



# Transit Access Study Point Reyes National Seashore

# Final Report

PMIS 129987



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## Executive Summary

Point Reyes National Seashore (PRNS) offers San Francisco Bay Area residents and visitors the opportunity to experience relatively untouched wilderness, including unspoiled beaches, hiking, bird watching, and other outdoor activities, in a spectacular setting. Situated in northwest Marin County just 30 miles from downtown San Francisco and therefore within a 90 minute drive of millions of Bay Area residents, the Seashore is accessible only by narrow, winding roads. Preserving this remote environment and the rural character of the surrounding area is part of the park's purpose and mission. The park must also accommodate 2 million visitors each year safely and with minimum impact on the natural environment.

The park's permanent rural and natural character presents a special set of transportation challenges. PRNS has longstanding plans to improve transportation conditions, reduce congestion, and lessen environmental impacts by promoting alternatives to private automobile use within the park.

PRNS has one on-going public transit service. The winter shuttle, which is sometimes called the headlands shuttle, operates between the Drakes Beach Visitor Center and the Headlands Lighthouse area from the last Saturday of December until mid-April, and provides access to an area of the park that is not open to auto travel during this sensitive period. The shuttle, which began operation in 1998, was implemented to avoid both environmental concerns and visitor experience concerns related to long parking queues at the lighthouse area during whale watching season.

A second shuttle was pilot tested in July of 2008. This service connected the Bear Valley Visitor Center with Limantour Beach. The free shuttle was designed to provide an alternate method of accessing the busy beach area and to provide opportunities for one-way hikes within the park. The shuttle operated on four weekends in July of this year.

This study includes an evaluation of both shuttle services as well as other transportation conditions within the park and makes recommendations for an improved transportation system at Point Reyes.

Recommendations are included in four areas:

### 1. Upgrade the existing winter shuttle service to Point Reyes Headlands.

An evaluation of the existing Point Reyes Headland Shuttle finds that the service does an excellent job of providing access to the Point Reyes Lighthouse and Chimney Rock while eliminating traffic congestion and parking limitations at the Lighthouse. Shuttle customers rate the service very highly. However, several small changes to the service could allow for significant improvements in visitor experience.

The following recommendations, described in detail in this report, would enhance the winter shuttle operation:

- Enhance winter shuttle stops for improved visitor safety, wayfinding, and accessibility.
- Operate at fixed headways for improved system efficiency.
- Continue to operate the existing larger (45-passenger) buses to maximize passenger capacity at reasonable cost.



- Continue to investigate alternative fuel vehicles to reduce emissions.

### **2. Do not implement the summer shuttle on a permanent basis at this time.**

The 2008 summer beach shuttle succeeded in several ways. Shuttle passengers rated the service very highly, and nearly all expressed an interest in riding the shuttle again. It served an unexpectedly large share of one-way trips, providing the opportunity for a unique experience at PRNS. On some days, it attracted a relatively large number of passengers. However, the shuttle also had a number of challenges. In particular, on some days, it had few riders, resulting in low overall productivity, as measured in passengers per service hour. In addition, the shuttle was implemented entirely using grant funds and was free to passengers. It has no dedicated ongoing funding, and its summer 2008 cost per boarding, at \$17, was unacceptably high. Given the uncertainty of funding and the shuttle's other challenges, the park cannot proceed with permanent implementation of the summer shuttle service at this time.

However, recognizing the promise demonstrated by the 2008 pilot's successes, the park should consider implementing an adjusted version of the shuttle service in the future should funding become available. An adjusted service, along with early, targeted marketing designed to take advantage of the lessons learned from the 2008 pilot, could accentuate the service's strong points and generate greater interest among park visitors. Should the park choose to implement the summer shuttle again in the future, it is recommended that it:

- Start the service no earlier than 11 AM.
- Operate at 30-minute headways rather than every 35 minutes.

- Mark shuttle stops more clearly and provide information at the stops.
- Conduct targeted marketing, beginning in the spring.

### **3. Develop coordinated marketing with the West Marin Stagecoach.**

User-friendly marketing and useful public information are key elements of successful transit systems. This report recommends that PRNS establish a marketing effort to inform the public about the availability of transit service to the park.

It also recommends that, if PRNS implements the summer shuttle in the future, it should use an aggressive marketing campaign to communicate the benefits of using the shuttle to all park visitors, and generate expanded ridership by targeting specific populations. A basic marketing effort should consist of branding; passenger information; and an expanded internet presence. A more robust marketing campaign, to be undertaken if resources are available, should include a public relations and advertising campaign, as well as paid media. The 2008 summer shuttle pilot program revealed that the target audiences for shuttle marketing should include: Olema and Samuel P. Taylor campers; PRNS backcountry campers; West Marin residents; and out-of-town visitors. Marin County Transit is currently completing an evaluation of its West Marin service. This may be an opportunity for partnership between the park and the Transit District to better coordinate service, including potentially establishing a summer "through route" to provide a single seat ride to the beach.

#### **4. Explore funding options for continued shuttle service.**

This report explores opportunities to pay for the existing winter shuttle. The current operating deficit for the wintertime Headlands shuttle is estimated to be \$33,424, at a fare of \$5.00 per passenger. Deficits on the winter shuttle have historically been covered through Visitor Center donations. The park can continue to fund some or all of the winter shuttle's operating deficit in this way. It should also consider raising the fare for the winter shuttle, and it should pursue federal funding through the Federal Transit Administration's Paul S. Sarbaines Transit in Parks Program and the National Park Service's Park Roads and Parkways Program, Category III - Alternative Transportation Program, which is funded through the Federal Lands Highway Program.

This report also documents the operating deficit that PRNS would face if it chose to implement the summer beach shuttle on a permanent basis. Implementing the summer beach shuttle would add between \$11,000 to \$43,000 in additional costs, depending on how much service the park chose to provide. Pilot shuttle costs have been paid using grant funds, but these funds are not available for ongoing service costs.



# Point Reyes Transit Access Study

This report describes the outcomes of the Point Reyes Transit Access Study. It includes a summary of existing transportation conditions at Point Reyes National Seashore (PRNS), and provides evaluations of two existing transit services at the seashore: the Point Reyes winter shuttle and the July 2008 pilot test of a shuttle service between the Bear Valley Visitor Center and Limantour Beach (the “pilot summer shuttle”).

Based on the information made available through these evaluations, this report proposes three sets of investments that could improve transportation and visitor experience at the park.

## 1. Point Reyes National Seashore

Point Reyes National Seashore offers San Francisco Bay Area residents and visitors the opportunity to experience relatively untouched wilderness, including unspoiled beaches, hiking, bird watching, and other outdoor activities, in a spectacular setting. Situated in northwest Marin County just 30 miles from downtown San Francisco and therefore within a 90 minute drive of millions of Bay Area residents, the Seashore is accessible only by narrow, winding roads. Preserving this remote environment and the rural character of the surrounding area is part of the park’s purpose and mission. The park must also accommodate 2 million visitors each year safely and with minimum impact on the natural environment. The park’s permanent rural and natural character presents a special set of transportation challenges. PRNS has longstanding plans to improve transportation conditions, reduce congestion, and lessen envi-

ronmental impacts by promoting alternatives to private automobile use within the park.

The PRNS has 150 miles of roadways, 160 miles of hiking trails, and 8,500 acres of sensitive resource areas. It provides a wide variety of experiences, including hiking, camping, beach-going, birdwatching, as well as interpretive programs provided by park staff. Seasonally, the park is also a prime location for observing sea mammals, including northern elephant seals and whales. Figure 1 shows an overall map of the Point Reyes National Seashore and its setting.

A survey of park visitors found that hiking and going to the beach were the most popular activities at the Seashore. Bird watching, going to the visitor center, picnicking, photography, and whale watching also attract significant numbers of visitors.

Major destinations at the Seashore include a diverse network of hiking trails, beaches, and several museum and educational facilities. Although the Seashore’s open ocean beaches are not safe for swimming, they remain a significant attraction to visitors who come for their natural beauty. Point Reyes Lighthouse draws large numbers of visitors, particularly during whale migration season. There is one hostel in the park, Point Reyes American Youth Hostel (AYH), located off Limantour Road.

Important areas of the park include:

- The primary park entrance, situated between Olema and Inverness on the east side of the park. This area is home to the Bear Valley Visitor center, the park’s main visitor center.
- Another visitor center, at Drakes Beach. The Ken Patrick Visitor Center includes an aquarium, several whale fossils, and a cross section of a sixteenth century cargo ship.

- Limantour Beach, where visitors may swim, wade, and picnic. Limantour beach was the destination of the Summer Shuttle.
- Between Drakes Bay and Limantour Beach, Drakes Estero and Estero de Limantour are popular with birdwatchers. Kayakers also enjoy Estero de Limantour
- Point Reyes Peninsula, which provides the experience of beautiful cliffs and beaches on the Pacific Ocean side of the park. A major attraction in this part of the park is the Point Reyes Lighthouse. Between late December and mid-April, this area offers views of migrating gray whales, one of the park's major visitor attractions. The lighthouse is the destination of the Point Reyes Headlands Shuttle.
- Tomales Point, located in the park's north end. The area has very little development and is home to California's second largest population of Tule Elk. Visitors may go canoeing at Abbots lagoon, and bird watching is also very popular. Tomales Point Trail is the most important hiking trail in this part of the park.
- The Phillip Burton Wilderness, which is contained within the area bounded by Limantour Road on the north and the Palomarin PRBO Science Fieldstation area to the south, near the town of Bolinas. Visitors to this area may camp, hike, canoe, and ride horses. A bird observatory is located near the Palomarin trailhead.

## Visitation

Point Reyes National Seashore attracts close to 2 million visitors per year. With the exception of four years in the 1980s when the park was severely impacted by road and trail closures due to flooding, visitation generally trended up for

more than three decades, from the late 1960s through the early 1990s. The park saw its highest visitation in 1993, when nearly 2.6 million people visited. Visitation has declined slightly since then, consistent with national trends. In 2006, slightly less than 2.1 million people visited Point Reyes National Seashore, roughly matching visitation rates during the early 1980s.<sup>1</sup>

Visitation at the park varies significantly with the seasons, however. Park staff reports that while peak visitation tends to coincide with summer and fall weekends with good weather, President's Day weekend in February is usually the busiest time of the year. President's Day often coincides with the peak of whalewatching season, and is often a weekend when both locals and visitors to the Bay Area come to Point Reyes.

## 2. Transportation Conditions

Point Reyes National Seashore is served by a network of winding, two lane roads. Inside the park, these roads generally provide an acceptable level of service to autos. The park also has sufficient parking available to meet the demand for free parking within the park, although some lots have localized shortages and overflow parking on roadways occurs during peak times.

Public transit is available to and from the park on the West Marin Stagecoach, a service provided by Marin Transit. The North Route 68 of the Stagecoach serves the Bear Valley Visitor Center four times daily in both Eastbound and Westbound directions seven days per week. A fifth, midday run is provided on Tuesday, Thursday, and Sat-

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<sup>1</sup> Point Reyes National Seashore Visitation data. National Park Service.



Figure 1 Point Reyes National Seashore



Source: Point Reyes National Seashore Staff

urday. The Coastal Route 62 of the West Marin Stage provides flag service through the park along California Route 1 three times per day on Tuesday, Thursday, and Saturday.

Historically, the park encountered major auto congestion and insufficient parking in the headlands area near the Point Reyes Lighthouse on weekends and holidays during whale migration season, from December to April. The park has solved this problem by closing the route to the headlands, Sir Francis Drake Boulevard, within the park during periods of peak demand, and providing a shuttle bus service to the lighthouse. This service is contracted to Marin Airporter, which provides 45-passenger diesel motorcoaches.

During the summer of 2008, Point Reyes National Seashore completed a pilot of a second shuttle service, operating between the Bear Valley Visitors Center and Limantour Beach, stopping at a trailhead along the route. The goals of this service included reducing parking demand during peak times in areas where parking is constrained as well as providing visitors with new experiences at Point Reyes, including increasing opportunities for one-way hikes.

## Visitor Trip Profile

The data from the last survey of the general park visitor population (completed in 1998) reveals that the vast majority of Point Reyes National Seashore visitors arrive by private automobile.<sup>2</sup>

<sup>2</sup> The park's most recent visitor survey was conducted in 1997 and 1998 by students and faculty from Sonoma State University. This survey gauged means of travel, duration of stay, group size, trip purpose, visitor satisfaction, and many other visitor characteristics for the general population of park visitors. The project collected data during all four seasons of the year. Ferry, Dana and Coby LaFayette. "Point Reyes National Seashore: Visitor Use Survey."

About seven percent arrive by tour bus, and two percent arrive by bicycle. West Marin Stage service to the park has begun since the completion of the survey, but very few park visitors currently ride the Stage. The survey also shows that the park is a day trip for most visitors: Nearly 60 percent of all visitors spend between two and six hours in the park. Just one in 10 visitors stays less than two hours, and visitors tend to stay longer during warmer weather seasons. About a third of visitors stay overnight at or near the park.

Almost nine out of 10 visitors (86 percent) arrived at the park with friends or family, and just five percent arrived alone. Of those arriving in a vehicle, about 45 percent had two or fewer passengers, 35 percent had three to four passengers, and about 20 percent had five or more passengers. Average vehicle occupancy was 3.2 persons.

While one in five visitors travels to the park from outside of California, two-thirds originate in the nine-county San Francisco Bay Area, making Point Reyes of particular significance to the local community. Twenty-seven percent of visitors originate in San Francisco or the San Francisco Peninsula. Sixteen percent originate in the East Bay (including Contra Costa and Alameda Counties) and 31 percent originate in the North Bay, including Marin, Sonoma, Napa, and Solano Counties. Fifteen percent of park visitors begin their trip in Marin County. Visitors originating in Marin are of particular note when studying transportation options for the park, as these visitors are the group that is most practical to serve with transit to the park.

One of the most important challenges to consider when evaluating public transportation for the park is the complexity of serving a variety of



destinations and activities across a very large area. A further challenge is that while three quarters of respondents indicated that going to the park was the major purpose of their trip that day, just half (52 percent) said that the park was their only destination in the course of their trip. This suggests that many visitors to the park are not simply traveling from home to the park and back, but rather are making complex trips involving multiple destinations.

## Facilities

### Bicycle and Pedestrian Access

The communities surrounding Point Reyes National Seashore are low density and rural in character, and opportunities for pedestrian travel are limited. Bicycling and walking on Sir Francis Drake Boulevard can be difficult because of the narrow shoulder. This lack of shoulder presents a safety hazard to bicyclists. The Cross-Marin Trail is a multi-use path that approaches the park from the east. Inside the park, Bear Valley Trail receives the heaviest bicycle traffic. The park and surrounding area also draws some long-distance cyclists, who use the roadway, particularly on weekends. There are no designated bike lanes in the park.



Highway 1 Approaching Point Reyes National Seashore

## Roadways

While Point Reyes National Seashore is accessible to the Bay Area's population by car, getting to the park from most parts of the region requires a substantial drive over winding roads. Access to the park requires a drive of at least an hour on any of several significant access roads, including Southbound California Route 1, Petaluma Road, Sir Francis Drake, or Lucas Valley Road.

Major roads within the park include the following:

- The major state highway in the area of the park, and passing through it, is California Route 1, a scenic two-lane road running north-south along the eastern edge of the park. Traveling from the south, the road passes through Olema and Point Reyes Station before turning to pass along the eastern edge of Tomales Bay.
- Sir Francis Drake Boulevard is the most important regional road running into the park. It runs north-west, traveling the full width of Marin County. It passes through Inverness and Point Reyes Station before entering the park near its midpoint and then proceeding to the park's westernmost point, in the headlands. It takes about 43 minutes to drive to the lighthouse from Bear Valley Visitor center.
- Limantour Road is a winding, scenic road through the park with no signalized intersections. It is maintained by PRNS. The road begins at Bear Valley Road near Inverness Park, and travels south, crossing Inverness Ridge and ending at Limantour Beach. Limantour Road is the primary route for the proposed Summer Shuttle.
- Bear Valley Road is a short road connecting California Route 1 (at Olema) to Sir Francis Drake (at Inverness Park). The park's administrative headquarters and the Bear Valley Visitor center are located off of this road, and it also provides access to Bear Valley Trail and nearby campsites.

- Pierce Point Road is a narrow roadway, but it is the major road serving the north section of the park. It begins at the northernmost point of Sir Francis Drake, running between Point Reyes National Seashore and Tomales Bay State Park, and then extending into the north section of the park to the Tomales Point Trailhead.

Roadway automobile Levels of Service (LOS) inside and immediately adjacent to the park were assessed at several key roadway points in 1998 as part of the Point Reyes National Seashore Transportation Study. These counts show that auto traffic tends to be higher in the afternoon than in the morning peaks. While these measurements were taken in 1998, projections made at that time did not forecast significant changes in these levels of service by 2020.<sup>3</sup>

## Parking

Point Reyes National Seashore has 10 large parking lots, which include a total of 1,116 spaces. It also has 13 other small parking lots where capacity and occupancy were not measured.

Of the largest parking lots, there are 334 spaces in three lots at the Bear Valley Visitor Center, and 414 spaces at Drakes Beach. There are 130 marked spaces at Limantour North, and the Limantour South lot has 16 spaces. The remaining spaces are spread across lots at Pierce Point Ranch, Chimney Rock, Five Brooks, and the Palomarin Trailhead.

Current parking occupancy estimates are based on the 1998 observations, adjusted for the slight decline in park visitation through 2005.

Projections suggest that parking demand exceeds supply in three locations during peak times. When

demand exceeds the supply of marked spaces, visitors park on the roadway. Overflow parking creates safety and natural resource concerns, as well as having a negative impact on visitor experience.

As of the last parking count, demand for parking at the Point Reyes Lighthouse during peak times was nearly three times the supply of 39 marked spaces. The park has resolved this situation by closing the road to the Lighthouse during peak whale-watching season, and introducing the Point Reyes winter Headlands shuttle. More information on the winter shuttle is included in Section 3 of this report.

Park staff has also observed occasional overflow parking at Limantour Beach during good-weather weekends in the summer. The parking counts conducted in conjunction with the summer shuttle pilot program found that the large 130-space Limantour North parking lot approached capacity only on the busiest days, but that the smaller (16-space) Limantour South lot routinely overflowed onto its narrow access road. For information on parking occupancy at Limantour Beach, see Section 4 of this report.

The last detailed parking counts at Bear Valley Visitor Center found that the two lots at that site had a combined 68 free spaces at peak occupancy. Observations made during the summer pilot shuttle data collection effort for this study found that, this level of occupancy is typical on many weekend days; however during peak times during the busiest days at the park parking at the Visitor Center fills to capacity.

In other locations, there is ample parking available. The park's largest parking lot, at Drakes Beach, had estimated peak occupancy of just 22

<sup>3</sup> Point Reyes National Seashore Transportation Study Final Report. BRW Inc and Lee Engineering, 1999.



percent, with 300 spaces available. This lot is the pickup point for the winter shuttle.

Average vehicle parking duration in 1998 varied from about one hour at the Point Reyes Lighthouse to three hours at Five Brooks. Total average parking duration for all lots was about two hours.<sup>4</sup>

Based on projections of growing park visitation, the park anticipates parking demand increasing 18 percent by 2020. This level of growth would put total peak occupancy at 907, still below the observed 1998 level overall while it remains possible to meet parking demand on most days with existing supply, parking overflows do occur on peak days and park staff does not anticipate adding new parking capacity in the future.

### Transit

Currently, the overwhelming majority of travel both to and from the park and within its boundaries is made in private autos. However, both Marin Transit and Point Reyes National Seashore offer public transportation choices, which are described below. Private tour buses are also allowed in the park, but not all areas are available to them. For safety reasons, private buses cannot travel on the narrower roadways, such as Lighthouse Road and Lifeboat Station Road.

#### *West Marin Stagecoach*

Marin Transit operates the West Marin Stagecoach in the rural, western part of Marin County, including service in the Point Reyes area. The Stagecoach began as a two-year demonstration project, with the original purpose of increasing

transportation options for seniors and youth in Western Marin. Two routes provide service to Point Reyes National Seashore.

The North Route 68 of the Stage operates from San Rafael to Inverness on Sir Francis Drake Boulevard. Route 68 stops at the Bear Valley Visitor center four times daily eastbound and four times daily westbound (a fifth run is added on Tuesdays, Thursdays, and Saturdays). Passengers from throughout Marin County and San Francisco can make connections with the North Route 68 Stagecoach at San Rafael. Travel time from San Rafael to the Bear Valley Visitor Center is about 41 minutes. Service has been operating six days a week to the Visitor Center only since April 1, 2007, and Sunday service was added in April, 2008. In June 2007, the North Route of the West Marin Stagecoach carried 1,517 passengers. This amounts to just under five passengers per revenue hour, including 5.3 on weekdays and 3.5 on Saturdays.

