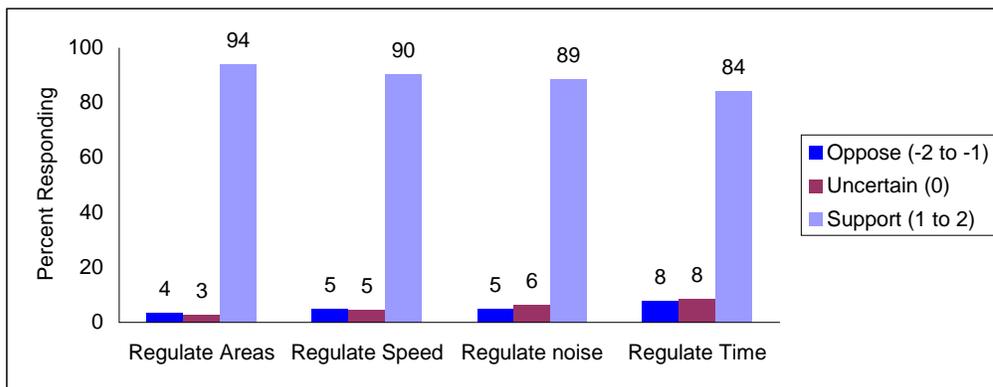
Reason to Drive	%
Convenience; equipment movement, chairs, camping supplies, dory launch, access	37
Because allowed	26
Facilitate recreation; clamming, fishing	12
Non-mobile passengers; children, elderly	8
Weather refuge	6
Beach camping	5
Parking availability	4
Property Concern; did not want to leave vehicle unchecked	2

n = 95

Regulation of Vehicles on the Beach

Different types of regulations are available to minimize conflict between vehicle users and non-vehicle users. To ascertain the perception of respondents towards different types of regulations, Question 5 asked respondents to, “Circle the number that best reflects your position about regulating vehicles on the beach.” Specific categories included regulating the speed of all vehicles, regulating the areas vehicles may be driven, regulating the time vehicles can be driven, and regulating the noise level of all vehicles. The response scale ranged from – 2 (Strongly Oppose) to 2 (Strongly Support). Regulating areas where vehicles can be driven received the most support (94%), followed by regulating the speed (90%), regulating noise (89%), and regulating time vehicles may be driven (84%, see Figure 17).

Figure 17. Perception of Different Beach Vehicle Use Regulations



Areas n = 3235 Speed n = 3213 Noise n = 3204 Time n = 3201

Visitor Perceptions of Vehicles

Question 6 asked respondents to “Please circle the number that best reflects your position regarding vehicles on the beach” as it relates to the following two statements, “Vehicles on the beach decrease the enjoyment of my visit,” and “Vehicles on the beach damage the coastal environment.” The response scale ranged from – 2 (Strongly Disagree) to 2

(Strongly Agree). Seventy percent of respondents agreed that vehicles decrease enjoyment of their visit, and 74% agreed that vehicles damage the environment (see Table 46).

Table 46. Perceived Impact of Beach Vehicle Use on Visit Enjoyment and Coastal Environment

Statement	% Disagree	% Uncertain	% Agree	n
Vehicles on the beach decrease the enjoyment of my visit	13	16	70	3276
Vehicles on the beach damage the coastal environment	12	15	74	3273

Seasonal Visitation

The frequency of visitation to Oregon beaches varies seasonally. Question 7 asked respondents, “In an average year, how many times during each season do you visit the Oregon Coast?” The summer season experiences the highest visitation, with an average of 4 visits per respondent, followed by fall and spring each with an average of 2 visits per respondent and winter has the lowest average visitation with 1 (see Table 47). Permanent coast residents accounted for 10% of the 3,253 responses.

Table 47. Seasonal Beach Visitation Frequency

# Visits	% Summer	% Fall	% Winter	% Spring
0	10	45	54	42
1 to 2	47	39	34	41
3 to 4	22	9	2	10
5 to 10	16	6	4	6
11 to 20	3	1	1	1
21 or more	2	1	< 1	< 1
Average	4	2	1	2

n = 3253

Information Types and Services

Questions 8, 9, 10, and 11 address information interests and uses. The questions ask respondents to identify the subjects they are interested in learning about, information services they would like to have, information sites or programs typically used, and how information was obtained.

Question 8 asked, “What subjects regarding the Oregon Coast would you be most interested in learning about?” The three subjects receiving the most interest included information on whales, seals and other wildlife (67%), tidepools (65%), and hiking opportunities (59%, see Table 48).

Table 48. Subjects Regarding the Oregon Coast Respondents are Most Interested in Learning About

Subject	% Interested
Whales, seals, & other wildlife	67
Tidepools	65
Hiking opportunities	59
History	53
Geology	46
Fishing, crabbing, clamming,	40
Geography	39
Birding	31
Horseback riding	14
Not interested in additional information	9
Other	7

n = 3266

Among the few (225 respondents) who identified “Other,” the four most common subjects were site-specific recreation information (42%), site-specific ecological information (21%), general tourist information (12%), and campground Information (12%, see Table 49)

Table 49. Description of “Other” Subjects Respondents are Interested in Learning About

Subjects of Interest	%
Site-specific recreation information; locations, surfing, walking, hiking, off-road vehicle, bicycling, scuba, kite flying, clamming, hunting	42
Site-specific ecological information; plant life, natural history, weather patterns, research, shell identification, wildlife identification and health	21
General tourist information; locations, pricing, and availability of lodging, restaurants, shopping, lighthouses, scenic locations, wildlife, exhibits, and museums	12
Campground information; where available, beach, RV and non-RV, prices, availability	12
Local interest information; native cultures, art, history, tours, volunteer opportunities	7
Events and festivals information; kites, art, other	4
Site-specific safety information; ocean warnings, tsunamis, undertow	3

n = 225

Questions 9 asked, “What types of information services would you like to have available?”

The three most commonly requested information services are informational and educational brochures (62%), trailside exhibits (50%), and roadside exhibits (44%, see Table 50).

Table 50. Requested Information Services

Information Service	% Interested
Informational and educational brochures	62
Trailside exhibits	50
Roadside exhibits	44
Ranger led programs	31
No other information services	17
Other information services	3

n = 3208

Among the relatively few (84 respondents) who identified “Other,” the three most common information sites or programs typically used are site-specific information (31%), the internet (29%), and coastal subject oriented maps or brochures (19%, see Table 51).

Table 51. Description of “Other” Requested Information Services

Information Source	%
Site-specific information; recreation opportunities, instructions, restrictions, trailhead maps, wildlife markers, ecological information	31
Internet information; tides, weather, campground availability, how do activities (crabbing, fishing) location of activities, handicap accessibility	29
Coastal subject oriented maps or brochures; recreation activity locations, tourist attractions, and events	19
Mailing materials; newsletter, volunteer and recreation opportunities, weather, camping availability, videos	13
General area information; on recreation opportunities in area, dining, shopping, lodging, camping, visitor centers, museums	8

n = 84

Question 10 asked, “Which of the following informational sites or programs do you or your group typically use while at the coast?” The three most commonly used information sites or programs are visitor centers (58%), historic buildings/features (45%), and outdoor or highway exhibits (45%, see Table 52).

Table 52. Typically Used Information Sites or Programs at the Coast

Information Site or Service	% Using
Visitor centers	58
Historic buildings/features	45
Outdoor or highway exhibits	45
No information site used	21
Ranger led programs	15
Other information sites	3

n = 3238

Among the relatively few (87 respondents) who identified using “Other,” methods of obtaining information, the three most common sources are from specific tourist attractions (29%), site specific signs or exhibits (22%), and general tourist destinations (18%, see Table 53).

Table 53. Description of “Other” Information Sites Used at the Coast

Information Source	%
Specific tourist destinations; lighthouses, museums, aquarium, visitor centers	29
Site specific signs or exhibits; regarding recreation opportunities, instructions, and restrictions, trailhead maps, wildlife markers	22
General tourist destinations; campgrounds, hotels, restaurants, stores	18
Local source; locals, merchants, newspapers, news, chamber of commerce	17
Printed material; books, newsletters, brochures, maps	9
Official individual; ranger, park host, volunteers, agency representative	5

n = 87

Recreation Information Source

Question 11 asked, “In general, how do you or members of your group obtain information about recreational opportunities on Oregon beaches?” The three most common information sources are previous visits (65%), friends or relatives (58%), and maps (40%, see Table 54).

Table 54. Method of Obtaining Information on Recreational Opportunities on Oregon Beaches

Information Source	% Using
Previous visits	65
Friends or relatives	58
Maps	40
Tourist Maps or Brochures	38
Highway signs or exhibits	37
Newspaper story or ad	27
Magazine story or ad	25
Travel guide/tour book	25
OPRD website	21
Local chamber of commerce	16
Internet	12
TV	11
Received no information	8
Telephone inquiry to agency	7
Radio	5
Written inquiry to agency	3
Other	2
Travel agent	1

n = 3269

Among the relatively few (62 respondents) who identified using “Other” methods of obtaining information, the three most common sources are information kiosks (31%), printed materials (24%), and local sources (23%, see Table 55).

Table 55. Description of “Other” Ways Information is Obtained on Recreation Opportunities

Information Source	%
Information kiosks; lighthouses, museums, aquarium, visitor centers campgrounds, hotels, restaurants, stores	31
Printed material; books, newsletters, brochures, maps	24
Local source; locals, merchants, newspapers, news, chamber of commerce	23
Official individual; ranger, park host, volunteers, agency representative	19
Trailside or site-specific signs	3

n = 62

Among the relatively few (160 respondents) who identified the internet as a source of information, the three most common sites used were general searches (41%), special interest pages (23%), and the OPRD website (19%, see Table 56).

Table 56. Internet Sites used to Gather Information on Recreation Opportunities

Internet Site	% Using
General search; msn, yahoo, google, aol	41
Special interest page; location or activity	23
OPRD website	19
Government or public service sites	11
Chamber of Commerce or Town page	6

n = 160

5. Snowy Plovers

This section of the mail-out survey asked respondents a variety of specific questions regarding the endangered Western Snowy Plover. The questions were developed in order to better understand the effect of existing Snowy Plover restrictions, acceptability of recovery methods, and willingness of visitors to adapt to restrictions.

Respondent Awareness of Plover Restrictions

Specifically, Question 1 asked, “Prior to receiving this survey, were you aware of use restriction to protect Snowy Plovers?” Most respondents (76%) were unaware of use restrictions (see Table 57).

Table 57. Respondent Awareness of Snowy Plover Use Restrictions

Aware of Restrictions	% Aware
No	76
Yes	24

n = 3289

Respondent Affected by Plover Restrictions

Question 2 asked, “During any trips in the past year, has your beach use been affected by use restrictions to protect snowy plovers?” Most respondents (66%) had not been affected by use restrictions (see Table 58).

Table 58. Respondents Affected by Plover Use Restrictions

Affected by Restrictions	% Affected
No	66
Not sure	28
Yes	5

n = 3281

Visibility of Plover Restrictions

Question 3 asked those respondents who had been affected by use restriction, “Were the Plover restriction signs clearly visible and easy to understand?” Among this relatively smaller group, most respondents (55%) believed that the signs were clearly visible and easy to understand (see Table 59).

