

VISITOR USE OF THE ROCKY INTERTIDAL AT HARRIS BEACH STATE PARK AND YACHATS STATE RECREATION AREA



Site management plan: Appendix A

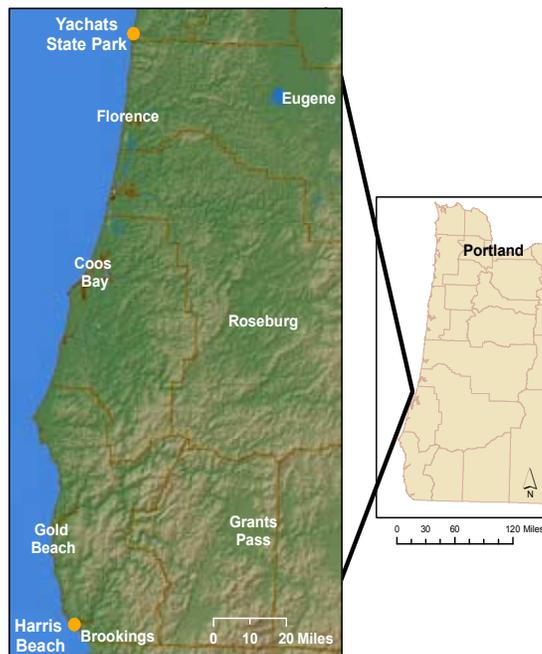
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I. EXECUTIVE SUMMARY

Introduction

This report describes the results of a visitor recreation use project conducted at two rocky intertidal sites on Oregon's coast: Yachats State Park and Harris Beach State Park, both Oregon Parks and Recreation Department (OPRD) properties (see map).

Summary of Key Results



Map of the 2 sites along the Oregon coast

The results are based on both observational data and on-site interviews of visitors to the intertidal areas adjacent to these two parks. The objective of the project was to obtain information about visitor use numbers, recreation types, and public awareness levels in intertidal areas adjacent to and near coastal state parks. This information will be used to determine whether there are conflicts between recreation use and resource protection. The results of this study are intended to complement biological inventories conducted at the same sites. Both inventories will inform future management plans for the sites.

Visitation Rates

Yachats State Park

The average number of visitors observed per low tide period at the Yachats is 29 with a range between 10 visitors on May 27th and 56 on June 27th. During the 14 days sampled, the average number of visitors per hour ranged from 3 to 14 persons with an average hourly visitation of 7 visitors per hour.

Harris Beach

The average number of visitors observed per low tide period at the Harris Beach is 58 with a range between 13 visitors on July 24th and 109 on May 30th. During the 14 days sampled, the average number of visitors per hour ranged from 3 to 27 persons with an average hourly visitation of 14 visitors per hour.

Timing of Visits

In previous surveys of rocky intertidal sites, it was discovered that, as anticipated, most visitors schedule their visit to correspond to the time of low tide.

However, during this survey, this was not the case at either site. Only 36% of visitors observed at Yachats and 31% at Harris Beach were seen during the period of one hour before to one hour after low tide. Regardless of the time of low tide, at the two sites, there appears to be a general trend of increased visitation in late-morning, especially between 10 AM-noon. The early morning is the least popular time of day with very few visitors observed before 7 AM at both sites (1-2% of visitors).

Yachats

Visitation at the Yachats intertidal area peaks two to three hours after low tide with 30% of visitors choosing this time frame to visit the site. The least popular time to visit the site was three to four hours after the time of low tide. However, this is tied very closely with the hour before low tide. Only 36% of all visitors were observed in the "prime" tidepooling time of one hour before to one hour after low tide. Unlike some previously studied sites, it appears that at Yachats, many visitors do not base their visit on the time of low

tide. Primary reasons for visiting the site (other than tidepooling), and convenience may have more to do with the timing of visits than low tide (for details, see the interview section).

There does not appear to be a correlation between the time of low tide and the visitation for the day. The most popular time to visit Yachats during this survey was between 11 and noon, with 24% of visitation occurring during that period. No visitors were observed between 5 and 6 in the morning, and under 1% before 7.

Harris Beach

Visitation peaks two to three hours after low tide with 31% of visitors choosing this time frame to visit. Many visitors do not base the time of their visits on the time of low tide, with only 31% of visitors counted during the peak time of one hour before to one hour after. Similar reasons were given for visiting the site in the interview period, which for most visitors did not include tidepooling. The most popular time to visit is between 11 and noon (28%), however, a close second popular time was between 10-11 AM. Very few visitors were observed before 7 AM.

Spatial Distribution

Distribution across the intertidal areas at the two parks is relatively evenly spread across the shoreline. However, visitors do favor certain segments of the shoreline, close to access points. At Yachats, visitation is concentrated just to the north of the access point and parking area. At Harris Beach, the shoreline just to the south of the access trail from the campground is the most heavily used.

Activity Types

Yachats

Active collecting (e.g., handling organisms for the purpose of removal, obvious presence of collecting equipment like buckets) was the most common activity with 33% of visitors observed doing these types of activities. In second place, approximately 31% of the observed visitors were passively exploring the tidepools (i.e., standing, kneeling, walking,

observing without turning over rocks/touching things). No schoolgroups were observed.

Harris Beach

Beach

recreation is much more predominate, with 48% of visitors observed recreating on the sandy beach (walking, picknicking, sunbathing etc.). A large portion of the shoreline at Harris Beach is made up of a sandy beach so this is not surprising. Active collecting (17%) was the second most common activity. Unlike Yachats, a few schoolgroups were observed (6% of visitors).

Visitor Characteristics

The typical visitor to the shore at these sites

- Travels in a family group of two
 - Is a return visitor who visits 1-5 times per year;
 - Spends one to two hours at the site;
 - Is an Oregonian from either the Willamette Valley/Portland Metro (Yachats) or Southern Oregon (Harris Beach)
 - Travels 431 miles to reach the site;
 - Comes to the site to relax and sightsee;
 - Visits other rocky shores on the Central Coast
 - Has an interest in learning more about tidepools, preferably via ranger-guided/roving ranger tour;
- and
- Is not aware of special protections afforded to intertidal areas, however, in general they support protections and believe collection is not allowed.

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I. INTRODUCTION

Oregon's rocky intertidal areas are subject to increasing human disturbance as population and interest in coastal recreation in these areas grows. Tidepools, cliffs, rocks, and submerged reefs support an ecologically rich and diverse ecosystem at the boundary of the land and sea along 161 miles (41%) of Oregon's shoreline. These rocky shore areas, particularly the 82 miles (21%) of rocky intertidal habitat, attract thousands of visitors annually. Rocky shores are thus resources of high ecologic, economic, and social value to a wide range of stakeholders from local communities to state agencies and citizens of the world at large.

Oregon Parks and Recreation Department (OPRD) is charged with overseeing the management of Oregon's Ocean Shore Recreation Area, which includes beaches and rocky intertidal areas along the coast. However, there is very little information about visitor use of Oregon's rocky shores and what impact visitors are having. OPRD completed a survey of Oregon's sandy beaches, however, the rocky shore segments of the coast were not covered (Shelby and Tokarczyk, 2002; OPRD, 2005). General day-use figures at coastal state parks indicate that use of rocky intertidal areas is likely increasing with the possibility of hundreds of thousands of people visiting these areas annually.

People use the rocky shores to play, conduct scientific research, supplement their livelihoods, perform traditional tribal activities, harvest food, and to teach and learn about nature. From exploring the unique creatures of the rocky intertidal to fishing from rocky outcroppings and observing marine mammals, activities on Oregon's rocky shores are diverse. The rocky shores have ecologic, economic, and social value to a wide range of stakeholders, from local communities to citizens of the world.

Although sixty-one percent of the visitors to Oregon's beaches are Oregonians, a large number are from out of state, drawn for various reasons to Oregon's unique and beautiful coast (Shelby and Tokarczyk,

2002). Therefore, although Oregon's population increase is likely to be reflected in visitor use of coastal areas, out-of state visitors will also play a role. Tourist revenue in Oregon's coastal counties is increasing, which suggests that more out-of-state visitors are using Oregon's coast (Dean Runyan Associates, 2004). This increase in population and tourism is also reflected in visits to Oregon's state parks next to rocky shores.

Two of Oregon's coastal resources that depend upon rocky shore areas (marine wildlife and tidepools) have been identified by coastal visitors as ones they are most interested in learning about (Shelby and Tokarczyk, 2002). Additionally, results from a study of recreation preferences of Oregon's aging population show that more than half (59%) of Oregonians aged 42-80 take part in ocean beach activities, and 37% spend time exploring tidepools (OPRD, 2007).

Oregonians age 42-80 rank ocean beach activities and exploring tidepools as their fifth and eight favorite forms of outdoor recreation (OPRD, 2007). Based on the survey, that use is evenly distributed among income brackets, likely because it is virtually cost-free, except for traveling to the sites. Oregonians in this age bracket make up 42% of Oregon's population (PRC, 2005), which indicates at least approximately 600,000 people explore Oregon's tidepools each year.

Impacts of human use on rocky shore areas range from the effects of trampling on sensitive intertidal habitat (Brosnan and Crumrine, 1994), to collection of intertidal resources (Castilla, 1999) and conflicts between humans and marine wildlife (Riemer and Brown, 1997).

One of the potential impacts on rocky intertidal areas is human recreation; therefore, to better manage the interface between human use and natural resources, information about visitor use numbers, recreation types and impact of human use is needed. This information is also helpful when looking at ways to improve recreational and interpretive opportunities at these locations.

II. METHODS

The two study sites are sections of rocky shoreline on Oregon’s central coast in Yachats and on the south coast in Brookings. Each section is under one mile in length and lies adjacent to two different state parks: Yachats State Recreation Area and Harris Beach State Park (fig. 1)

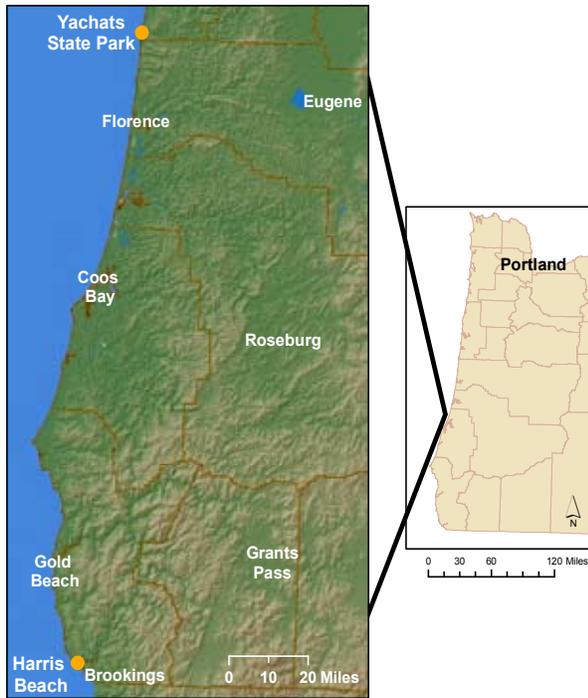


Figure 1. Map of the 2 sites along the Oregon coast

Yachats

The approximately 23-acre OPRD property known as Yachats State Recreation Area provides public access to the shoreline along the length of the park (fig. 2). The shoreline is characterized by “low cliffs fronted by a fractured rocky bench (Fox et. al., 1994).” The rocky bench is separated by large fissures/surge channels and small sandy beaches (Fox et. al., 1994).

The approximately 0.4 mile long study region is subdivided into seven main study areas (A-G) to show where visitor activity is concentrated. The Yachats River flows into the ocean on the southern end forming a significant break in the rocky bench, which then continues to the south of the study area along to

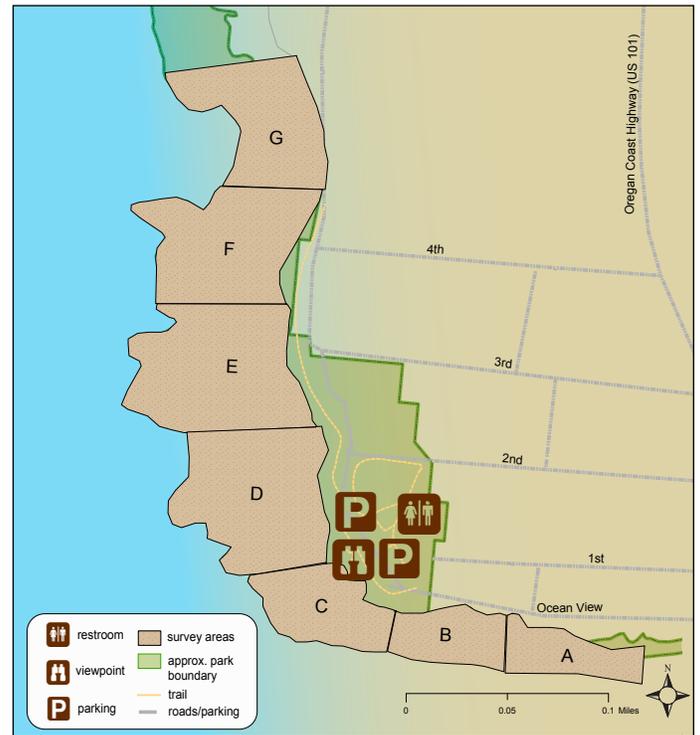


Figure 2. Map of Yachats study site showing the 7 sampling areas (A-G). The approximate park boundary is shown in green.