While the North Route does provide service to the park, few visitors choose this option. During the entire month of June 2007, for example, just 11 passengers boarded at the Bear Valley Visitor Center stop, the only stop currently offered inside the park. However, during the July 2008 operation of a pilot shuttle service from the Bear Valley Visitor Center to Limantour Beach, about 8 percent of pilot shuttle passengers arrived at the park aboard the West Marin Stage. This suggests the potential for expanded transit ridership to the park if connecting transit options can be enhanced. See Section 4 of this document for more information on the summer pilot shuttle.

Marin Transit's new Coastal Route 62, in operation since April 1, 2007, operates on Tuesday,

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<sup>4</sup> Parking Capacity and Occupancy Projections: Point Reyes National Seashore General Management Plan Table 43. From Point Reyes National Seashore Staff.

Thursday, and Saturday, and makes three trips per day in each direction on California Route 1 between Stinson Beach/Bolinas and Point Reyes Station. The majority of this route traces the park's eastern boundary. While the Coastal Route 62 has no official stops within the park, the West Marin Stage is a "flag stop" service that will stop to pick up passengers at any safe location. There has not been transit service to the area on Sunday since Golden Gate Transit Route 65 stopped operation in 2003.

During June 2007, the newer Coastal Route carried a total of 204 passengers, for a total of 1.85 passengers per hour. As with the North Route, the Coastal Route carries more passengers on weekdays than on Saturdays (1.62). Marin Transit does not have a record of how many, if any, passengers have boarded the Coastal Route by flagging it inside the park.



**Lighthouse Visitor Center**

While both of these services provide unique opportunities for a potentially "car free trip" to PRNS, they are not well advertised as a recreational service, either by Marin Transit or by the park. Recommendations for coordinated marketing of the West Marin Stage to recreational users and improved shuttle marketing are included in Section 4 of this report.

Marin Transit has recently begun a needs assessment to study opportunities to improve transit service in West Marin, including service to residences, jobs, community resources, and recreational areas. This study provides the opportunity for Marin Transit and Point Reyes National Seashore to collaborate and consider ways that they might jointly improve recreational transit opportunities in the area.

### **3. Point Reyes Winter Headlands Shuttle**

One of PRNS's major attractions is the population of migrating gray whales that transit the coast in late winter and early spring. The whales can be seen from the Point Reyes Lighthouse, and they attract a large number of visitors to this part of the park. Sir Francis Drake Boulevard is a narrow roadway in this area, and there are just 39 spaces available in the Lighthouse parking lot. Because of these circumstances, Sir Francis Drake Boulevard is closed west of Drakes Beach access road on weekends and holidays from park opening until 5:30 PM. Visitors may still travel to the lighthouse using the Point Reyes winter Headlands shuttle, the one transit service currently operated by the park, prior to July 2008. The winter shuttle runs from the Drakes Beach parking lot to the lighthouse and Chimney Rock. This service operates only on weekends from late-December to mid-April, in order to relieve crowded road conditions on the park's narrow roadways and to reduce the impact on natural resources. One of the focuses of this study has been to assess the operations of the existing shuttle service, and to consider ways that the service might be improved. The outcomes of



Figure 2 Point Reyes Existing Transit



this evaluation are described in Section 3 of this report.

PRNS currently contracts with Marin Airporter to run the winter shuttle with 45-passenger diesel motorcoaches. The fare for the shuttle is \$5.00 for adults and free to children under the age of 16. Tickets are available at the Drakes Beach visitor center. Passengers purchase a ticket and then wait in line for the shuttle, which departs Drakes Beach approximately every 20 minutes from 9:30 AM to 3:30 PM. Passengers may have to wait up to an hour during the busiest times as buses fill up quickly.

A total of 13,394 riders rode the shuttle during whale-watching season in 2007, up significantly up from the 8,001 who rode it in 2006. Because the shuttle operates only when weather conditions will result in high demand for visitation to the lighthouse, the number of days of service varies from year to year. Park staff checks weather conditions before deciding whether to call for shuttle service. The shuttle operated 27 days in 2007, compared with 17 in 2003. Therefore, while ridership was up significantly in 2007, the number of riders per day of service actually fell, with just under 500 riders in 2007, compared with over 570 passengers per day in 2003.

In 2007, the total cost of the contracted buses was just over \$75,000, and the park also paid roughly \$12,000 for additional staffing for ticket sellers and staff to help direct passengers and bus operators. About 80% of passengers paid the \$5 fare (children under 16 ride for free). Total revenue collected from ticket sales was \$53,513, and the system's operating deficit was \$33,717. These costs result in a cost-per-passenger for the shuttle system, including buses, parking-lot staff,

and ticket sellers of approximately \$6.51. Subsidy-per-passenger was approximately \$2.50. The shuttle's deficit is currently funded using revenues from Visitor Center donation boxes, the only funds over which Park staff have full discretion. See Section 5 of this report for a discussion of funding options for the winter shuttle.

Further information about the passenger experience on board the Point Reyes winter Headlands shuttle is provided below.

**Winter Shuttle 2008  
Passenger Survey Findings**

Understanding the background and experience of customers of the park's existing transit service can help the park as it considers changes to that shuttle, as well as investments in transportation in other parts of the park. Nelson\Nygaard conducted a survey of riders on board the Point Reyes headlands shuttle on Saturday, February 9th and Sunday, February 10th, 2008. The survey gathered information on shuttle riders' travel patterns, experiences riding the shuttle, and attitudes toward transportation alternatives. Survey findings are described below. A second survey, conducted on board the pilot summer shuttle operated during July 2008, is described in Section 4 of this report.

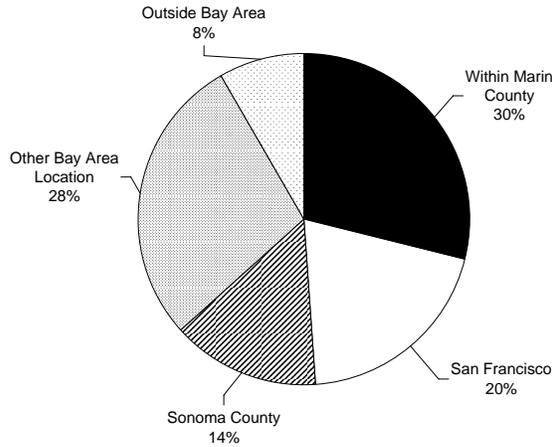
**Travel to and within Point Reyes**

More than 90% of survey respondents began their trips in the San Francisco Bay Area. Just under half of respondents began their trip in Marin County (30%), or in adjacent Sonoma County. One in five trips began in the City of San Francisco, and the remainder, slightly more than one-quarter of all trips, started from another point in the Bay Area. The large percentage of shuttle riders origi-



nating outside of Marin suggests that a majority of respondents had already traveled an hour or more before boarding the shuttle.

**Figure 3** “Where did you begin your trip to Point Reyes National Seashore from today?”



Respondents were asked what mode of transportation they used to travel to the Seashore. Approximately 95 percent of respondents had driven or been a passenger in a private vehicle. Like general park visitors, the vast majority of shuttle riders come to the park in their own vehicles, with the remainder coming in rental vehicles

Survey respondents were also asked where they lived. Of the 384 respondents who answered this question, 17 percent lived in Marin County and 15 percent lived in the city of San Francisco. Forty-four percent of survey respondents lived in the seven other counties of the greater Bay Area, including 14 percent in Sonoma County, 18 percent in the East Bay, nine percent in the South Bay, and three percent in Napa and Solano Counties. Seven percent live in California counties outside of the Bay Area.

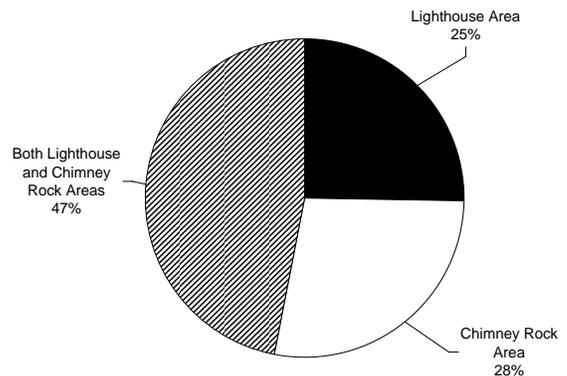
Ten percent of respondents live outside of California, a share that is significantly smaller than the

one-third of general park visitors surveyed who said they were from out-of-state in the 1997-98 Sonoma State survey. This difference is expected, because the Sonoma State survey was conducted throughout the year, whereas the Point Reyes winter shuttle survey occurred during the winter.

### Trip Destinations

All winter shuttle passengers board the shuttle for the first time at the Drakes Beach Visitor Center. The shuttle trip proceeds from Drakes Beach to the lighthouse, continues to Chimney Rock, and then returns to Drakes Beach, giving passengers the option of visiting one or both destinations. About half of survey respondents visited both destinations. Those who visited just one destination were roughly evenly split between the lighthouse and Chimney Rock. It should be noted that during the weekend of the survey, there were few whales spotted in the lighthouse area and numerous elephant seals seen at Chimney Rock. This fact might have influenced the destination choices of shuttle passengers.

**Figure 4** “What destinations did you visit from the Shuttle?”



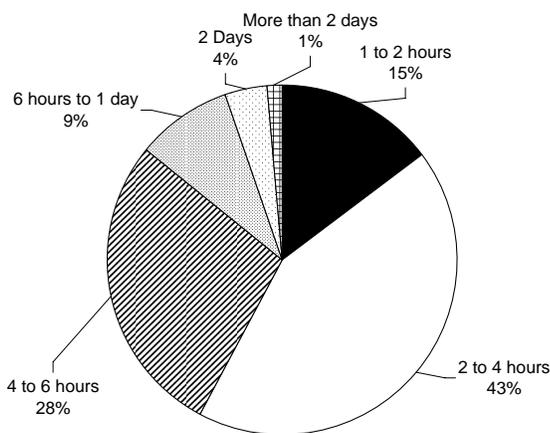
About two-thirds of the headlands shuttle riders chose to visit additional destinations in the park during their visit. Drakes Beach, the shuttle’s origin point, was, not surprisingly, the most com-

mon of these other destinations. About a fifth of all passengers visited the Bear Valley Visitor Center, nearly one in 10 visited Tomales Point, and just three percent visited Limantour Beach. Limantour Beach is one of the park’s most popular destinations during the summer, but it is lightly visited in the winter. Six percent visited another destination within the park.

### Trip Durations

A large majority of survey respondents planned to spend less than a full day at Point Reyes National Seashore. Fifteen percent planned a short visit of one to two hours, and 71 percent planned to spend between two and six hours. Five percent of survey respondents planned to spend more than one day at the park. This is consistent with the 1997-98 Sonoma State survey of general park visitors, which found that three out of five respondents planned to spend between two and six hours in the park, and just less than one-quarter said they would be staying one or more nights, either in the park or nearby.

**Figure 5 “How much time will you spend visiting Point Reyes National Seashore during this visit?”**



### Shuttle Experiences

Survey respondents rated various attributes of the existing service. Overall, responses were strongly positive: in seven out of nine categories (quality of buses, driver courtesy, convenience of stops, ease of finding bus stops, frequency, and on-time performance), 90 percent or more of respondents described service as “very good” or “good.” The most positive responses came in the category of “driver courtesy”: Almost 99 percent of respondents indicated “very good” or “good” in this category.

Passengers’ high ratings of “quality of vehicles” is notable because park staff has expressed some concern that the large diesel vehicles provided by Marin Airporter were oversized for the parks’ narrow roadways. Based on both customer observations and interviews with bus operators on duty during the data collection period, there does not appear to be a real problem with the larger buses given the lack of competing traffic on the road.

While still positive, passenger ratings were somewhat less enthusiastic in two categories: 72 percent of respondents indicated that amenities at bus stops were “good” or “very good,” and 80 percent of respondents thought highly of the “information at bus stops.” The shuttle currently lacks all but the most basic bus stop amenities. At Drakes Beach, orange cones designate the bus stop, and passengers line up for the shuttle as instructed by park staff. No benches, shelter, or permanent signage is present. There is a basic shelter and benches available at the lighthouse stop, but little information.

Reflecting the service’s generally positive ratings, a large majority of respondents (71 percent) said they would use the shuttle in the future, and



another 22 percent said they “probably” would, for a total of 93 percent. It should be noted that on winter “whale watching” days, the shuttle is the only option for travel to the lighthouse and Chimney Rock. Personal vehicles are prohibited from the area, as parking is limited and demand is high when sea mammals are visible.

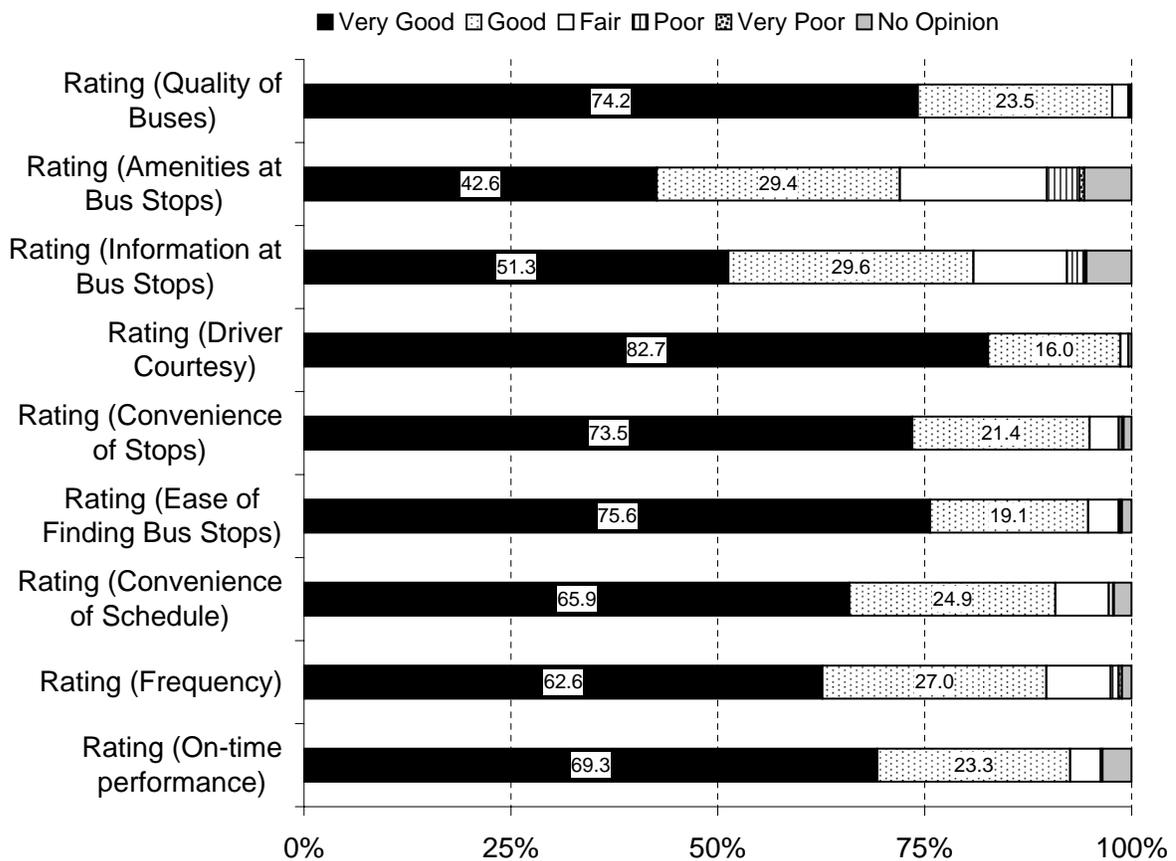
While most survey respondents reported satisfaction with the existing service and willingness to use it again, 87 percent of respondents said that it was their first time riding the shuttle. Six percent had used the shuttle once before, and seven percent had used it more than once before. This high rate of first-time users reflects the fact that many visitors to Point Reyes visit occasionally or while on vacation. Because most riders will take

the shuttle only once, the park must continually educate visitors about shuttle service.

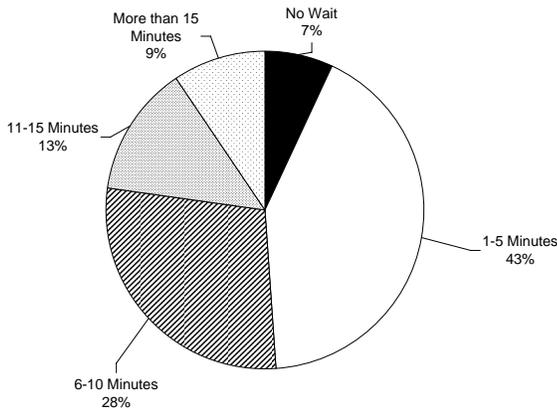
### Wait Times

Shuttles departed approximately every 20 minutes, although departure times varied somewhat as park staff had the discretion to hold shuttle departures in response to passenger loads and other conditions. Half of survey respondents perceived time spent waiting at stops to be five minutes or less, more than three-quarters said they’d had to wait no more than 10 minutes, and nine out of 10 said they’d had to wait 15 minutes or less.

**Figure 6 “Please Rate the Shuttle Service on each of the following”**



**Figure 7 “How long did you have to wait to ride the shuttle today?”**

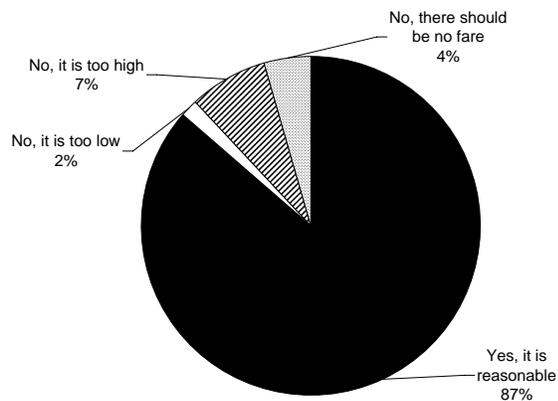


In a quality shuttle operation, passengers can either board the very first bus that comes, or know when they will be able to board. Seventy-eight percent of respondents said they were able to board the first bus that arrived. About one in five respondents had to wait for at least one full bus to depart before being able to board a bus. These occasions took place during periods of peak ridership, generally in the mid-afternoon. Only one percent of respondents said they were left behind by two or more buses.

## Fares

The park currently charges \$5 per passenger, with children under six permitted to ride for free. Passengers purchase tickets at the visitor center at Drakes Beach. A large majority of respondents (87 percent) described the current \$5 fare as “reasonable.” Only two percent, however, believed the fare should be raised.

**Figure 8 “Do you think the current fare of \$5 is reasonable for this service?”**



### Shuttle Improvements

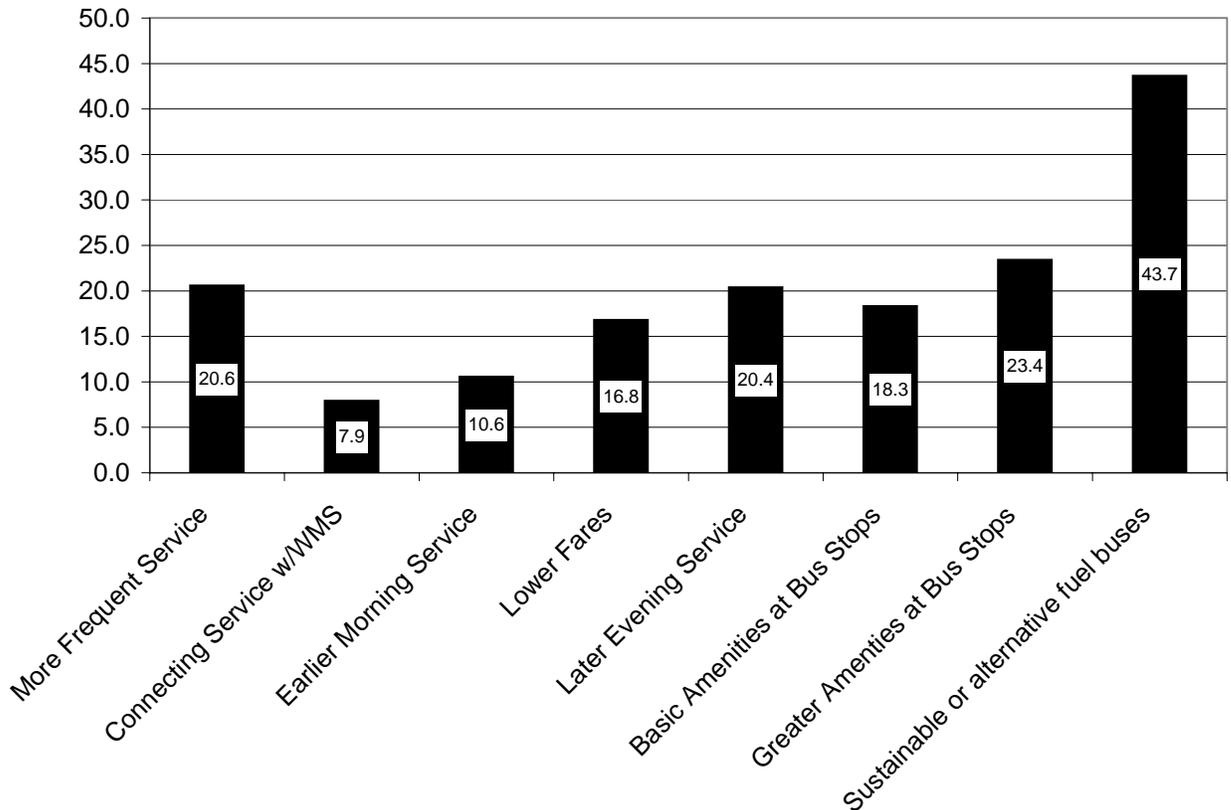
Survey respondents were presented with eight proposed improvements to existing service, and asked to select three that might encourage them to ride the shuttle again in the future. The most popular choice was “sustainable or alternative fuel vehicles.” This interest from customers supports park staff’s continued investigation of alternative fueling options for transit vehicles at Point Reyes National Seashore.