Table 59. Visibility of Plover Use Restriction Signs

Signs Visible	%
Yes	55
No	45

n = 459

Plover Management Methods

Various methods are available to recover Snowy Plovers. Question 4 asked respondents to, “Circle the number that best reflects your position toward each of the following conservation and recovery measures.” The response scale ranged from – 2 (Strongly Oppose) to 2 (Strongly Support). Responses show that seasonal prohibition of certain activities received the greatest support (76%), followed by signs only (70%), partial beach closure (62%), fencing nests only (43%), total beach closure (29%), removing predators (21%), and bulldozing dunes (20%, see Table 60).

Table 60. Respondent Perception of Plover Recovery Methods

Recovery Method	Oppose	Uncertain	Support	N
Seasonally prohibit uses	6	17	76	2994
Signs only	9	22	70	3096
Partial beach closure	14	23	62	3084
Fence nests only	21	37	43	3015
Total beach closure	43	27	29	3056
Remove predators	45	34	21	3043
Bulldoze dunes	42	39	20	3044

Media Used for Plover Information

Question 5 asked, “What type of media would you be most likely to use to find out about Snowy Plover Beach restrictions?” The three most commonly identified sources are highway signs (44%), newspaper stories or ads (41%), and tourist brochures or maps (34%, see Table 61).

Table 61. Media Most Likely Used to Find Out About Plover Use Restriction

Media	% Likely to Use
Highway signs	44
Newspaper story or ad	41
Tourist brochures or maps	34
TV	30
OPRD website	29
Previous visits	27
Friends or relatives	26
Magazine story or ad	19
Radio	17
Maps	16
Travel guide/tour book	15
Local chamber of commerce	9
Internet	8
Other	6
Telephone inquiry to agency	5
Written inquiry to agency	2
Travel agent	1

n = 3138

Of the relatively few (188 respondents) who identified “Other,” media sources for information on the Snowy Plover, the three most common responses were trailside or site- specific markers (63%), information kiosks (13%), and official individuals (10%, see Table 62).

Table 62. Description of “Other” Media Sources Used for Information on Snowy Plovers

Other Media Source	% Using
Trailside or site-specific signs	63
Information kiosks; lighthouses, museums, aquarium, visitor centers campgrounds, hotels, restaurants, stores	13
Official individual; ranger, park host, volunteers, agency representative	10
Interest group; audobon, ONRC, newsletter, books	7
Local source; locals, merchants, newspapers, news, chamber of commerce	4
Hunting/fishing regulations	3

n = 188

Among the relatively few (85 respondents) who identified using the Internet to find out information on the Snowy Plover, the three most common website included general searches (59%), special interest pages (19%), and government websites (14%, see Table 63).

Table 63. Internet Sites Used to Find Information on the Snowy Plover

Internet Site	% Using
General search; msn, yahoo, google, aol	59
Special interest page; location or activity	19
Government or public service sites	14
OPRD website	8

n = 85

Willingness to Change for Plover Recovery

Question 6 asked respondents to, “Circle the number that reflects your position toward the following statement,” with the statement being “I would be willing to change my activities on the beach to improve Snowy Plover habitat”. The response scale ranged from – 2 (Strongly Disagree) to 2 (Strongly Agree). Most respondents (70%) agreed with the statement (see Table 64).

Table 64. Respondent Willingness to Change Behavior to Improve Plover Habitat

Agreement with Statement	%
Agree	70
Uncertain	20
Disagree	10

n = 3210

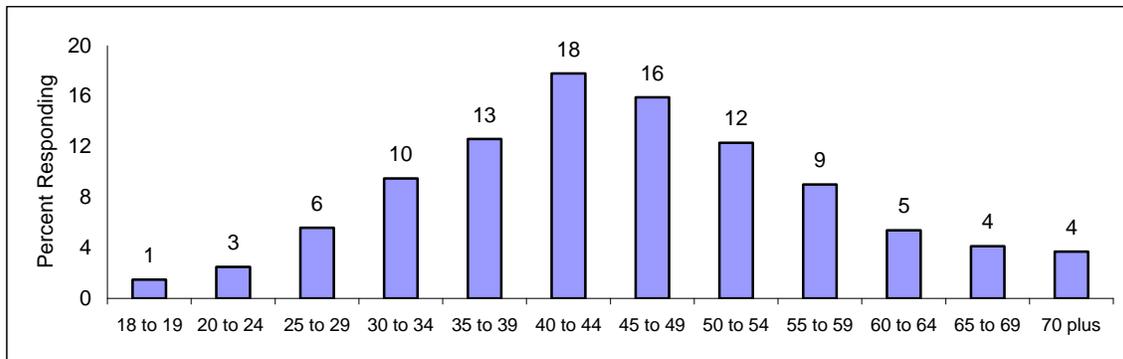
6. Demographics

This section of the mail-out survey directed respondents to answer a variety of questions about themselves. The questions (gender, age, ethnicity, education, marital status, income, town size, and papers read) were developed to better understand coastal visitors.

Question 1 asked respondents to identify their gender. Of the 3,253 who answered 63% are female and 37% are male.

Question 2 asked respondents to identify their age. The most common age group was 40 to 44 (18%, see Figure 18).

Figure 18. Age of Respondents



n = 3272

Question 3 asked respondents to identify their ethnicity. Majority of respondents reported being Caucasian (96%, see Table 65) followed by Hispanic, Native American, and Asian each 1%.

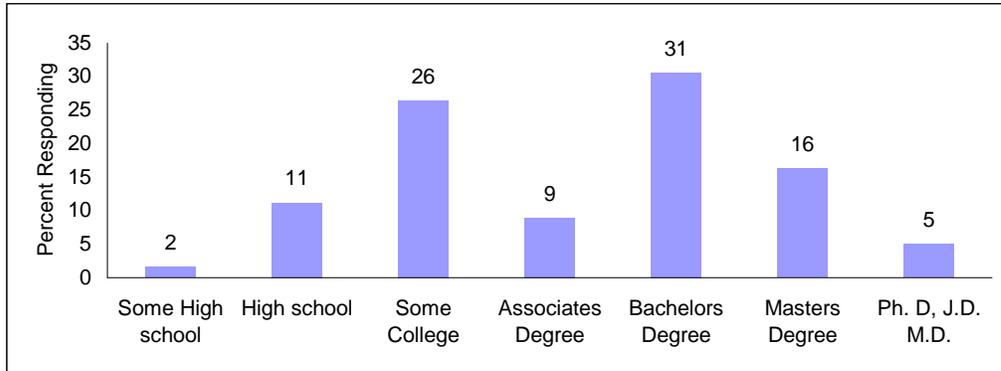
Table 65. Ethnicity of Respondents

Ethnicity	% Identifying As
Caucasian	96
Hispanic	1
Native American	1
Asian	1
Middle Eastern	< 1
African American	< 1
Pacific Islander	< 1

n = 3235

Question 4 asked respondents to identify the highest level of education completed. Thirty one percent of respondents identified a bachelor’s degree as the highest level of education achieved (see Figure 19). Completion of “Some College” was the second most common response (26%).

Figure 19. Highest Level of Education Completed by Respondent



n = 3269

Question 5 asked respondents to identify their marital status. Seventy six percent of respondents were married and 19% single (see Table 66).

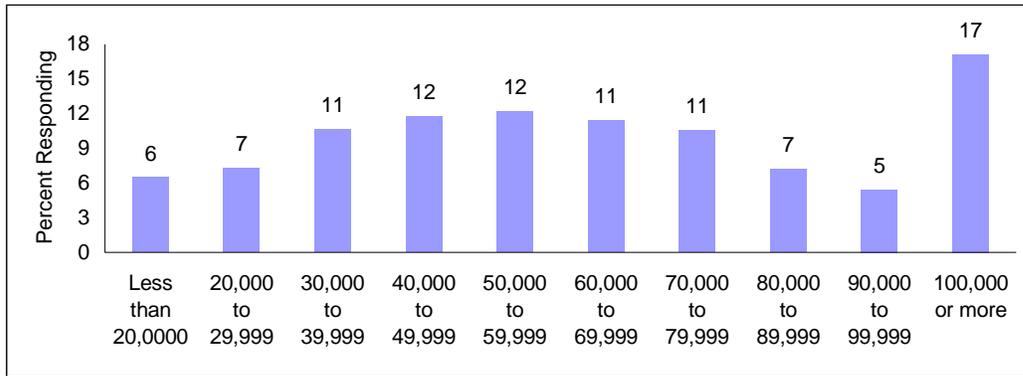
Table 66. Marital Status of Respondent

Status	%
Married	76
Single	19
Other	5

n = 3259

Question 6 asked respondents to report their annual household income. Seventeen percent of respondents reported an annual income of \$100,000 or more, while 6% reported less than \$20,000 (see Figure 20).

Figure 20. Annual Household Income of Respondent



n = 2990

Question 7 asked respondents to identify the size of town they live in. Thirty three percent of respondents live in a large city (50,000 or more, see Table 67).

Table 67. Home Town Size of Respondent

Town Size	%
Rural area	9
Small town (< 5,000)	12
Small city (5,000 to 50,000)	30
Large city (> 50,000)	33
Large city suburb	16

n = 3272

Question 8 asked respondents to identify what (if any) newspapers are read on a regular basis. Forty nine percent of respondents read a daily or weekly newspaper that is not listed (see Table 87). Thirty seven percent of respondents reported reading the Oregonian and 18% of respondents do not read a paper on a regular basis (see Table 68).

Table 68. Newspapers Read on a Regular Basis

Newspaper	% Reading
Other daily newspaper	49
Oregonian	37
No regular newspaper	18
Salem Statesman	6
Seattle Times	6
Eugene Register Guard	4
Medford Mail Tribune	2
Bend Bulletin	2

n = 3251

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APPENDIX A

Segments, Sub-segments

Sample Method

2001 Beach Segments and Sub-segments

Segment 1	Miles
Columbia River to Nehalem River	32

Sub-segment 1-A	
Columbia River to Necanicum River	16
Necanicum to Tillamook Head	2
Indian and Ecola Beaches	1

Sub-segment 1-B	
Chapman Pt. To Humbug Pt.	3
Humbug Pt. To Hug Pt.	1
Hug Pt. To Arch Cape	1.5
Arch Cape to Cape Falcon	1.5
Short Sands Beach	0.5
Neahkanie Mt. To Nehalem River	5.5

Research Technician: Dan Philbrook

Segment 3	Miles
Roads End to Yaquina River	20.5

Sub-segment 3-A	
Roads End to Siletz River	7
Devil's Punch Bowl to Schooner pt.	4

Sub-segment 3-B	
Siletz River to Boiler Bay	6
Yaquina head to Yaquina River	3.5

Research Technician: Samantha Castle

Segment 5	Miles
Umpqua River to Blacklock Point	48

Sub-segment 5-A	
Umpqua River to Tenmile Creek	7
Tenmile Creek to Coos Bay	14.5
Bastendorf Beach	1
Sacchi Beach	1
Agate Beach to Fivemile Point	2.5

Sub-segment 5-B	
Fivemile Point to Coquille River	6
Face Rock to New River	7
New River to Blacklock Point	9

Research Technician: Brock Purvis

Segment 2	Miles
Nehalem River to Cascade Head	34.5

Sub-Segment 2-A	
Nehalem River to Tillamook Bay	8
Bayocean spit	4
Pt. Maxwell to Netarts River	1.5
Netarts River to Cape Lookout	5.5

Sub-segment 2-B	
North Sand Lake spit	1.5
Sand Lake to Cape Kiwanda	6
Cape Kiwanda to Nestucca River	4
Nestucca River to Cascade Head	4

Research Technician: Martha Willand

Segment 4	Miles
South Beach to Umpqua River	43.5

Sub-segment 4-A	
South Beach	1.5
Collins Creek to Alsea River	4
Alsea River to Starr Creek	6
Rocky Knoll to Heceta Head	3
Lily Lake to Sutton Creek	3
Sutton Creek to Siuslaw River	3