Cape Perpetua (Fox et. al., 1994).

Harris Beach

The 190-acre OPRD property known as Harris Beach State Park provides multiple public accesses to the rocky shore. This section of shoreline is characterized by a series of rocky intertidal areas interspersed with sandy beaches (Fox et. al., 1994). The park provides public access near the north, middle, and south end of the study area (fig. 6). Goat Island, the state’s largest coastal island lies immediately offshore of the park.

The approximately 0.8 mile long study region is subdivided into seven study areas (A-G). A good portion of the study area is made up of mainly sandy beach, including most of sections A-C. The focus of this study is on visitor use of the rocky intertidal, however, these beach sections were included to more fully show the spectrum of visitor use adjacent to the park.



Figure 6. Map of Harris Beach study site showing the 7 sampling areas (A-G). The approximate park boundary is shown in green.

Two methods of on-site data collection are employed, observational data of visitor recreational activities and a short interview. Information recorded includes location, time, number of users, and activity in the intertidal areas. The on-site interview collects information about recreation activities, knowledge of protections and restrictions, and access.

To gain an understanding about peak use periods, all on-site data is collected between May and August 2009. Data collection methods (discussed below) are the same for both sites.

In Oregon, late spring and summer low tides are generally accepted to be the best time to gain access to the rocky intertidal. Not only are the tides the lowest during this time period, but weather conditions tend to favor coastal recreation as does the timing of spring-

time school field trips and summer school vacation.

Sample Selection

Days and Times

To achieve the objective of quantifying human activity in the rocky intertidal, potential sampling periods were chosen to coincide with a relatively low predicted tide (at or below 0 MLLW) and daylight hours (between sunrise and sunset). To standardize time relative to predicted low tide and obtain counts over the entire span of low tide use, the survey period starts the hour before and ends four hours after the predicted low tide (Adessi, 1994; Fox, 1994).

Since visitor numbers and types of activity may be expected to vary between weekdays and weekends and also depending on whether schools are in session or not, it is necessary to stratify sampling over time (Underwood and Kennelly, 1990). Observations are divided into school weekdays (WdS), school weekends (WeS), summer holiday weekdays (WdH), and summer holiday weekends (WeH) to allow orthogonal comparisons (Underwood and Kennelly, 1990).

Potential days meeting the above mentioned criteria (low tides coinciding with daylight hours) were identified and separated out to allow for at least two replicates of each type of day (WdS, WeS, WdH, WeH) information is desired for. Ultimately, final sampling days should be randomly chosen, however, for the weekend category, there were not enough days available that met the criteria to randomly sample. The dates for the other categories of days were all randomly selected from the list of 43 dates that met the criteria. Ideally, within this list of days, the sites would have then also have been selected randomly. This was done to the extent practicable, but ranges of days had to be clumped due to the distance between sites and funding limitations.

Area

Sampling is initiated from two different starting locations (on the north and south ends of each of the site) and begins in either a northward or southward direction, chosen randomly on each day. From the starting location, sampling follows a set route through the rocky intertidal at each of the study sites. Visitor use observation and visitor interview periods alternate throughout the 5-hour sampling period as indicated in figure 4. Whether or not the starting period is visitor counting or visitor interview is chosen randomly each day. There are three, 40-minute visitor counting periods, which alternate with three, hour-long visitor interview periods.

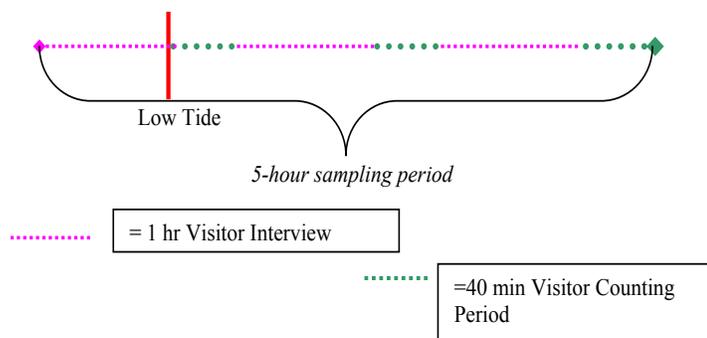


Figure 4. Schedule of Visitor Use Observation and Visitor Use Survey Periods during the sampling period. This figure depicts a day that starts with an interview period, for illustrative purposes only.

Visitor Observation and Counting Period

The first method of on-site data collection used is observational, whereby the surveyor observes visitor recreational activities and counts visitor numbers. The observations are brief “snap-shots” of the activities present at the site since the observer only notes activities as visitors pass through the rocky shore.

Observations are broken down into each of the observation sections and by activity. To monitor different types of use, activities are broken down into eight categories. These categories are as follows:

1. *Active, non-collectors* are people that are seen to be

handling organisms (i.e. picking up a sea star, poking an anemone) and/or turning over rocks but it is not apparent that they are collecting organisms.

2. *Active, collectors* are people that are obviously collecting organisms. These people may have buckets or plastic bags and/or collecting tools such as knives. Any person seen putting something in their pocket or utilizing any sort of collecting device (e.g., prying tools) is considered an active collector. At any given distance it is unlikely that the specific organism(s) is identifiable, but if it is, it is noted on the data sheet.

3. *Passive visitors* are those that are moving about in the intertidal (e.g., standing, kneeling, walking) but are not collecting or turning rocks. These types of visitors may be tidepooling, birding, taking photos etc.

4. *Fishers* are people observed to be rock fishing from shore. Offshore fishing (from boats) is not included in this category.

5. The *Other* category is used for all activities that do not fit within the other groups. They are described in as much detail as possible.

6. *Dogs* present at the site are noted, as are whether or not they are on or off-leash.

7. *Schoolgroups* present at the site are noted and the approximate size is included if possible.

8. *Beach* or non-rocky shore activities are noted if they are in the areas adjacent to the rocky shore observation areas.

Visitor Interview Period

The second method of data collection used was a short on-site interview, whereby the surveyor interviews visitors about recreational rocky shore activities and general knowledge of protections (see Appendix for survey instrument). Since it is not practical to interview all visitors to the site as use

levels vary and visitor movements are not under the control of the interviewer, visitors are contacted at random (Shelby and Tokarczyk, 2002).

A standard script was utilized to contact visitors. The script informed potential respondents of the purpose of the study as a recreation use project being conducted by OPRD. The project was described as a way to gather information to help OPRD better manage Oregon’s rocky shores for both recreation and natural resource preservation. Respondents were informed that participation in the interview was completely voluntary and confidential. Except for home zip codes, no personal information was collected about the participants. At the end of the interview, participants were provided with a copy of OPRD’s “Oregon’s Rocky Intertidal Area” brochure if they wanted one.

III. RESULTS

Observation Period

During the 28 day visitor observation period from May 23-August 22nd a total of 1182 visitors were observed recreating in the two separate intertidal areas (Tables 1-3). Counts include the entire span of low tide use as they occurred one hour before the predicted morning low tide to four hours after the low (Fox, 1994).

The average number of visitors per day is 42 with a range between 10 visitors on May 27th at Yachats and 109 on May 30th at Harris Beach. During the 28 days sampled (14 at each site), the daily average hourly use at the two sites ranged from 3 to 28 persons with an average hourly visitation of 7 visitors per hour at Yachats and 14 visitors/hour at Harris Beach. Results for visitor use counts, distribution (temporally and spatially) and recreation types are summarized below for each site.

Yachats

The average number of visitors per day at the Yachats intertidal area is 29 with a range between 10 visitors on May 27th and 56 on June 27th (Table 3). During the 14 days sampled, the average number of

Table 1. Time and height of predicted low tides for survey dates.

Date	Time	Height	Type	Site
5/23/2000	6:30 AM	-1.3	WeS	Yachats
5/24/2009	6:50 AM	-1.9	WeS	Yachats
5/26/2009	8:24 AM	-2.2	WdS	Yachats
5/27/2009	9:14 AM	-2.0	WdS	Yachats
5/28/2009	9:40 AM	-1.6	WdS	Harris Beach
5/29/2009	10:32 AM	-1.1	WdS	Harris Beach
5/30/2009	11:25 AM	-0.4	WeS	Harris Beach
6/6/2009	5:52 AM	-1.0	WeS	Harris Beach
6/7/2009	6:30 AM	-1.1	WeS	Harris Beach
6/8/2009	8:08 AM	-1.1	WdS	Harris Beach
6/9/2009	7:44 AM	-1.0	WdS	Harris Beach
6/11/2009	9:20 AM	-0.7	WdS	Yachats
6/23/2009	6:57 AM	-2.3	WdH	Harris Beach
6/24/2009	7:44 AM	-2.3	WdH	Harris Beach
6/26/2009	9:42 AM	-1.6	WdH	Yachats
6/27/2009	10:28 AM	-0.9	WeH	Yachats
6/28/2009	11:15 AM	0	WeH	Yachats
7/9/2009	8:20 AM	-0.9	WdH	Yachats
7/10/2009	8:51 AM	-0.7	WdH	Yachats
7/11/2009	9:21 AM	-0.4	WeH	Yachats
7/23/2009	7:50 AM	-2.1	WdH	Yachats
7/24/2009	8:05 AM	-1.4	WdH	Harris Beach
7/25/2009	8:46 AM	-0.7	WeH	Harris Beach
7/26/2009	9:27 AM	-0.1	WeH	Harris Beach
8/7/2009	7:21 AM	-0.2	WdH	Harris Beach
8/8/2009	7:49 AM	-0.1	WeH	Harris Beach
8/21/2009	7:24 AM	-1.2	WdH	Yachats
8/22/2009	8:03 AM	-0.7	WeH	Yachats

visitors per hour ranged from 3 to 14 persons with an average hourly visitation of 7 visitors per hour.

On average, weekend days (27 visitors/day) received almost the same amount of use as weekdays (29 visitors/day). More visitors come when school is on summer break (32 visitors/day) than when school is in session (23 visitors/day). Days that fall on weekends when school on summer vacation (WeH) appear to receive the highest mean use (36 visitors/day) with weekends when school is in session (WeS) receiving the least (18 visitors/day) amount of visitation pressure during the survey period (Table 3). Rain may have been a factor on one day, as it was one of the least popular.

Table 2. Visitor counts totals for each of the 14 survey dates at Yachats. Canine visitors are indicated by (+n). The only rainy day is indicated by an asterisk.

Day Type	Dates	Number of visitors
WdS	5/26	15
	5/27	10 (+1)
	6/11	55
	$X' \approx 27$	
WeS	5/23	16
	5/24	19(+3)
	$X' \approx 18$	
WdH	6/26/2009	43 (+1)
	7/9/2009	25 (+3)
	7/10/2009	21 (+3)
	7/23/2009	49 (+2)
	8/21/2009	12 (+1)
	$X' \approx 30$	
WeH	6/27/2009	56 (+1)
	6/28/2009	32 (+1)
	7/11/2009*	16
	8/22/2009	38 (+1)
	$X' \approx 36$	
TOTAL		407 (+17)
Average		$X' \approx 28$

Table 3. Visitor counts totals for each of the 14 survey dates at Harris Beach. Canine visitors are indicated by (+n). The one partially rainy day (light rain/fog) is indicated with an asterisk

Day Type	Dates	Number of visitors
WdS	5/28/2009	49(+5)
	5/29/2009	79(+3)
	6/8/2009	43(+4)
	6/9/2009	22(+2)
$X' \approx 48$		
WeS	5/30/2009	109(+5)
	6/6/2009	28(+4)
	6/7/2009	26(+2)
	$X' \approx 54$	
WdH	6/23/2009	64(+7)
	6/24/2009	34(+10)
	7/24/2009*	13(+2)
	8/7/2009	33(+5)
	$X' \approx 36$	
WeH	7/25/2009	90(+4)
	7/26/2009	95(+5)
	8/8/2009	90(+7)
	$X' \approx 92$	
TOTAL		775 (+65)
Average		$X' \approx 58$

Harris Beach

The average number of visitors per day is 58 with a range between 13 visitors on July 24th and 109 on May 30th. During the 14 days sampled, the daily average hourly use ranged from 3 to 27 persons with an average hourly visitation of 14 visitors per hour.

On average, weekend days (73 visitors/day) get more use than weekdays (42 visitors/day) and less visitors come when school is in session (51 visitors/day) than during summer vacation (60 visitors/day). Days that fall on weekends when school is on vacation (WeH) appear to receive the highest mean use (92 visitors/day) with weekdays during summer vacation (WdH) receiving the least (36 visitors/day) amount of visitation pressure (table 3).