Reflecting respondents’ less enthusiastic ratings of existing amenities at stops, 40 percent were interested in improved bus stop amenities. “Enhanced amenities” were chosen by nearly one-quarter, and “basic amenities” by another 18 percent of respondents. Later and more frequent service were

more popular choices than earlier service, and only about one in six respondents chose “lower fares.”

Improved connections to existing transit were the least preferred improvement, with less than one in 10 respondents making that choice. This is expected, given the small share of respondents using transit to reach the park, and the fact that few respondents were even aware that the Stagecoach service was available prior to filling out the survey.

**Figure 9 “What THREE Improvements would make you more likely to use this shuttle again in the future?”**



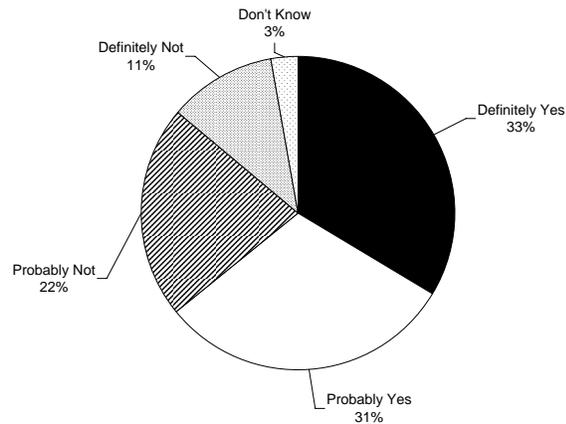
## Transit and Parking Alternatives

Respondents were asked a series of questions about potential expansions of shuttle service and changes to parking policies, as well as about existing West Marin Stagecoach service. While the responses to this question do not predict the precise number of people who would use a new shuttle service, they do provide general information that can be used to inform service planning.

Respondents were asked whether they would consider taking a shuttle to various park destinations, and permitted to choose as many destinations as they wished. Shuttles to Limantour Beach, Drakes Beach, and Tomales Point were each of interest to about one in five respondents. Thirty-seven percent of survey respondents indicated interest in at least one of these shuttle options. Of those who chose a shuttle destination, about 60 percent expressed interest in Limantour Beach and Drakes Beach, while 72 percent expressed interest in a shuttle to Tomales Point. Less than one percent of all respondents suggested another destination.

One notable difference between those making their first visit of the year and those returning after previous visits was in their interest in particular shuttle destinations. For example, while 16 percent of first time visitors were interested in a shuttle to Limantour Beach, 26 percent (21 out of 82) of those who had been there twice and 43 percent (43 out of 101) of those who had been there more than twice were interested in that shuttle destination. The same pattern holds for other shuttle destinations, although somewhat less strongly. Returning visitors may have more interest in shuttles to these destinations; alternatively, they may simply better recognize the names of these places.

**Figure 10** “Would you be willing to pay a roundtrip fare of \$5 for a voluntary shuttle from the Bear Valley Visitor Center to the beach or hiking trailheads?”



Nearly two-thirds of respondents said they would be willing to pay a \$5 round-trip fare for a shuttle from the Bear Valley Visitor Center to beaches or trailheads even if roads were not closed to cars. This would seem to suggest a great deal of support for expanded transit service within the park.

Three-fifths of respondents said they would pay a \$5 parking fee in exchange for expanded fare-free shuttle service. It is unclear whether the 30 percent of respondents who said that they would not pay such a fee might actually be deterred from visiting the park, or merely did not support charging for parking.

Given a choice between a free shuttle from the Bear Valley Visitor Center to park destinations or a \$5 parking fee at those destinations, 63 percent of respondents said they would choose free shuttles over paying for parking. Surprisingly, this percentage is nearly identical to 64 percent of respondents who stated that they would vol-



untarilly ride a shuttle that cost \$5 even in the absence of parking charges. These responses may therefore indicate a general willingness to consider new shuttle options, rather than a careful consideration of costs and benefits for different transportation scenarios.

### Existing Transit

Awareness of existing transit service to the park was remarkably low: Just 34 out of 499 respondents had even heard of the West Marin Stage-coach bus route between the main visitor center and San Rafael, where transit connections can be made to a range of Bay Area locations. This may reflect the fact that 70% park visitors do not begin their trip in Marin County and may also reflect the fact that the park is a relatively new destination for the Stage.

Upon learning of the availability of transit service to the park, one-third of respondents said they would likely “consider” using it. Among those whose trips to the park originated in Marin

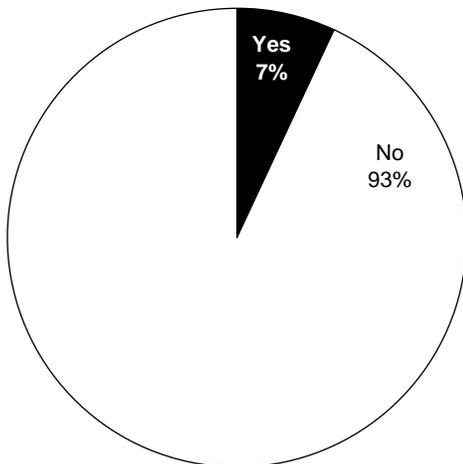
County, the share willing to consider using the Stage rose to 40 percent. This higher share suggests that greater outreach efforts to local Marin residents might benefit the West Marin Stage.

### Age and Disability

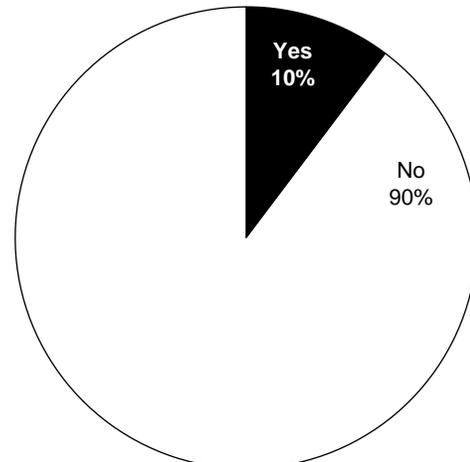
Respondents were asked about the ages of persons in their party. Only about one in seven respondents said that one or more members of their party were children under the age of six, and only about one in eight said that their party included senior citizens.

Only about one in 10 respondents said that a member of their party had a physical condition that made it difficult to participate in park activities or services. This finding is consistent with the fact that the charter buses supplied by Marin Airporter are not wheelchair accessible. Instead, park visitors displaying a disabled placard in their vehicle are permitted to access the lighthouse and Chimney Rock via private auto at all times of year. Park visitors with disabilities were therefore likely

**Figure 11** “Prior to taking this survey, were you aware of the West Marin Stage service?”



**Figure 12** “Does anyone in your group have a physical condition that made it difficult to access or participate in park activities or services?”



to be underrepresented among the respondent population.

Because there is currently no way for disabled visitors to get to Drakes Beach without having access to a private vehicle, and private vehicles displaying a handicap placard are allowed on Limantour Road even during peak times, the lack of wheelchair accessible buses departing from that location likely does not exclude anyone from visiting the lighthouse or Chimney Rock. However, the park does have a responsibility under the Americans with Disabilities Act (ADA) and Architectural Barriers Act Accessibility Standard (ABAAS) to upgrade its facilities to full accessibility as it makes new investments in transportation infrastructure or renews its contracts with service providers.

## Frequency of Use

Nearly two-thirds of respondents said they were visiting the Seashore for the first time during the previous 12 months. Close to one in five had been to the park three or more times during that period.

Among those making trips that originated in Marin County, just over half (54 percent) were making their first trip within the previous 12 months, 13 percent were making their second trip, and more than a third had visited the park more than twice. One in 10 survey respondents originating in Marin County had visited the park at least five times in the previous 12 months.

## Survey Findings Summary

The survey found that riders on the winter shuttle are pleased with their experience. They rate most aspects of the service highly and believe that the \$5 fare, which was charged at the time of the

survey, is reasonable. Most would use the shuttle again. Most riders are open to considering shuttle service to other parts of the park, although many would not or could not share the name of a particular destination to which they would like to take a new shuttle. Not surprisingly, riders who had been to the park at least once before in the previous 12 months had more of an idea of the park destinations to which they might like to ride a shuttle. Like general park visitors surveyed in 1990, shuttle riders are mostly San Francisco Bay Area residents making a day trip to the park. They overwhelmingly access the park via private vehicles, and about two-thirds have destinations in the park other than those served directly by the Shuttle.

When asked whether they would pay \$5 to ride a voluntary shuttle to “the beach or hiking trailheads”, more than 60 percent of respondents said they would “definitely” or “probably” would. Surprisingly, almost exactly the same share of respondents expressed interest in a shuttle when the shuttle itself was free and there was a \$5 parking fee at their destination.

More than 60 percent of survey respondents stated that they would be willing to pay for parking at Point Reyes National Seashore in exchange for expanded shuttle service. It should be noted that, because only existing shuttle users were surveyed, some bias may exist for alternatives prioritizing new transit service over free, available parking. Nonetheless, it should also be noted that almost all respondents had driven to the park, many of them long distances. It may be that many visitors to the seashore would welcome enhanced alternatives to additional, required driving within the park.



The existing transit service to the park, the West Marin Stage, is currently very lightly used. The survey suggests some potential to improve the productivity of the Stage through marketing, given the gap between the number of respondents aware of transit service to the park (7 percent) and the number who said they might use such service (33 percent).

### **Winter Shuttle Recommendations**

While the shuttle to the headlands has proven effective, well-used, and well-liked, the passenger survey identified a number of small changes that could significantly improve customer experience. Improving customer experience should, over time, increase ridership. Four types of improvements are recommended:

- A. Add amenities to the three existing shuttle bus stops;
- B. Operate on fixed rather than flexible headways;
- C. Continue to operate large vehicles; and
- D. Identify opportunities to run alternative fuel vehicles.

#### **A. Enhance Park Transit Stops for Visitor Safety, Wayfinding and Orientation**

The bus stops served by the winter shuttle lack all but the most basic passenger amenities. At Drakes Beach and at the lighthouse, passengers wait at a bus stop marked only with temporary signage. No shelter is available. At Chimney Rock there is a single shelter, but not signage. In addition, the existing shuttle stops do not meet federal accessibility standards.

Shelters and benches would improve passenger experience, and information would help passengers navigate the system and could provide fur-

ther information about the park. Improved stops would also increase visitor safety, meet federal accessibility standards, and protect visitors from inclement weather, which is especially important during the winter months. Well-designed bus stops would provide an opportunity for orientation and interpretive information, increasing visitor understanding of sensitive park resources and use of the shuttle system and other transportation resources.

It is recommended that the park design and construct three transit stops—at Drakes Beach, the lighthouse, and Chimney Rock—to serve the headlands shuttle and provide in-park connections with Marin Transit. The stops should provide attractive bus shelters, information kiosks, and clear signage. Signage should clearly identify the route and schedule of the shuttle. Information kiosks should also have information about the summer beach shuttle (if retained) and the West Marin Stage.

Total cost in 2008 dollars for these improvements is estimated to be approximately \$300,000, including project management and technical support for design and construction, and associated design, fabrication, and installation of wayfinding and orientation signs at the three existing shuttle stops.

#### **B. Operate at Fixed Headways**

The winter shuttle currently operates based on headway schedule and demand. Buses depart approximately every 20 minutes. During peak hours, a fourth vehicle is added and headways are cut to approximately 15 minutes. Throughout the day, bus operators rely on instruction from temporary staff stationed at stops. Staff release buses once they determine that an adequate number of pas-

sengers have boarded. Drivers must also rely on instruction from temporary staff to determine when they should take their lunch breaks. These staff members also help riders identify the boarding areas, which currently do not have adequate signage.

It is recommended that vehicles depart on a regular schedule and that drivers take pre-scheduled breaks. When three vehicles are in service, departures occur every 20 minutes, and every 15 minutes when four vehicles are in service. A more fixed schedule would provide passengers with a clearer idea of the next departures and allow signage to include a pre-determined schedule. Shuttle schedules should be posted on signage at stops.

### C. Continue to operate large buses

As part of the winter shuttle evaluation, park staff were interested in opportunities to operate the shuttle with smaller buses. There are several reasons to consider switching to smaller vehicles, including:

- safety concerns related to the difficulty of two buses passing on the narrow roadway;
- wear-and-tear on the roadway from heavy vehicles; and
- passenger experience.

As noted in the survey findings above, passenger ratings for quality of vehicles were very high. Seventy-four percent found vehicle quality to be “very good,” and 24 percent found vehicle quality to be “good,” for a total of nearly 98 percent rating vehicle quality highly. Given these high ratings, it does not appear that the vehicles used are interfering with a positive passenger experience. Passengers did rate “sustainable or alternative fuel vehicles” as an improvement that would encourage

them to ride the shuttle again in the future. Alternative fuel options are discussed further below.

While safety is a primary concern, the professional drivers operating the shuttle appear able to navigate the Lighthouse Road and pass each other without significant difficulty. Drivers did not express any concerns about the road conditions and commonly feel that as long as they do not have to compete with general traffic, the road works well for them. There is some concern about road wear and resource preservation in situations where one bus must pull to the side of the road in order to allow for two buses to pass each other. While this way of operating presents some concerns for road maintenance and resource damage to vegetation immediately on the shoulder of Lighthouse Road, it should be noted that the narrowness of the roadway would require even 30-passenger vehicles to perform the same maneuver. The road to Chimney Rock is too narrow for buses to pass each other. Currently, one vehicle drives on this road at a time, and operators use orange cones as signaling devices to ensure that two buses never use the road at the same time. Given the narrowness of the roadway, this system would have to be maintained even with smaller vehicles.

#### *Smaller Vehicle Alternatives*

Currently, during good-weather weekends, Marin Aipporter’s large motorcoaches regularly fill to capacity and even leave passengers behind during some mid-day and afternoon runs. In order to accommodate peak demand using smaller vehicles without significantly increasing wait times, the park would have to increase the frequency of service. It should be noted that the cost of contracting a small bus is generally similar to the cost of contracting a large bus, since the majority of bus



## Transit Access Study

operating expense is the cost of the driver. Figure 14 demonstrates the additional resources that would be required to provide the same passenger capacity with smaller vehicles. For this example, we have assumed that the cost of additional transit service would be \$110 per hour.

One possibility is for the park to operate the service with 30-passenger buses. Doing so would cut capacity-per-vehicle by 33 percent, requiring an additional two buses during the five-hour afternoon service period to maintain the same total capacity. At \$110 per vehicle service hour, the additional 10 hours of bus service would cost an estimated \$1,100 per day, or approximately \$30,000 per season.

The appropriate vehicle to accommodate 30 passengers would be a 30' diesel-powered bus of the type used by many urban transit systems to accommodate lower ridership local routes, or winding roads requiring high maneuverability.



AC Transit 30' Neighborhood Bus

**Figure 13 Cost of Smaller Vehicle Options**

	Vehicle Passenger Capacity	Vehicles	Passenger Capacity/ hour	Additional Afternoon service hours	Cost Increase	Cost/ hour	Cost Increase/day	Cost Increase
Existing	45	4	180	0	\$0.00	\$110.00	\$0.00	\$0.00
Medium-Sized Vehicles	30	6	180	10	\$1,100.00	\$110.00	\$1,100.00	\$29,700.00
Small Vehicles	20	9	180	25	\$2,750.00	\$110.00	\$2,750.00	\$74,250.00

The vehicle would be smaller than the over-the-road coaches now used by Marin Airporter to provide the service, but might not be noticeably less visually intrusive.

While smaller vehicles are somewhat more fuel efficient, the need for additional service hours and the need to transport additional vehicles to the park would likely overwhelm any emissions reduction from improved fuel economy. Given the marginal benefits and significant cost increase, switching to 30-passenger vehicles is not recommended.

PRNS may also consider using 20-passenger cut-away shuttles of the type used by Marin Airporter to operate the summer pilot shuttle, and by Marin Transit to operate the West Marin Stagecoach.



West Marin Stagecoach 20-Passenger Bus

This type of shuttle would cut passenger capacity per vehicle by more than 50 percent, and would require a total of nine vehicles to provide the same passenger capacity during the five-hour peak period. At \$110 per vehicle service hour, the additional 25 hours of bus service would cost an estimated \$2,750 per day, or \$74,000 per year. These vehicles would be noticeably less visually intrusive than the vehicle type currently in use, and they would probably be able to pass each other on Lighthouse Road without pulling onto the shoulder. However, it would still not be desirable for buses to pass each other on the road to Chimney Rock. With more than twice as many vehicles operating at one time, the need to delay at the intersection of Lighthouse and Chimney Rock roads could create significant logistical challenges.

Given these constraints, it is recommended that the park continue to operate large over-the-road coaches for the foreseeable future. However, the park should continue to investigate whether an on-site biodiesel fueling station could meet its environmental goals and be accommodated by Marin Airporter.

#### **D. Continue to Investigate Alternative-fuel Vehicles**

Point Reyes National Seashore has maintained an interest in utilizing vehicles powered by fuels that minimize greenhouse gas emissions and other harmful pollution. Doing so would serve the park's goal of reducing its impact on the environment, and might improve visitor experience; additionally, "alternative-fuel vehicles" was the option chosen by the most survey respondents as a factor that would lead them to ride the shuttle again. Options for reduced emissions from transit

vehicles are described below. It should be noted that vehicle technology is rapidly changing and that fuel cell and other options are likely to become more widely available in the next five years.

#### ***Hybrid Electric Buses***

One increasingly common way of reducing emissions from transit vehicles is the use of hybrid-electric technology. For example, two large Bay Area transit operators have begun to use hybrid-electric buses. San Francisco Municipal Transportation Agency (SFMTA) is currently operating 86 low-floor diesel hybrid electric buses manufactured by Daimler-Chrysler Commercial Buses of North America. These buses cost about \$500,000, or about \$150,000 more than conventional diesel buses. However, with a projected 30 percent improvement in fuel economy and other maintenance advantages, MTA expects to recoup costs over the lifecycle of the vehicles. Alameda County Transit (AC Transit) has worked with the Dutch bus manufacturer Vanhool to develop a gasoline-electric hybrid 30' bus for use on neighborhood routes.

Park staff should note, however, several near-term constraints on implementing this option at PRNS. A hybrid-electric bus can cost \$500,000 or more. Transit buses operate year-round, 15 hours per day, making it cost effective for the agency to own vehicles and store them on-site. The same is true for large parks with year round transit service such as the shuttles operated in Yosemite National Park. However, given the very targeted transit service that PRNS expects to continue providing, contracting vehicles as needed remains the most cost-effective option for the park. Most contract bus operators have a limited selection of vehicles available, preferring to operate vehicles owned



by their clients where possible, and no Bay Area contractors currently offer hybrid-electric buses on a contract basis. While the park should retain the possibility of contracting hybrid-electric buses at some point in the future, it is recommended that the park wait until this type of vehicle has become a more common offering by contract shuttle providers.

When it investigates potential vehicle suppliers, park staff should keep in mind that unless vehicles are stored at PRNS, they will generate emissions in transit to the park. Any vehicles brought from further away than San Rafael would add to the emissions generated by the shuttle service as it is currently organized. Vehicle emissions en route to the park should be factored in to any calculation of expected emissions benefit.

### ***Biofuels***

The park has considered using biodeisel fuels. Biodiesel is an alternative to petro-diesel that can be produced from corn, soybeans, or other biological materials. While biodiesel is not commonly used in transit vehicles, some agencies have experimented with its use. In transit applications, biodiesel is almost always mixed with standard petroleum diesel fuel. Beginning in late 2008, AC Transit will begin pilot testing B20 (20 percent biodiesel/80 percent petroleum) in existing vehicles.

The vehicles currently supplied by Marin Airporter can fuel with B10 (10 percent biodiesel/90 percent petroleum) without any mechanical problems or violation of their warranty. The park should therefore continue to investigate installing a biodeisel fueling facility at the current Roads and Trails fueling complex. The project, as envisioned by the park, would retrofit the exist-

ing petro-diesel tank with a 1,000 gallon storage tank. The updated facility would allow the park to choose from different biodeisel fueling options depending on the biodeisel market and vehicle needs. It would be designed and installed by a contractor. Should the park provide a bio fueling center, there would be a number of logistical issues involved with fueling Marin Airporter vehicles at the park—key among them being that the buses would need to be adequately fueled to get to the park—but Airporter is willing to work with the park on logistics.