Sub-segment 4-B	
Siuslaw river to Siltcoos River	10
Siltcoos River to Takenitch Creek	5
Takenitch Creek to Threemile Creek	3
Threemile Creek to Umpqua River	5

Research Technician: Sunrise Coulter

Segment 6	Miles
Sixes River to Crissie Field Beaches	34

Sub-segment 6-A	
Sixes River Mouth	1
Cape Blanco to Elk River	2
Elk river to Port Orford Head	4
Battle Rock to Humbug Mountain	4
South of Humbug	1
Devil's Backbone to Nesika Beach	5.5

Sub-segment 6-B	
Otter Point to Rogue River	3
Rogue River to Cape Sebastian	5
Cape Sebastian to Pistol River	3.5
Pistol River to Crook Point	1.5
Whaleshead Beach	1
Harris Beach	.5
Harbor Beach	1
Winchuck and Crissie Field Beaches	1

Research Technician: Dan Elefant

Data collection area = 212.5 miles

Sub-segment sample method

June 19 th to July 19 th		
Monday	Tuesday	Wednesday
Segment 1-A	Segment 1-A	Segment 1-A
N → S	Not Covered	N → S

July 19 th to September 3 rd			
Monday	Tuesday	Wednesday	Thursday
Segment 1-A	Segment 1-A	Segment 1-A	Segment 1-A
N → S	Not Covered	N ← S	Not Covered

Segment 1-B	Segment 1-B	Segment 1-B
Not Covered	N → S	Not Covered

Segment 1-B	Segment 1-B	Segment 1-B	Segment 1-B
Not Covered	N → S	Not Covered	N ← S

Appendix B

On-site Script

2001 On-Site Script

OPRD Recreation Use Observation and Survey

Hello my name is _____ and I am doing recreation use project for the Oregon parks and recreation department. If you are interested in participating in this study I have a one page survey that asks a few general questions regarding your visit to the beach today.

I must request that all participants be 18 or older.

Additionally all responses will be kept absolutely confidential and responses will be used solely for the purposes of this study. Furthermore, your that participation in this study is entirely voluntary and if you do not wish to participate at any phase you are welcome to do so.

If you have any concerns or questions regarding this study you may contact the Oregon State Parks Department for further explanation of why the study has been conducted and how the results will be used.

The purpose behind this project is threefold.

- 1) First, the OPRD has been legally mandated by the Oregon State Government to determine appropriate access and use of the Oregon coastal beaches.
 - To meet the requirements of this mandate, OPRD has initiated this comprehensive recreation use study of the entire Oregon Coast.
 - The information gathered in this study will provide a foundation of real and reliable data upon which responsible coastal decisions can be made.
- 2) Second, protection of the snowy plover an endangered bird that has historically nested along much of the Oregon coast has become a priority for the U.S. Fish and Wildlife Service and Oregon State Fish and Wildlife.
 - The data gathered (both use levels and types of recreation) in this study will be used to develop a plan that will enhance the plover population and satisfy the requirements of the Endangered Species Act.
- 3) Third, as the popularity and use of the Oregon coast has grown user conflicts have begun to occur. These conflicts will no doubt increase as the population grows.
 - This study will help Oregon begin to gauge the coastal use, understand the specific sources of conflict, and ideally help prevent problems before they occur.

Oregon Parks and Recreation would greatly appreciate your help in gathering information about your experience at this specific beach and have a very brief survey. This survey is just a couple of questions and will take less than a minute to fill out.

Furthermore, this survey has been commissioned by the Oregon Parks and Recreation and will be used solely for planning purposes along the Oregon Coast.

Presentation of Survey

As you may notice at the bottom of the survey you will see a section for your address and name. This is obviously a very limited questionnaire and further information is needed for the level of planning required at the coast. OPRD is very interested in your visit to coast and would appreciate the opportunity to send a survey that will gather more information in order to have better data on which planning can be based.

Your help in planning for Oregon's future is greatly appreciated, thank you for your time.

Appendix C

1st Mailing Wave Cover Letter

2nd Mailing Wave Post Card

3rd Mailing Wave Cover Letter

4th Mailing Wave Cover Letter

2002 First Mailing Wave Letter

DEPARTMENT OF FOREST RESOURCES

OREGON STATE PARKS AND RECREATION



Dear Oregon beach visitor,

The Oregon Coast is an important resource that provides enjoyment for everyone. Recent years have seen a significant increase in the number of visitors and activities along the coast. With the increase in visits, careful and effective resource management is critical for ensuring the quality of coastal visits now and in the future.

The information collected in your questionnaire will be combined with other data to create statistical summaries. The information will help Oregon State Parks Department to maintain high quality recreation opportunities for all visitors. *This is a chance to provide your views and help us understand what is important to those who visit and enjoy the Oregon Coast.*

This study is being conducted by researchers from Oregon State University for the Oregon State Parks and is an extension of the Statewide Conservation and Outdoor Recreation Plan (SCORP). You were selected to participate as a result of your visit to the Oregon Coast during the summer of 2001, the visit where you were contacted by a researcher and completed a short on-site survey.

Your participation in this mail survey is completely voluntary. However, in order to better understand how beachgoers feel, *it is important that as many people as possible respond to this survey.* Please respond to all questions to the best of your ability, and return the completed survey in the enclosed stamped envelope.

Your name and address will be kept confidential, and your responses will not be associated with you personally. The identification number on the survey will only be used to make sure everyone has a chance to respond.

Please feel free to write any comments on the survey or on separate paper. If you have any questions please contact us. *Thanks in advance for your time and effort; your participation is a key to the success of the study.*

Sincerely,

Dr. Bo Shelby
Forest Resources Department

DEPARTMENT OF FOREST RESOURCES • OREGON STATE UNIVERSITY
PEAVY HALL 280 • CORVALLIS • OREGON 97331 – 5703

Telephone 541-737-4951 • Fax 541-737-3049 • E-mail: forest.resources@orst.edu

2002 Second Mailing Wave Postcard

Dear Survey Recipient,

About one week ago we sent you a questionnaire about Oregon beaches.

If you have already completed and returned the questionnaire, thank you. If not, we encourage you to take the time to complete it as soon as possible and return it in the postpaid envelope.

This questionnaire is part of a study being conducted by researchers at Oregon State University for the Oregon State Parks Department. We are writing again because each person's response is important. We cannot send a questionnaire to every coastal visitor, so you are representing many others who did not receive a questionnaire. If your survey was misplaced or was never received, please contact John Tokarczyk, at (541) 737-2215 and we will send you another copy

Thank you for helping with future coast management decisions
Sincerely,

Professor Bo Shelby

2002 Third Mailing Letter

DEPARTMENT OF FOREST RESOURCES



OREGON STATE UNIVERSITY
Peavy Hall 280 Corvallis, Oregon 97331-5703
Telephone 541-737-4951 Fax 541-737-3049

I am writing to you about our study of visitor use on Oregon beaches because we have not yet received your completed questionnaire.

The number of questionnaires returned is encouraging. However, *our ability to accurately understand how beach visitors feel about important issues still depends on you* and others who have not yet responded. Past experience suggests that those who have not yet sent in questionnaires may have different and important perspectives about beach recreation.

Since it is impossible to send a questionnaire to everyone who visits Oregon beaches, you are representing many other beach visitors who did not receive a survey. *Your views are a valuable part of this research, and will help us present an accurate picture of the interests and concerns of those who visit and enjoy the Oregon Coast.* Even if you do not spend much time on the Oregon Coast, the information you provide will give us a better idea of how visitors feel about this important resource.

Please take a few minutes to answer and return the questionnaire. In the event that your original copy has been misplaced, a replacement questionnaire is enclosed.

Your time and cooperation is greatly appreciated.

Sincerely,

Professor Bo Shelby
Forest Resources Department

2002 Fourth Mailing Letter

DEPARTMENT OF FOREST RESOURCES



OREGON STATE UNIVERSITY
Peavy Hall 280 Corvallis, Oregon 97331-5703
Telephone 541-737-4951 Fax 541-737-3049

RE: OREGON COAST BEACH RECREATION STUDY

Over the last month we have written to you seeking your thoughts and opinions about Oregon beaches. We are relying on your response to help us gain a better understanding of how individuals use and enjoy Oregon beaches.

The results of this survey are particularly important because they will help guide coastal management decisions now and in the future. *Your response is important to us; you can help us gain an accurate understanding of how people view the Oregon Coast.* We hope you will take a few minutes to fill out the enclosed questionnaire and return it to us in the pre-paid envelope. Thanks for your help.

Sincerely,

Professor Bo Shelby
Forest Resources Department

Appendix D

On-site Survey Instrument



2001 On-Site Survey



Oregon State Parks Beach Use Survey

Participation in this study is voluntary and results confidential. Furthermore, all participants should be 18 years or older.

1. Which of the following activities have you participated in while on this beach? (Please check all that apply.)

<input type="checkbox"/> Walking for pleasure	<input type="checkbox"/> Jogging, running, walking for exercise	<input type="checkbox"/> Picnicking, relaxing (at a stationary location)
<input type="checkbox"/> Camping	<input type="checkbox"/> Exercising Dogs	<input type="checkbox"/> Swimming
<input type="checkbox"/> Kite flying	<input type="checkbox"/> Driftwood fires	<input type="checkbox"/> Surfing
<input type="checkbox"/> Informal driftwood collection	<input type="checkbox"/> Bike riding	<input type="checkbox"/> Boogie boarding
<input type="checkbox"/> Birding	<input type="checkbox"/> Participating in special events	<input type="checkbox"/> Kayaking
<input type="checkbox"/> Clamming	<input type="checkbox"/> Fishing from the beach	<input type="checkbox"/> Wind surfing through beach access
<input type="checkbox"/> Horse back riding	<input type="checkbox"/> Crabbing from the beach	<input type="checkbox"/> Hang gliding (if landing on the beach)
<input type="checkbox"/> Scenic enjoyment	<input type="checkbox"/> Fireworks	<input type="checkbox"/> Other (Please specify) _____

2. Of the activities listed above (in question 1), please **circle the primary activity** you have participated in today while **on this beach**.

3. Thinking about today at this beach, how crowded would you say the area is? (Circle one number)

1-----2-----3-----4-----5-----6-----7-----8-----9

Not at all Slightly Moderately Extremely
Crowded Crowded Crowded Crowded

4. Thinking about today at this beach, have you experienced any conflicts with other beach users?

No
 Yes

If you answered "Yes" please specify the conflicting user group. _____

5. Please indicate how you accessed the beach today (check one).

Public access with a parking lot
 End of a public street
 Private Property (your own or rented)
 Private Property (not your own or rented)

6. We would like to send you a mail survey about how you use the Oregon Coast. Please list your name and mailing address below.

Name: _____

Street Address: _____

City: _____ State: _____ Zip Code: _____

To be completed by data gatherer.

Activity: _____

Location: _____

Area of Beach: in water water line sand veg. line upland

Time: _____ a.m. p.m.

