



# Fort Clatsop

## *Evaluation of Summer 2004 Operations*



**FINAL REPORT**  
September 2004

John A. Volpe National Transportation Systems Center  
Research and Special Programs Administration  
U.S. Department of Transportation



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## Report Notes and Acknowledgments

This evaluation was funded by the National Park Service Alternative Transportation Program under the Federal Highway Administration Federal Lands Highway Program.

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This project would not have been possible without the support and cooperation of Chip Jenkins, Superintendent at Fort Clatsop National Memorial. We would like to thank him for his assistance, particularly with respect to providing key data sources. In addition, we would like to thank Ethan Abeles, Transportation Scholar, for his work on the visitor evaluation and other invaluable support. Many thanks to Pete Field, of the U.S. Department of Transportation Federal Highway Administration, for his assistance in providing data and his feedback on the evaluation. In addition, we would like to thank Sunset Empire Transportation District for sharing data and insights, and Patrick Shea, of the National Park Service Denver Service Center, for his feedback regarding the evaluation. We greatly appreciate the cooperation and comments received from all park staff and partners during the evaluation.

## Executive Summary

In 2005, Fort Clatsop National Memorial celebrates the bicentennial of the winter encampment of the Lewis and Clark expedition at Fort Clatsop. In the summer of 2004 a number of changes in operations were made at Fort Clatsop in anticipation of a large increase in visitation during the Bicentennial. Key changes to systems operations include the implementation of a ticket reservation system; the opening of Netul Landing as the new gateway to Fort Clatsop; the seasonal closing of the two parking lots near the visitor center; the use of shuttle buses to transport visitors from Netul Landing to the fort, and the expansion of regional bus service to accommodate visitors coming from nearby communities.

The goal of this current evaluation is to assist the National Park Service (NPS) in assessing how the new systems have performed during the summer of 2004. NPS and its partners will use the findings from the evaluation to help inform decisions regarding operations for next summer.

A variety of data sources was used in this evaluation, including a site visit to Fort Clatsop in August 2004; qualitative interviews with partners, park staff, transit bus drivers and visitors; a visitor evaluation conducted in August 2004, and other data collected by Fort Clatsop and its partners on visitation, parking access and transit ridership.

The findings indicate that:

- **Overall, the visitor experience at the site of the fort continues to be very positive.** Visitors were able to enjoy the site at their own pace and did not feel crowded during their visit.
- **Operations at Netul Landing seem to work well.** Overall, visitors enjoyed the orientation and the interpretative displays and didn't seem to mind waiting 10 to 15 minutes for a shuttle. However, there were some visitors (especially returning visitors) who were upset that they could no longer park near the visitor center.
- **Netul Landing parking was sufficient for most of the summer,** though on some occasions the lot was full and visitors could not find parking. One of the biggest complaints regarding parking was that the physically handicapped had difficulty walking from the far parking lot to the shelter.
- **The ticket reservation system did not function as anticipated.** Awareness and use of the system was relatively low, and visitors, park staff and partners found the ticketing process very cumbersome; problems were cited with both the web interface and the phone system.
- **Visitors give the intra-park shuttle service positive ratings.** Returning visitors and tour groups tended to complain the most about riding the shuttle, whereas new visitors were more likely to take the process in stride.
- **The regional transit service had a respectable mode share during the summer;** however, stakeholders felt that service enhancements are necessary to boost ridership.

Based on these findings, the Volpe Center offers a set of recommendations for enhancing the overall visitor experience. In brief, these recommendations include:

- Discontinue the ticket reservation system.
- Enhance regional transit service and marketing to encourage transit use.
- Improve parking access at Netul Landing for handicapped.
- Make targeted use of the parking lots near the visitor center for tour buses and possibly transit buses.

In addition other recommendations that might enhance the visitor experience include:

- Improve visitor information.
- Build a foot trail from Netul Landing to the fort.

# Introduction

## Background

Fort Clatsop National Memorial is located in northwest Oregon near the mouth of the Columbia River. It is at this site that the Lewis and Clark expedition built the fort where they spent the winter of 1805-06. In 2005, Fort Clatsop celebrates the bicentennial of the Lewis and Clark expedition. In preparation for an expected large increase in visitation, Fort Clatsop and its partners implemented a number of changes to operations during the 2004 summer season, including:

- The implementation of a new ticket reservation system.
- The opening of Netul Landing, located about one mile from the site of the fort replica, as the new “gateway” to Fort Clatsop.
- The seasonal closing of the two parking lots near the visitor center and the fort replica during the summer months (June 14 – September 6).
- The introduction of an intra-park shuttle that transports visitors from Netul Landing to Fort Clatsop.
- The addition of new transit service routes to transport visitors from neighboring communities to Netul Landing.

## Evaluation Objectives

The 2004 summer season was viewed as an opportunity to test the new systems and to evaluate initial operations. The National Park Service requested that the Volpe Center assist in an evaluation. The limited timeframe for the evaluation limited the scope of the analysis and required that its focus be confined to the following critical questions:

1. Should the ticket reservation system be continued?
2. How should the parking areas at Netul Landing and the site of the fort replica be operated?
3. Are adjustments to the intra-park shuttle service necessary?
4. What adjustments are needed to other transportation services, such as transit, that are provided to Netul?
5. How has the visitor experience, especially visitor spatial distribution and pace of the visit, been affected by the new systems?