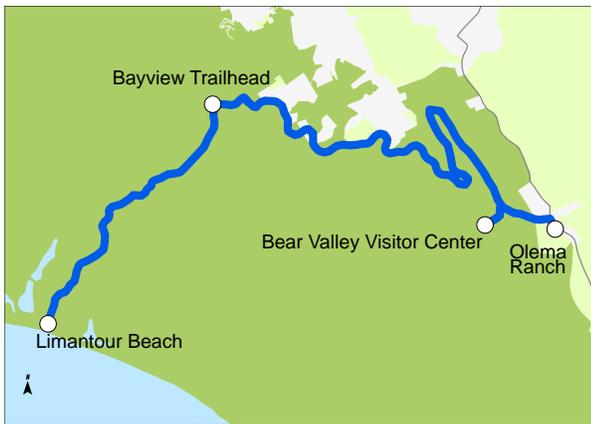
## **4. Summer Pilot Shuttle**

During the summer of 2008, Point Reyes National Seashore completed a pilot of a second shuttle service, operating between the Bear Valley Visitors Center and Limantour Beach, stopping at a trailhead along the route. The goals of this service were to reduce parking demand during peak times in areas where it is constrained and to provide visitors with new experiences at Point Reyes, including the opportunity to take one-way hikes that cannot otherwise be easily accomplished. The route was chosen for a number of reasons:

- The route permits service from PRNS's main Visitor Center to one of its most popular summer destinations.
- Several popular trails have trailheads on Limantour Road, and transit service on this route would allow visitors to experience one-way hikes, including hikes that are less strenuous than what is currently available, thus enhancing the visitor experience at the park.
- Limantour Road, while narrow, is navigable for a standard 21-foot cutaway vehicle. The trip from the Visitor Center to the beach is also a manageable distance that can be covered by a bus in approximately 25 minutes.

- Park staff has observed constrained parking conditions at Limantour Beach during the busiest summer weekend days.
- Riders of the existing winter shuttle have expressed interest in this type of service. Asked whether they would be willing to pay \$5 to ride a shuttle to the beach or hiking trailheads, approximately two-thirds responded that they definitely or probably would.

The 2008 pilot offered free service every 35 minutes from the Olema RV Resort and Campground to the Bear Valley Visitor Center, the Bayview Trailhead, and finally to Limantour Beach, during the four weekends of July. The purpose of the pilot was to test the feasibility of this type of service, and the level of interest among visitors.



**Summer Shuttle Route**

Information was collected on board the summer shuttle on two of the four weekends of operation. The contractor provided additional ridership information for all four weekends of service. Data collection included counts of boardings and alightings at each of the shuttle’s four stops, and surveys of passengers on board the route. Parking occupancy was also recorded at the Limantour Beach Parking lots during two weekends in July and the first weekend in August, to determine the impact of the shuttle on parking demand. This

section describes the outcomes of the summer pilot shuttle implementation and evaluation.

## Shuttle Operations

The summer shuttle operated between Olema RV Resort and Campground (just outside the park’s eastern boundary on Highway 1), and Limantour Beach, with intermediate stops at the Bear Valley Visitor Center and the Bayview Trailhead. The Campground stop allowed campers and RV users to visit the beach without the use of a private vehicle. The Bayview Trailhead stop gave park visitors access to the network of trails near Limantour Road without use of a private vehicle. This trailhead was chosen over others in the area, including the popular Sky Trail trailhead, because its parking lot provides a safe place for a transit vehicle to pull out of the roadway. The combination of stops offered both relatively fast service to the beach and opportunities for one-way hikes that would have been difficult to accomplish with a car.

The shuttle operated between approximately 10 AM and 5:30 PM Saturdays and Sundays in the month of July. Like the winter shuttle, the summer pilot shuttle service was operated on a contract basis by Marin Airporter. It used two 20-passenger cutaway vehicles equipped with wheelchair lifts and bike racks. The buses were gasoline-powered and marked with Marin Transit branding. Weather over the course of the month varied significantly, but was generally favorable.

No fare was charged for the summer pilot. The shuttle provided approximately 14 hours of service per day, or 112 hours over four weekends. The total cost of the park’s contract with Marin Airporter for the summer service was \$12,616,



for an average cost of \$113 per service hour. No additional park staffing was required for the summer shuttle, primarily because the service was free and no ticket sales were required.

Because of a short timeframe for implementation, marketing for the pilot shuttle was extremely limited. Marketing consisted of a posting on the Point Reyes National Seashore web site, and the distribution of flyers at the following locations:

- Marin Transit vehicles and transfer facilities
- Samuel P. Taylor State Park
- Olema RV Resort and Campground
- Bear Valley Visitor Center

There were also no improvements made to bus stops. The Bear Valley Visitor Center and Campground stops shared the bus stops used by the West Marin Stage; there are no passenger amenities and little signage at these locations. The Bayview Trailhead stop was unmarked, and the Limantour Beach stop was marked only with a small paper sign.

Scheduled round-trip running time for this route was conservatively set at 56 minutes. Adding a

total of 14 minutes of dwell time, layover, and recovery, split between Bear Valley Visitor Center and Limantour Beach, results in a 70-minute round-trip cycle. Given relatively light passenger loads and no congestion on Limantour road, the pilot shuttle met all scheduled time points with time to spare. As described below, the experience of the 2008 summer pilot demonstrates that a tighter, 60-minute round-trip cycle is possible. This would allow two buses to provide service every 30 –minutes, which is much easier for visitors to remember and represents a higher level of service to visitors who want flexibility in their arrival and departure times.

The shuttle service’s first run began at Olema RV Resort and campground at 9:49 AM, and departed the Bear Valley Visitor Center at 10 AM. Thereafter, shuttles departed every 35 minutes. There was a longer, 75-minute gap between shuttles in the early afternoon to allow for driver breaks. Outbound runs departing after 3:09 PM were not included on the published schedule as operators were instructed not to take passengers to the beach, in order to ensure no passengers would be left behind at the end of the service day.

**Figure 14 Shuttle Schedule**

Olema	Bear Valley Visitor Center	Bayview Trailhead	Limantour Beach	Bayview Trailhead	Bear Valley Visitor Center	Olema
9:49 AM	10:00 AM	10:15 AM	10:28 AM	10:38 AM	10:55 AM	10:58 AM
10:24 AM	10:35 AM	10:50 AM	11:03 AM	11:13 AM	11:30 AM	11:33 AM
10:59 AM	11:10 AM	11:25 AM	11:38 AM	11:48 AM	12:05 PM	12:08 PM
11:34 AM	11:45 AM	12:00 PM	12:13 PM	12:23 PM	12:40 PM	12:43 PM
12:09 PM	12:20 PM	12:35 PM	12:48 PM	12:58 PM	1:15 PM	1:18 PM
12:44 PM	12:55 PM	1:10 PM	1:23 PM	1:33 PM	1:50 PM	1:53 PM
1:59 PM	2:10 PM	2:25 PM	2:38 PM	2:48 PM	3:05 PM	3:08 PM
2:34 PM	2:45 PM	3:00 PM	3:13 PM	3:23 PM	3:40 PM	3:43 PM
3:09 PM	3:20 PM	3:35 PM	3:48 PM	3:58 PM	4:15 PM	4:18 PM
			4:23 PM	4:33 PM	4:50 PM	4:53 PM
			4:58 PM	5:08 PM	5:25 PM	5:28 PM
			5:33 PM	5:43 PM	6:00 PM	6:03 PM

Last connection to westbound West Marin Stagecoach (to Inverness) at 4:18 PM  
 Last connection to eastbound West Marin Stagecoach (to San Rafael) at 5:08 PM

## Summer Pilot Evaluation

The purpose of the summer beach shuttle was to test the market for and feasibility of this type of service. It should be noted that the service provided during the pilot differs from any possible permanent service in several important ways. Pilot shuttle ridership should not be assumed to fully project the eventual permanent shuttle ridership because:

1. The seashore had a limited window to promote awareness of the pilot service, and marketing was minimal. Many potential passengers were not aware of the shuttle service prior to arriving at the park.
2. A permanent shuttle would require capital investment in passenger amenities at bus stops. No permanent improvements to bus stops were made prior to the pilot test.
3. There was no fare for the pilot shuttle, and parking remained free at Limantour beach. A permanent shuttle service may require a fare, parking fees, or a combination of the two to offset the cost of operations.
4. The pilot shuttle had one intermediate stop at the Bayview trailhead. A permanent shuttle may also have one intermediate stop, but it may add stops at other trailheads or at the Point Reyes youth hostel as well. The Sky Trailhead and Point Reyes Hostel were not included as shuttle stops. Improvements are required at these locations prior to making them a bus stop.



### Shuttle Ridership

During its eight days of service, the pilot shuttle service attracted a total of 717 boardings, with significant variability from day to day. With two vehicles each operating for approximately seven hours per day, this amounts to a productivity of 6.4 boardings per revenue service hour.

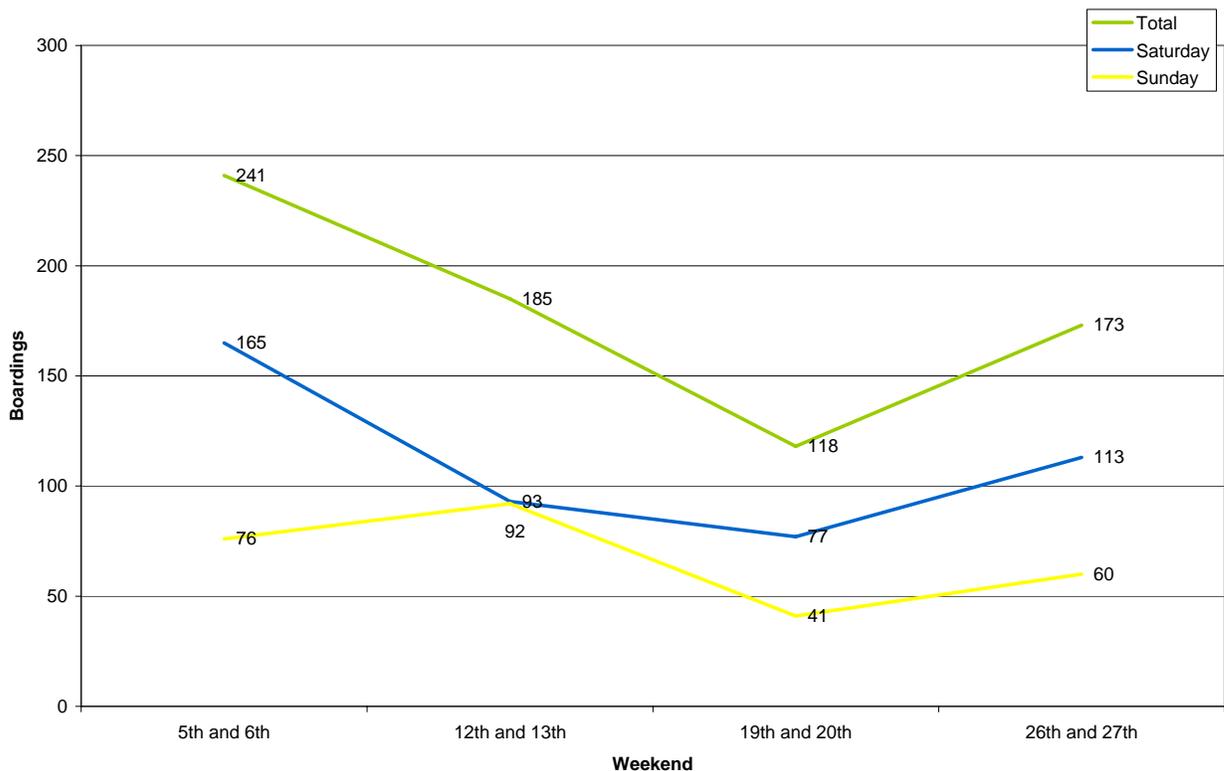
There were nearly twice as many boardings on the shuttle on the four Saturdays of service as on Sundays. Total Saturday ridership was 448 boardings, averaging eight passengers per revenue service hour. Total Sunday ridership was 269 boardings, for a total of 4.8 passengers per hour.

The pilot shuttle’s busiest weekend was its inaugural weekend, occurring over the Fourth of July holiday: On Saturday, July 5<sup>th</sup> and Sunday, July

6<sup>th</sup>, the shuttle attracted a total of 241 boardings. This weekend was also extremely busy in the park as a whole, and it had the highest recorded parking occupancy at Limantour Beach. The shuttle’s least busy weekend was its third, occurring over July 19<sup>th</sup> and 20<sup>th</sup>. It attracted a total of 118 boardings on this weekend, with just 41 occurring on Sunday. Weather was significantly less favorable on this weekend.

The total cost of the pilot shuttle service was \$12,616 for eight days of service, or approximately \$112 per revenue service hour. Given the 717 boardings during the pilot shuttle, this amounts to \$17 per boarding. Because the service is free, the subsidy per passenger is equal to the total cost per passenger.

**Figure 15 Boardings by Weekend**



## Ridership by stop

As expected, the greatest boarding and alighting activity occurred at the route's two anchor stops: the Bear Valley Visitor Center and Limantour Beach. Overall, 371 boardings occurred at the beach stop and 240 occurred at the visitor center. A small but significant share of shuttle riders (86 boardings) boarded the shuttle from Olema RV Resort and Campground. Because many RV campers may wish to visit the beach but may find it inconvenient to drive large vehicles into the park, direct outreach to RV campers could generate much greater ridership from this stop.

One of the greatest potential benefits of the shuttle is that it allows visitors to make one-way hikes that would not otherwise be possible. While counts of unlinked boardings and alightings do not allow us to know precisely how many one-way trips were made, the difference between boardings and alightings at individual stops demonstrates that shuttle passengers made a significant number of one-way trips. For example, while the Bayview Trailhead had a very small share of boardings (just 20), it had a much larger share of shuttle alightings (111), suggesting that some passengers may have disembarked the shuttle at the trailhead and then hiked to another park destination. More than half of Bayview Trailhead alightings were made from vehicles heading in the eastbound direction (toward the visitor center), demonstrating that many passengers made the final leg of their trip on foot.

While one-way trips involving the Bayview Trailhead stop were predicted during the design of the pilot shuttle, passengers also used the shuttle for one-way trips in an unexpected way. There were 127 more boardings than alightings at Limantour Beach, suggesting that a significant share of shuttle

passengers used the service to return from the beach without having used the shuttle to get there. This group probably includes both day-visitors who hiked the eight-mile journey to the beach, as well as backpackers who began the day closer to the western side of the park and used the shuttle to return to the visitor center. Because backpackers at Point Reyes tend to register and plan their trips months in advance, targeted outreach beginning in the spring could attract significant new ridership from this group of visitors.

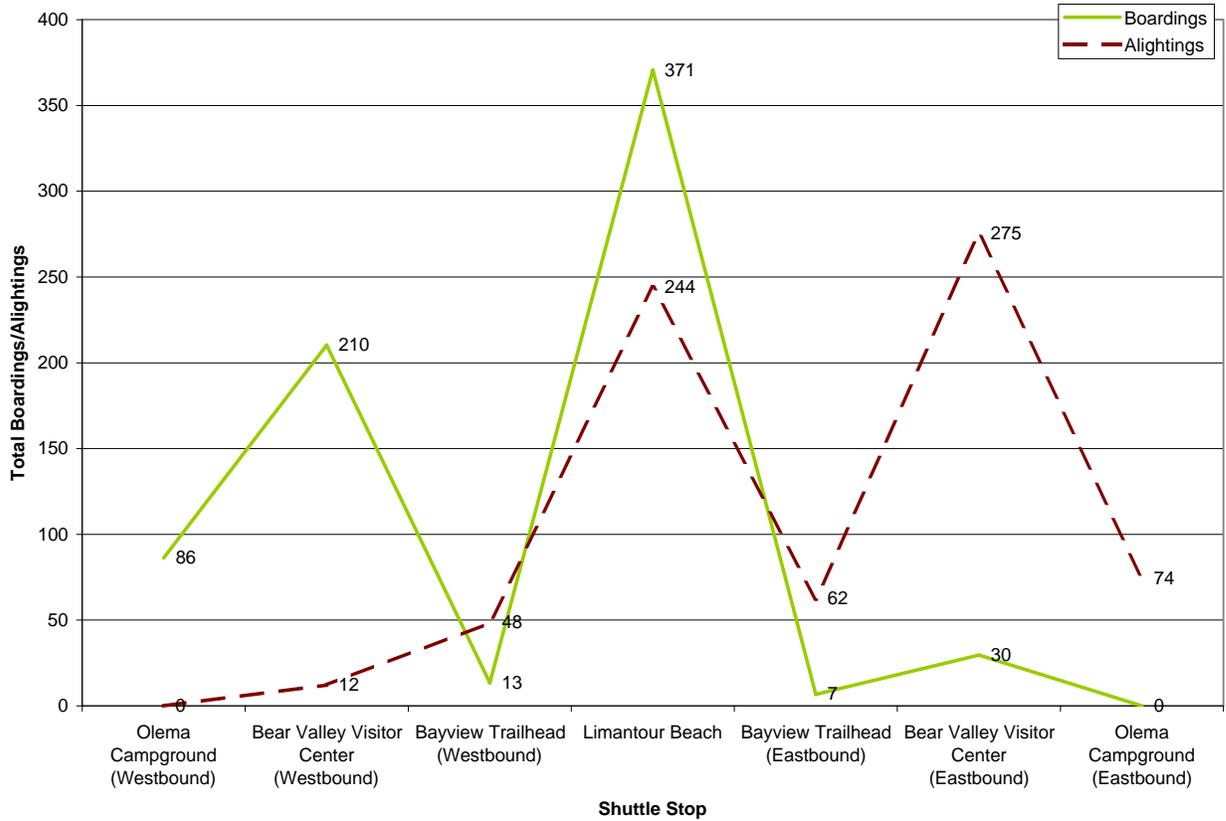
Overall, there were nearly 100 more eastbound boardings (passengers travelling away from the beach and toward the visitor center or campground) than westbound boardings.

As noted above, there were nearly twice as many boardings on Saturday as on Sunday during the pilot. An examination of boardings and alightings by stop and by direction also reveals that Saturday and Sunday riders used the shuttle in different ways.

On Saturdays, the vast majority of passengers traveled between the visitor center and the beach. There were nearly as many alightings (174) as boardings (213) at Limantour Beach and nearly an equal number of westbound boardings (143) and eastbound alightings (169) at the visitor center. These numbers suggest that by far the most common type of trip went from the visitor center to the beach and back. Forty-four passengers got off the shuttle at Bayview Trailhead heading westbound toward the beach. It is likely that some portion of these Bayview Trailhead alightings continued to Limantour Beach and then took the shuttle back to the visitor center, accounting for some or all of the gap between boardings and alightings at Limantour Beach.

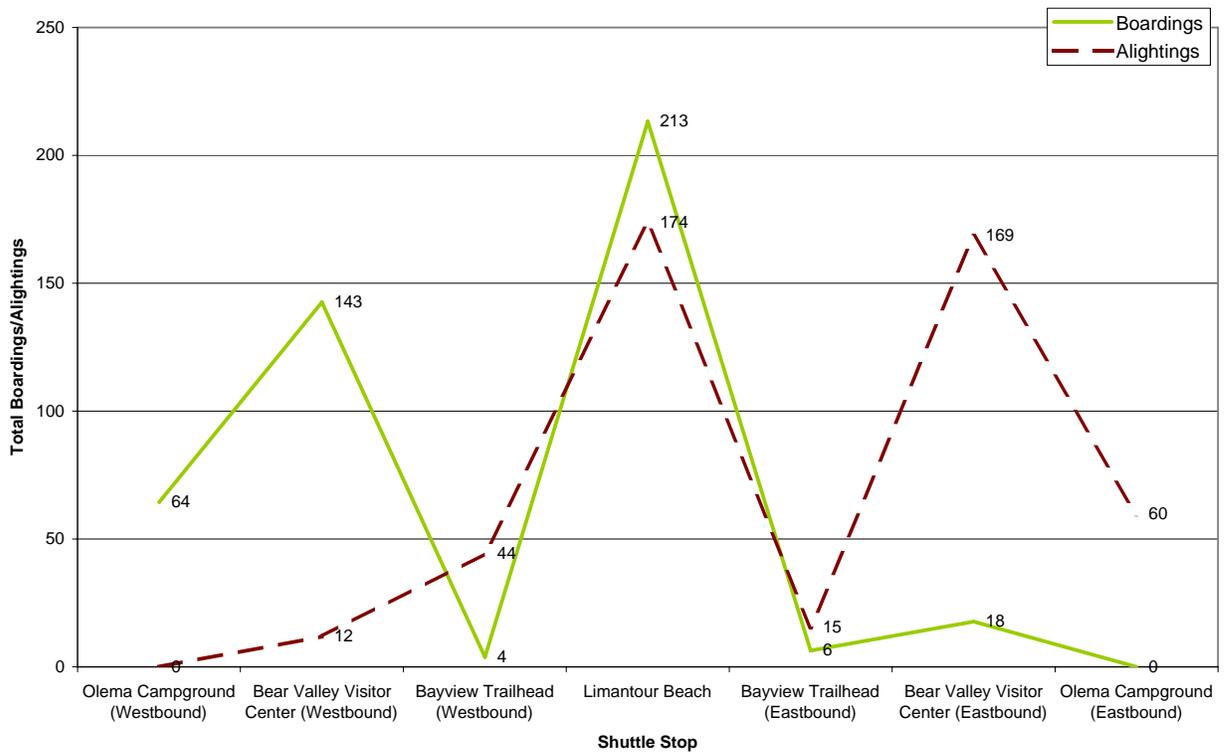


**Figure 16 Boardings by Stop (Directional)\***



\*Note: Nelson\Nygaard collected boarding data by stop during two weekends of the pilot. For the remaining two weekends, this analysis uses bus operator passenger counts and assumes boardings and alightings by stop occur in the same pattern as the weekends for which this data is available.