Date: ____/____/ 2001

People in sight: _____

Vehicles in sight: _____

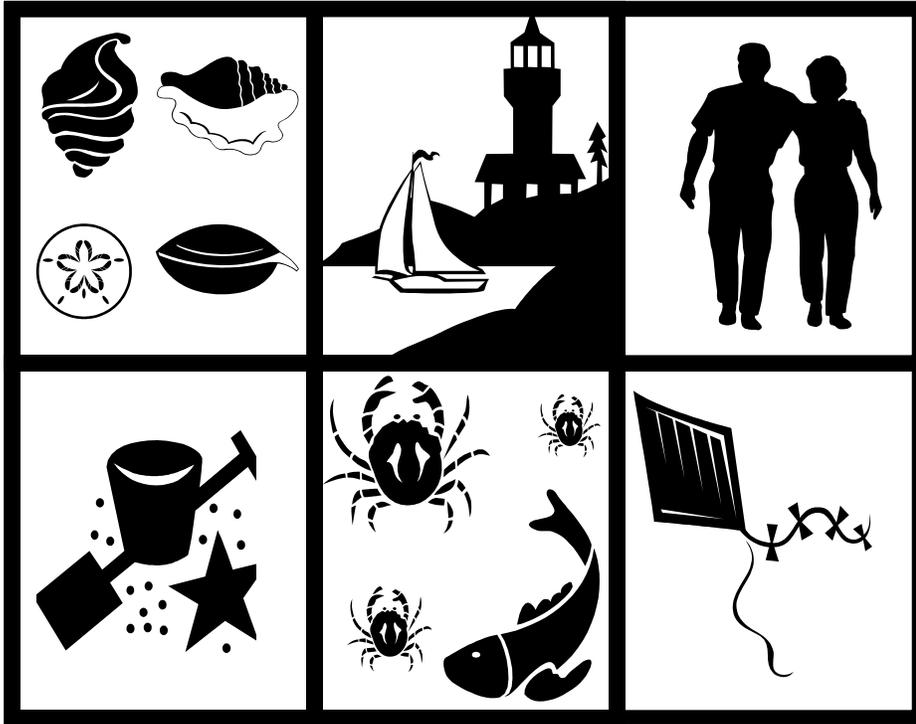
Group size: _____

Appendix E

Mail-out Survey Instrument

2002 Mail-Out Survey

Oregon Coast Recreation Survey



Oregon State University



Oregon State Parks

Please return your completed questionnaire
In the enclosed envelope to:

The Forest Resources Department – Beach Study
Oregon State University
Peavy Hall Room 280
Corvallis, Oregon 97331-5703

Oregon Coast Recreation Survey

The Oregon Coast has become an increasingly popular visitor destination. In order to maintain high quality recreation opportunities on the Oregon Coast, it is important for state resource agencies to know about you -- what you do and what you prefer. This survey is designed to collect that information.

Please try to answer every question because a single missing answer can reduce the value of the rest of your responses. There are no right or wrong answers; the best response is the one which most closely reflects your own personal feelings or beliefs. All your responses will be kept strictly confidential.

We appreciate your input and help with this project. Thank you for your time!

QUESTIONS FOR A TYPICAL VISIT TO THE OREGON COAST

1. When you go to the Oregon Coast, what is usually your primary destination? Please check only one.

The beach itself
 A public park on the coast (for example, a campground)
 A specific attraction (for example, aquarium, shops, town)
 The coast in general (no specific destination)

2. On a typical trip, how long do you usually stay at the coast?

Day trip only, (**skip to question 4**)
 One or more nights
 I am an Oregon Coast permanent resident

3. When you stay overnight at the coast, where do you usually spend the night? Please check only one.

Campground
 Hotel/Motel
 Rented residence/Time share
 Privately owned vacation home
 I am a Permanent resident
 I don't stay overnight
 Other (please describe) _____

4. When you go to the beach, about how long do you usually spend on or near the sand or water?

About _____ hours per day

5. Approximately how many miles (one way) do you usually travel to reach the beach?

About _____ miles

6. When you visit the beach, how many people are typically in your immediate group, including yourself?

_____ Number of people

7. How would you describe the group you are typically with? Please check only one.

Alone
 Family
 Friends
 Family & Friends
 Other (please describe) _____

8. On the day you were surveyed, did you or any member of the group you were with have a disability?

Yes
 No, (**skip to question 12**)

9. Please identify the type of disability.

Mobility
 Deafness
 Blindness
 Mental disability

10. When this access problem occurred, what type of access were you seeking?

Yes
 No, (**skip to question 12**)

11. In general, what type of access were you seeking, but did not experience?

Ability to view ocean from an upland point
 Access to dry sand
 Access to wet sand
 Access to water

12. On the scale below, please circle the number that indicates how safe you generally feel at the beach.

	Extremely Unsafe				Extremely Safe
	-2	-1	0	1	2
Environmental Safety (safe from waves, logs, etc.)					
Personal Safety (safe from other people, etc.)					
Property Safety (safe from personal theft, etc.)					
Facility Safety (safe from hazardous structures, e.g. structurally unsound bathroom etc.)					

If you feel unsafe at the beach (circled -1 or -2 for any category), please explain why.

13. The day you were surveyed, on what part of the Oregon Coast did you spend most your time? Please check only one. (A map is located on the last page of this booklet).

- North (Astoria to Lincoln City)
 Central (Lincoln City to Coos Bay)
 South (Coos Bay to Brookings)

14. In general when you visit the Oregon Coast, how important is each of the following activities on the **beach itself**? Please circle one number for each activity.

Activity	Not Important		Important		Very Important	Don't Know
	1	2	3	4	5	0
Walking						
Relaxing						
Picnicking						
Beachcombing						
Exercise						
Playing in the sand						
Kite flying						
Bird Watching						
Photography						
Driftwood fires						
Camping						
Motorcycles/ATVs						
Scenic enjoyment						
Swimming/Wading						
Surfing						
Boogie boarding						
Bicycling						
Fireworks						
Exercising dogs						
Tidepool exploration						
Fishing from beach						
Crabbing from beach						
Clamming/Mussels						
Windsurfing						
Ranger-led programs						
Visitor centers/exhibits						
Driving car on beach						
Horseback riding						
Other _____						

15. On a typical visit to an Oregon beach, what is your primary reason for visiting? Please circle only one of the activities listed in question 14.

DOGS AND HORSES ON THE BEACH

- When you visit the beach, do you typically bring one or more dogs?
 Yes typically how many dogs? _____
 No, I don't bring dogs (**skip to question 3**)
- When you visit the beach with your dog(s), do you use a leash? Please check only one.
 Yes, at all times (100% of the time)
 Yes, most of the time (50% of the time or more)
 Yes, part of the time (less than 50% of the time)
 No, I don't use a leash
- While at the beach, have you encountered any dogs belonging to others not in your group?
 Yes, off-leash dogs
 Yes, on-leash dogs
 Yes, both off-leash and on-leash dogs
 No, I haven't encountered dogs
- Does the presence of dogs on the beach decrease the quality of your visit? Please check all that apply.
 Yes, dog feces left on the beach
 Yes, dogs harassed or harmed me or members of my group
 Yes, dogs harassed or harmed my own animals
 Yes, dogs harassed or harmed wildlife
 No, dogs caused no problems
- When you visit the beach, do you typically ride horses?
 Yes, I own a horse
 Yes, I rent or borrow a horse
 No, I don't ride horses at the beach
- While at the beach, have you encountered horses belonging to others not in your group?
 Yes
 No
- Does the presence of horses decrease the quality of your visit? Please check all that apply.
 Yes, horse feces left on the beach
 Yes, horses harassed or harmed me or members of my group
 Yes, horses harassed or harmed my own animals
 Yes, horses harassed or harmed wildlife
 Yes, horses conflicted with travel along the beach
 No

CAMPING ON THE BEACH

- While at the coast, did you camp on the beach itself?
 Yes, (**skip to question 3**)
 No
- Would you like to camp on the beach?
 Yes
 No
- Are there places on the beach that you would like to camp that are closed to camping?
 Yes
 No

VEHICLES ON THE BEACH

1. Do you think motorized vehicles should be allowed on the beach? Please check only one.

- Yes, with no restrictions
- Yes, but only in certain areas
- Yes, but only at certain times
- Yes, but only in certain areas and at certain times
- No

2. Do you think the following types of motorized vehicles should be allowed on the beach?

Vehicles that are licensed and legal on streets and highways Yes No

Vehicles that are not licensed and not legal on streets and highways Yes No

3. Have you used a motorized vehicle on the Oregon beaches?

- Yes, "street legal" vehicles only
- Yes, **non** "street legal" vehicles only
- Yes, street legal and non street legal vehicles
- No, (**skip to question 5**)

4. What was your primary reason for using a motorized vehicle on the Oregon beaches?

- Sport or personal enjoyment
- Access to a remote location
- A disability that limits pedestrian beach travel
- Other (please identify) _____

5. Please circle the number that best reflects your position about regulating vehicles on the beach.

	Strongly Oppose				Strongly Support
Regulate the speed of all vehicles	-2	-1	0	1	2
Regulate the areas where vehicles may be driven	-2	-1	0	1	2
Regulate the time vehicles can be driven	-2	-1	0	1	2
Regulate the noise level of vehicles	-2	-1	0	1	2

6. Please circle the number that best reflects your position regarding vehicles on the beach.

	Strongly Disagree				Strongly Agree
Vehicles on the beach decrease the enjoyment of my visit	-2	-1	0	1	2
Vehicles on the beach damage the coastal environment	-2	-1	0	1	2

7. In an average year, about how many times during each season do you visit the Oregon Coast?

Season	Estimated number of visits per year
Summer (Memorial Day through Labor Day)	<input type="text"/> Visits
Fall (Labor Day through November)	<input type="text"/> Visits
Winter (December through March)	<input type="text"/> Visits
Spring (April through Memorial Day)	<input type="text"/> Visits
I am a Permanent coast resident	<input type="text"/>

8. What subjects regarding the Oregon Coast would you be most interested in learning about? (Please check all that apply.)

- History
- Geography
- Geology
- Hiking opportunities
- Fishing, crabbing, clamming, mussel collection, seaweed collection
- Tidepools
- Birding
- Whales, seals & other wildlife
- Horseback riding
- Other (please specify) _____
- Not interested in additional information

9. What types of information services would you like to have available? (Please check all that apply.)

- Informational & Educational Brochures
- Roadside Exhibits
- Trailside Exhibits
- Ranger-Led Programs
- Other, please specify: _____
- Not interested in information services

10. Which of the following informational sites or programs do you or your group typically use while at the coast?

- Historic buildings/features
- Visitor center(s)
- Outdoor or highway exhibits
- Ranger-led programs
- None
- Other, please specify: _____

11. In general, how do you or members of your group obtain information about recreational opportunities on Oregon beaches? (Please check all that apply.)

- Received no information (**skip to next page**)
- Friends or relatives
- Previous visits
- Magazine story or ad
- Newspaper story or ad
- TV
- Radio
- Oregon Parks and Recreation Department Website
- Written inquiry to park or agency
- Telephone inquiry to park or agency
- Local Chamber of Commerce
- Travel agent
- Travel Guide/Tour Book
- Maps
- Tourist Brochures
- Highway signs
- Internet (please specify site used most often) _____
- Other (please specify) _____

SNOWY PLOVERS

The western snowy plover is a threatened species under the Endangered Species Act. In recent years, the Oregon Parks and Recreation Department has restricted recreational use in some beach areas during the plover nesting season. The nesting area for these species is typically located above the high tide line and below the beach grass. Closures help protect nesting activities.

1. Prior to receiving this survey, were you aware of use restrictions to protect Snowy Plovers?

- Yes
- No

2. During any trips in the past year, has your beach use been affected by use restrictions to protect snowy plovers?

- Yes
- Not sure, (**skip to question 4**)
- No, (**skip to question 4**)

3. Were the Plover restriction signs clearly visible and easy to understand?

- Yes
- No

4. Different methods are being considered for Snowy Plover conservation and recovery. Please circle the number that best reflects your position toward each of the following conservation and recovery measures.