Low Tide

The “best time” to visit tidepools is generally thought to be one hour before to one hour after low tide. To determine if visitation corresponds to this belief, visitor counts are plotted against hours before or after low tide. The time of low tides varied between survey dates between 5:52 AM and 11:25 AM (Table 1).

Yachats

Visitation at the Yachats intertidal area peaks two to three hours after low tide with 30% of visitors choosing this time frame to visit the site (fig. 5). The least popular time to visit the site was three to four hours after the time of low tide. However, this is tied very closely with the hour before low tide (thought to be the optimal time for tidepooling). Only 36% of all

visitors were observed in the “prime” tidepooling time of one hour before to one hour after low tide (fig. 5). Unlike some previously studied sites, it appears that at Yachats, many visitors do not base their visit on the time of low tide. Primary reasons for visiting the site (other than tidepooling), and convenience may have more to do with the timing of visits than low tide (for details, see the interview section).

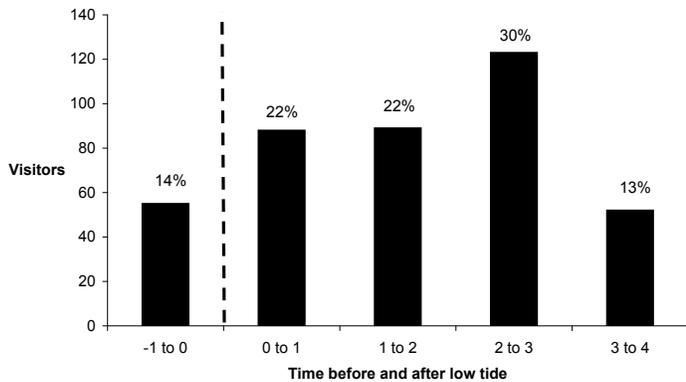


Figure 5. Visitor count levels before and after low tide at Yachats. N= 407

Harris Beach

Like at Yachats, visitation peaks two to three hours after low tide with 31% of visitors choosing this time frame to visit the site (fig. 6). Again, it appears that at Harris Beach, many visitors do not base the time of their visits on the time of low tide, with only 31% of visitors counted during the peak time of one hour

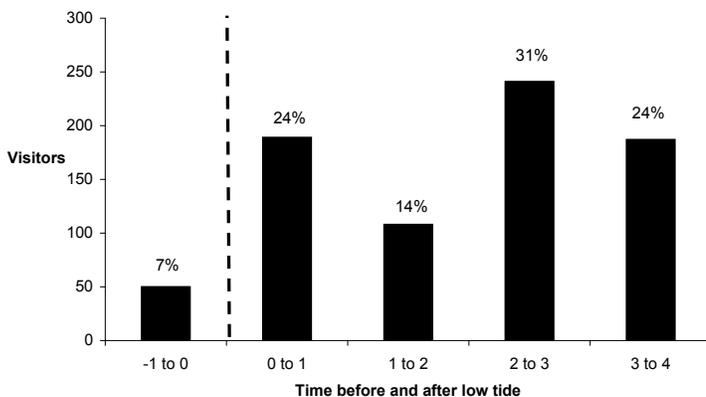


Figure 6. Visitor count levels before and after low tide at Harris Beach. N=775

before to one hour after. Similar reasons were given for visiting the site in the interview period, which for most visitors did not include tidepooling. A large portion of the site includes sandy beach and the area is popular for beach recreation.

Time of Day

If visitation is not entirely dependent on the time of low tide, time of day may be the factor that primarily determines visitation rates at intertidal areas. Visitor counts are plotted against time of day between 5 AM and 4 PM in figures 7 and 8. Regardless of the time of low tide, at the two sites, there appears to be a general trend of increased visitation in late-morning, especially between 10 AM-noon. The early morning is the least popular time of day with very few visitors observed before 7 AM at both sites (1-2% of visitors).

Yachats

There does not appear to be a correlation between the time of low tide and the visitation for the day (fig. 7).

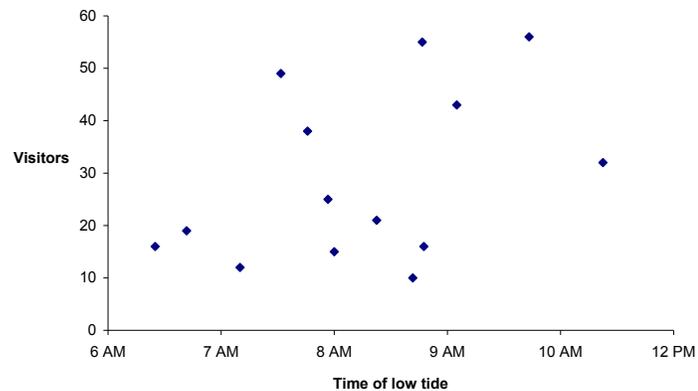


Figure 7. Number of visitors at Yachats for each day plotted against the time of peak low tide for that day. N=407

The most popular time to visit Yachats during this survey was between 11 and noon, with 24% of visitation occurring during that period (fig. 8). No visitors were observed between 5 and 6 in the morning, and under 1% before 7.

Harris Beach

There appears to be a trend of higher visitation with

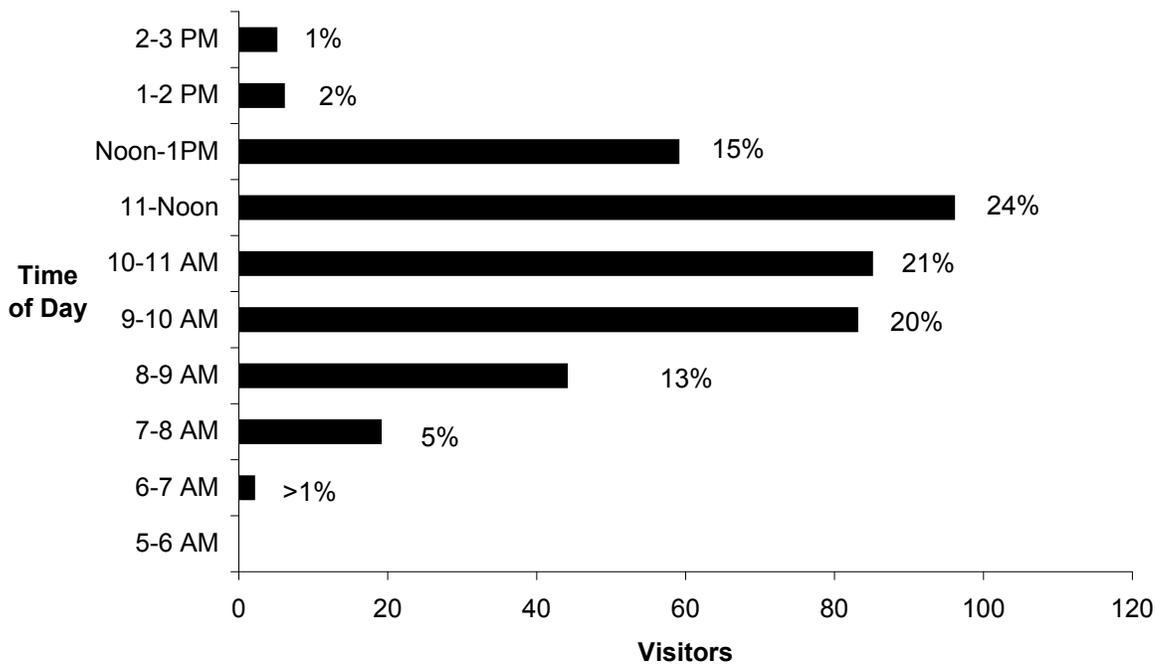


Figure 8. Number of visitors at different times of day at Yachats. N=407



Visitors exploring the Yachats shoreline at low tide

later low tides (fig. X). The busiest day was also the day during which the latest low tide fell (10:45 AM). This pattern has been evident at other sites surveyed in the past, but for those sites visitation depended a lot more heavily on time of low tide. This trend may simply be showing that visitors prefer visiting later in the day.

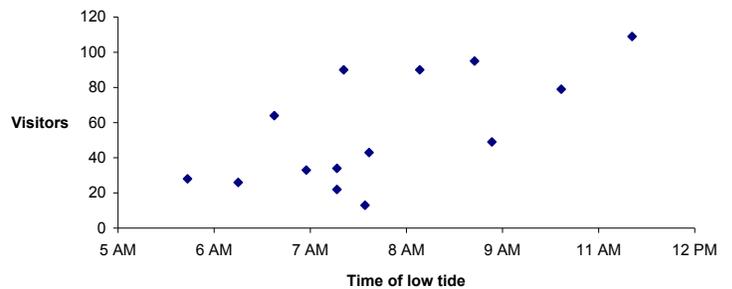


Figure 10. Number of visitors at Harris Beach for each day plotted against the time of peak low tide for that day. N=775

At Harris Beach, the most popular time to visit, was again, between 11 and noon (28%), however, a close second popular time was between 10-11 AM (fig. 9). Very few visitors were observed before 7 AM.

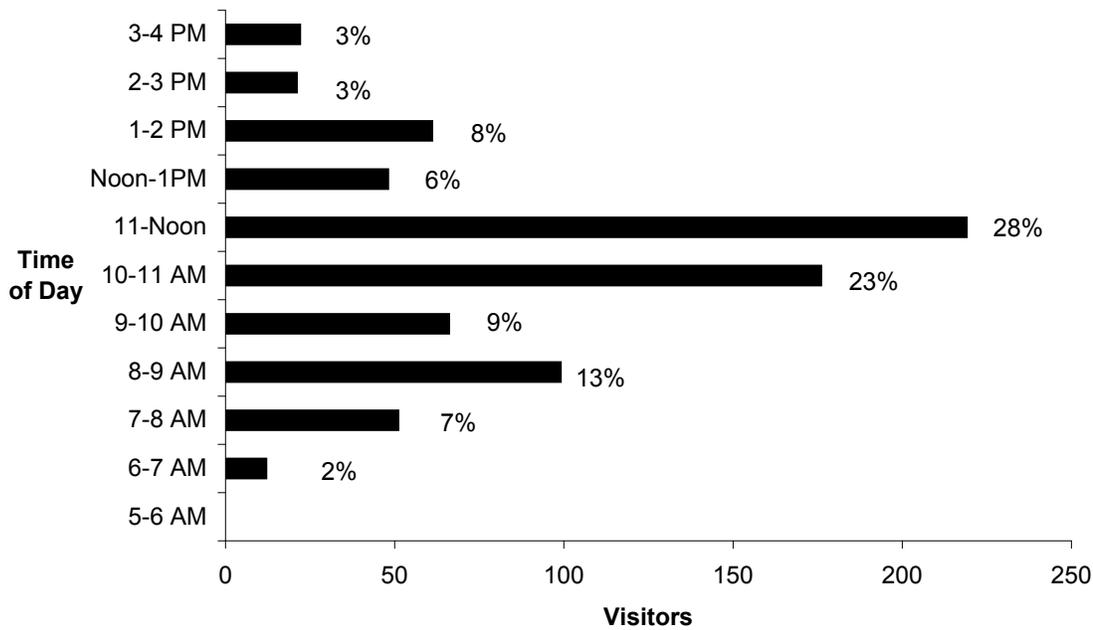


Figure 9. Number of visitors at different times of day at Harris Beach. N=775

Spatial Distribution of Visitors

In addition to the patterns evident in the temporal distribution of visitors, how they distribute themselves spatially is important as well. Do certain areas get heavier use? How far do visitors travel from the access points? These are questions that can only be answered by looking at how visitors are distributed across the intertidal areas. Distribution across the intertidal/beach areas at the two parks is not even. In general, most visitors do not move very far away from access points. While attempts were made to make the sections of shoreline approximately the same length, it was also necessary to pick easy to recognize “landmarks”. Therefore, some sections are larger than others at both sites.

Yachats

At the Yachats intertidal area, the most frequented area is the section immediately to the west of the access point (area “D” in figure 11). This area is frequented by approximately 29% of visitors to the site during this survey period. The most highly concentrated visitor pressure is within the area immediately to the north of the access point and



Children recreating on the beach at Harris Beach State Park

can be clearly seen in the diagram showing the darkest burnt orange/ brown color (fig. 11).

The second most popular section is area “E”, which receives less visitor pressure (25%) as area D. Area D is to the northwest of the access point. The least visited section of shoreline was area “A”, to the southeast of the access point. No visitors were observed in this area during the survey period. Only 1% of visitors were observed in area B, which indicates that most visitors do not venture around the corner into a section which is almost entirely rocky and relatively difficult to traverse. Additionally, most of this area is only accessible at reasonably low tides.