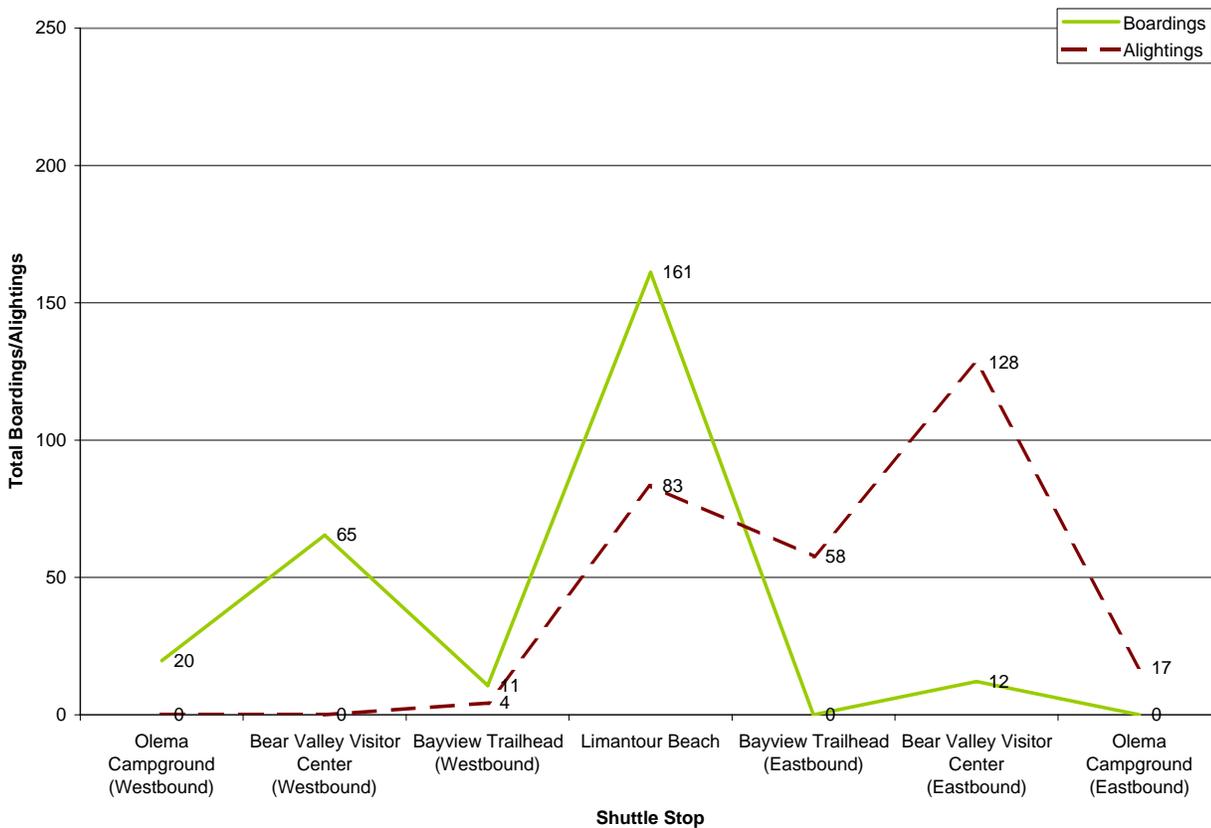
**Figure 17 Boardings by Stop (Directional) Saturday Only**



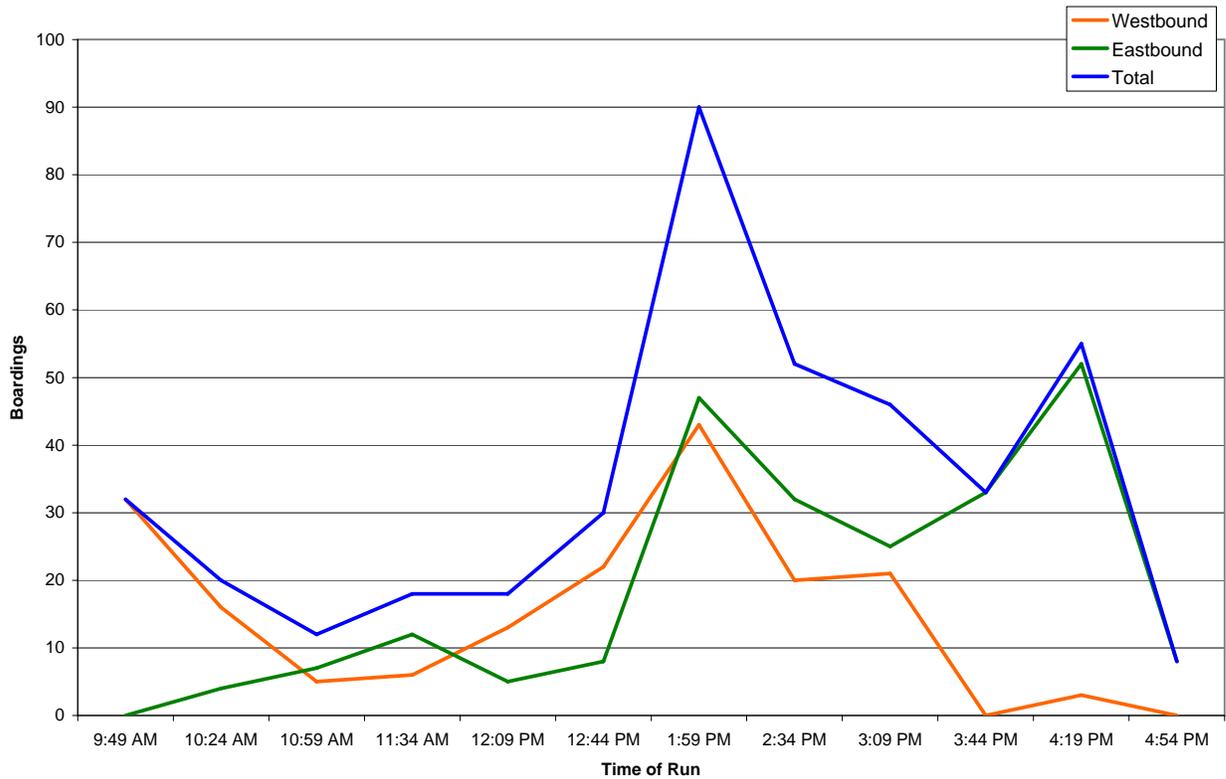
Sunday boarding data demonstrate not only lighter ridership but also a different pattern of use. There were twice as many boardings (161) as alightings (83) at Limantour Beach. Just 65 passengers boarded going westbound at Bear Valley Visitor Center. Use of the Bayview Trailhead stop also differed sharply from Saturdays: just four people got off at Bayview going westbound toward the beach, whereas 58 got off at the Bayview stop going eastbound toward the visitor center.

This pattern of use suggests that the round-trip journey from the visitor center to the beach and back was rare on Sunday. Instead, the largest share of passengers made a one-way trip from the beach heading toward the visitor center. These passengers either made the eight-mile hike to the beach, or were backcountry campers who began the day in the park. Many did not take the shuttle all the way back to the visitor center, but instead got off at the Bayview Trailhead.

**Figure 18 Boardings by Stop (Directional) Sunday Only**



**Figure 19 Boardings by Time and Direction\***



\*Note: Totals include only boarding data collected by Nelson\Nygaard during two weekends of the pilot.

### Ridership by time of day

Ridership on the beach shuttle varied widely over the course of the day. There were a small but significant number of early morning riders, and then a mid-morning period with very little boarding activity. Total boardings peaked strongly during the 2 PM hour, and again, less strongly, during the second-to-last run of the day.

Riders travelling in the westbound direction account for all of the boardings on the first run of the day, and a large majority throughout the AM service period. Westbound ridership peaked at 2 PM, which was later than expected. This is consistent with survey findings that suggest that a significant share of shuttle riders are mid-day arrivers to the park planning a relatively short stay at the beach.<sup>5</sup> Outbound ridership dropped

off almost completely after 3 PM, when bus operators were instructed to stop taking passengers to the beach.

Eastbound ridership also peaked during the 2 PM run. Because this peak followed a morning period with relatively little westbound boarding activity, it is likely that many of the passengers riding eastbound at this time were using the shuttle to make a one-way inbound trip. Eastbound ridership peaked again during the second-to-last run of the day (4:19 PM), but then dropped off for the final run, as few passengers appeared willing to risk waiting for the last run. As noted above, about a fifth of shuttle riders responding to the summer pilot shuttle survey were interested in later evening service.

<sup>5</sup> According to the survey of shuttle passengers described below, 36% of shuttle riders spend 1-4 hours at in the park.

## Limantour Beach Parking Occupancy

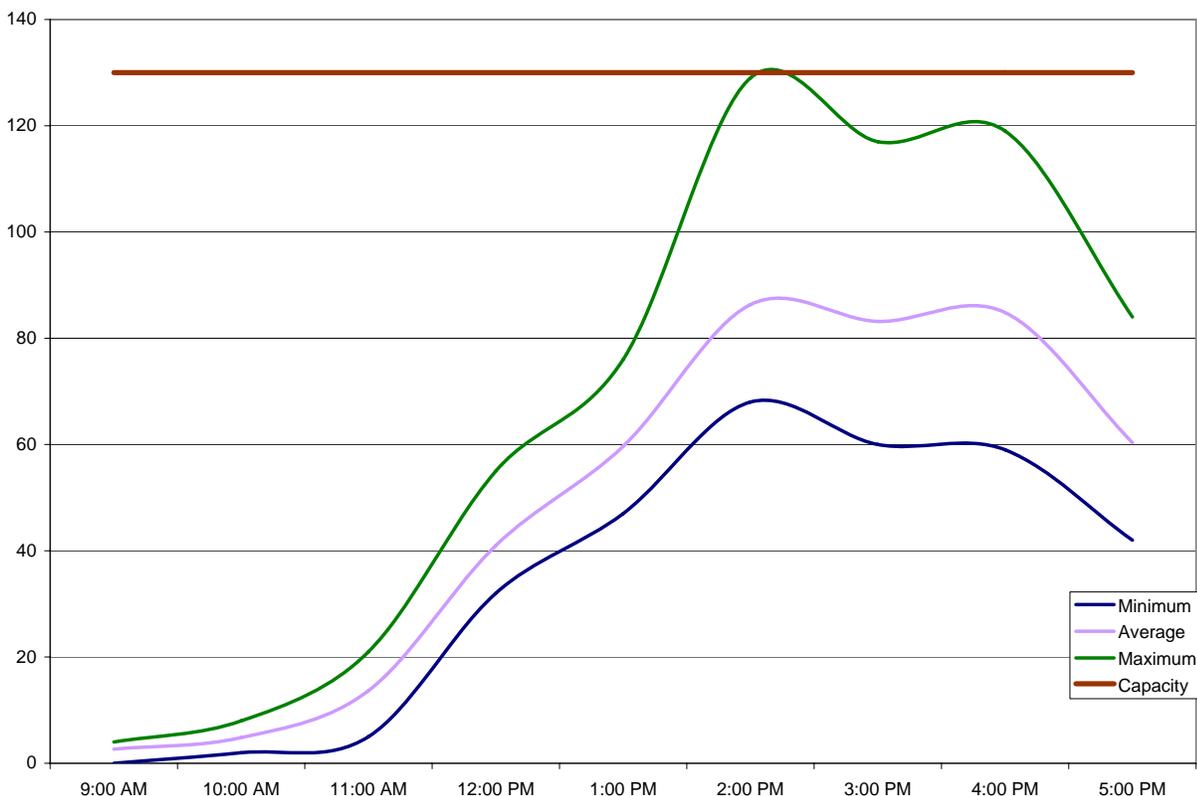
Nelson\Nygaard conducted counts of parking occupancy on three weekends at Limantour Beach. Two weekends of parking counts occurred while the shuttle was operating (July 5-6 and 25-26), and the third was completed the weekend after the shuttle stopped operating (August 2-3). Counts were scheduled in this way in order to measure the impact of the shuttle on parking demand. However, like shuttle ridership, parking occupancy at Limantour Beach varied widely from weekend to weekend, reflecting variations in weather and overall park visitation. These variations were large enough to overwhelm any impact on parking occupancy that the shuttle may have had; the weekend when the shuttle did not operate actually had the lowest parking occupancy of the three weekends of parking counts.

Limantour beach has two parking lots. The largest, Limantour Beach North, has approximately 130 marked parking spaces, including two handicapped spaces. The smaller of the two, Limantour Beach South, is about 0.6 miles south of Limantour North, and it's connected by a small access road. It has just 16 marked spaces.

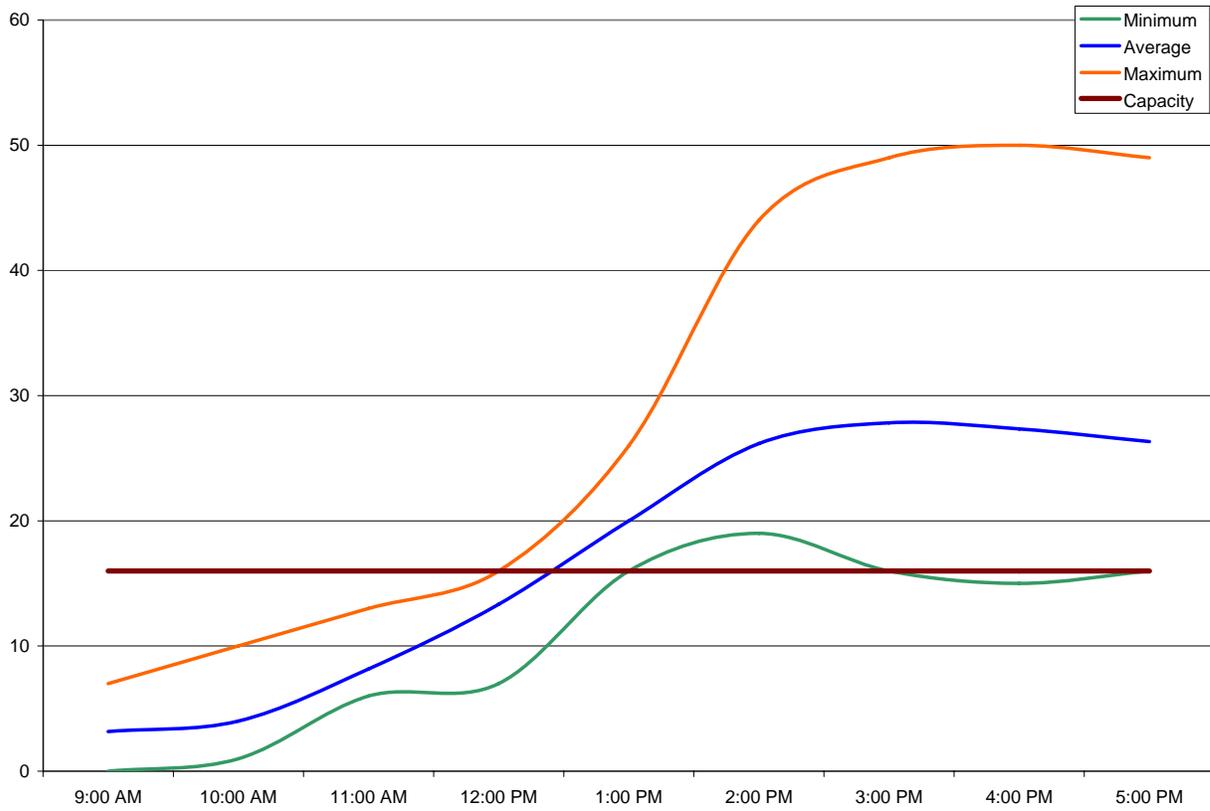
On average, Limantour North had spare capacity at all times of day. Average parking occupancy was below 50 percent through the noon hour and peaked at about 90 cars during the 2 PM hour. Average occupancy began to drop during the 4 PM hour.

The same time distribution patterns held on the busiest and least-busy days at Limantour beach. On the lightest days, occupancy peaked at about 70 cars during the 2 PM hour. Only on the busiest day at the beach did peak occupancy approach

**Figure 20 Limantour North Parking Occupancy by Time**



**Figure 21 Limantour South Parking Occupancy by Time**



the capacity of the Limantour North lot, and then only during the peak (2 PM) hour. This level of occupancy occurred on Saturday, July 5<sup>th</sup>, and was far higher than any other day.

By contrast, the much smaller Limantour South lot filled and overflowed on all days of the survey. In addition to parking in the 16 marked spaces, drivers park along the narrow roadway leading to the lot. Cars parked outside of the marked spaces had two wheels outside off of the paved roadway and two wheels on the roadway, narrowing the space available for cars to enter and exit the parking lot. While most visitors use a pedestrian path to access the beach, pedestrians must navigate the same narrow roadway as the cars in order to get to and from this path. While drivers move very slowly through this area, at peak times this pat-

tern of overflow parking still creates some safety concerns.

On average, occupancy peaked during the 3 PM hour at over 30 cars, or twice the capacity of the lot, and remained at that level through the 5 PM hour. Even on the least-busy weekend day at the beach, parking occupancy at Limantour South peaked at about four cars over capacity. On the busiest day, Saturday, July 5<sup>th</sup>, occupancy peaked in the 4 PM hour, with 55 cars parked along the access road.

Generally, the Limantour South lot fills and overflows long before the larger Limantour North lot reaches even 50 percent occupancy. It is unclear why some visitors prefer overflow parking at the Limantour South lot when there is ample capac-

ity available at the Limantour North lot. One key difference may be that the Limantour South lot is next to a part of the beach where dogs are allowed. Additional signage and/or well marked trail from the north lot to the beach could help balance parking demand.

Combined occupancy at the Limantour North and Limantour South lots exceeded combined capacity on just one day: Saturday, July 5<sup>th</sup>. On this day, total parking occupancy in the two lots peaked at 171 cars, or about 17 percent over capacity. The shuttle attracted 248 boardings on this day, perhaps alleviating the demand for parking somewhat.

Given the lack of an on-going long-term parking problem at the beach, parking congestion alone would not justify an on-going shuttle operation to Limantour beach. A shuttle may be helpful to address overflow parking on particularly popular weekends such as the 4<sup>th</sup> of July.

Parking occupancy at Bear Valley Visitor Center is also an important factor to consider in judging the feasibility of permanently implementing this type of shuttle service. Because most shuttle passengers park at the Visitor Center rather than driving to their final destination, the shuttle will tend to shift parking demand from the beach to the visitor center. A survey of pilot shuttle passengers demonstrates that about 60 percent arrived as either the driver or passenger of a private vehicle. If parking is near capacity at the visitor center, shifting parking demand from the beach to the visitor center may cause an unwanted impact. A lack of available parking at the visitor center would also constrain shuttle ridership during peak times by making it impossible for drivers to stop at the visitor center and board the shuttle.

In previous studies of transportation at Point Reyes, it was found that while the Bear Valley parking lots did not generally fill, there were typically less than 70 empty spaces in the two parking lots combined. Parking occupancy at Bear Valley was recorded on the three weekends of the summer data collection. Parking occupancy rates at the visitor center were higher than at the beach on all days, and reached capacity during the noon and 2 PM hours on both days of the busiest weekend of the pilot, July 5<sup>th</sup> and 6<sup>th</sup>. This suggests that there is not adequate parking at the Bear Valley visitor center to accommodate a large relocation of parking from the beach to the visitor center.

## Summer Pilot Shuttle Survey Findings

In order to better understand the experience of visitors using the pilot shuttle, passenger surveys were completed during two weekends of shuttle operation. Surveys were offered to all passengers over the age of 18 on the return trip from Limantour Beach to the Bear Valley Visitor Center.<sup>6</sup> Survey questions were identical to those asked of riders of the winter shuttle. Like the winter shuttle survey, this pilot shuttle survey gathered information on passengers' travel behaviors, experiences riding the shuttle, and attitudes toward transportation alternatives. A total of 163 completed surveys were collected.