	Strongly Oppose		Neutral		Strongly Support
a. Signs only (use signs to identify nesting sites and inform the public of appropriate activities)	-2	-1	0	1	2
b. Fence around nests only	-2	-1	0	1	2
c. Partial beach closure (close off dry sand around nesting areas)	-2	-1	0	1	2
d. Total beach closure (close off wet and dry sand around nesting areas)	-2	-1	0	1	2
e. Remove Plover predators (for example, foxes and raccoons)	-2	-1	0	1	2
f. Dune bulldozing to improve Plover habitat	-2	-1	0	1	2
g. Seasonally prohibiting certain uses (such as dogs, vehicles, horses, kites, fireworks etc.) in nesting areas	-2	-1	0	1	2

5. What type of media would you be most likely to use to find out about Snowy Plover Beach restrictions? (Please check all that apply.)

- Friends or relatives
- Previous visits
- Magazine story or ad
- Newspaper story or ad
- TV
- Radio
- Oregon Parks and Recreation Department Website
- Written inquiry to park or agency
- Telephone inquiry to park or agency
- Local Chamber of Commerce
- Travel agent
- Travel Guide/Tour Book
- Maps
- Tourist Brochures
- Highway signs
- Internet (please specify site used most often) _____
- Other (please specify) _____

6. Please circle the number that reflects your position toward the following statement .

	Strong Disagree				Strongly Agree
I would be willing to change my activities on the beach to improve snowy plover habitat	-2	-1	0	1	2

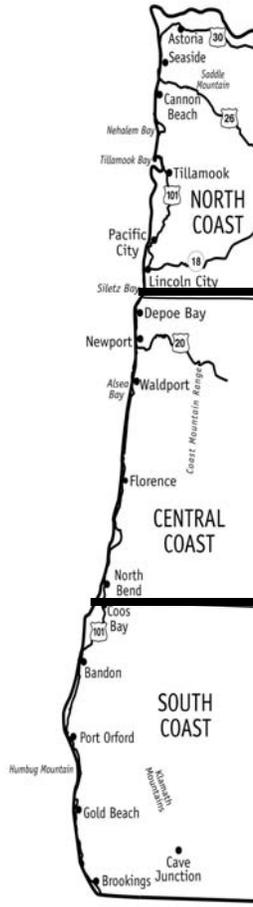
Demographics

1. Are you ___ male ___ female
2. What is your age?
 - ___ 18 – 19
 - ___ 20 – 24
 - ___ 25 – 29
 - ___ 30 – 34
 - ___ 35 – 39
 - ___ 40 – 44
 - ___ 45 – 49
 - ___ 50 – 54
 - ___ 55 – 59
 - ___ 60 – 64
 - ___ 65 – 69
 - ___ 70 or over
3. What is your ethnic background?
 - ___ White, European American, Non-Hispanic
 - ___ Asian or Asian American
 - ___ Black, African American, Non-Hispanic
 - ___ Middle Eastern or Middle-Eastern American
 - ___ Pacific Islander
 - ___ Hispanic or Latino American
 - ___ American Indian or Alaskan Native
4. What is the highest level of education you have completed?
 - ___ Some high school
 - ___ High school diploma
 - ___ Some college
 - ___ Associates degree
 - ___ Bachelor's degree or equivalent
 - ___ Master's degree
 - ___ Ph.D., J.D., M.D.
5. What is your marital status?
 - ___ Single
 - ___ Married
 - ___ Other
6. Please identify your annual household income.
 - ___ Less than \$20,000
 - ___ \$20,000 - \$29,999
 - ___ \$30,000 - \$39,999
 - ___ \$40,000 - \$49,999
 - ___ \$50,000 - \$59,999
 - ___ \$60,000 - \$69,999
 - ___ \$70,000 - \$79,999
 - ___ \$80,000 - \$89,999
 - ___ \$90,000 - \$99,999
 - ___ \$100,000 or over
7. What size town do you live in?
 - ___ Farm or rural area
 - ___ Small town (less than 5,000 people)
 - ___ Small city (5,000 to 50,000 people)
 - ___ Large city (more than 50,000 people)
 - ___ Suburb of a large city

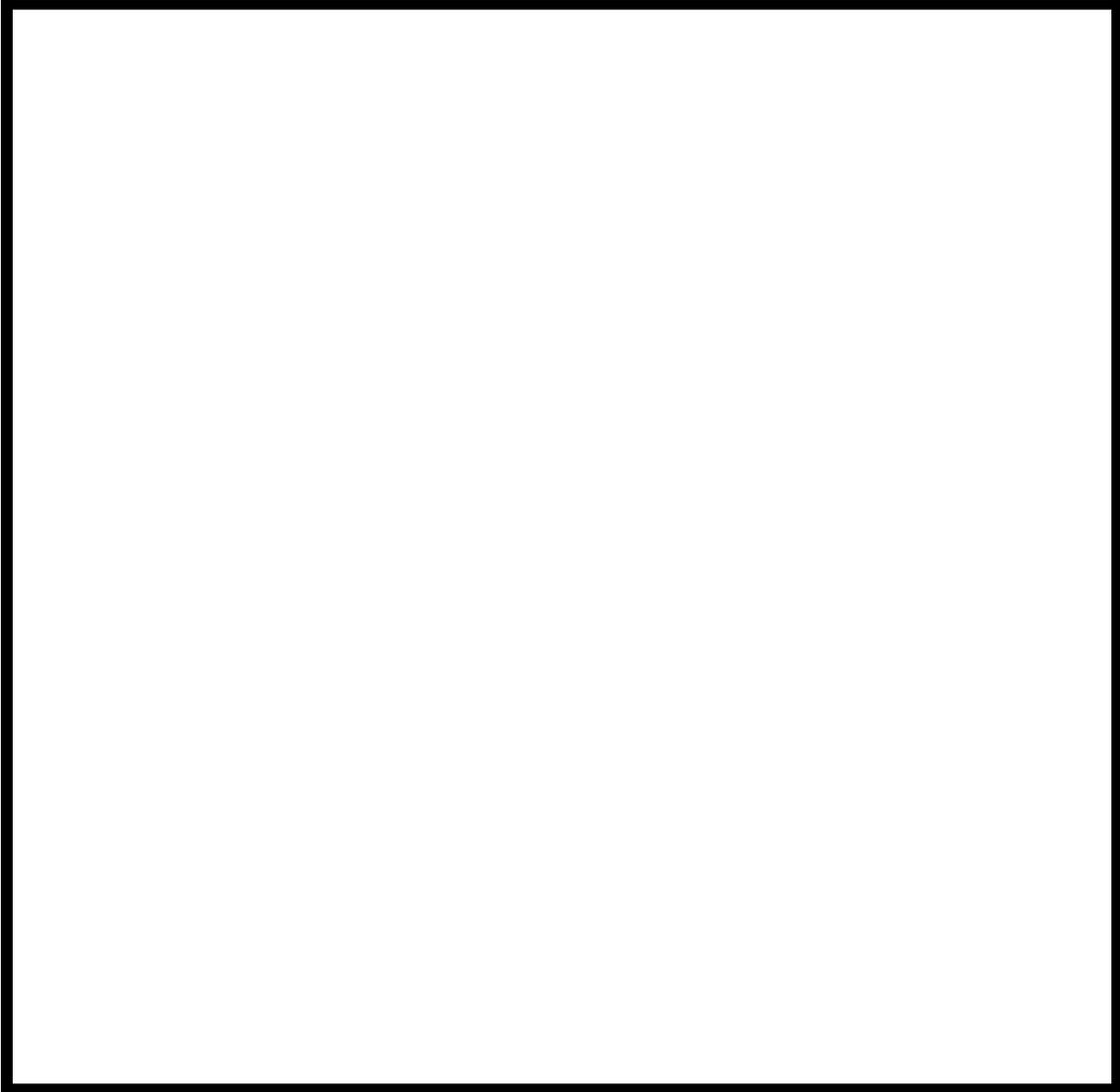
8. What newspapers do you read regularly (please check all that apply.)

- I don't read a newspaper regularly
- Oregonian (any edition)
- Salem Statesman Journal
- Eugene Register Guard
- Medford Mail Tribune
- Bend Bulletin
- Seattle Times
- Other daily or weekly newspaper

Thank you for your time!



Any additional comments you may have would be appreciated.



Thank you for your help.

Please return your completed questionnaire in the enclosed envelope to:

The Forest Resources Department - Beach Study
Oregon State University
Peavy Hall Room 280
Corvallis, Oregon 97331-5703

Appendix F

Coast Recreation Activity Frequency – Observation Data

Segment 1, 2, and 3 Activity Frequency – Observation Data

Segment 4, 5, and 6 Activity Frequency – Observation Data

2001 Observed Coast Activity Frequency

Activity	Percent
Relaxing in a stationary location	41.53
Walking	26.75
Sandplay	5.70
Scenic enjoyment	4.54
Swimming/wading	4.08
Exercising Dogs	3.42
Kite flying	2.53
Surfing	1.67
Exercise	1.56
ATV	1.52
Beachcombing	1.45
Sports	1.32
Tidepooling	1.20
Boogie Board	0.54
Bicycling	0.38
Fishing from beach	0.38
Camping	0.32
Windsurfing	0.23
Horseback riding	0.23
Collect Driftwood	0.16
Kayak	0.15
Artistic pursuit	0.07
Skim boarding	0.05
Special Events	0.04
Clamming/Mussels	0.04
Campfire	0.03
Hang gliding	0.02
Viewing wildlife	0.02
Spiritual pursuit	0.01
Photography	0.01
Birding	0.01
Beach Cleanup	0.01
Fireworks	<0.01
Rock climbing	<0.01

2001 Observed Activities Segments 1, 2, and 3

Segment 1		Segment 2		Segment 3	
Activity	%	Activity	%	Activity	%
Stationary	56	Stationary	43	Stationary	36
Walking	17	Walking	30	Walking	30
Scenic	13	Sandplay	6	Sandplay	11
Surfing	4	Swimming	6	Swimming	7
Dogs	3	Dogs	3	Kite Flying	4
Swimming	1	Kite Flying	2	Tidepooling	3
Sandplay	1	ATV	1	Beachcomb	2
Kite Flying	1	Sports	1	Dogs	2
Bicycling	1	Beachcombing	1	Sports	2
Boogie Board	1	Boogie Boarding	1	Scenic	1
Exercise	<1	Tidepooling	1	Exercise	1
Kayak	<1	Surfing	1	Surfing	1
Beachcomb	<1	Fishing	1	Skim Board	<1
Fishing	<1	Exercise	1	Collect Driftwood	<1
Windsurfing	<1	Collect Driftwood	<1	Boogie Board	<1
Horseback	<1	Camping	<1		
Clamming	<1	Scenic Enjoyment	<1		
Hang gliding	<1	Hang Gliding	<1		
		Horseback	<1		
		Birding	<1		

n = 41344

n = 22474

n = 39011

2001 Observed Activities Segments 4, 5, and 6

Segment 4		Segment 5		Segment 6	
Activity	%	Activity	%	Activity	%
Walking	32	Walking	43	Walking	31
Stationary	26	Stationary	24	Stationary	28
ATV	8	Dogs	10	Exercise	22
Sandplay	7	ATV	8	Swimming	5
Dogs	4	Beachcomb	3	Sports	2
Sports	4	Swimming	2	Kite Flying	2
Swimming	3	Kite Flying	2	Fishing	2
Kite Flying	3	Horseback Riding	2	Dogs	1
Scenic	3	Exercise	1	Windsurfing	1
Camping	2	Camping	1	Beachcomb	1
Exercise	2	Fishing	1	Sandplay	1
Windsurfing	2	Collect Driftwood	1	Clamming	1
Beachcomb	1	Artistic	1	Surfing	1
Horseback	1	Campfire	<1	Camping	1
Fishing	1	Surfing	<1	Tidepooling	<1
Special Event	<1	Sports	<1	Boogie Board	<1
Boogie Board	<1	Boogie Board	<1	Scenic	<1
Surfing	<1	Sandplay	<1	Spiritual Pursuit	<1
View wildlife	<1			Photography	<1
Collect Driftwood	<1			ATV	<1
Bicycling	<1			Horseback Riding	<1
Beach Cleanup	<1			Special Events	<1
Hang glide	<1			Birding	<1
Campfire	<1			Campfire	<1
Tidepooling	<1			Collect Driftwood	<1
				Fireworks	<1
				Rockclimbing	<1
n = 11360		n = 8353		n = 4284	