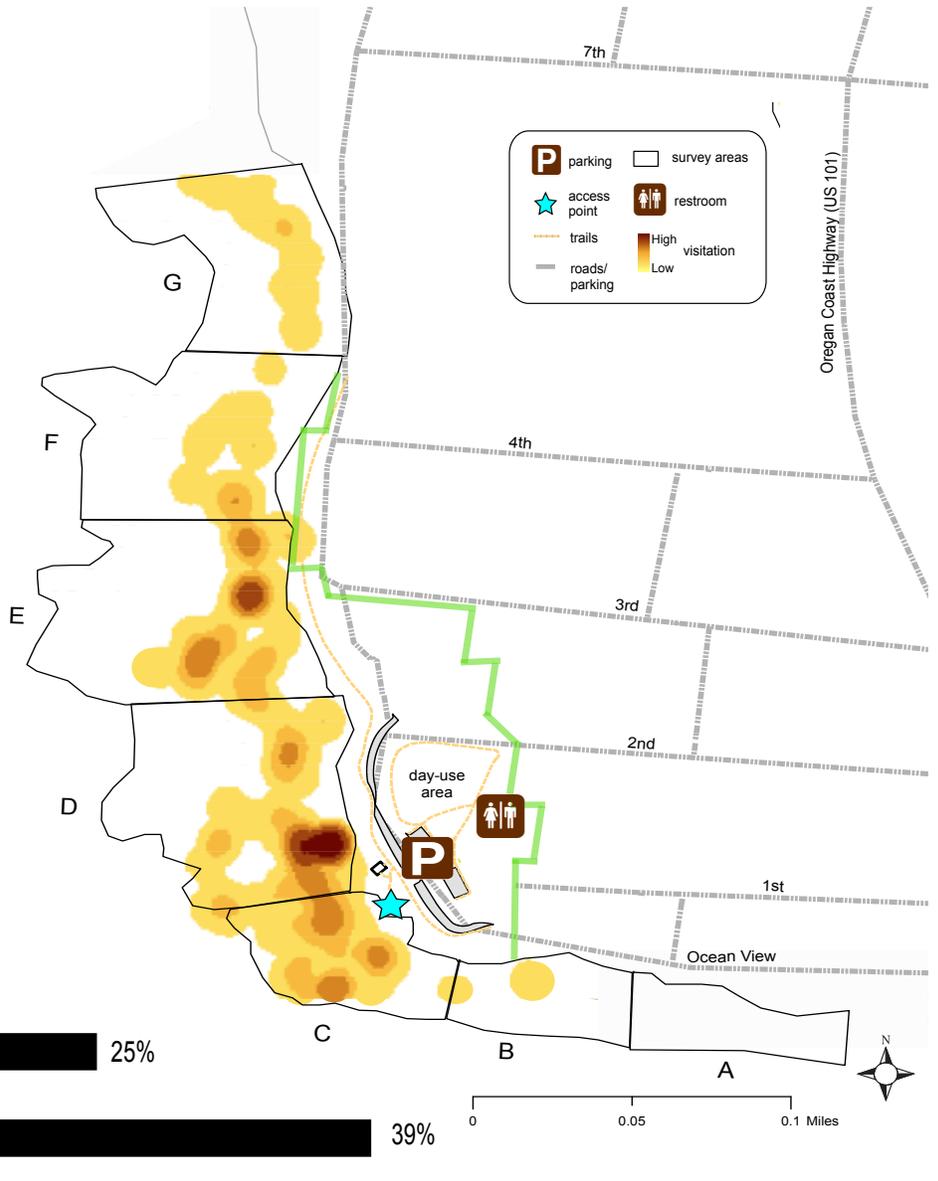
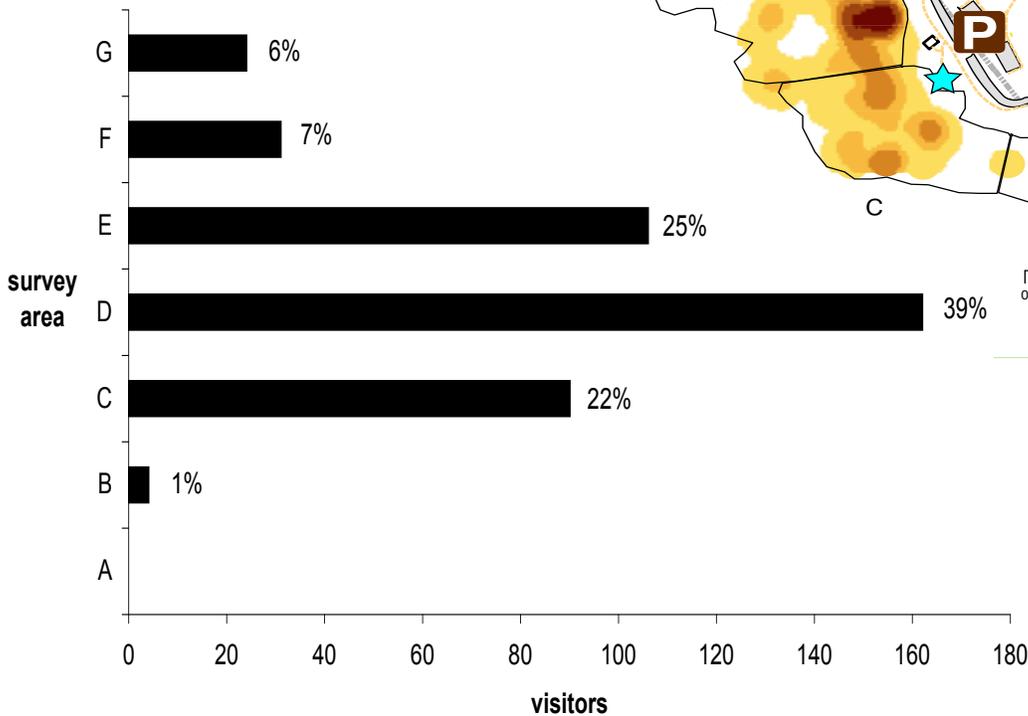


Figure 11. Visitor count levels in survey areas A-G at Yachats State Recreation Area (n=). Total number (bar chart) and percentage (text boxes) of visitors in each survey section are shown on the above chart (left) and visitor intensity is shown on the map (right).

Appendix A: Rocky Shore Recreation Use Study

Harris Beach

The most popular section of the shoreline at Harris Beach is the area just to the south of the rock beach trail access point (fig. 12). This is area “D” as noted in figure 12 and receives approximately 20% of visitation. It is not surprising that this section receives high levels of visitation as it is immediately below the

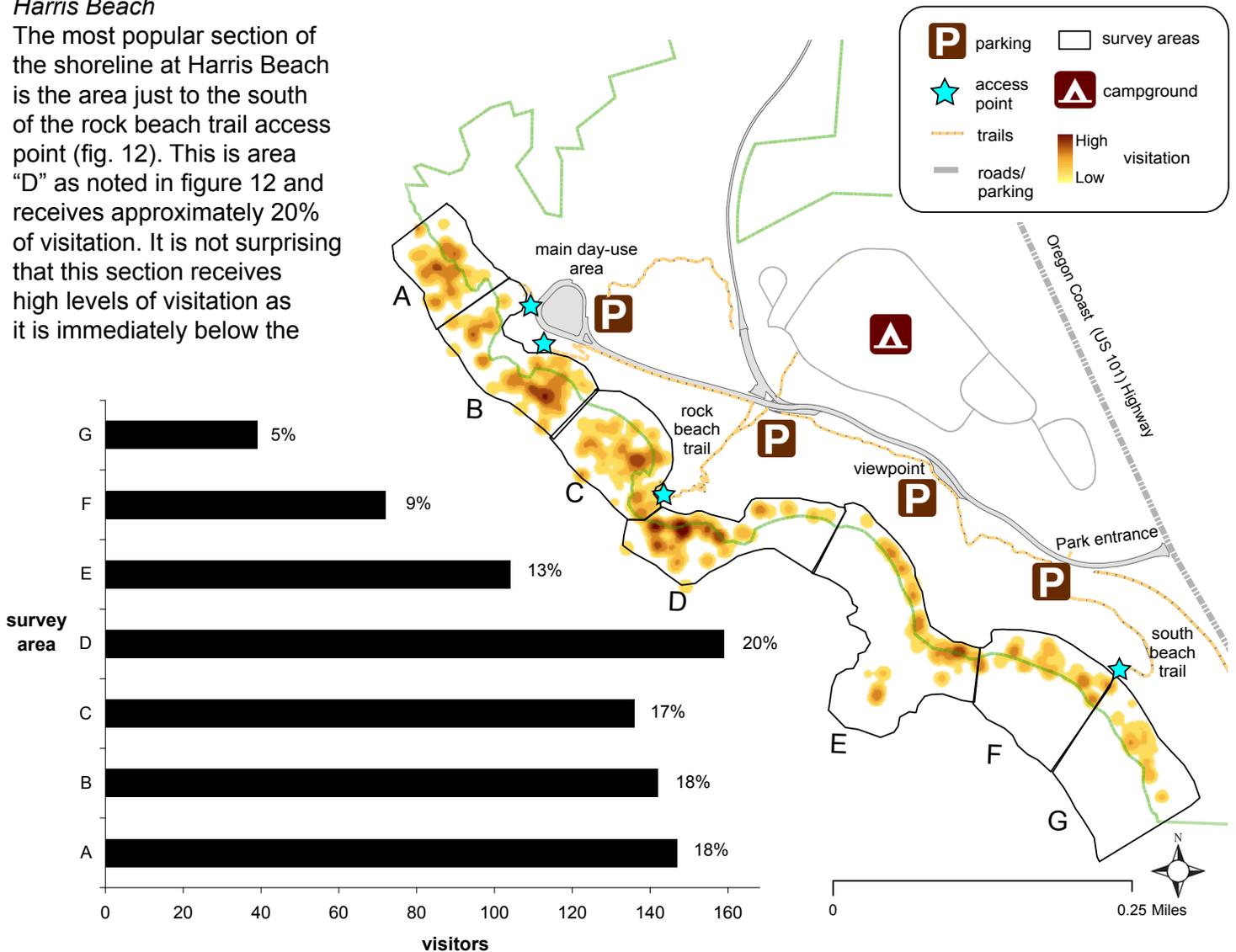


Figure 12. Visitor count levels in survey areas A-G at Harris Beach (n=842). Total number (bar chart) and percentage (text boxes) of visitors in each survey section are shown on the above chart (left) and visitor intensity is shown on the map (right).

beach access trail leading from the campground. The next popular sections of shoreline are areas A and B (both 18%) as well as area C (17%). The shoreline in sections A-C is primarily sandy. The least use area (G) is on the far south end of the park and is accessed by either a trail leading off of a viewpoint or by walking up or down the beach. Area E includes some offshore rocks that become accessible during low tides. Some level of visitation was observed

near these offshore rocks (fig. 12). Compared to Yachats, use is more evenly distributed across the survey area.

Activity Types

Visitors were observed for the purpose of counting how many people were recreating at the various intertidal areas, but also to see what types of

recreational activities they participate in.

Yachats

Although collection of living organisms is not allowed at the site, “active collecting” was the most commonly observed activity (33%) at the Yachats intertidal area. While some limited amount of collection is of living organisms (which is illegal without a permit), in most cases it is not possible to distinguish people collecting living vs. non-living items (e.g., rocks). However, much of what was observed being collected (when possible) was non-living items such as agates and shells.

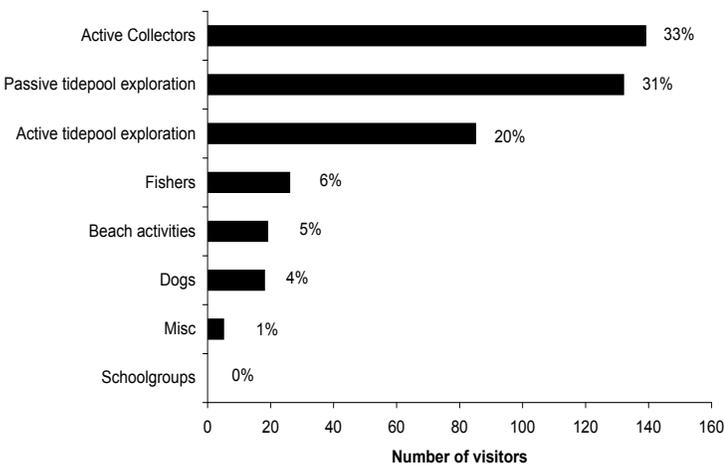


Figure 13. Recreational activities at Yachats (n=424).

Passive tidepool exploration (e.g., walking, observing, tidepooling without handling organisms or rocks) was the second most common activity (31%). Active tidepool exploration (e.g., picking things up, handling organisms, touching organisms and/or turning over rocks) was also a relatively common activity with 20% of visitors (fig. 13).

No groups identifiable as being associated with an educational (schoolgroup) were observed at Yachats during the survey period. These visits are presumed to make up a large number of rocky shore visits during spring low tide series that coincide with end of year field trips. However, Yachats does not appear to be a favored location for these trips.