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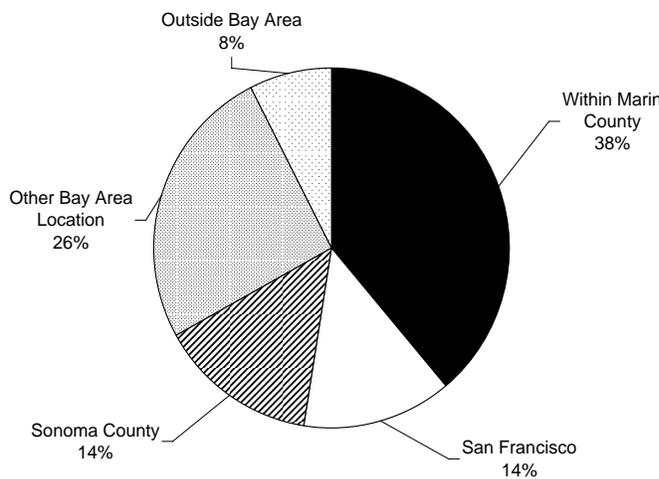
<sup>6</sup> Passengers making one-way outbound trips were offered surveys upon exiting the vehicle and asked to return them to the Bear Valley Visitor Center. Just one survey was returned in this way.



### Travel to and within Point Reyes

Like riders of the winter shuttle, more than 90 percent of summer pilot shuttle riders originate in the San Francisco Bay Area. Marin County accounted for a somewhat higher share of total ridership on the summer shuttle (38 percent, compared to 30 percent for the winter shuttle), and San Francisco accounted for a slightly lower share (14 percent, compared to 20 percent for the winter shuttle).

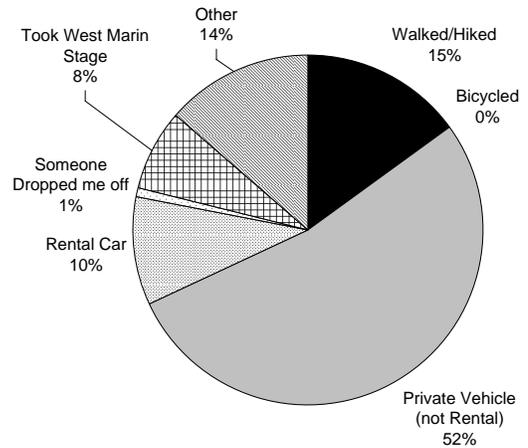
**Figure 22 Trip Origin**



Respondents were also asked what mode of travel they had used to get to the seashore that day. Unlike winter shuttle passengers, 95 percent of whom used private vehicles to get to the far western edge of the park (an isolated area that lacks any transit service), pilot shuttle passengers used a relatively diverse mix of access modes. About 60 percent used their own car or a rental car, but 15 percent stated that they walked or hiked to the park. Because the population living within walking distance of the park is very small and likely accounts for a small share of shuttle ridership, it is unclear why such a large number of passengers report walking to the park. It is likely that a significant share of those who reported walking were

overnight backpackers making one-way trips on the shuttle, or people staying at the campground who recorded walking to the shuttle stop on the day of their ride.

**Figure 23 Mode of Access to Point Reyes National Seashore**



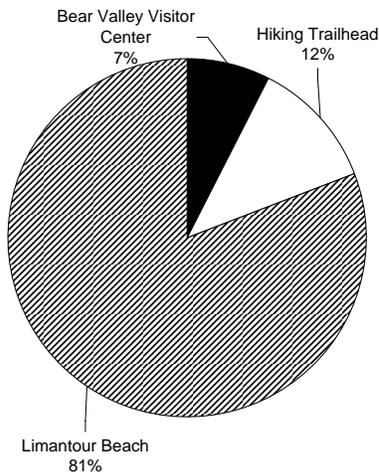
Eight percent reported that they arrived at the park on the West Marin Stage, the Marin transit service with which the shuttle was designed to connect. Connecting passengers making a car-free trip to the seashore may be a potential growth market for the shuttle if it is implemented as a permanent service, particularly if awareness and ridership grows on the Stage. A further 14 percent of passengers reported that they used some other mode of access. Of these, many began their trip at Olema RV Resort and Campground and used the shuttle itself to access the park.

### Trip Destinations

Passengers could board the pilot shuttle at any of its four stops and could take either a one-way or two-way trip. Asked the primary destination of their shuttle trip, 81 percent reported that it was Limantour Beach. Twelve percent reported a primary destination of a hiking trailhead, and

seven percent reported that the Bear Valley Visitor Center was their primary destination.

**Figure 24 Shuttle Trip Destinations**



About 55 percent of shuttle passengers indicated that they would be visiting other destinations within the park not served directly by the shuttle. Four percent of all respondents visited Drakes Beach, and seven percent visited Tomales Point.

### Trip Durations

Summer shuttle riders generally planned to spend more time at the park than winter shuttle riders. Just over 64 percent planned four hours or more in the park. More than one in five survey respondents planned to spend 2 or more days in the park. Many of these multiple-day park visitors may be backpackers, and may represent many of those making one-way inbound trips. This is a potential growth market for the shuttle. By contrast, 42 percent of winter shuttle riders planned to spend more than four or more hours in the park, and just five percent planned to spend two or more days in the park.

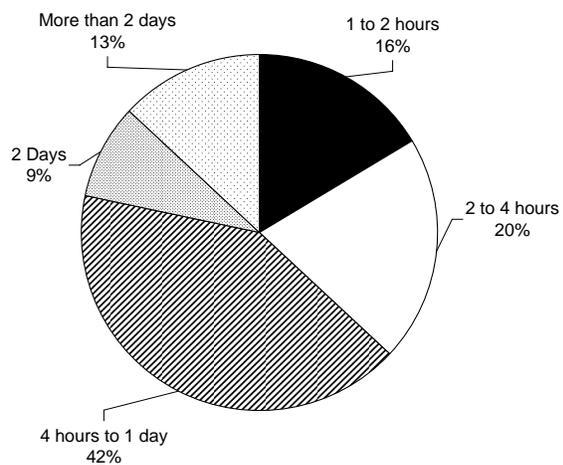
Survey respondents rated various attributes of the pilot shuttle service. As with the winter shuttle, ratings were generally very high. On safety and

security as well as vehicle quality, about three-fourths of passengers rated the service “very good,” and a further one-fifth rated it as “good.”

On the convenience and frequency of the schedule, about 60 percent of passengers rated the service as “very good” and a further 25 percent found it “good.” The shuttle operated on 35-minute headways. Nearly all passengers rated on-time performance highly, consistent with the fact that shuttles were on-schedule throughout the pilot.

Ratings of amenities and information at bus stops were significantly lower: 50 percent of passengers found amenities to be “fair,” “poor,” or “very poor.” It should be noted that there were essentially no amenities at any of the summer shuttle stops.

**Figure 25 Planned Time of Stay at PRNS**



### Shuttle Experiences

Passengers overwhelmingly said they would ride the shuttle again. Eighty-eight percent said they “definitely” would, and a further 10 percent said they “probably” would. This high rate of approval exceeds the also very high rate for the winter shuttle (71 percent).



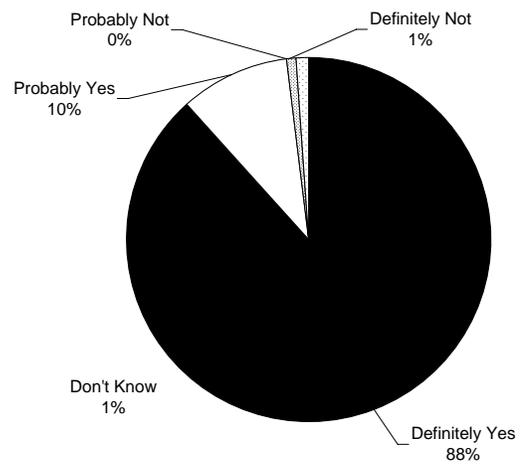
## Wait Times

Shuttles operated on 35-minute headways, with somewhat longer waits during the noon hour when driver breaks were scheduled. Shuttles were on-time for all stops throughout the weekend, reflecting a relatively slack schedule, and little congestion. Nearly all passengers (97 percent) reported that they were able to board the first bus that arrived, and only during the peak runs of the busiest day (Saturday, July 5<sup>th</sup>) did vehicles fill to capacity.

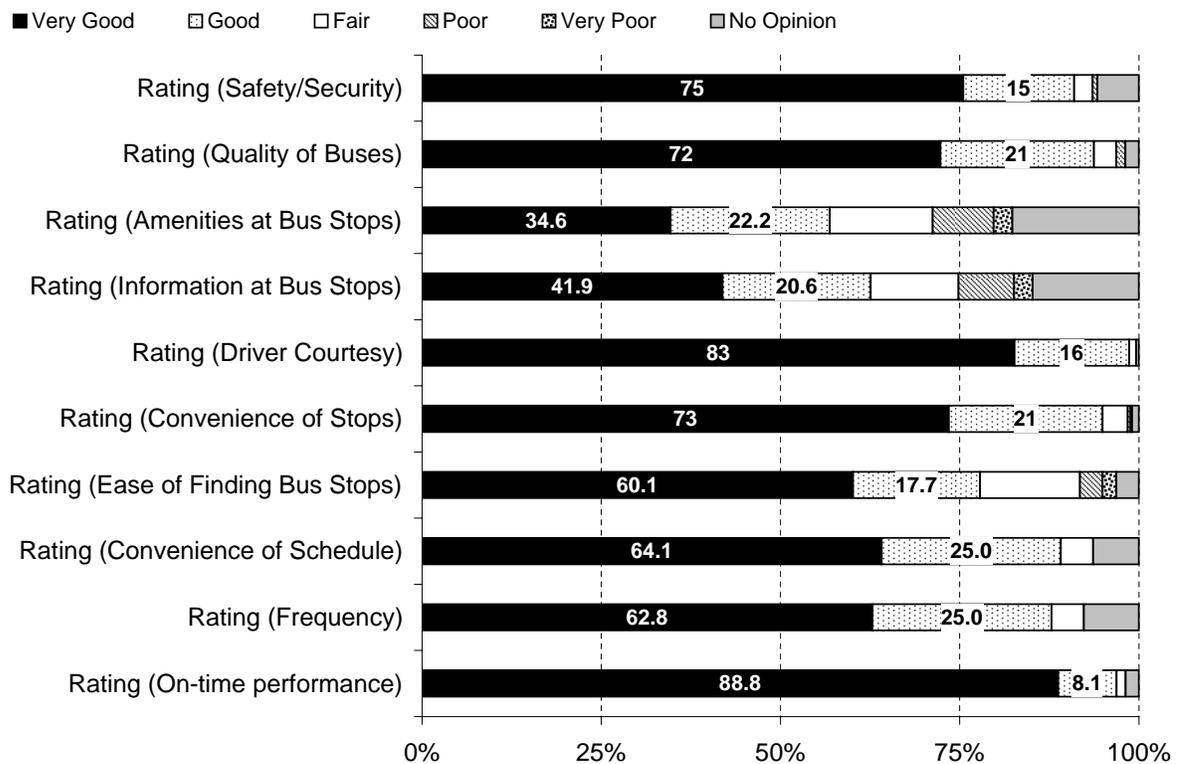
Despite these relatively long headways, nearly half of survey respondents (46 percent) reported that they waited less than 5 minutes to board the shuttle. This may reflect that fact that passengers had access to a published schedule, and many went to the stop when buses were scheduled to arrive. Thirty-six percent of passengers waited between six and 15 minutes. Nearly one in five passengers waited more than 15 minutes.

While many passengers had relatively short waits, a somewhat tighter schedule with 30-minute headways and buses arriving at key stops on the hour and half hour may encourage additional ridership from passengers unwilling to consult a printed schedule.

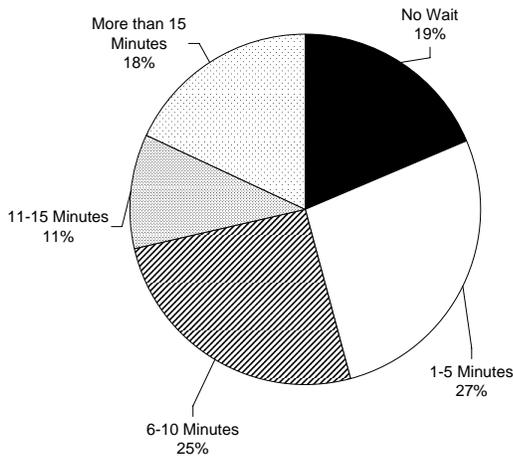
**Figure 27 Would You Use This Shuttle Again?**



**Figure 26 Shuttle Service Ratings**



**Figure 28 How Long Did You Have To Wait To Ride The Shuttle?**



### Shuttle Improvements

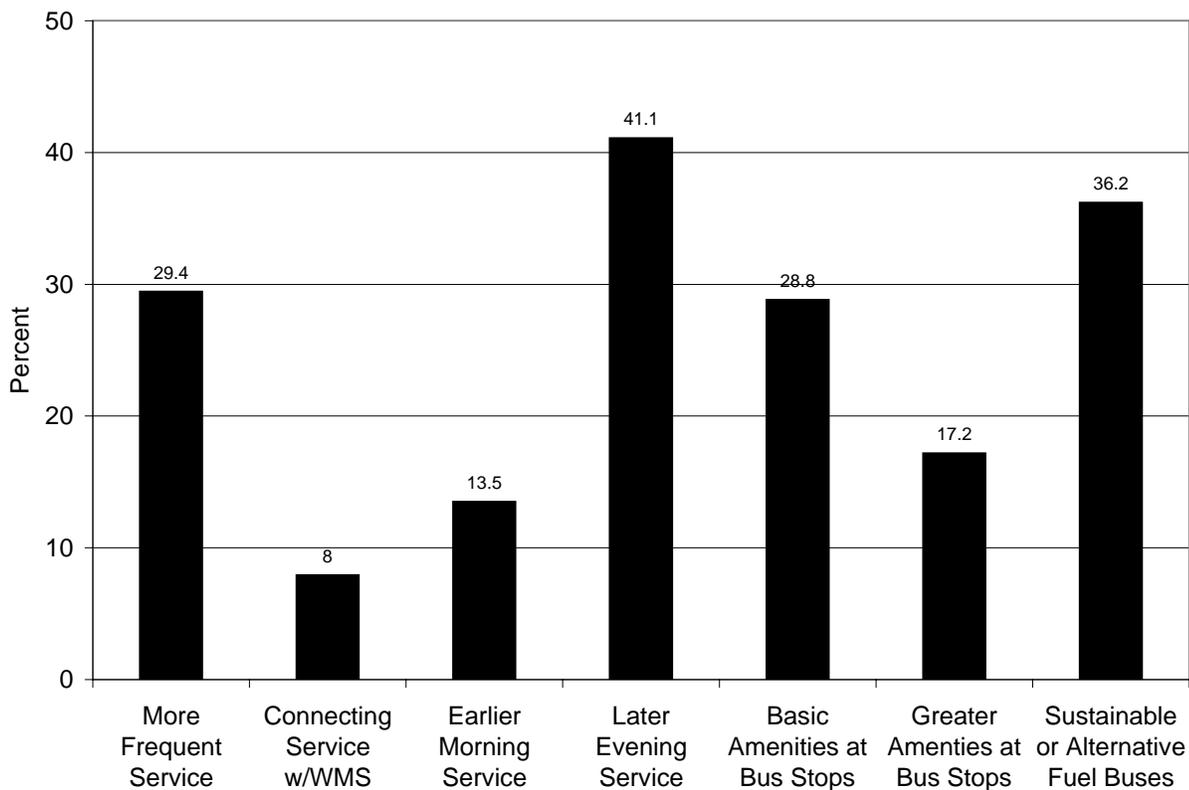
Survey respondents were presented with eight proposed improvements to existing service, and asked to select three that might encourage them to ride the shuttle again in the future. The most

popular choice was “Later Evening Service,” consistent with the fact that many shuttle riders made their outbound trip after noon, and the high rate of inbound boarding on the second-to-last shuttle run of the day. By contrast, just 14 percent of passengers wanted “Earlier Morning Service.”

Nearly as many (36 percent) reported that “Sustainable or Alternative Fuel Buses” would make them more likely to ride again in the future. 30 percent of passengers wanted more frequent service. 29 percent wanted “Basic Amenities at Stops,” and 17 percent wanted “Greater Amenities at stops.” Bus stops for the pilot shuttle had essential no improvements.

As with the winter shuttle, about an 1 in 10 passengers chose improved connections with the West Marin Stage.

**Figure 29 Shuttle Improvements Desired by Passengers**



### Transit and Parking Alternatives

Passengers on the shuttle were asked a series of questions about potential expansions of shuttle service and changes to parking policies, as well as about existing West Marin Stagecoach service. These questions were essentially the same as those asked of winter shuttle passengers.

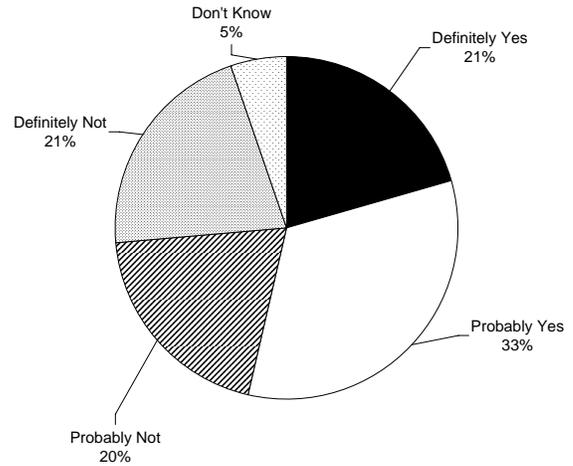
The pilot shuttle was free for passengers. Survey respondents were asked about their willingness to pay a \$5 fare to use the shuttle in the future. About 20 percent of passengers said they “definitely” would pay such a fare, and a third said that they “probably” would. Combined, about half of passengers were willing to consider paying a \$5 fare. This is significantly lower than the two-thirds of winter shuttle passengers who stated that they were willing to pay such a fare for a hypothetical summer shuttle.

More than 40 percent said they would “probably not” or “definitely not” pay such a fare. These responses suggest that a \$5 fare would eliminate a large portion of shuttle ridership. However, the park may be able to implement a lower fare and retain some portion of the shuttle’s ridership.

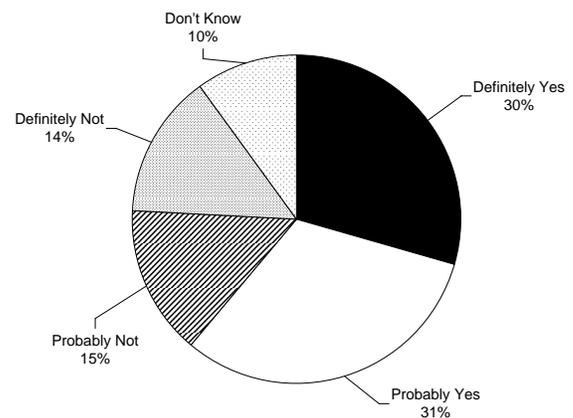
As with the winter shuttle, 60 percent of respondents stated that they would be willing to pay a \$5 fee for parking if the proceeds were used to fund a free shuttle. Thirty percent stated that they would “definitely not” or “probably not” be willing to pay such a fee.

Asked to choose between travelling on a free shuttle to park destinations or paying \$5 to park at those destinations, 75 percent stated that they would ride the free shuttle. This response is expected, given that respondents had already chosen to ride a free shuttle, even without a parking fee at their destination.

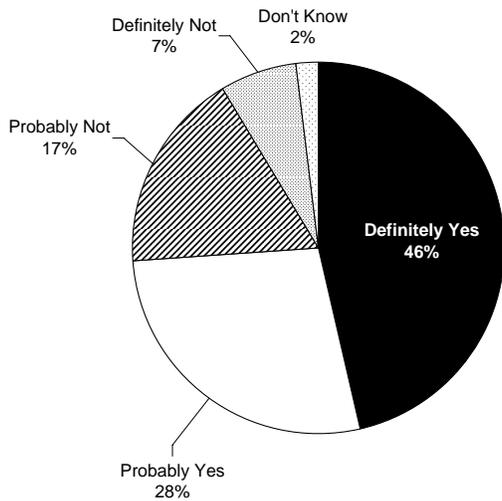
**Figure 30** “Would you be willing to pay a roundtrip fare of \$5 for a voluntary shuttle from the Bear Valley Visitor Center to the beach or hiking trailheads?”



**Figure 31** “Another way that the park could pay for new shuttle services would be to charge visitors a parking fee and keep the shuttle free. Would you be willing to pay a \$5 fee for parking in the park?”



**Figure 32** If there were a \$5 fee for parking at destinations within the park outside of the Visitor Center, but shuttle service from the visitor center to destinations was available and free, would you ride the shuttle instead of paying the \$5 parking fee at the destinations?