Appendix G

Use Levels Individual Beaches

2001 Use Levels Individual Beaches

Segment 1 Individual Beach Use Levels – North to South

Beach	Avg. # People Weekday	Avg. # People Weekend Day	Avg. # People/Mile Weekday	Avg. # People/Mile Weekend Day	% experiencing some crowding
Columbia River to Necanicum River	150	277	9	17	32
Necanicum River to Tillamook Head	226	466	113	233	51
Indian and Ecola Beaches	73	214	73	214	63
Chapman Pt. to Humbug Pt.	427	726	142	242	48
Humbug Pt. to Hug Pt	37	117	37	117	31
Hug Pt. to Arch Cape	124	101	82	67	41
Arch Cape to Cape Falcon	9	7	6	4	0
Short Sands Beach	92	232	184	465	73
Neahkanie Mt. To Nehalem River	141	128	26	23	37

Segment 2 Individual Beach Use Levels – North to South

Beach	Avg. # People Weekday	Avg. # People Weekend Day	Avg. # People/Mile Weekday	Avg. # People/Mile Weekend Day	% experiencing some crowding
Nehalem River to Tillamook Bay	216	337	27	42	23
Bayocean Spit	30	84	8	21	21
Pt. Maxwell to Netarts River	65	181	43	120	36
Netarts River to Cape Lookout	72	119	13	22	40
North Sand Lake Spit	19	33	12	22	37
Sand Lake to Cape Kiwanda	62	77	10	13	21
Cape Kiwanda to Nestucca River	170	295	43	74	56
Nestucca River to Cascade Head	76	85	19	21	15

Segment 3 Individual Beach Use Levels

Beach	Avg. # People Weekday	Avg. # People Weekend Day	Avg. # People/Mile Weekday	Avg. # People/Mile Weekend Day	% experiencing some crowding
Roads End to Siletz River	527	1089	75	156	33
Siletz River to Boiler Bay	148	279	37	70	23
Devil's Punchbowl to Schooner Pt.	159	187	27	31	34
Yaquina Head to Yaquina River	184	442	53	126	31

Segment 4 Individual Beach Use Levels

Beach	Avg. # People Weekday	Avg. # People Weekend Day	Avg. # People/Mile Weekday	Avg. # People/Mile Weekend Day	% experiencing some crowding
South Beach	53	73	35	48	13
Collins Creek to Alsea River	50	60	12	15	10
Alsea River to Starr Creek	132	220	22	37	16
Rocky Knoll to Heceta Head	36	55	12	18	25
Lily Lake area to Sutton Creek	8	16	3	5	33
Sutton Creek to Siuslaw River	56	259	19	86	41
Siuslaw River to Siltcoos River	79	163	8	16	27
Siltcoos River to Takenitch Cr.	8	25	2	5	9
Takenitch Cr. to Threemile Cr.	7	34	2	11	9
Threemile Cr. to Umpqua River	7	8	1	2	30

Segment 5 Individual Beach Use Levels

Beach	Avg. # People Weekday	Avg. # People Weekend Day	Avg. # People/Mile Weekday	Avg. # People/Mile Weekend Day	% experiencing some crowding
Umpqua River to Tenmile Cr.	39	64	6	9	16
Tenmile Cr. to Coos Bay	38	60	3	4	23
Bastendorf Beach	38	98	38	98	16
Sacchi Beach	4	4	4	4	0
Agate Beach to Fivemile Pt.	5	6	2	2	7
Fivemile Pt. to Coquille River	54	57	9	10	12
Face Rock to New River	71	90	10	13	12
New River to Blacklock Pt.	5	34	1	4	0

Segment 6 Individual Beach Use Levels – North to South

Beach	Avg. # People Weekday	Avg. # People Weekend Day	Avg. # People/Mile Weekday	Avg. # People/Mile Weekend Day	% experiencing some crowding
Sixes River mouth	7	22	7	22	8
Cape Blanco to Elk River	4	3	2	1	16
Elk River to Pt. Orford Head	14	19	4	5	21
Battle Rock to Humbug Pt.	12	12	3	3	15
Devil's Backbone to Nesika Beach	6	4	1	1	21
South of Humbug	0	0	0	0	0
Otter Pt. to Rogue River	5	5	2	2	12
Rogue River to Cape Sebastian	15	21	3	4	16
Cape Sebastian to Pistol River	9	15	3	4	30
Pistol River to Crook Pt.	3	3	2	2	14
Whaleshead Beach	8	19	8	19	23
Harris Beach	52	54	103	108	42
Harbor Beach	26	36	26	36	25
Winchuck and Crissie Fields Beaches	5	16	5	16	15

Individual Beaches by average number of people per mile per weekend day

Beach	Avg. # People/Mile Weekend Day	Avg. # People/Mile Weekday	Avg. # People Weekend Day	Avg. # People Weekday	% reporting some crowding	Segment
Short Sands Beach	465	184	232	92	73	1
Chapman Pt. to Humbug Pt.	242	142	726	427	48	1
Necanicum River to Tillamook Head	233	113	466	226	51	1
Indian and Ecola Beaches	214	73	214	73	63	1
Roads End to Siletz River	156	75	1089	527	33	3
Yaquina Head to Yaquina River	126	53	442	184	31	3
Pt. Maxwell to Netarts River	120	43	181	65	36	2
Humbug Pt. to Hug Pt	117	37	117	37	31	1
Harris Beach	108	103	54	52	42	6
Bastendorf Beach	98	38	98	38	16	5
Sutton Creek to Siuslaw River	86	19	259	56	41	4
Cape Kiwanda to Nestucca River	74	43	295	170	56	2
Siletz River to Boiler Bay	70	37	279	148	23	3
Hug Pt. to Arch Cape	67	82	101	124	41	1
South Beach	48	35	73	53	13	4
Nehalem River to Tillamook Bay	42	27	337	216	23	2
Alsea River to Starr Creek	37	22	220	132	16	4
Harbor Beach	36	26	36	26	25	6
Devil's Punchbowl to Schooner Pt.	31	27	187	159	34	3
Neahkanie Mt. To Nehalem River	23	26	128	141	37	1
Netarts River to Cape Lookout	22	13	119	72	40	2
North Sand Lake Spit	22	12	33	19	37	2
Sixes River mouth	22	7	22	7	8	6
Bayocean Spit	21	8	84	30	21	2
Nestucca River to Cascade Head	21	19	85	76	15	2
Whaleshead Beach	19	8	19	8	23	6
Rocky Knoll to Heceta Head	18	12	55	36	25	4
Columbia River to Necanicum River	17	9	277	150	32	1
Siuslaw River to Siltcoos River	16	8	163	79	27	4
Winchuck and Crissie Fields Beaches	16	5	16	5	15	6
Collins Creek to Alsea River	15	12	60	50	10	4
Sand Lake to Cape Kiwanda	13	10	77	62	21	2
Face Rock to New River	13	10	90	71	12	5
Takenitch Cr. to Threemile Cr.	11	2	34	7	9	4
Fivemile Pt. to Coquille River	10	9	57	54	12	5
Umpqua River to Tenmile Cr.	9	6	64	39	16	5
Lily Lake area to Sutton Creek	5	3	16	8	33	4
Siltcoos River to Takenitch Cr.	5	2	25	8	9	4
Elk River to Pt. Orford Head	5	4	19	14	21	6
Arch Cape to Cape Falcon	4	6	7	9	0	1
Tenmile Cr. to Coos Bay	4	3	60	38	23	5
Sacchi Beach	4	4	4	4	0	5
New River to Blacklock Pt.	4	1	34	5	0	5
Rogue River to Cape Sebastian	4	3	21	15	16	6
Cape Sebastian to Pistol River	4	3	15	9	30	6
Battle Rock to Humbug Pt.	3	3	12	12	15	6
Threemile Cr. to Umpqua River	2	1	8	7	30	4
Agate Beach to Fivemile Pt.	2	2	6	5	7	5
Otter Pt. to Rogue River	2	2	5	5	12	6
Pistol River to Crook Pt.	2	2	3	3	14	6
Cape Blanco to Elk River	1	2	3	4	16	6
Devil's Backbone to Nesika Beach	1	1	4	6	21	6
South of Humbug	0	0	0	0	0	6

Individual Beaches by percent reporting some crowding

Beach	% reporting some crowding	Avg. # People/Mile Weekend Day	Avg. # People/Mile Weekday	Avg. # People Weekend Day	Avg. # People Weekday	Segment
Short Sands Beach	73	465	184	232	92	1
Indian and Ecola Beaches	63	214	73	214	73	1
Cape Kiwanda to Nestucca River	56	74	43	295	170	2
Necanicum River to Tillamook Head	51	233	113	466	226	1
Chapman Pt. to Humbug Pt.	48	242	142	726	427	1
Harris Beach	42	108	103	54	52	6
Sutton Creek to Siuslaw River	41	86	19	259	56	4
Hug Pt. to Arch Cape	41	67	82	101	124	1
Netarts River to Cape Lookout	40	22	13	119	72	2
Neahkanie Mt. To Nehalem River	37	23	26	128	141	1
North Sand Lake Spit	37	22	12	33	19	2
Pt. Maxwell to Netarts River	36	120	43	181	65	2
Devil's Punchbowl to Schooner Pt.	34	31	27	187	159	3
Roads End to Siletz River	33	156	75	1089	527	3
Lily Lake area to Sutton Creek	33	5	3	16	8	4
Columbia River to Necanicum River	32	17	9	277	150	1
Yaquina Head to Yaquina River	31	126	53	442	184	3
Humbug Pt. to Hug Pt	31	117	37	117	37	1
Cape Sebastian to Pistol River	30	4	3	15	9	6
Threemile Cr. to Umpqua River	30	2	1	8	7	4
Siuslaw River to Siltcoos River	27	16	8	163	79	4
Harbor Beach	25	36	26	36	26	6
Rocky Knoll to Heceta Head	25	18	12	55	36	4
Siletz River to Boiler Bay	23	70	37	279	148	3
Nehalem River to Tillamook Bay	23	42	27	337	216	2
Whaleshead Beach	23	19	8	19	8	6
Tenmile Cr. to Coos Bay	23	4	3	60	38	5
Bayocean Spit	21	21	8	84	30	2
Sand Lake to Cape Kiwanda	21	13	10	77	62	2
Elk River to Pt. Orford Head	21	5	4	19	14	6
Devil's Backbone to Nesika Beach	21	1	1	4	6	6
Bastendorf Beach	16	98	38	98	38	5
Alsea River to Starr Creek	16	37	22	220	132	4
Umpqua River to Tenmile Cr.	16	9	6	64	39	5
Rogue River to Cape Sebastian	16	4	3	21	15	6
Cape Blanco to Elk River	16	1	2	3	4	6
Nestucca River to Cascade Head	15	21	19	85	76	2
Winchuck and Crissie Fields Beaches	15	16	5	16	5	6
Battle Rock to Humbug Pt.	15	3	3	12	12	6
Pistol River to Crook Pt.	14	2	2	3	3	6
South Beach	13	48	35	73	53	4
Face Rock to New River	12	13	10	90	71	5
Fivemile Pt. to Coquille River	12	10	9	57	54	5
Otter Pt. to Rogue River	12	2	2	5	5	6
Collins Creek to Alsea River	10	15	12	60	50	4
Takenitch Cr. to Threemile Cr.	9	11	2	34	7	4
Siltcoos River to Takenitch Cr.	9	5	2	25	8	4
Sixes River mouth	8	22	7	22	7	6
Agate Beach to Fivemile Pt.	7	2	2	6	5	5
Arch Cape to Cape Falcon	0	4	6	7	9	1
Sacchi Beach	0	4	4	4	4	5
New River to Blacklock Pt.	0	4	1	34	5	5
South of Humbug	0	0	0	0	0	0

Appendix H

Recreation Activity Description

Recreation Activity Description

Recreation Activities

The recreation activities below are those included on the original onsite survey and other identified by respondents. Activities 1 through 24 were included on the original on-site survey. Activities 25 through 45 were activities identified by respondents.