Other activities noted included the presence of dogs

(both on and off leash), fishing and “miscellaneous” (fig. 13). More than half of dogs were noted on-leash (61%). Fishing from shore does occur, although it does not make up a large percentage of visitor use (6%). The miscellaneous activities category (those not pre-specified on the survey form) at this site ended up only including researchers. Seventy percent of visitors observed were adults. More than half of dogs were noted on leash (61%).



Researchers in the rocky intertidal at Yachats

It was noted that the majority of visitors to the park either stay in their cars, briefly get out to take in the view from the viewpoint or parking lot, or park and walk into town.

Harris Beach

Beach recreation was the most common activity with 48% of visitors (fig. 14). A large portion of the shoreline at Harris Beach is made up of a sandy beach so this is not surprising. Active collecting

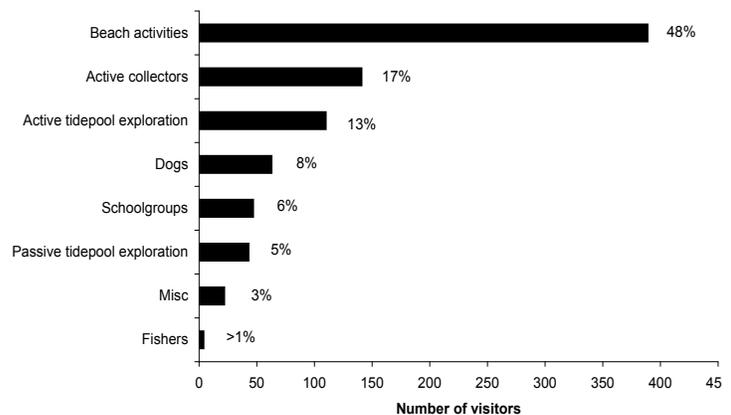


Figure 14. Recreational activities at Harris Beach (n=842)

(17%) was the second most common activity (fig. 14). Educational (schoolgroup) visits make up approximately 6% of visitation.

Most of the rocky area within the park is included within the Harris Beach Marine Garden. Collecting of invertebrates is not allowed within the Marine Garden. The remainder of the shoreline is part of the Brookings Research Reserve. Removal of organisms is only legal with a scientific research permit issued by the Department of Fish and Wildlife (ODFW) within the research reserve. A relatively large number of visitors were observed collecting during the survey period. Most of what visitors were observed collecting was non-living (e.g., rocks, shells), although it is not always possible to see what people are collecting.

Fishing from shore makes up a much smaller percentage of visitor use (~1%) than at Yachats. Miscellaneous activities noted include running/jogging, painting, feeding the squirrels by hand, participating in a ranger-led tour, biking, picking up trash, and putting in boats (canoes/kayaks).

Seventy percent of visitors observed were adults. More than half of dogs were noted on leash (60%).



Visitor photographing a bird at Harris Beach, with Goat Island in the background

Interview Period

A total of 268 visitor groups were interviewed during their visit at the two intertidal areas over the course of the survey (N=113 for Yachats, 155 for Harris Beach). 99% of visitors contacted agreed to participate in the brief on-site interview, although some of the interviews are not entirely complete with a few questions unanswered. The following sections describe the results from the interview questions, which range from demographics of the interviewees (e.g., group size, visits per year, and distance traveled) and reasons for visiting the site to awareness of rocky shore regulations and general support of intertidal protections.

Demographics of Respondents

Yachats

The average group size for visitors is four people with a range between 1-40 people (fig. X). Thirty five percent came in groups of two, with the next most common size being groups of three (16%). Fifteen percent travel alone and only three percent travel in groups of more than 50 (fig. X).

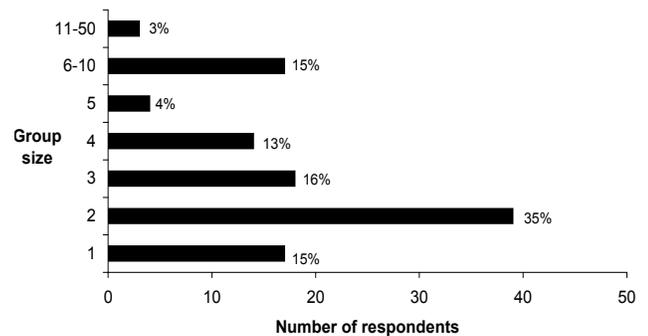


Figure 15. Group size at Yachats (n=112)

The vast majority of visitors (79%) were with their families, with 5% traveling with friends and only fourteen percent visiting the intertidal area alone (fig. X). Five percent were visiting with friends and one percent were in a group of friends and family. Unlike previous sites surveyed, only one visitor group was interviewed that was part of an educational/school group (1%). The school in this case was Portland State University and it was a group of six.

Over two thirds of the visitors (69%) said they were repeat visitors to the Yachats intertidal area. The average visit time for return visitors is two hours with a range between less than one and five hours (fig. X). 35% of visitors spent between 1 to 2 hours at the site.

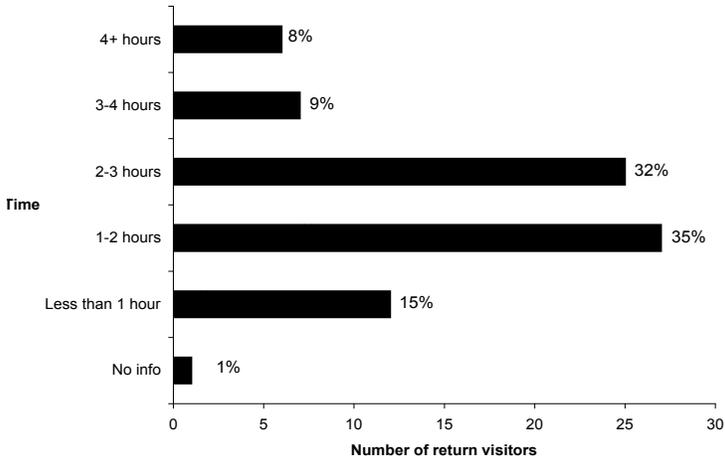


Figure 17. Time spent at Yachats by return visitors (n=78)

56 percent of return visitors indicated visiting the Yachats intertidal area between one to five times per year (fig. X) with an average of eleven visits per year and a range between less than one and 165 days.

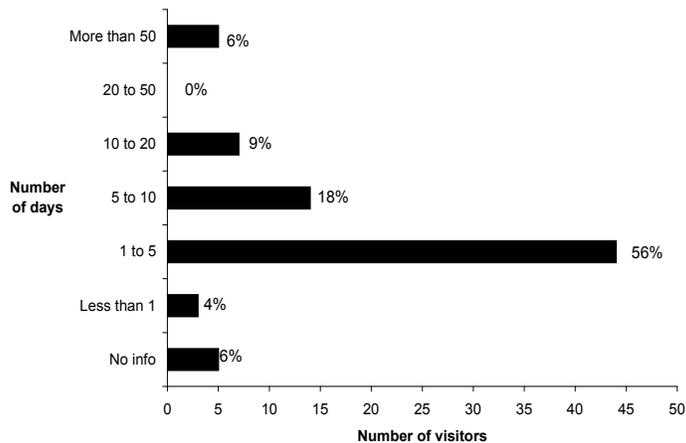


Figure 18. Days per year at Yachats by return visitors (n=78)

Of those visitors that came to the Yachats intertidal for the first time, 13% indicated it was also their first visit to the Oregon Coast. The majority of visitors interviewed (68%) indicated they would return to the site at some time in the future. The average visit to

the intertidal is 1 hour 22 minutes for first time visitors with a range of less than one half hour to 5 hours (fig. X). Slightly less than one half (43%) of first-time visitors indicated they spend between one to two hours at the site.

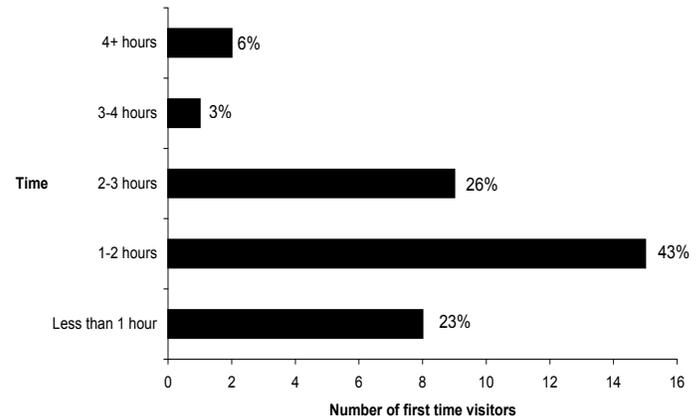


Figure 19. Time spent at Yachats by first-time visitors (n=35)

Harris Beach

The average group size for visitors to Harris Beach is three people with a range between 1-15 people. Slightly over 1/3 of visitors (39%) came in groups of two, with thirteen percent traveling alone and only one percent traveling in groups of 50 or more (fig. X).

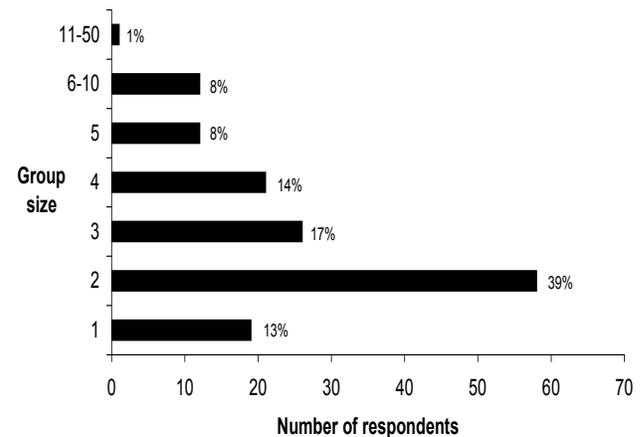


Figure 20. Group size at Harris Beach (n=149)

Approximately 4/5 of visitors (78%) were with families, 13% traveled alone, and only one school group from Grants Pass was present during the interview period. Six percent were travelling with family and friends and three percent with friends only.

Appendix A: Rocky Shore Recreation Use Study

Slightly under 2/3 of the visitors (64%) said they were repeat visitors to Harris Beach. The average visit time for return visitors is two hours 13 minutes with a range between 15 minutes and 8 hours (fig. X). 44% of visitors spent between 1 to 2 hours at the site.

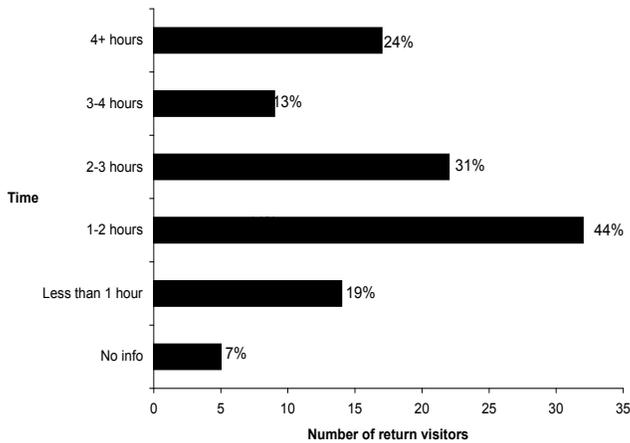


Figure 22. Time spent at Harris Beach by return visitors (n=99)

Sixty eight percent of return visitors indicated visiting Harris Beach between one to five times per year (fig. X) with an average of 8 visits per year and a range between less than one and 150 days.

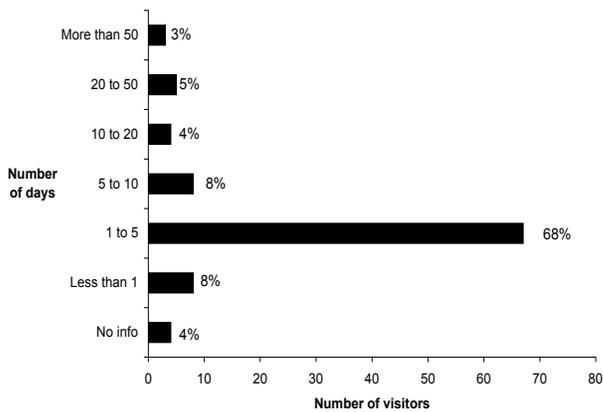


Figure 23. Days per year at Harris Beach by return visitors (n=99)

Of those visitors that came to Harris Beach for the first time, 19% indicated it was also their first visit to the Oregon Coast. A majority (63%) of first-time visitors indicated they would return to Harris Beach at some time in the future. The average visit to the beach is one hour 45 minutes with a range of one half hour to

5 hours. 39% of visitors spend one to two hours at the site (fig. X).