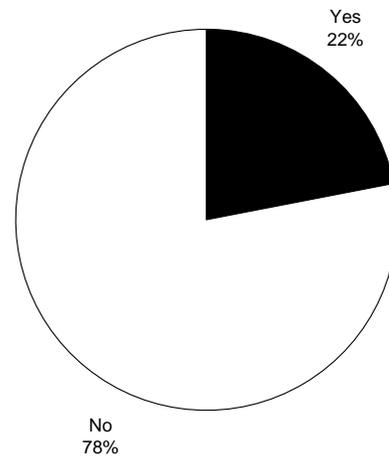
### Existing Transit

While awareness of the existing West Marin Stagecoach transit service to the park was higher among pilot shuttle passengers than winter shuttle passengers, still just one in five respondents had ever heard of the Stage. A significant portion of these, 8 percent of all respondents, had actually used the Stage to get to the park that day.

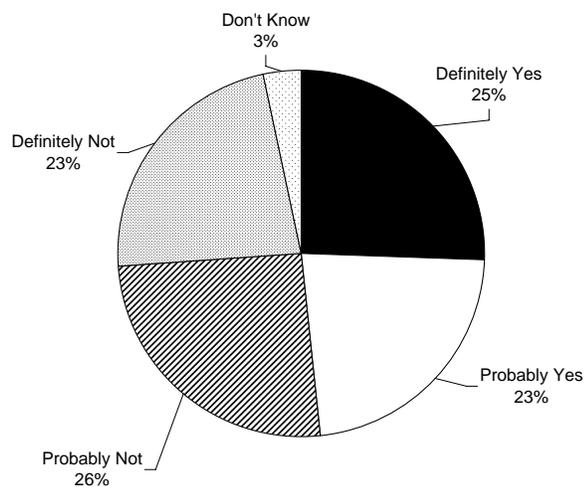
Upon learning of the availability of transit service to the park, about half of respondents stated that they would consider using it, and about half said they would not. The share willing to consider using the Stage to get to the park is significantly higher among summer pilot shuttle passengers than winter shuttle passengers. Increased awareness and ridership on the Stage among potential recreational users, particularly those living or stay-

ing in Marin County, could be a significant benefit to summer shuttle ridership. The coordinated marketing plan in Section 5 of this document explores ways of achieving this goal.

**Figure 33** “Prior to taking this survey, were you aware of the West Marin Stage service?”



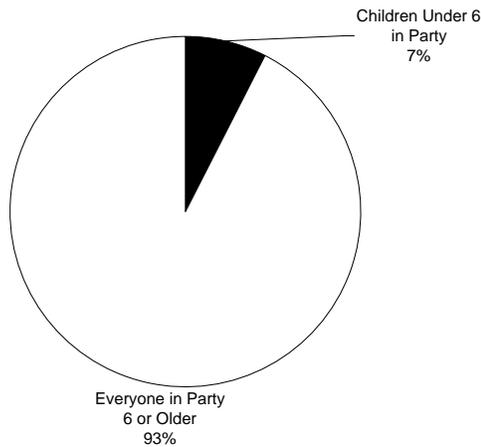
**Figure 34** “Would you consider riding the West Marin Stagecoach to the park in the future?”



### Age and Disability

Respondents were asked about the ages of persons in their party. Only about five percent of respondents said that one or more members of their party were children under the age of six. This is significantly lower than on the winter shuttle, and suggests that one limitation to shuttle ridership may be its lack of attractiveness to beach-going families with young children. Only about 14 percent said that their party included seniors over the age of 65.

**Figure 35** “How many in your party are under 6 years old?”

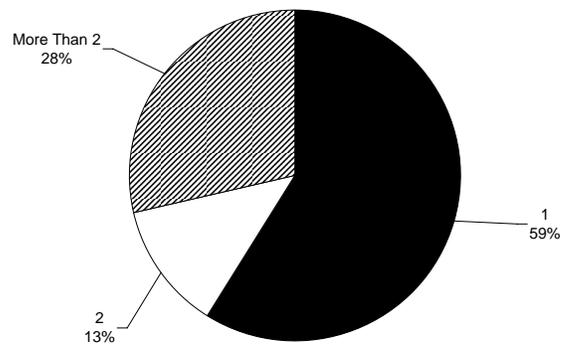


Five percent of passengers said that a member of their party had a physical condition that made it difficult to participate in park activities or services. About twice as large a share of survey participants on the winter shuttle responded affirmatively to this question, even though the summer shuttle has wheelchair access, while the winter shuttle does not. The low rate of persons with disabilities may reflect the fact that the destinations served by the shuttle—the beach and hiking trailheads—are themselves not accessible.

### Frequency of Use

The rate of returning visitors to the park was consistent with the winter shuttle: about 60 percent were visiting for the first time in the preceding 12 months. Twenty-eight percent had visited more than twice that year, and about half of these had visited five or more times.

**Figure 36** “How many times have you visited Point Reyes National Seashore in the last 12 months?”



### Survey Findings Summary

Survey findings demonstrate that summer shuttle riders overwhelmingly had a positive experience, and nearly all would use the shuttle again. Passengers recognized the lack of amenities and information at bus stops and rated these aspects considerably lower than all other aspects of the service.

The population of summer shuttle passengers differs somewhat from the winter shuttle. A slightly higher share begins their trip in Marin County, and the summer shuttle attracts passengers using a relatively diverse set of access modes. Fourteen percent walked or hiked to access the shuttle (although many of these are probably overnight backpackers who access the park itself with a private vehicle), and eight percent used the West

Marin Stagecoach. Very few shuttle passengers were in parties with young children, reflecting the fact that park visitors (and particularly beachgoers) with young children may be less willing to use transit than other groups of visitors.

Two-thirds of shuttle passengers planned to spend at least four hours at Point Reyes National Seashore, and more than one in five shuttle passengers planned to spend more than one day at the park. The unexpectedly high proportion of overnight visitors who used the summer shuttle suggests a significant market for backpackers who would use the shuttle at one or both ends of their trip.

A fifth of passengers were aware of the West Marin Stagecoach prior to taking the survey, but about half said they would be willing to consider riding such a service. These findings suggest that there may be a shuttle market for Marin residents who could experience a “car free day” at the seashore.

The most popular improvement desired by passengers was later evening service (41 percent), but at least 30 percent of passengers also desired sustainable or alternative fuel buses, bus stop amenities, and more frequent service.

About half of passengers stated a willingness to pay a \$5 fare for the service, but 40 percent stated they would not consider paying such a fare. This finding suggests a fare of this amount (now paid by winter shuttle riders) would significantly impact ridership potential. There was a greater willingness to consider paying for parking as a way to fund a free shuttle: 60 percent said they would consider this possibility, and just 30 percent said they would not. Seventy-five percent said they would choose a free shuttle over paying for parking at their destination.

Summer shuttle riders would be expected to be more sensitive to fares than winter riders because the winter shuttle provides access to an area that is not open to auto drivers in the winter. Summer shuttle riders had the option of driving and parking for free, making them more sensitive to the cost of riding the shuttle.

## Summer Shuttle Recommendations

The summer pilot shuttle succeeded in several ways. It provided park visitors with a positive experience, and one that nearly all would like to repeat. On Saturday, July 5<sup>th</sup>, a day when beach parking demand exceeded capacity, the shuttle carried more than 100 visitors to Limantour Beach and avoided further overcrowding or waits for parking. With extremely limited marketing, the shuttle attracted a significant and enthusiastic group of passengers. The operation of the service itself encountered no problems. Operators met all scheduled time points with time to spare.

An unexpected success of the shuttle was the number of one-way trips that it generated, particularly eastbound trips beginning at Limantour Beach, and primarily on Sunday. While the shuttle was designed to facilitate short one-way hikes between the Bear Valley Visitor Center and the network of trails near the Bayview Trailhead stop, it appears to have also attracted a market among those making long one-way hikes to the beach, and among backpackers spending two days or more in the park. For many, it allowed one-way hikes, a park experience that had previously been unavailable. Given the relatively small amount of marketing done for the service, it appears that this market could be expanded. While passengers on the summer shuttle support



its continuation, the pilot service faced a number of challenges that can not be easily overcome. While reducing parking congestion at the beach was one of the primary reasons for implementing the shuttle, parking counts conducted during the shuttle's operation suggest that there is only a very limited parking congestion parking at Limantour. On the single day when parking demand exceeded supply at the beach, ridership on the shuttle was significant and likely improved access and enhanced visitor experience for beach visitors. On most days and at most times of day, ample parking was available at the beach. While the shuttle was a positive amenity for beach passengers, it was not necessary to serve overflow parking demand.

Another reason for offering shuttle service was to provide a car free beach experience to visitors who may have taken Marin County Transit to the park and transferred to the Limantour Shuttle. Data collected from shuttle riders suggests that nearly all shuttle riders drove to the park and parked at the Bear Valley Visitor Center. The location of the park suggests that for all but a very few Marin County residents who can take advantage of the Stagecoach for local trips, a car free day at Pt. Reyes would require an excessive travel time and for many riders a multi-seat trip involving at least one transfer just to access the park. The market for car free travel to the park is relatively small, and likely concentrated in the campground just outside of the park, and in the relatively small number of lodging opportunities that are close enough to access the park by biking, walking or taking transit. A small number of residents of Marin County would also fall into this potential market. However, these markets are not large enough to justify continued shuttle service.

A final objective of the shuttle was to provide new park experiences including facilitating one-way hikes. Here the shuttle exceeded expectations, carrying hikers and back packers with very little advanced marketing. This is the one market that is likely to have significant upside potential for the shuttle. Given the fact that backpackers and longer distance hikers tend to plan their trip farther in advance, advertising a summer shuttle well in advance could increase its ridership.

However, even with the potential for expanding ridership, it appears that it would be challenging to fund an on-going summer shuttle. The free shuttle offered in 2008 cost \$17 per boarding, an unacceptably high subsidy. The implementation of a fare would likely deter ridership significantly, particularly if there is no disincentive for driving to the beach, such as a parking fee. There is likely no level of user subsidy, in the form of fares, that would cover the shuttle's expense.

Given these challenges, it is not recommended for PRNS to begin operating the summer shuttle on a permanent basis at this time. However, should funding become available, PRNS could consider implementing a similar service in the future. The following service adjustments would allow a future summer shuttle to be more efficient and productive than the 2008 Pilot:

**Start later in the day.** Few visitors spend a full day at Limantour Beach, and many arrive at Point Reyes National Seashore at mid-day or later. In order to operate the most efficient and productive service possible, the shuttle should begin operating no earlier than 11 AM. While this schedule may cost the shuttle some of its early-morning riders, it will increase average ridership for each run. PRNS may also consider extending service

later into the evening. The shuttle's second-to-last, eastbound run was consistently one of its busiest. While ridership dropped off sharply for the last run of the day, this was probably due to passengers being unwilling to risk missing the last shuttle of the day, rather than their preferred schedules. Further, about 40 percent of shuttle riders stated that "later evening hours" would cause them to be more likely to ride the shuttle again in the future, compared to just 13 percent who wanted "earlier morning hours."

**Tighten the schedule.** Thirty percent of survey respondents said that "more frequent service" would make them more likely to use the shuttle again in the future. The pilot shuttle operations demonstrate that the trip can safely be made in 30 minutes. The schedule should be shortened, and organized such that departures from the anchor stops (Limantour Beach and Bear Valley Visitor Center) occur on the hour and half-hour. Currently, short average passenger wait times suggest that a large portion of shuttle passengers consult a printed schedule before going to a shuttle stop. Departures on the half-hour would eliminate the need to consult a paper schedule, perhaps making shuttle ridership attractive to a wider group of potential riders.

**Consider an Hourly Service on Sunday.** Over the four weekends of the 2008 pilot, there were about twice as many boardings on Saturday as on Sunday. Saturday boardings were primarily beach-goers making a round trip. Sunday riders were largely one-way hikers and back packers. This market has the greatest potential for expansion, but may not be as dependant on frequency for attracting riders. Reducing service on Sunday's to every hour would reduce costs, while still of-

fering an opportunity for both one-way hikers and beach-goers to take advantage of the service.

**Mark bus stops more clearly.** For the 2008 summer pilot, visitor center and campground bus stops were marked only with small paper signs. Bus stops at Limantour Beach and the Bayview Trailhead were not marked at all. For a further pilot shuttle or permanent summer shuttle operations, stops should be marked with large, visible signs containing full information about the shuttle service and schedule, as well as information about connecting service with the West Marin Stagecoach. The park may also wish to make benches available to further mark stops and provide for passenger comfort.

If the summer shuttle is implemented on a permanent basis, the park should construct bus shelters of the type described in Section 3 of this report.

**Conduct targeted marketing, beginning in the spring.** Late approval of the pilot shuttle project lead to a very limited marketing effort. Shuttle marketing should be expanded and targeted to populations that the 2008 pilot revealed may be most likely to respond to marketing and ride the shuttle. These populations include Olema and Samuel P. Taylor campers, PRNS backcountry campers, West Marin residents, and out-of-town visitors. The next section of this report includes a detailed marketing plan that would be a necessary part of implementing any on-going summer shuttle service.



## 5. Marketing Plan for Park Transportation

User-friendly marketing and useful public information are key elements of successful transit systems. This section describes general principles for marketing transit at Point Reyes National Seashore. These principles can be applied to all transit services connecting to and operating within the park, including the winter shuttle, the West Marin Stagecoach, and summer shuttle service if operated.

### Principles for Marketing Transportation Services at Point Reyes National Seashore

#### Goals and Objectives

Goals for a park transportation service marketing program are to:

#### *Inform the public about the availability of and access to the shuttle services*

Marketing and outreach activities must inform and educate the public about the availability of transit service. People are reluctant to try something they do not fully understand. People who have always driven to the parks will need a degree of reassurance that the experience will be pleasant and that they will not get “stuck” in the park. To achieve this goal, parks should provide complete, useful, and positive information about the services, and promote transit service as a viable travel alternative for getting to the seashore.

Surveys on shuttle services to Muir Woods and other recreational destinations have shown that the vast majority of riders are using the service for the first time, year after year. Because the majority of riders will be recreational visitors from outside

the area, there is a need to continually market transit services to the public. These riders are less likely to learn about transit services through word of mouth or past experience; marketing programs for “use once” recreational systems should assume that those they are reaching have no previous experience or knowledge about the service.

#### *Communicate the benefits of using transit to all park visitors*

Benefits of taking in-park transit include the opportunity to see the sights, take pictures, and interact more fully with travelling companions since one is not driving, as well as environmental benefits and the opportunity for a new experience in the park. Marketing should seek to communicate these benefits to passengers.

#### *Generate expanded ridership from target populations*

Given limited resources for transportation in parks as well as for marketing them, parks should focus marketing toward the groups of visitors likely to benefit most from the shuttle service. More detail on target populations is provided below.

### Components of a Marketing Program

The aim of a Marketing Program is to support the goals described above and yet be flexible enough that they can be adapted to changes in services and meet future goals. The following strategies might be included as part of a program to increase awareness of park shuttle services, in coordination with local transit service.

- Focused Message
- Branding
- Passenger Information
- Expanded Internet Presence
- Public Relations and Advertising Campaign

Each of these is described below.

### ***Focused Message***

The objective of park shuttle services is to provide a new visitor experience while reducing resource impacts from cars, including air and noise pollution, paving of natural areas to accommodate parking, and impacts on natural resources when lots overflow. The primary marketing messages for the shuttles should include:

- Explore the Park in a new way.
- Have more fun (and save money) on your visit by letting someone else drive.
- Help preserve the parks and the environment by leaving your car behind.
- In addition to these messages, marketing materials should be tailored with messages to appeal to the specific target markets described below.

### ***Branding***

Branding—creating a name, logos, and sometimes a “tagline”—can increase the usability of a system by making it more visible and familiar to the potential user. Because some park shuttle vehicles are leased for short periods, it may not be practical to paint or wrap them with the park’s identifiers. However, vehicles can be marked with temporary signage, as are the vehicles used for the Point Reyes Winter Headlands Shuttle. Branding should help to convey that the service is convenient, fun, and environmentally friendly.

In addition, a primary symbol or logo for the shuttle could be used on all printed and electronic information and at the stops to make the service more recognizable. In addition to a distinctive park shuttle stop sign, stops should have standard signage and provide a basic level of comfort with shade/shelter, benches, and trash receptacles.

### ***Passenger Information***

Passenger information – schedules and maps – provide an important incentive to get people on transit. Shuttle service information should be widely posted in the park, including on roadways and at destinations such as the visitor centers and significant attractions – wherever potential passengers might be able to take advantage of the service. Visitors from outside the local area often combine visits to more than one recreational site. Flyers should also be posted at other major destinations and visitor centers within the larger area.

### ***Expanded Internet Presence***

Internet information is essential in reaching visitors from out of the area. For larger parks, particularly those far from urban areas, the great majority of visitors will be visitors from other regions. Recent recreational surveys at Muir Woods show that visitors from out of the area use the internet as their main means of getting information about opportunities to take transit. Transit information should be posted on the park website, and should include the main marketing messages, passenger information, and pictures of the vehicles at the park to give the visitor confidence that this system will meet their needs.

Park transit information should also be posted or linked to the web sites for other nearby recreational destinations, local campsites and hotels, and any regional transportation sites (such as the Bay Area’s 511), particularly those with trip-planning features.

Other websites to consider are those focused on a geographic area providing information on what to do for fun and entertainment. These would include Craigslist Events, local Chambers of



Commerce, and hiking and camping clubs such as the Sierra Club.

### ***Public Relations and Advertising Campaign***

**The Press.** Local and regional newspaper stories are an important way to reach both local residents and tourists. Transportation marketing efforts should include press releases describing shuttle services, stating the purpose, frequency, and service plan for the shuttles, as well as a referral to the park web site. With the visual appeal of parks and the current increase in the demand for public transit, it may be possible to bring about an article on park shuttle services once or twice a year in the local papers and regional magazines. Stories might include interviews with riders and park staff describing the benefits of the system and the experience of taking the shuttle, as well as photographs of people using the service in a scenic setting.

**Paid media.** Just prior to the start of the shuttle season, marketing materials might be reworked into paid ads for the press, both local to the park and in papers serving the nearest urban area. These advertisements should emphasize the same messages as other marketing materials, namely: the shuttle is an opportunity to explore park in a new way; have more fun (and save money) on your visit by letting someone else drive; and help preserve the parks and the environment by leaving your car behind.

### **Marketing a Future Summer Shuttle Service**

Should PRNS decide in the future to invest in a summer shuttle or any other in-park transportation services, the marketing approaches described

above could be applied in the following specific ways:

1. Make passenger information available in printed brochures, flyers, and posters on local and regional transit such as Marin Transit and Golden Gate Transit vehicles, and on CalTrans' 511 information website, with cross-posted links on all parties' websites.
2. Post flyers at other major destinations and visitor centers within the larger area, including onboard the PresidiGo and at the Presidio Transit Center, Muir Woods, Fort Baker, and the Golden Gate Bridge.
3. Include information on any park shuttles connecting with local transit with all West Marin Stagecoach material and vice-versa.
4. During the 2008 summer pilot, an announcement about the service was linked from the "Public Transportation" page on the PRNS website. To gain maximum exposure for the shuttle on the PRNS website, it is recommended that information about any in-park transportation services, along with information about the West Marin Stagecoach, be described on a single page, and that the following pages provide links to this page: "Plan your visit"; "Things to do"; "Getting Around"; "Coast Camp"; "Backcountry Camping"; "Directions to Limantour Beach."
5. Provide shuttle information on the websites of other closely related destinations and organizations such as Samuel P. Taylor State Park and Olema RV Resort and Campground, as well as CalTrans' 511 website, where all Bay Area transportation information is available.

6. Use other event-related websites. Announcements on two additional websites may help to increase shuttle exposure and generate interest among young adults in the San Francisco Bay Area. The Craigslist “events” section is free and widely read.<sup>7</sup> The website and e-mail newsletter “FuncheapSF” reaches 10,000 “active & outgoing people in San Francisco and the Bay Area” and accepts relevant advertisements for a small fee.<sup>8</sup>
7. Work with local press to run feature stories about the shuttle service include the Pacific Sun (Marin), the Bay Area Sierra Club newsletter (the Yodeler), and Sunset Magazine, which reaches the whole western U.S. region.
8. Place paid ads in local and regional newspapers, such as the West Marin Citizen, Point Reyes Light, Marin Independent Journal, as well as the San Francisco Chronicle and the Oakland Tribune, emphasizing the same messages as other marketing materials, namely: the shuttle is an opportunity to explore Point Reyes National Seashore in a new way; have more fun (and save money) on your visit by letting someone else drive; and help preserve the parks and the environment by leaving your car behind.

The 2008 pilot as well as recent surveys on the West Marin Stage reveal a number of specific markets for a future summer shuttle service:

**Olema Ranch Campground and Samuel P. Taylor Campers.** In surveys taken on the summer shuttle, many riders reported that they started their trip from a campground outside of PRNS, either at Olema or in Samuel P. Taylor State Park.