- 1 Walking for pleasure
- 2 Exercise; jogging, running, walking
- 3 Picnicking, relaxing (at a stationary location) also noted on survey: *drinking, sunbathing*
- 4 Camping
- 5 Exercising Dogs
- 6 Swimming also noted on survey: *wading, jumping waves, chasing waves, getting feet wet*
- 7 Kite flying
- 8 Driftwood fires
- 9 Surfing
- 10 Informal driftwood collection
- 11 Bike riding
- 12 Boogie boarding
- 13 Birding
- 14 Participating in special events
- 15 Kayaking
- 16 Clamming also noted on survey: *mussel gathering*
- 17 Fishing from the beach
- 18 Wind surfing through beach access
- 19 Horseback riding
- 20 Crabbing from the beach
- 21 Hang gliding (landing on the beach)
- 22 Scenic enjoyment
- 23 Fireworks
- 24 Other (on the on-site survey and provided the opportunity to identify activities (A25 - A45)
- 25 Beachcombing includes as noted on survey: *shells, rocks, sandollars, agates, floats, beach glass, fossils, seaweed, kelp, metal detecting, gold prospecting,, collecting flowers*
- 26 Sandplay also noted on survey: *sandcastles, sandsculpting, digging holes, climbing on dunes*
- 27 Family also noted on survey: *playing with kids, entertaining kids, out of town family, grandkids*
- 28 Beach vehicle recreation specifically noted: *ATV, cars, motorcycle, fourwheelers, sandrail, Jeep, dune buggy*
- 29 Artistic Pursuits specifically noted: *painting, sketching, drawing, writing*
- 30 Sports specifically noted: *frisbee, soccer, baseball, football, volley ball, bocce, croquet, golf,*
- 31 Photography
- 32 Spiritual specifically noted: *Taichi, Yoga, Meditation, Praying, Church activities*
- 33 Reading
- 34 Tidepooling specifically noted: *viewing tidepools, anemones, crabs*
- 35 Beach cleanup specifically noted: *pickup litter and dead animals*
- 36 Remote control vehicles specifically noted: *planes, cars*
- 37 Wildlife viewing specifically noted: *whales, sealions, seals, birds, plants*
- 38 Skim Boarding
- 39 Land sailing
- 40 Jetskiing
- 41 Paragliding
- 42 Doryfishing landing
- 43 Rock climbing
- 44 Kissing
- 45 Kiteboarding

Appendix I

Towns of Origin for Oregonian On-site Survey Respondents

2001 Oregon Cities of Origin

City	%	City	%	City	%	City	%
Portland	20.94	Reedsport	0.30	Vancouver	0.10	Dairy	0.03
Salem	5.13	Warren	0.30	Veneta	0.10	Deer Island	0.03
Eugene	3.75	Amity	0.27	Vernonia	0.10	Detroit	0.03
Beaverton	3.21	Dayton	0.27	Winchester	0.10	Drain	0.03
Hillsboro	2.50	Fairview	0.27	Yamhill	0.10	Dufur	0.03
Corvallis	2.30	Gearhart	0.27	Brightwood	0.07	Eaglecreek	0.03
Gresham	2.03	Oceanside	0.27	Brownsville	0.07	Fossil	0.03
Tigard	1.93	Stayton	0.27	Burns	0.07	Haine	0.03
Milwaukie	1.86	Eagle Point	0.24	Cannon Beach	0.07	Halsey	0.03
Oregon City	1.69	Gaston	0.24	Carlton	0.07	Hammond	0.03
Bend	1.55	Jacksonville	0.24	Columbia City	0.07	Harbor	0.03
Medford	1.45	La Grande	0.24	Corbett	0.07	Hebo	0.03
Grants Pass	1.42	Neskowin	0.24	Dexter	0.07	Independence	0.03
Newport	1.42	Prineville	0.24	Eddyville	0.07	Irrigon	0.03
McMinnville	1.38	Scappoose	0.24	Elkton	0.07	Island City	0.03
Tillamook	1.38	Seaside	0.24	Enterprise	0.07	Jefferson	0.03
Lake Oswego	1.35	St. Helens	0.24	Fall Creek	0.07	Jet City	0.03
West Linn	1.32	Boring	0.20	Gervais	0.07	Junction	0.03
Aloha	1.15	Grand Ronde	0.20	Happy Valley	0.07	Kalama	0.03
Tualatin	1.08	Myrtle Creek	0.20	Harrisburg	0.07	Keno	0.03
Brookings	1.05	Philomath	0.20	Manzanita	0.07	Kimberly	0.03
Roseburg	1.05	Rogue River	0.20	Merlin	0.07	King City	0.03
Newberg	1.01	Shady Cove	0.20	Monroe	0.07	La Pine	0.03
Lincoln City	0.95	Turner	0.20	Mt. Angel	0.07	Lafayette	0.03
Canby	0.91	Winston	0.20	Myrtle Point	0.07	Lakeview	0.03
Springfield	0.91	Astoria	0.17	Neotsu	0.07	Madras	0.03
Bandon	0.88	Cave Junction	0.17	North Powder	0.07	Mapleton	0.03
Forest Grove	0.84	Coquille	0.17	Ophir	0.07	Marcola	0.03
Keizer	0.84	Hermiston	0.17	Otis	0.07	Marion	0.03
Ashland	0.81	Langlois	0.17	Otter Rock	0.07	Maupin	0.03
Albany	0.78	Sheridan	0.17	Parkdale	0.07	Milton Freewater	0.03
Hood River	0.71	Sweet Home	0.17	Pleasant Hill	0.07	Mount Vernon	0.03
Sherwood	0.71	Talent	0.17	Rainier	0.07	Mt Angel	0.03
Clackamas	0.68	Woodburn	0.17	Rhododendron	0.07	Mt. Hood	0.03
Lebanon	0.64	Aurora	0.14	Rickreall	0.07	Mt. Vernon	0.03
Klamath Falls	0.61	Creswell	0.14	Sisters	0.07	Mulino	0.03
Wilsonville	0.61	Dundee	0.14	Tenmile	0.07	Nestucca	0.03
Dallas	0.57	Eagle Creek	0.14	Welches	0.07	Nyssa	0.03
Pacific City	0.57	Estacada	0.14	Wilderville	0.07	Ontario	0.03
Port Orford	0.57	Garibaldi	0.14	Willamina	0.07	Prospect	0.03
Rockaway Beach	0.54	Glendale	0.14	Adams	0.03	Riddle	0.03
Sandy	0.54	Gold Hill	0.14	Agness	0.03	Roseville	0.03
Coos Bay	0.51	Hubbard	0.14	Alcotta	0.03	Scotts Mills	0.03
Florence	0.47	Independence	0.14	Allegany	0.03	Scottsburg	0.03
Gold Beach	0.47	Nehalem	0.14	Alvadore	0.03	Sheridon	0.03
Troutdale	0.47	Netarts	0.14	Applegate	0.03	Siletz	0.03
Cornelius	0.44	Seal Rock	0.14	Arch Cape	0.03	South Beach	0.03
Monmouth	0.44	Sixes	0.14	Athens	0.03	Southland	0.03
Silverton	0.44	Toledo	0.14	Baker City	0.03	Summerville	0.03
The Dalles	0.44	White City	0.14	Banks	0.03	Tangent	0.03
Central Point	0.41	Beavercreek	0.10	Bundon	0.03	Tierra Del Mar	0.03
North Bend	0.41	Chiloquin	0.10	Burton	0.03	Umatilla	0.03
Aumsville	0.37	Clatskanie	0.10	Camas	0.03	Umpqua	0.03
Depoe Bay	0.37	Cloverdale	0.10	Capitol Point	0.03	Union	0.03
Bay City	0.34	John Day	0.10	Cariton	0.03	Unity	0.03
Cottage Grove	0.34	Junction City	0.10	Center Point	0.03	Walton	0.03
Gladstone	0.34	Lakeside	0.10	Centras Point	0.03	Westlake	0.03
Pendleton	0.34	Lyons	0.10	Chariston	0.03	Wheeler	0.03
Waldport	0.34	Mill City	0.10	Charleston	0.03	Williams	0.03
Gleneden Beach	0.30	Redding	0.10	Conden	0.03	Wolf Creek	0.03
Molalla	0.30	Sublimity	0.10	Crabtree	0.03	Yachats	0.03
Redmond	0.30	Sutherlin	0.10	Crooked River Ranch	0.03		