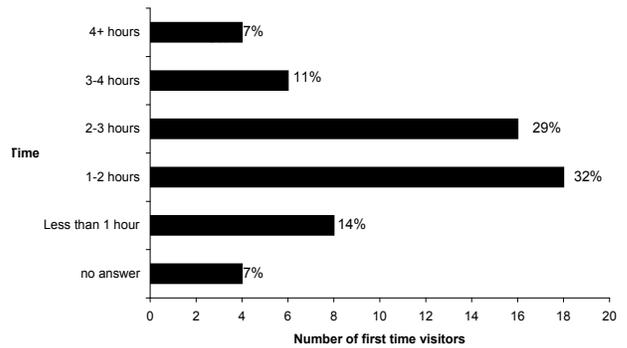


Figure 24. Time spent at Harris Beach by first-time visitors (n=56)

Origin of Visitors

Yachats

The majority (65%) of visitors interviewed were Oregonians, the second largest group coming from Washington (11%) and 8% from California (fig. X). The average one-way distance traveled was 381 miles with a range of one mile (Yachats, OR) to 3,148 miles (Virginia Beach, VA). "Other" locations include those with less than three visitor groups including Nevada, Utah, Virginia, Montana, Kentucky, Arizona and Canada.

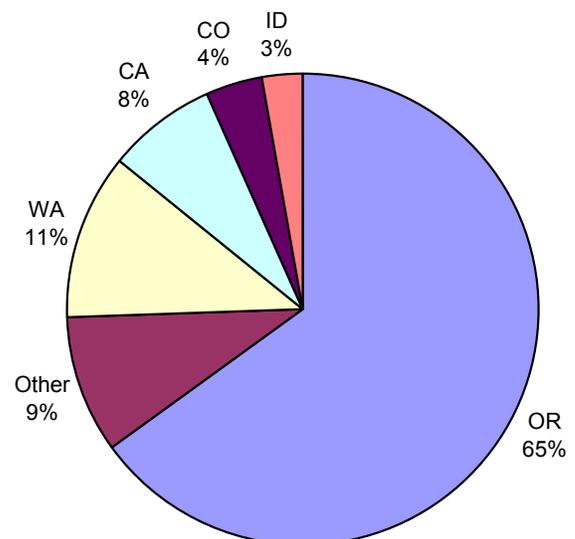


Figure 25. Origin of Yachats visitors (n=105)

Thirty seven percent of in-state visitors came from the Willamette Valley, 31% from the Portland Metro area, and 17% from the coast (fig. X). Of the coastal visitors, seven percent were locals.

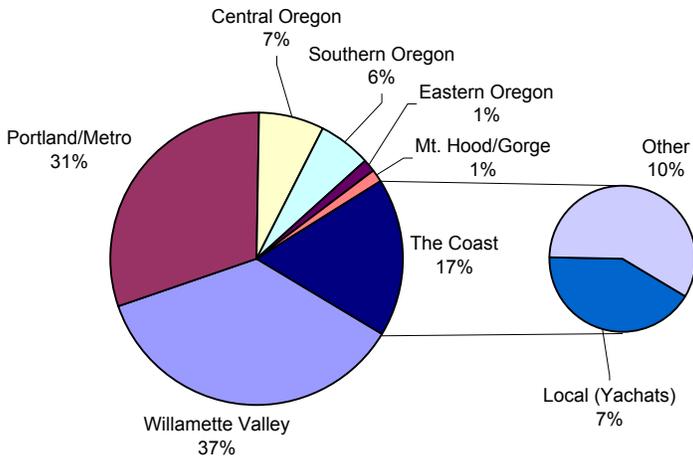


Figure 26. Origin of Yachats in-state visitors (n=69)

Harris Beach

Approximately one half of visitors interviewed were Oregonians (56%) with 21 percent from California and 4% from Washington (fig. X). The average one-way distance traveled to reach Harris Beach was 481 miles with a range of 2 miles (Brookings, OR) to 3431 miles (Arlington, MA).

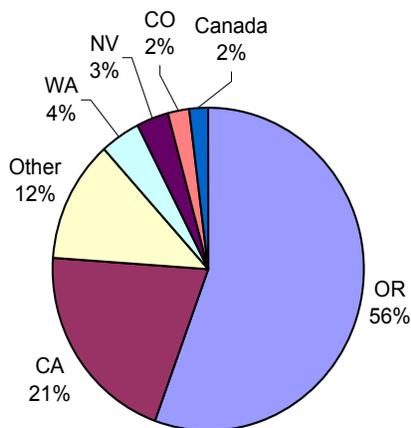


Figure 27. Origin of Harris Beach visitors (n=146)

A majority (63%) of in-state visitors came from Southern Oregon, 19% from the coast and 9% from the Portland Metro area (fig. X). Of those visiting from the coast, almost everyone surveyed was a local.

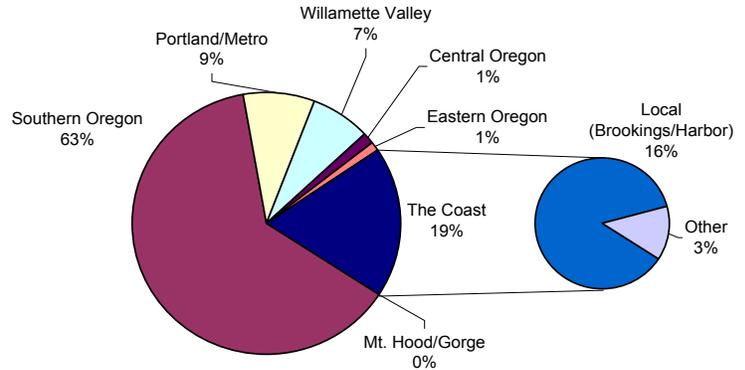


Figure 28. Origin of Harris Beach in-state visitors (n=81)

Sources of Information

Original "discovery" of the site

While both sites are close to the main highway, it is of interest how visitors locate the sites in the first place.

Yachats

The primary way visitors originally found out about the site is from a family member or friend (35%) with walking/driving by (exploring) the next most popular method (26%). Living in the area (now or in the past) was another way many visitors "discovered" the park (19%). Less common sources of information include tradition (7%), the internet (5%) and guidebooks (3%) among several others.

Harris Beach

The beach at Harris Beach State Park is located almost directly across from the park campground (which is right off the main highway), which makes it more visible Yachats. However, the primary way visitors mention that they originally found out about the site is still from either a family member or friend (36%) and exploring (19%). Living in the area (16%) and tradition (9%) are also popular way of discovering the site. A few visitors (5%) did mention they found out about the site from OPRD staff or publications, although more found it on the internet (8%).

Time of Visit/Tidal Cycle

Many types of coastal recreation activities are not dependent on the tides; however, most rocky shore/intertidal recreation is highly dependent on how low

the tide is and the time it occurs.

Yachats

Unlike most previous sites surveyed, just under half of visitors based the time of their visit on the low tide (49%). The most common sources of information for determining when low tide occurs were through tide charts (57%), the Internet (18%), and through the newspaper (10%). Other methods include friends/family, observation and through local business.

Harris Beach

Even fewer visitors (35%) based their visit on the predicted low tide at Harris Beach. Again, tide charts/tables are the most popular method (35%) used to determine the timing of a visit followed by the an OPRD posting/staff (25%), the internet (12%) and direct observation (10%). Other methods include family and friends, the time of year/experience, local business and the newspaper.

Reason for Visit

Primary Reason for Visit

Yachats

At Yachats State Park, the primary reason visitors indicated they came to the site is relaxation and sightseeing (25% each) and tidepooling (fig. 31).

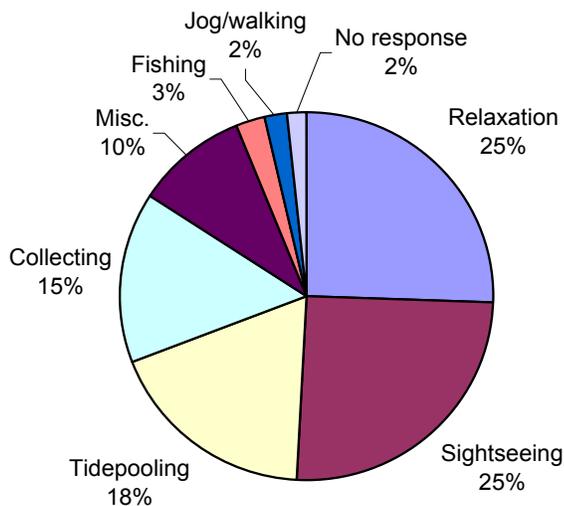


Figure 31. Primary reason for visit to Yachats (n=114)

Other reasons given for visiting include research and letting kids/grandkids play and explore to name a few. Although collecting of living organisms is not allowed within the marine garden, approximately 15% of visitors indicated collecting as their primary purpose for visiting. However, items being collected did not appear to include living items (except possibly tube worms). Items collected include agates, shells, rocks, tube worms (possibly their shells) and sea glass.

Harris Beach

Visitors to Harris Beach did not deviate from those at Yachats in their primary motivation for visiting the site (fig. 32). Again, the primary reason visitors indicated they came to the site is relaxation (32%) followed by sightseeing (27%) and tidepooling (16%). Collecting was not noted as the primary reason for visiting by anyone surveyed. Other reasons given for visiting include eating, escaping inland heat/weather, and family events.

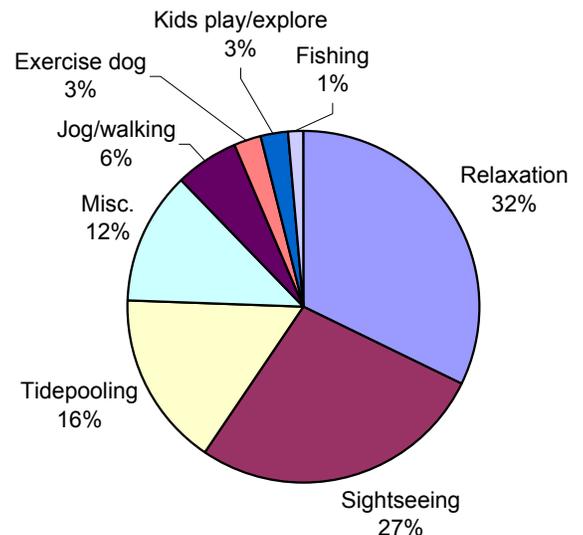


Figure 32. Primary reason for visit to Harris Beach (n=155)

What Visitors Liked Best and Least

Yachats

When asked the open ended question, “what do you like least”, for the most part visitors did not have a wide array of serious complaints. Many visitors could not come up with anything they did not like. Only 26% had something they liked least, with 41%

of comments citing the difficulty of accessing the beach. The next most frequently mentioned “least favorite” things only had a few comments each and include crowds, erosion, garbage, slippery rocks, and the weather. A smattering of other responses, none getting more than one mention each included things like lack of regulatory signage, a shaded picnic area, and a sitting area/bench (see the appendix).

When asked the opposite question, “what do you like best” about the site, visitors to Yachats State Park indicated that the beauty and scenery of the site (17%) and the geology/rock formations (16%) are the things they like “best” (fig. 33). These were followed by the tidepools (13%), agates/shell collecting (9%) and the quiet and secluded nature of the site (8%).

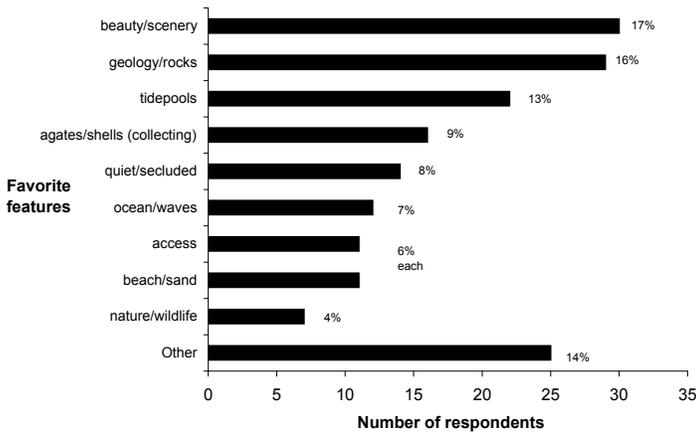


Figure 33. Favorite features at Yachats. Percentages may not add up to 100 due to rounding. Visitors sometimes had more than one response to this question (n=177 comments).

Harris Beach

When asked about their least favorite aspect of their visit to Harris Beach, even fewer visitors found it possible to think of something negative (18%) than at Yachats State Park. A quarter of comments related to the weather, followed by crowding at about 15%. A variety of other issues ranged from several about not liking the new access ramp, to slippery rocks, lack of an off-leash area, dog waste, and dogs off-leash.

At Harris Beach, visitors had somewhat similar responses to the question about their favorite aspects of the site to Yachats (fig. 34). The beauty and scenic nature of the park is at the top of the list, tied with

geology/rocks at fourteen percent. These are followed closely by the tidepools (11%). The beach and ocean/waves are tied for fourth place at eight percent (fig. 34).