7 <http://sfbay.craigslist.org/cal/>

8 <http://sf.funcheap.com/>

The summer pilot shuttle served the Olema RV Resort and Campground directly; during the eight-day summer shuttle pilot, 86 passengers boarded at the campground stop. If the park decides to run a similar shuttle system in the future, this will be a key market for potential expansion. With 177 campsites at the facility, a large potential shuttle ridership pool exists here. The park could further reach this audience by coordinating with the campground to place information about the shuttle on the “Local Area Recreation” section of the campground’s website.<sup>9</sup> Easily visible signage should mark the campground bus stop, and the campground should receive shuttle flyers well before the shuttle begins operating.

Because the West Marin Stagecoach serves Samuel P. Taylor State Park directly and offers a short ride to the Bear Valley Visitor Center, campers at the park may offer the best market to attract passengers making connections between the two services. Samuel P. Taylor has 65 reservable campsites as well as a variety of large group sites. The park could target this audience by placing marketing material at appropriate locations near Samuel P. Taylor campsites, promoting the shuttle with staff, and working with the park to post information about the service on the Samuel P. Taylor State Park website.<sup>10</sup> Information should be provided to anyone making a campsite reservation, either online, by phone, or in person.

**West Marin Residents.** Survey results indicate that 38 percent of shuttle riders began their trip to PRNS in Marin County, compared to 14 percent in San Francisco. In addition, 28 percent of shuttle survey respondents had been to the park at least twice in the previous twelve months. Marin

9 [http://www.olemaranch.com/Local\\_Area\\_Recreation](http://www.olemaranch.com/Local_Area_Recreation)

10 [http://www.parks.ca.gov/?page\\_id=469](http://www.parks.ca.gov/?page_id=469)



residents, particularly West Marin residents, have shorter distances to travel and therefore can more practically make the West Marin Stagecoach-to-summer shuttle connection. Marketing should directly target West Marin Residents.

As recommended by Marin Transit's recent marketing plan, the best way to reach these potential riders is using a series of "testimonial" ads in West Marin newspapers. These ads would show riders describing how the West Marin Stagecoach has benefited them. If Marin Transit decides to pursue this marketing strategy, it is recommended that the park seek to "piggyback" on Marin Transit advertising by helping to create one such ad with a rider who has used the Stage to get to PRNS.

Out-of-town visitors. During the Summer, West Marin is host to thousands of out-of-town visitors. Although the shuttle only ran for one month, it attracted a small but significant share of out-of-town visitors. Targeted marketing could significantly increase this share. PRNS could distribute announcements and flyers to B&Bs, hotels, and visitor bureaus throughout Marin and Sonoma. For San Francisco visitors, the park should take advantage of the network of hotel concierges who already distribute information on the Muir Woods Shuttle. PRNS should also coordinate with Golden Gate National Recreation Area to post flyers at other major destinations and visitor centers within the larger park area, including Muir Woods, Fort Baker, and the Golden Gate Bridge.

### **Opportunities for Co-Marketing with Marin Transit / West Marin Stagecoach**

Regardless of whether there is in-park transportation service, the West Marin Stage serves the Bear Valley Visitors Center at PRNS. Co-marketing with Marin Transit may help to reduce the num-

ber of cars that come to the park. The fact that eight percent of summer shuttle riders arrived at the park via the West Marin Stagecoach suggests that the Stage has the potential to attract a group of recreational users making a car-free trip to the park.

Consultants to Marin Transit recently completed a marketing plan for the agency.<sup>11</sup> This plan covers a multitude of marketing activities including branding, passenger information, advertising, public relations, and creating relationships with local groups. Full implementation of this plan would serve to benefit both the summer shuttle service (if reinstated) and the Stage.

The park should also coordinate with Marin Transit and Golden Gate Transit to post flyers aboard transit vehicles in Marin and San Francisco, the San Rafael Transit Center, and at the Transit hub in San Anselmo, featuring the opportunity to take the Stage to Point Reyes National Seashore.

If the shuttle service to Limantour is started again in the future, PRNS can further coordinate with Marin Transit through:

- Schedule coordination: park shuttles should arrive at the visitor center in time for riders to use the restrooms and get refreshed prior to boarding the Stage.
- 511 Phone information: Marin Transit's marketing plan recommends that Marin Transit list their information on the regional transit site, 511.org. This is also a 511 phone referral line for transportation. PRNS should make sure that shuttle information is included with Marin Transit's West Marin Stagecoach information so that potential visitors can get information by phone and on the web through this well-known one-stop source.

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<sup>11</sup> "Strategic Marketing Plan for Marin Transit." Draft Prepared for Marin Transit by Selena Barlow, Transit Marketing. March 2008.

- Advertising: Consider a recreational transit campaign co-sponsored by PRNS, Marin Transit, and Golden Gate Transit, to reach recreational travelers from San Francisco. Information highlighted in these “Bus to the Beach” materials would provide information pertaining only to the specific bus routes going to West Marin recreational sites, with schedules for those routes and maps highlighting connecting services with clearly marked transfer points. By pointing to just the routes connecting the city and southern Marin to West Marin towns and recreational sites, trip planning would be more simple and reassuring. This would provide one source for the whole trip, eliminating the need to consult schedules from three different sources in order to figure out connections in an unfamiliar area. Distribution would include online materials and printed materials distributed on buses, at transit hubs, and to hotels and other tourist areas.
- As described above, Marin Transit’s marketing plan recommends a series of “testimonial” ads in West Marin newspapers, noting that these types of ads tend to be effective in small rural communities. The ads would show riders describing how the West Marin Stagecoach has benefited them. To maximize the potential for attracting connecting passengers, the park may want to coordinate with Marin Transit to create one such ad with a rider who has used the Stage to get to Point Reyes National Seashore. The message and the images of riders could be customized to the messaging and targeted groups described above.

## 6. Funding Plan

The existing Point Reyes winter shuttle operates at a significant deficit. In 2007, costs exceeded revenues by more than \$33,000. The service has no dedicated funding, and the operation is currently subsidized using visitor center donations, the park’s only truly discretionary revenue source, in addition to fares.

Implementing a permanent summer shuttle would add to costs and deficits. Providing 14 service hours per day on Saturday and Sunday for the whole summer (Memorial Day to Labor Day, or 16 weeks) at a cost of \$110 per service hour would take an estimated \$48,280. The park could reduce these costs by providing less service, as described below. While some cost recovery may be possible through fares, there is no fare that would fully cover all of the shuttle’s costs.

This section discusses options for funding continued transit service at Point Reyes National Seashore.

## Potential Revenue Sources

### Fares

Very few transit services cover their costs through the farebox. The West Marin Stagecoach service, for example covers less than 10 percent of its costs from fares. The winter shuttle does significantly better, generating approximately \$53,500 in fares, covering 62 percent of its costs. This farebox recovery ratio reflects the fact that the fare is relatively high (\$5 for adults), and the fact that all park visitors wishing to go to the lighthouse or Chimney Rock must use the shuttle because Lighthouse Road is closed to private vehicles.

It is likely that demand for the service is relatively inelastic with respect to price, in that a moderate price increase will lead to a relatively small drop in ridership, primarily because riders who want to go to the headlands have no other option. Increasing the fare for the winter shuttle may therefore help to cover more of its costs. It may be possible to increase the adult fare for the service from \$5 to \$7. Based on experience with similar services, this 40 percent fare increase will lead to a decrease in



ridership of approximately 10 percent, yielding a net gain in revenue.

While the 2008 summer pilot shuttle was free, the park may also choose to charge a fare to partially recover the cost of a permanent shuttle service. Because this is an “optional” rather than a mandatory shuttle ride, fares should be kept relatively low.

PRNS should be aware that, because Limantour Road remains open and parking is available at Limantour Beach, summer shuttle riders are likely more sensitive to fares than the winter shuttle riders. Even a very low fare will deter a significant number of riders. Beachgoers who travelled to the park using their own vehicles would be most affected by price increases. Visitors wishing to make a one-way hike are the least likely to be deterred by fares, because their preferred activity is made possible only by using the shuttle.

Because summer shuttle riders will be sensitive to fares, a fare of \$2 per person is recommended. This is lower than the winter fare and more typical of public transit fares. Even with this reasonable fare, experience with similar systems suggests that a \$2 fare would reduce demand by 15-20 percent for beach-goers.

### Partnerships with Marin Transit

Marin Transit is currently studying opportunities to improve transit service in West Marin, including service to residences, jobs, community resources, and recreational areas.<sup>12</sup> If PRNS were to establish a partnership with Marin Transit to provide transit service, it may be able to enhance the utility of transit service while reducing costs for both agencies. Coordinated service could, for example, be operated by Marin Transit and pro-

vide direct service from San Rafael to Limantour Beach, rather than the connecting service as demonstrated in the 2008 summer pilot shuttle. While the park would almost certainly have to contribute to the operating costs of such a direct service, it may come at a savings as compared to contracting its own service form a private operator.

It is recommended that PRNS continue to collaborate with Marin Transit in designing an optimal transit network for recreational passengers in West Marin.

### Federal Funding

The Point Reyes Transit Access Study was funded by a grant from the Federal Transit Administration’s Alternative Transportation in Parks and Public Lands program (ATPPL). This program, when reauthorized in 2009, was renamed the Paul S. Sarbaines Transit in Parks Program (TRiP). It provides funding, up to \$27 million in FY2009, to “support public transportation projects in parks and public lands.” Program goals specify that funds should be directed to capital or planning projects, rather than ongoing operations. TRiP funds can be used for vehicle leasing as well as purchase.

The Federal Lands Highway Program funds the National Park Service’s Park Roads and Parkways Program. Under Category III - Alternative Transportation Program, the program funds approximately \$12 million annually nationwide to reduce impacts to resources and improve visitor experience through alternative transportation planning and implementation projects. It also funds vehicle acquisition and leasing. All NPS alternative transportation projects are prioritized annually through a call for projects. Projects

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12 West Marin Needs Assessment, Marin Transit. In process.

submitted for this program may be “flagged” as candidates for the FTA TRiP program described above.

The Alternative Transportation in Parks and Public Lands program (ATPPL) is a federal program that will provide \$27 million in FY2009 to “support public transportation projects in parks and public lands.” Program goals specify that funds should be directed to capital or planning projects, rather than ongoing operations. ATPPL funds can be used for vehicle leasing as well as purchase.

By funding vehicle leasing, a federal grant can support a portion of shuttle contract costs. The award of such a grant would be justified by the fact that funds would cover the capital cost of transit vehicles in the most cost-effective way available for this type of service. There is a precedent for this type of award from ATPPL: Lewis and Clark National Historic Park in Washington and Oregon was awarded ATPPL funds in 2008 to fund leasing costs for vehicles used in a bus service that operates 84 days per year. The rest of the time, these vehicles are used to by a local transit operator.

**Funds Generated in the Park**

Currently, the deficit for the winter shuttle is back filled by donations from visitors. The deficit in FY 2008 was approximately \$33,000. Adding additional services would increase the deficit for transportation at PRNS. Even added marketing for the winter shuttle could ultimately add to the deficit since there is very little additional capacity available for increased riders without increasing service.

Options for increasing funding generated in the park include increasing fares and/or charging for

parking. The park does not currently have plans to implement parking charges. Should parking charges be considered in the future, they could be implemented only at high demand parking locations or throughout the park. Parking fees, in addition to providing revenue, provide incentives for visitors to access the park via transit walking or bicycling or to drive with more visitors per vehicle. This outcome serves the park’s goal of reducing emissions and resource impacts for vehicle use in the park. Parking fees can also be used to manage parking supply in areas where the demand for free parking exceeds the available supply such as the Limantour Beach South parking lot. While the park has no plans to implement parking charges at this time, charges may ultimately be useful as part of a demand management strategy.

**Funding Scenarios**

An ideal funding plan would allow PRNS to fund two very different shuttle operations. The first, the winter shuttle, is essential for ensuring orderly transportation of visitors within the park during whale migration season. The summer beach shuttle does not solve a pressing congestion problem, but it does provide a new way to see the park and may yield resource preservation and environmental benefits as well. The summer shuttle is desirable if resources are available, but not essential to park operations.

While this report does not recommend implementing the summer shuttle on a permanent basis, this section documents the resources that would be required if the park decided to implement the service at a later time, and proposes alternatives for how the park could raise the required funds. The goal of any funding plan is to balance costs and revenues over a long term, rather than



focusing on a single year. A secondary goal is to encourage shuttle ridership and discourage single occupant auto trips, which create congestion and have a disproportionate impact on the environment at the seashore.

It should be noted that the estimates of the yield from user fees provided here are necessarily speculative. Little data is available on how user fees impact park visitor behavior.

**Winter Shuttle Funding**

Contracting winter shuttle operations with Marin Airporter costs the park \$75,000, and additional staffing used to support the shuttle cost an additional \$12,000. Sixty-two percent of this cost is recovered through the \$5 fare that is charged for all adult passengers. The existing deficit for the winter shuttle is estimated to be \$33,400. PRNS should consider raising the Winter Shuttle fare to \$7.

As noted previously, demand for this service is likely to be relatively inelastic, given that the experience of travelling to the lighthouse and Chimney Rock is highly valued and the shuttle is the only way for visitors to have that experience. We estimate that a 40 percent increase in fare will lead to a decrease in ridership of no more than

10 percent and will reduce but not eliminate the deficit this service. At a fare of \$7.

The park could continue to fund the remaining deficit out of visitor center donations, pursue vehicle leasing cost funding through ATPPL grants, or other funds generated in the park or through grants.

**Summer Shuttle Funding**

As illustrated in Figure 38, Providing 14 service hours per day on Saturday and Sunday for the whole summer (Memorial Day to Labor Day, or 16 weeks), at a cost of \$110 per service hour would cost an estimated \$48,280. The park could reduce these costs by providing less service.

For example, providing service on Saturdays only would reduce the cost by half. However, boarding data from the 2008 pilot suggest that Sunday service generates the bulk of one-way trips from backpackers. As an alternative, the park could seek to retain this market, which may be less headway-sensitive than beach-goers, by providing hourly service on Sundays along with half-hourly service on Saturdays. The total cost of this arrangement would be \$36,210. Finally, the park could limit service to only part of the summer. Providing service just for the eight busiest weeks of the summer,

**Figure 37 Summer Shuttle Service Options**

Summer Shuttle Options		Service Days	Total Service Hours	Cost/Hour	Total Cost
8 Weeks	Saturday Only	8	112	\$110	\$12,320
	Saturday and Hourly Sunday	16	184	\$110	\$20,240
	Saturday and Sunday weeks	16	224	\$110	\$24,640
16 Weeks	Saturday Only	16	224	\$110	\$24,640
	Saturday and Hourly Sunday	32	368	\$110	\$40,480
	Saturday and Sunday weeks	32	448	\$110	\$49,280

**Figure 38 Summer Shuttle User Fee Options**

Summer Shuttle Options		Service Days	Total Service Hours	Cost/ Hour	Cost	Board-ings	Fare	Fare Rev.	Subsidy	Subsidy/ Boarding	Share of Costs Covered
8 Weeks	Saturday Only	8	112	\$110	\$12,320	1120	\$2	\$1,523	\$10,797	\$10	12%
	Saturday and Hourly Sunday	16	184	\$110	\$20,240	2240	\$2	\$3,046	\$17,194	\$8	15%
	Saturday and Sunday weeks	16	224	\$110	\$24,640	2240	\$2	\$3,046	\$21,594	\$10	12%
16 Weeks	Saturday Only	16	224	\$110	\$24,640	2240	\$2	\$3,046	\$21,594	\$10	12%
	Saturday and Hourly Sunday	32	368	\$110	\$40,480	4480	\$2	\$6,093	\$34,387	\$8	15%
	Saturday and Sunday weeks	32	448	\$110	\$49,280	4480	\$2	\$6,093	\$43,187	\$10	12%

for example (July and August), would halve the cost of each of the above options. The potential cost of summer shuttle service therefore varies between an estimated \$12,320 and \$49,280, depending upon how much service is offered.

If the park chose to implement one of these service options on a permanent basis, it will almost certainly require user fees to pay part of the cost of the service. Riders on this service are likely to be more fare sensitive than winter riders and fares should be kept as low as possible to retain ridership. An initial fare of \$2.00 could be tested to ensure that ridership does not deteriorate to significantly.

With proper marketing, productivity on this shuttle could average 10 passengers per service hour. Figure 39 estimates ridership and the revenue generated by a \$2.00 fare under different operating scenarios.

enue generated by a \$2.00 fare under different operating scenarios.

**Funding Recommendations**

Because each of the funding strategies described in this report involves complex trade-offs, no single funding recommendation can be made. Rather, we recommend that the park continue to pursue grant funds to support leasing of vehicles and construction of shuttle stops for the Headlands Shuttle System, that it engage with Marin County Transit as it carries out a study of service options in West Marin and consider implementing the Summer Shuttle to Limantour Beach on a permanent basis in the future should congestion become problematic and if ongoing funding becomes available.

### 7. Conclusion

This study finds that the winter headlands shuttle service at PRNS is successful and well liked by its passengers, but that a few small adjustments have the potential to improve visitor experience even further. It also finds that a summer shuttle service provided a valued experience for park visitors. However, because of low overall productivity during the pilot and funding uncertainty, this shuttle can not be continued without additional funds.

This study also finds that, while the park has the opportunity to pursue funding opportunities through federal grants and improved transit efficiency by collaborating with Marin Transit, a significant portion of transit service costs will have to be funded through user fees in the near term.

Because each of the funding strategies described in this report involves complex trade-offs, no single funding recommendation can be made. Rather, we recommend the following: the park should continue to pursue grant funds to support leasing of vehicles and construction of shuttle stops for the Headlands Shuttle System. It should engage with Marin Transit as that agency carries out a study of service options in West Marin. Finally, PRNS should consider implementing the Summer Shuttle to Limantour Beach on a permanent basis in the future should congestion become problematic and should ongoing funding become available.

# Appendix A. 2008 Summer Pilot Shuttle Marketing Flyer

Park News

National Park Service  
U.S. Department of the Interior



## Free Shuttle to Limantour Beach

From Olema Ranch, Bear Valley Visitor Center & Bayview Trailhead  
Weekends in July • 10 a.m. to 6 p.m.

Help Point Reyes National Seashore reduce greenhouse gases while enjoying a relaxing ride through the park by taking advantage of this free and convenient trial program.

Shuttles will leave Olema Ranch for Limantour Beach every 35 minutes, stopping along the way at Bear Valley Visitor Center and Bayview Trailhead. They'll return using the same route, so you can hike between stops without having to worry about getting back to your car.



Bear Valley Visitor Center



### Use the Shuttle to Take Scenic One-Way Hikes

- Bayview to Limantour via Bayview & Muddy Hollow Trails (3.9 mi)*
- Bayview to Limantour via Laguna & Coast Trails (4 mi)*
- Bayview to Bear Valley via Bayview, Sky & Wittenberg Trails (5.4 mi)*
- Bayview to Bear Valley via Fire Lane & Horse Trails (5.4 mi)*
- Limantour Beach to Bear Valley via Fire Lane & Horse Trails (7.7 mi)*
- Limantour Beach to Bear Valley via Coast & Bear Valley Trails (8.5 mi)*

### Make a Car-Free Trip to Point Reyes National Seashore

Take the West Marin Stage to the Bear Valley Visitor Center from downtown San Rafael or Inverness.

For more: [www.marintransit.org](http://www.marintransit.org)

Olema	Bear Valley Visitor Center	Bayview Trailhead	Limantour Beach	Bayview Trailhead	Bear Valley Visitor Center	Olema
9:49 AM	10:00 AM	10:15 AM	10:28 AM	10:38 AM	10:55 AM	10:58 AM
10:24 AM	10:35 AM	10:50 AM	11:03 AM	11:13 AM	11:30 AM	11:33 AM
10:59 AM	11:10 AM	11:25 AM	11:38 AM	11:48 AM	12:05 PM	12:08 PM
11:34 AM	11:45 AM	12:00 PM	12:13 PM	12:23 PM	12:40 PM	12:43 PM
12:09 PM	12:20 PM	12:35 PM	12:48 PM	12:58 PM	1:15 PM	1:18 PM
12:44 PM	12:55 PM	1:10 PM	1:23 PM	1:33 PM	1:50 PM	1:53 PM
1:59 PM	2:10 PM	2:25 PM	2:38 PM	2:48 PM	3:05 PM	3:08 PM
2:34 PM	2:45 PM	3:00 PM	3:13 PM	3:23 PM	3:40 PM	3:43 PM
3:09 PM	3:20 PM	3:35 PM	3:48 PM	3:58 PM	4:15 PM	4:18 PM
			4:23 PM	4:33 PM	4:50 PM	4:53 PM
			4:58 PM	5:08 PM	5:25 PM	5:28 PM
			5:33 PM	5:43 PM	6:00 PM	6:03 PM

Last connection to westbound West Marin Stagecoach (to Inverness) at 4:18 PM  
Last connection to eastbound West Marin Stagecoach (to San Rafael) at 5:08 PM

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Final Report



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As the nation's principal conservation agency, the Department of the Interior has the responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environment and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration

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