n = 2960

Appendix J

All Activities Pursued by Segment – On-site Survey

Primary Activity Pursued by Segment – On-site Survey

2001 Recreation Activities Pursued by Segment

Segment 1		Segment 2		Segment 3		Segment 4		Segment 5		Segment 6	
Activity	%										
Walking	90.2	Walking	91.0	Walking	92.5	Walking	89.4	Walking	93.2	Walking	88.8
Scenic	70.3	Scenic	72.3	Scenic	74.0	Scenic	71.9	Scenic	81.9	Scenic	64.2
Picnicking	60.6	Picnicking	55.1	Picnicking	60.8	Picnicking	58.7	Picnicking	56.7	Picnicking	45.1
Exercise	37.1	Exercise	39.1	Kites	38.2	Exercise	35.2	Exercise	51.2	Camping	29.1
Kites	32.7	Kites	31.4	Exercise	35.2	Camping	33.8	Other	47.3	Exercise	27.5
Swim	30.3	Dogs	29.0	Swim	24.6	Kites	33.8	Beachcomb	38.0	Dogs	24.1
Dogs	21.6	Swim	24.7	Dogs	22.1	Dogs	26.3	Dogs	35.2	Swim	21.1
Fires	20.7	Fires	22.2	Fires	18.8	Other	25.8	Driftwood	26.4	Kites	16.7
Bicycle	14.4	Camping	20.4	Other	17.0	Swim	24.8	Birding	24.3	Driftwood	16.0
Camping	13.8	Other	19.8	Driftwood	14.5	Fires	16.5	Kites	22.4	Other	14.9
Boogie	12.8	Driftwood	12.7	Camping	11.6	Driftwood	10.6	Camping	16.8	Fires	11.5
Surfing	10.8	Birding	11.1	Birding	10.5	Birding	9.4	Swim	15.1	Birding	9.9
Other	10.2	Fireworks	10.6	Fireworks	9.7	ATV	7.9	Events	13.2	Surfing	9.4
Birding	8.1	Boogie	9.7	Beachcomb	7.1	Fishing	7.7	Fires	11.7	Fishing	8.5
Fireworks	8.1	Bicycle	8.9	Boogie	6.4	Beachcomb	6.9	Fishing	9.8	Fireworks	8.3
Driftwood	7.9	Events	7.5	Crabbing	6.2	Fireworks	6.3	ATV	7.0	Boogie	8.2
Clamming	6.6	Beachcomb	7.4	Events	5.7	Bicycle	6.2	Crabbing	6.6	Bicycle	7.7
Events	5.0	Surfing	6.8	Fishing	5.1	Boogie	5.2	Fireworks	6.6	Wind Surf	7.7
Sandplay	4.5	Fishing	6.8	Sandplay	5.1	Events	5.2	Clamming	6.4	Beachcomb	5.8
Fishing	4.0	Clamming	6.6	Clamming	4.6	Sandplay	5.0	Horses	4.7	Clamming	5.0
Horses	3.8	Sandplay	5.4	Surfing	4.4	Surfing	3.8	Bicycle	3.6	Events	4.7
Crabbing	3.6	Crabbing	4.3	Bicycle	3.5	Clamming	3.8	Boogie	3.0	Crabbing	4.2
Kayak	2.6	Horses	3.5	Horses	2.4	Crabbing	3.5	Surfing	2.1	Horses	3.1
Family	1.9	Kayak	2.1	Kayak	1.3	Horses	3.1	Sandplay	1.9	Sandplay	2.5
Beachcomb	1.4	ATV	1.8	Family	1.3	Sports	2.3	Kayak	1.1	Kayak	2.0
Spiritual	1.3	Sports	1.7	Tidepooling	1.2	Kayak	1.9	Wind Surf	0.6	Family	1.6
Wind Surf	1.1	Family	1.3	Sports	0.6	Reading	1.3	Family	0.6	Photograph	1.4
Sports	0.7	Tidepooling	1.0	Wildlife	0.5	Spiritual	1.2	Tidepooling	0.6	Sports	1.3
Hang Glide	0.4	Reading	0.7	Photograph	0.4	Wind Surf	0.8	Sports	0.4	Tidepooling	0.6
Skim Board	0.4	Wind Surf	0.4	Reading	0.4	Family	0.8	Photograph	0.4	Wildlife	0.6
Photograph	0.3	Hang Glide	0.4	Rock Climb	0.3	Photograph	0.8	Spiritual	0.4	Rock Climb	0.6
Reading	0.3	Photograph	0.4	Wind Surf	0.2	Tidepooling	0.6	Wildlife	0.4	Hang Glide	0.5
Tidepooling	0.2	Skim Board	0.4	Artistic	0.2	Litter	0.4	Kissing	0.4	Spiritual	0.5
ATV	0.1	Paragliding	0.4	Spiritual	0.2	Skim Board	0.2	Hang Glide	0.2	ATV	0.3
Artistic	0.1	Artistic	0.3	Litter	0.2	Kiteboard	0.2	Artistic	0.2	Artistic	0.3
Litter	0.1	Spiritual	0.2	Skim Board	0.2	Hang Glide	0	Reading	0	RC	0.2
RC	0.1	Doryfishing	0.2	Hang Glide	0.1	Artistic	0	Litter	0	Kissing	0.2
Wildlife	0.1	Kissing	0.2	ATV	0.1	RC	0	RC	0	Kiteboard	0.2
Land Sail	0.1	Litter	0.1	RC	0.1	Wildlife	0	Skim Board	0	Reading	0
Jetskiing	0	RC	0.1	Land Sail	0.1	Land Sail	0	Land Sail	0	Litter	0
Paragliding	0	Wildlife	0.1	Jetskiing	0	Jetskiing	0	Jetskiing	0	Skim Board	0
Doryfishing	0	Jetskiing	0.1	Paragliding	0	Paragliding	0	Paragliding	0	Land Sail	0
Rock Climb	0	Rock Climb	0.1	Doryfishing	0	Doryfishing	0	Doryfishing	0	Jetskiing	0
Kissing	0	Land Sail	0	Kissing	0	Rock Climb	0	Rock Climb	0	Paragliding	0
Kiteboard	0	Kiteboard	0	Kiteboard	0	Kissing	0	Kiteboard	0	Doryfishing	0

n = 895

n = 1988

n = 1960

n = 520

n = 472

n = 632

Primary Activities Pursued by Segment

Segment 1		Segment 2		Segment 3		Segment 4		Segment 5		Segment 6	
Activity	%										
Walking	38.4	Walking	39.2	Walking	37.4	Walking	29.2	Walking	34.1	Walking	35.1
Picnicking	26.8	Picnicking	18.1	Picnicking	25.7	Picnicking	21.0	Scenic	16	Scenic	17.6
Scenic	12.3	Scenic	10.4	Scenic	12.6	Scenic	8.7	Picnicking	13.4	Picnicking	16
Dogs	3.5	Dogs	5.1	Kites	3.7	Camping	5.8	Beachcomb	9.8	Wind Surf	6.9
Surfing	3.4	Exercise	3.7	Dogs	3.5	ATV	5.2	Dogs	6.4	Beachcomb	3.5
Sandplay	2.8	Beachcomb	3.3	Beachcomb	3.0	Kites	4.6	ATV	4.7	Kites	2.8
Exercise	2.2	Kites	2.6	Sandplay	3.0	Dogs	4.0	Exercise	2.1	Swimming	2.0
Kites	2.2	Sandplay	2.5	Exercise	1.8	Exercise	3.5	Camping	2.1	Camping	1.7
Swimming	1.5	Camping	2.2	Surfing	1.3	Beachcomb	3.5	Kites	1.9	Exercise	1.6
Boogie	1.5	Swimming	1.9	Crabbing	1.1	Sandplay	2.5	Fishing	1.5	Surfing	1.6
Camping	0.9	Surfing	1.6	Swimming	1.0	Swimming	2.3	Driftwood	1.1	Dogs	1.3
Beachcomb	0.8	ATV	1.5	Camping	0.8	Fishing	1.9	Horses	1.1	Sandplay	1.3
Bicycle	0.6	Fishing	1.2	Boogie	0.8	Fires	1.2	Sandplay	0.9	Family	1.1
Family	0.4	Boogie	1.0	Family	0.8	Surfing	1.2	Swimming	0.4	Clamming	0.9
Kayak	0.3	Family	0.9	Fishing	0.5	Boogie	1.0	Fires	0.4	Fishing	0.9
Clamming	0.3	Sports	0.9	Tidepooling	0.5	Spiritual	0.8	Tidepooling	0.4	Driftwood	0.8
Fires	0.2	Fires	0.5	Fires	0.3	Reading	0.8	Kissing	0.4	Photograph	0.6
Fireworks	0.2	Bicycle	0.4	Driftwood	0.3	Sports	0.6	Boogie	0.2	Bicycle	0.5
Sports	0.2	Tidepooling	0.4	Sports	0.3	Driftwood	0.4	Birding	0.2	Boogie	0.5
Photograph	0.2	Events	0.3	Birding	0.2	Wind Surf	0.4	Wind Surf	0.2	Tidepooling	0.5
Spiritual	0.2	Kayak	0.3	Events	0.2	Family	0.4	Family	0.2	Birding	0.3
Reading	0.2	Crabbing	0.3	Kayak	0.2	Bicycle	0.2	Artistic	0.2	Kayak	0.3
Skim Board	0.2	Reading	0.3	Artistic	0.2	Fireworks	0.2	Wildlife	0.2	ATV	0.3
Driftwood	0.1	Paragliding	0.3	Photograph	0.2	Photograph	0.2	Surfing	0	Sports	0.3
Events	0.1	Driftwood	0.2	Clamming	0.1	Tidepooling	0.2	Bicycle	0	Spiritual	0.3
Crabbing	0.1	Horses	0.2	Horses	0.1	Litter	0.2	Events	0	Fires	0.2
Artistic	0.1	Fireworks	0.2	Hang Glide	0.1	Skim Board	0.2	Kayak	0	Events	0.2
Tidepooling	0.1	Artistic	0.2	Fireworks	0.1	Kite Board	0.2	Clamming	0	Horses	0.2
Birding	0	Skim Board	0.2	Spiritual	0.1	Birding	0	Crabbing	0	Crabbing	0.2
Fishing	0	Birding	0.1	Reading	0.1	Events	0	Hang Glide	0	Artistic	0.2
Wind Surf	0	Clamming	0.1	RC	0.1	Kayak	0	Fireworks	0	Wildlife	0.2
Horses	0	Hang Glide	0.1	Wildlife	0.1	Clamming	0	Sports	0	Rock Climb	0.2
Hang Glide	0	Spiritual	0.1	Skim Board	0.1	Horses	0	Photograph	0	Kissing	0.2
ATV	0	Jetskiing	0.1	Land Sail	0.1	Crabbing	0	Spiritual	0	Hang Glide	0
Litter	0	Doryfishing	0.1	Bicycle	0	Hang Glide	0	Reading	0	Fireworks	0
RC	0	Kissing	0.1	Wind Surf	0	Artistic	0	Litter	0	Reading	0
Wildlife	0	Wind Surf	0	ATV	0	RC	0	RC	0	Litter	0
Land Sail	0	Photograph	0	Litter	0	Wildlife	0	Skim Board	0	RC	0
Jetskiing	0	Litter	0	Jetskiing	0	Land Sail	0	Land Sail	0	Skim Board	0
Paragliding	0	RC	0	Paragliding	0	Jetskiing	0	Jetskiing	0	Land Sail	0
Doryfishing	0	Wildlife	0	Doryfishing	0	Paragliding	0	Paragliding	0	Jetskiing	0
Rock Climb	0	Land Sail	0	Rock Climb	0	Doryfishing	0	Doryfishing	0	Paragliding	0
Kissing	0	Rock Climb	0	Kissing	0	Rock Climb	0	Rock Climb	0	Doryfishing	0
Kite Board	0	Kite Board	0	Kite Board	0	Kissing	0	Kite Board	0	Kite Board	0

n = 895

n = 1988

n = 1960

n = 520

n = 472

n = 632

Appendix K

Primary Activities Pursued by Respondents on the Beach

Primary Activities Pursued by Respondents

Activity	Primary Activity
Relaxing	36.9
Scenic Enjoyment	15.4
Walking	13.4
Playing in the Sand	9.4
Beachcombing	6.9
Camping	3.7
Exercising dogs	1.8
Motorcycles/ATVs	1.6
Surfing	1.5
Swimming/wading	1.5
Tidepool exploration	1.2
Other	1.0
Exercise	0.9
Windsurfing	0.8
Picnicking	0.7
Boogie boarding	0.5
Crabbing from beach	0.5
Fishing from beach	0.4
Kite Flying	0.4
Photography	0.3
Horseback riding	0.3
Bird Watching	0.2
Clammin/Mussels	0.2
Driftwood Fires	0.1
Driving car on beach	0.1
Bicycling	0.1
Fireworks	0.1
Ranger-led programs	0.0
Visitor centers/exhibits	0.0

n = 2738