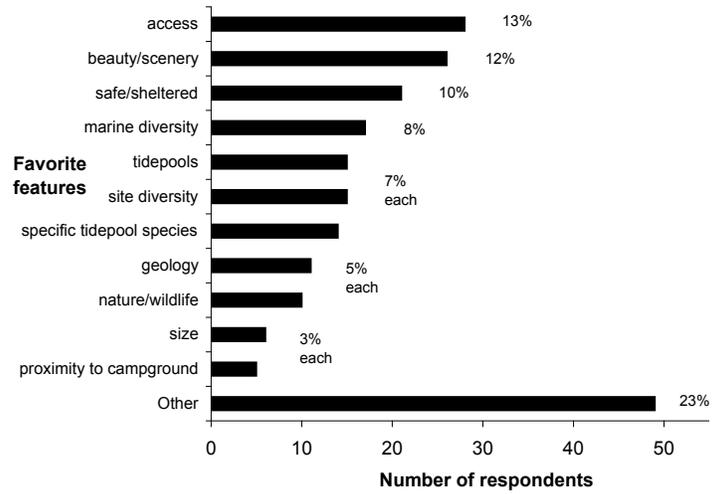


Figure 34. Favorite features at Harris Beach. Percentages may not add up to 100 due to rounding. Visitors sometimes had more than one response to this question (n=228 comments).

Other Rocky Shores Visited

To get a sense of other popular rocky shore sites, visitor groups were asked, “do you visit other tidepool areas along the Oregon coast?”

Yachats

The vast majority of visitors (71%) indicated that they do visit other Oregon rocky shores (Table 4). The

Table 4. Other Oregon rocky shores visited by interviewees at Yachats (n=122 comments). Respondents sometimes mentioned more than one location.

Rocky Shore	Times Mentioned
Neptune SSV	14
Cape Perpetua	10
Seal Rock	9
Newport area	8
Yachats (other sections)	8
Yaquina Bay (Head?)	5
Lincoln City area	4
Seaside area	3
Couldn't remember name(s)	15
Other sites, including mention of sections of the coast like the “south coast” and statements like “all over”	46

Appendix A: Rocky Shore Recreation Use Study

central coast being the most popular region (72%). Sites within Neptune State Scenic Viewpoint are the most frequently mentioned, followed by Cape Perpetua and Seal Rock (Table 4).

Harris Beach

Just over half of visitors (54%) said that they visit other Oregon rocky shores with the slightly over one-third of those responses (34%) being sites on the central coast (Table 5). Quite a few people were not able to remember the names of the location(s) they visited. Twenty three percent of sites mentioned are located between Coos Bay and Brookings (South Coast). The Newport area was mentioned the most frequently, followed by the whole coast, the Seaside area and sites within Samuel H. Boardman State Scenic Corridor.

Table 5. Other Oregon rocky shores visited by interviewees at Harris Beach (n=115 comments). Respondents sometimes mentioned more than one location.

Rocky Shore	Times Mentioned
Newport area	13
Cannon Beach area	9
Samuel H. Boardman SSC	8
Florence area	5
Cape Arago/Sunset Bay	5
Yachats State Park	4
Bandon area	4
Seaside area	3
Lincoln City area	3
Charleston/Coos Bay area	3
Astoria area	3
Couldn't remember name(s)	19
Other sites, including mention of sections of the coast and "everywhere"	36

Interest in Learning More About Rocky Shores

Visitor groups were asked if they were interested in learning more about tidepools on a future visit. Those that responded in the affirmative were then asked about their preferred method of learning (i.e., what type of interpretive method).

Yachats

Forty percent of respondents indicated they were

interested in learning more about tidepools on a future visit. As shown in figure 35, 32% listed their top preference to be a ranger-guided walk/tour. The learning method visitors were least interested in is trailside exhibits (14%).

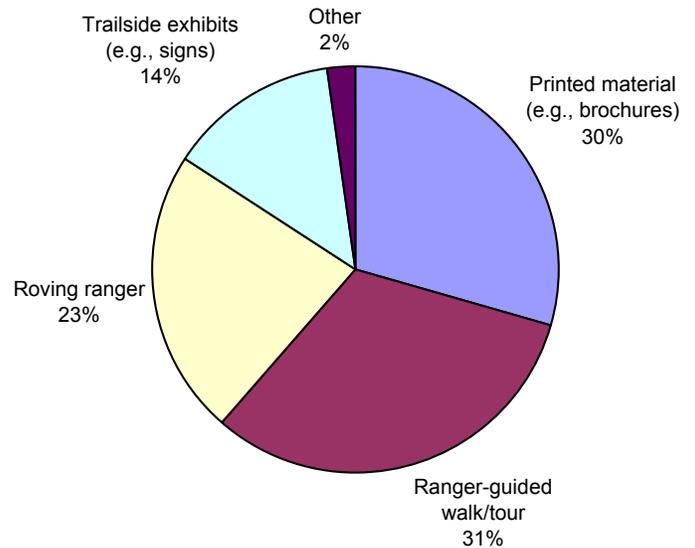


Figure 35. How visitors prefer to learn about tidepools at Yachats (n=44).

Harris Beach

Approximately one-half (47%) of visitors to Harris Beach were interested in learning more about rocky shores (fig. 36). Ranger-guided walks were noted as the most popular option (20%) followed by printed materials (18%).

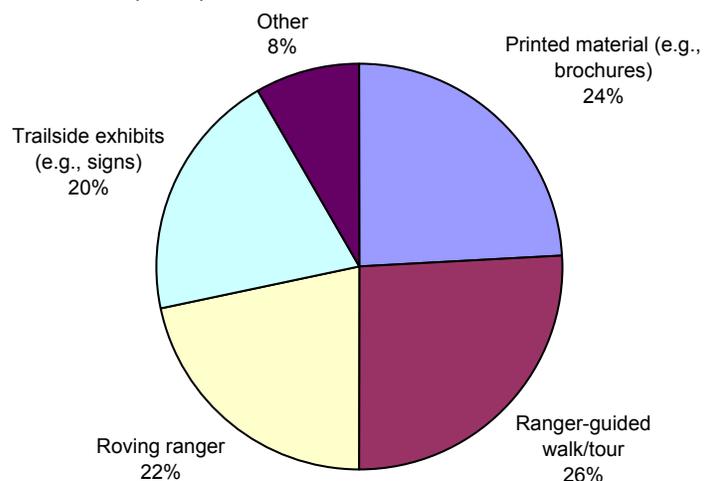


Figure 36. How visitors prefer to learn about tidepools at Harris Beach (n=69).

Again, trailside exhibits were the least popular learning method at five percent. "Other" types of methods mentioned as the top preference for learning included simply being in the tidepool (exploring on their own), integrating programs into school field trips and into the curriculum, and having information on the OPRD website.

Awareness of Rocky Shore Protections

The intertidal areas at Yachats and Harris Beach are part of specially managed areas (Marine Gardens and Research Reserves) where collection of intertidal animals is limited (no collection and no-collection without a scientific and/or educational permit from ODFW). To ascertain whether visitors are familiar with these protected areas or of other protected areas along the coast, interviewees were asked several questions about rocky shore restrictions and the status of intertidal protected areas along the coast.

Plant and Animal Restrictions

Yachats

The first question of this type asked whether they were aware of any restrictions (besides the general fish and wildlife regulations) on plants or animals in this particular section of the rocky shore. 50 percent of visitors indicated they were aware of restrictions

on plants while 72 percent said they were aware of restrictions on animals.

Of the comments from visitors that believed restrictions were in place for animals, no collection was cited the most often at 32% (fig. 37). These were followed by a combination of comments tending toward tidepool etiquette and those that restrict collection somehow. Behavioral restrictions/etiquette included things like not touching (13%), being careful/not disturbing (11%), leaving things in place (10%, and a smattering of other comments. Nobody specifically mentioned the status of the site as a marine garden. For a full list of comments, see the Appendix.

Of the 50% of visitors that indicated they believed there are restrictions on marine plants, the variety of answers (and percentages) is very similar to those for marine animals. Most respondents replied with the same comments for plants as they did for animals. Again, the most popular response is that collection is not allowed (39%) followed by behavioral responses such as being careful (10%) and leaving things in place (8%).

It appears that even without a marine garden sign near the access, the majority of visitors still believe restrictions limit collection of intertidal species to some degree.

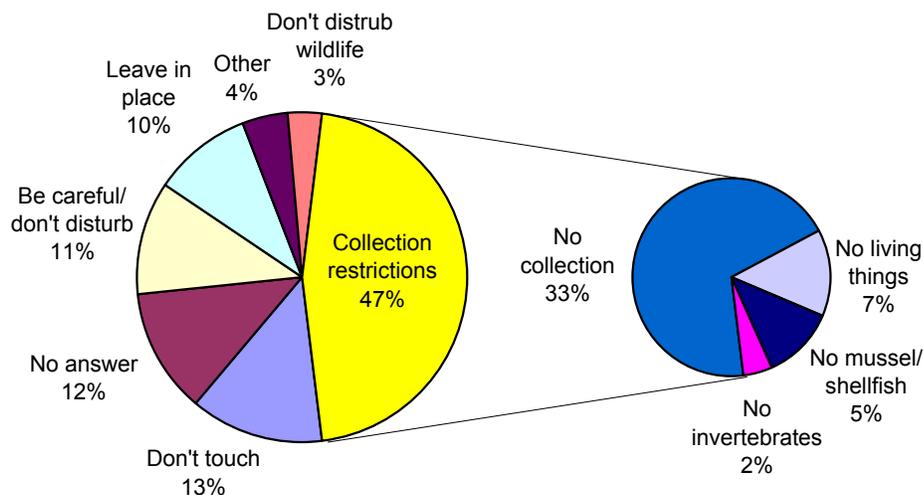


Figure 37. Types of restrictions visitors think that are in place for animals at Yachats. Some respondents had more than one comment (n=91 comments).

Appendix A: Rocky Shore Recreation Use Study

Harris Beach

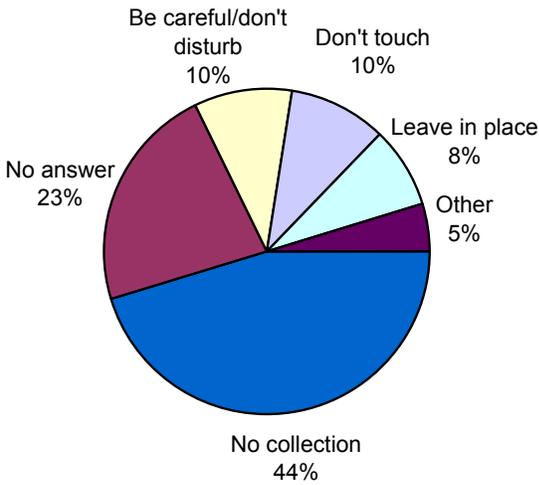


Figure X. Types of restrictions visitors think that are in place for plants at Yachats. Visitors sometimes had more than one response to this question (n=62 comments).

At Harris Beach, 41% of visitors indicated they were aware of restrictions on plants and 50% indicated the same thing for animals (fig. 38).

Of the comments of those visitors that believe there are restrictions on marine animals at Harris Beach, 28% believe that there are limits on collection. This mainly is made up of comments indicating visitors believe all collection is not allowed, however, a few responses specified this limitation only applies to

living things and mussels. Additionally, there are a range of comments (related to tidepool etiquette) that imply that collection is not allowed such as not touching them (8%) and leaving them in place (12%) for a total of 48% of the comments indicating that visitors believe that collection of living tidepool animals is generally not permitted at the site. No visitors mentioned the status of the site as a marine garden and/or research reserve.

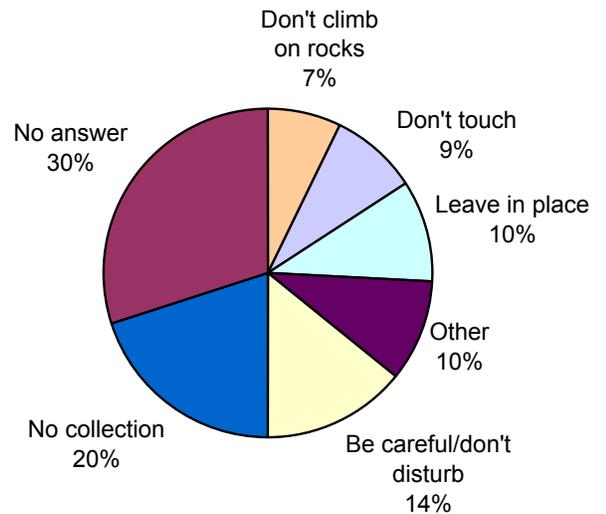


Figure X. Types of restrictions visitors think that are in place for plants at Harris Beach. Visitors sometimes had more than one response to this question (n=70 comments).

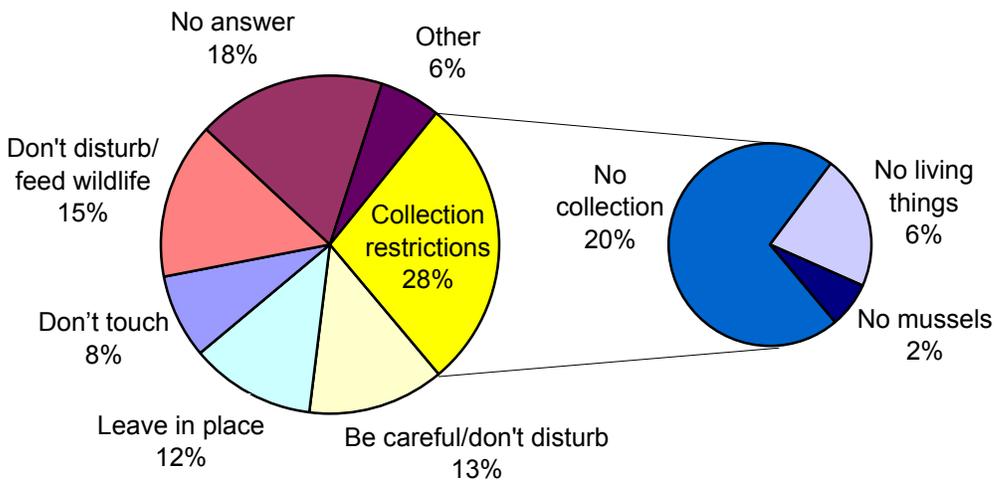


Figure X. Types of restrictions visitors think that are in place for animals at Harris Beach. Some respondents had more than one comment (n=100 comments).

Of the 41% of visitors that believe there are restrictions on marine plant collection, the majority that had an actual response mentioned no collection (20%). Approximately 30% of respondents believed there were restrictions but didn't appear to know what they are. This is followed by a combination of comments related to tidepool etiquette/personal behavior such as not being careful/not disturbing the plants (14%) and leaving them in place (8%). No visitors noted the status of the area as a research reserve/marine garden.

Intertidal Protected Areas

The next question about rocky shore protections asked visitors whether they are aware of tidepool areas along the Oregon Coast having any special protections. If visitors indicated that they were aware of protected areas, they were then asked where those areas are and what kind of protections they have. Visitors were also asked if they support protections (in general) for intertidal areas.

The majority of the intertidal areas adjacent to both Yachats and Harris Beach State Parks are specially designated marine areas called "Marine Gardens". Oregon Department of Fish and Wildlife (ODFW) regulations state that no collection of shellfish and other marine invertebrates is allowed in these areas. Additionally, the intertidal area to the north and south of Harris Beach Marine Garden are encompassed in the Brookings Intertidal Research Reserve. Collection of most intertidal species (except some shellfish) is limited, except by scientific and/or educational research permit.

Yachats

The minority of visitors interviewed (43%) indicated they are aware of intertidal areas having some level of special protection. When probed as to where those areas are and what types of protections are afforded within them, 67% of those visitors indicated they are aware of locations and/or protections afforded to those sites.

When asked to name specific areas, 54% had a response and 74% were able to name some sort

of protection. However, many of those respondents simply indicated they feel the whole coast/all tidepools are protected. Yachats State Park and Yaquina Head were the most frequently mentioned protected areas (17% each). Other sites mentioned by a few people include Strawberry Hill (2), Boiler Bay (1), Cape Perpetua (1), Haystack Rock (1).

The most frequently mentioned types of protection are limitations on collection (56%). Within that category were a range of comments from no collection to specific marine managed designations (marine garden).

Visitors were also asked to what extent they favor or oppose having protected marine (tidepool) areas along the Oregon coast. The majority (65%) of visitors indicated they were strongly in favor of some kind of protections for tidepools. 20% of respondents were somewhat in favor of protections, with approximately 11% neither in favor or opposition. Two percent of respondents were strongly opposed to protections.

Harris Beach

Only 30% of visitors indicated they are aware of special protections for intertidal areas. Of those that did believe there are protected areas, approximately one-half (54%) indicated they are aware of locations and/or protections afforded to those sites.

When asked to name specific areas, 67% had a response and 37% were able to name some sort of protection. Harris Beach itself was the most frequently mentioned protected area followed by two references to areas "near Newport". None of the other responses were mentioned more than once but included sites such as Haystack Rock (Cannon Beach), Cape Perpetua, State Parks (in general), Sunst Bay, Yaquina Head, and Yachats.

25% of those visitors that said they were aware of areas with protections actually were able to come up with what type of protections are afforded in those areas. The most commonly mentioned protection is that there are limits on collection (42%) followed by generally not disturbing/harming tidepools (14%). A

Appendix A: Rocky Shore Recreation Use Study

few other responses included “those posted”, dogs needing to be on leash and “wildlife protections.”

Slightly under half of visitors interviewed (45%) of visitors indicated they were strongly in favor of some kind of protections for tidepools and almost everyone else said they “somewhat favor” protections (30%). Three percent said they somewhat oppose protections and quite a few (21%) neither favor nor oppose protections.

Other information

Suggestions for Improving Visit

Yachats

Only 24% of Yachats visitors had suggestions on ways to improve their visit (Table 6). Improving access

was the most commonly mentioned suggestion, particularly re-doing the old beach access stairs. Other comments focused on improving signage, services and facility maintenance.



Viewing platform and access at Yachats State Recreation Area

Table 6. Suggestions of visitors to Yachats. Some respondents had more than one comment (n=31 comments)

Category	Comment	Times Mentioned
Signage	Improve warning signage about dangers/hazards	2
	Add signs describing tidepool protections/restrictions	2
	Add more interpretive/informational signs	1
	Add signage about packing out garbage	1
	Improve wayfinding signage	1
	Add bilingual signs about rules	1
Services	Add information to the website that visitors can bring to the tidepools	1
	Don't implement a fee	1
	Provide a map with information about public access	1
	Provide information about reducing impacts to tidepools	1
	Provide roving rangers to help improve visitors safety (especially children)	1
Regulations	Don't prohibit agate collection	1
Facilities	Improve beach access (e.g., re-do beach access stairs, provide ADA access)	7
	Add another trash can closer to the parking lot	2
	Explain what the caution tape is for, remove/replace it with something less ugly	2
	Do not build anything else/keep it natural	2
	Add a play area with grass (more scenic than a bunch of parked cars)	1
	Improve restroom maintenance (e.g., frequency of toilet paper replacement)	1
	Provide simple recycling facilities	1
	Improve trail near northern end of park	1

Harris Beach

The vast majority of visitors did not have any suggestions for improving their visit with only 12% citing specific recommendations. The most frequently mentioned suggestion involves improving on-site interpretive signage followed by several comments about not allowing dogs off-leash (Table 7).

Table 7. Suggestions of visitors to Harris Beach (n=22 comments)

Category	Comment	Times Mentioned
Facilities	Leave it natural	2
	Place trash bags/cans near beaches	1
	Provide a closer restroom (on south end)	1
	Improve campsite privacy by planting hedges (site A-9 specifically)	1
	The new access ramp is excessive (waste of money when parks are hurting)	1
	Overflow parking is needed	1
	Need to mark speed bumps better to prevent damage to smaller cars	1
Signage	Improve interpretive signage (etiquette, ecology, restrictions)	5
	Post sign asking visitors to clean up after dogs	1
Services	Improve interpretive opportunities (interpretive/roving rangers)	1
	Continue to have interpreters/naturalists on site	1
Regulations	Dogs should be allowed off-leash	3
	Too many rules/don't over-restrict	2
	There should be a fine for off-leash dogs	1



Main day-use area at Harris Beach State Park (OPRD)

Appendix A: Rocky Shore Recreation Use Study



Yachats (top left) and Harris Beach (bottom) shorelines



Appendix C: Species ranking definitions

DEFINITIONS (ORNHIC, 2007)

LE = Listed Endangered. Taxa listed by the USFWS or the National Marine Fisheries Service (NOAA Fisheries) as Endangered under the Endangered Species Act (ESA), or by the ODA or ODFW under the Oregon Endangered Species Act of 1987(OESA). LT = Listed Threatened. Taxa listed by the USFWS, NOAA Fisheries, ODA, or ODFW as Threatened. PE = Proposed Endangered. Taxa proposed by the USFWS or NOAA Fisheries to be listed as Endangered under the ESA or by ODFW or ODA under the OESA. PT = Proposed Threatened. Taxa proposed by the USFWS or NOAA Fisheries to be listed as Threatened under the ESA or by ODFW or ODA under the OESA. C = Candidate. Taxa for which NOAA Fisheries or USFWS have sufficient information to support a proposal to list under the ESA, or which is a candidate for listing by the ODA under the OESA. SOC = Species of Concern. Taxa which the USFWS is reviewing for consideration as Candidates for listing under the ESA.

ORNHIC List Ranking Criteria:

- List 1 contains taxa that are threatened with extinction or presumed to be extinct throughout their entire range.
- List 2 contains taxa that are threatened with extirpation or presumed to be extirpated from Oregon. This includes extremely rare species.
- List 3 contains taxa for which more information is needed before status can be determined, but which may be threatened or endangered in Oregon or throughout their range.
- List 4 contains taxa which are of conservation concern but are not currently threatened or endangered. This includes taxa which are very rare but are currently secure, as well as taxa which are declining in numbers or habitat but are still too common to be proposed as threatened or endangered.

NatureServe/Natural Heritage Network Ranks

The ranking is a 1-5 scale, based primarily on the number of known occurrences, but also including threats, sensitivity, area occupied, and other biological factors. The top line is the Global Rank and begins with a "G". If the taxon has a trinomial (a subspecies, variety or recognized race), this is followed by a "T" rank indicator. The second line is the State Rank and begins with the letter "S". The ranks are summarized below:

- 1 = Critically imperiled because of extreme rarity or because it is somehow especially vulnerable to extinction or extirpation, typically with 5 or fewer occurrences.

- 2 = Imperiled because of rarity or because other factors demonstrably make it very vulnerable to extinction (extirpation), typically with 6-20 occurrences.
- 3 = Rare, uncommon or threatened, but not immediately imperiled, typically with 21-100 occurrences.
- 4 = Not rare and apparently secure, but with cause for long-term concern, usually with more than 100 occurrences.
- 5 = Demonstrably widespread, abundant, and secure.

H = Historical Occurrence, formerly part of the native biota with the implied expectation that it may be rediscovered; X = Presumed extirpated or extinct; U = Unknown rank; NR = Not yet ranked.

Rank Qualifiers: Q = Questionable taxonomy. Global ranks sometimes have a "Q" at the end. This indicates that there are questions related to the taxonomic validity of the taxon. Range Ranks = Ranks with more than one value. These can be G1G2, G1G3, etc. These indicate that the predicted final rank would be within the range, but with no indication of preference among the possibilities.

More details on the Heritage Ranking system and more definitions can be found at the NatureServe web site: <http://www.natureserve.org/explorer/ranking.htm>

ODFW Sensitive Species List categories:

VULNERABLE (SV) - "Vulnerable" sensitive species are not in imminent danger of being listing as threatened or endangered, but could become "sensitive-critical," "threatened," or "endangered," with changes in populations, habitat or threats.

ODFW Nearshore Strategy Species (NRStr) are also listed in this plan. Strategy species are nearshore species that were identified to be in greatest need of management attention. Identification as a strategy species does not necessarily mean the species is in trouble. Rather, those identified as a strategy species have some significant nearshore management and/or conservation issue connected to that species that is of interest to managers (ODFW, 2006).

Stakeholder and Public Involvement

(Update after public meeting)

Stakeholder Meeting

A stakeholder meeting of invited participants was held on October 19th. The meeting notes are included in this Appendix (E) which includes a list of the people that attended. Several more people were invited but did not attend. In addition to having the option to provide input at the meeting, all invited members were kept up-to-date with information about submitting comments on the draft plan and the public meeting. They were all presented with the option for a face-to-face meeting to provide input directly (in the event that they couldn't attend the committee meeting). Several members provided written comments on draft versions of the plan and are all acknowledged in the plan.

Public Meeting

A press release was issued noting the subject, time and location of the public meeting (a copy is included in Appendix E). A brief notice appeared in the Coos Bay World prior to the meeting (UPDATE if more). A note about the meeting was posted on OPRD's Twitter account which has over 5000 followers. The "tweet" provided a link to the planning website with meeting information and how to comment. An e-mail was sent out to the stakeholder e-mail list, which includes all members of the stakeholder committee and anyone that has indicated an interest in this process. The e-mail recipients were asked to share information about the meeting.

X people attended the meeting on 16 December 2010. The meeting notes are included in this Appendix (E). News coverage?

Public Comment Period

Following the public meeting, there was an approximately two week written comment period (Dec. 16th-Jan.3rd). Information for submitting public comments was presented at the public meeting and posted on the OPRD website. Information was also included in the news release issued prior to the public meeting. A brief notice appeared in the Coos Bay

World regarding the meeting and comment period. X comments were received during the public comment period and those are summarized in the meeting notes and included in this appendix.