## Data Sources

Several data sources were used in the evaluation of new systems at Fort Clatsop. Data sources include observations from a site visit to Fort Clatsop in early August 2004, findings from qualitative interviews conducted with park staff, transit bus drivers, visitors and partners, and findings from a visitor evaluation conducted at Fort Clatsop. Other data used in this report include:

- Visitor head count for summer 2004
- Transit ridership information
- Tour bus information
- Traffic counts for 2004 and prior years
- Information from the visitor sign-in book
- Bookstore sales

Each of these data sources is described in more detail below.

### Fort Clatsop Site Visit

A Volpe staff member visited Fort Clatsop on August 2-4, 2004. During the visit, qualitative interviews were conducted with park staff, transit bus drivers, and visitors, as well as some of the partners. As part of the visit, the Volpe staff person experienced Fort Clatsop as any first time visitor would, by riding the transit bus from Astoria, being oriented at Netul, riding the intra-park shuttle to the fort; touring the fort and watching a demonstration, and spending time at the visitor center. In addition, the Volpe staff person spent a number of hours at Netul Landing and at the site of the visitor center and the fort replica in order to observe operations and to gauge the visitor experience.

### Qualitative Interviews

Qualitative interviews were conducted with the following stakeholders:

- Park staff
- Bus drivers from Sunset Empire Transportation District (SETD)
- Visitors
- Partners

In this report, “park staff” refers to permanent rangers, seasonal rangers, volunteers and other staff at Fort Clatsop. “Partners” is defined very loosely and ranges from stakeholders who have committed substantial funding to the new systems to stakeholders who have made no financial contribution but who are nonetheless affected by the new systems. Partners include representatives from Sunset Empire Transportation District, Pacific County Transit, American West Steamboat Company, Sundial Special Vacations, Fort Stevens State Park, and Columbia River Maritime Museum. In addition, partners include staff from the Astoria Visitor Center, Astoria-Warrenton Chamber of Commerce, and Seaside Chamber of Commerce—three locations where visitors could purchase tickets online and obtain information about their visit.

Discussion guides were developed for all the interviews in order to insure that key topics would be covered. However, the questions were intentionally designed to be very general and open-ended, so as not to lead the respondents. The objective of the qualitative interviews is to obtain different perspectives from a range of stakeholders in order to develop insight and understanding on how the new systems have operated at Fort Clatsop this summer. However, because of the small number of people interviewed and the non-random method of recruitment, the findings cannot be evaluated quantitatively, nor are they necessarily representative of each of the populations.

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<sup>1</sup> Additional qualitative interviews were conducted by phone from the Volpe Center after the on-site visit.

## Visitor Satisfaction

In an evaluation visitors were asked to rate their level of satisfaction with different aspects of their visit, including the ticket reservation system and the shuttle system. The evaluation was conducted between July 30<sup>th</sup> and August 28<sup>th</sup> 2004. The National Park Foundation Transportation Scholar, with the occasional assistance of park volunteers, conducted the evaluation. Overwhelmingly, visitors were receptive to the idea of providing feedback.

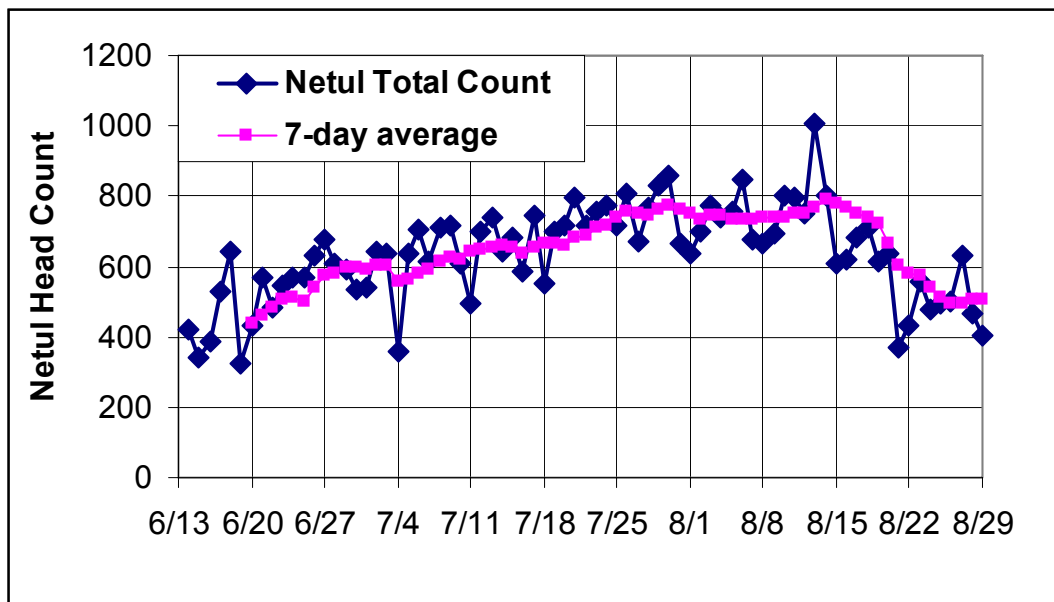
The visitor evaluation consists of five sections:

1. Visitor Characteristics
2. The Reservation System Ticketing System
3. The Fort Clatsop Intra-park Shuttle
4. Regional Transit Buses
5. Visitor Experience

## Visitor Head Count

Visitor counts were gathered between 6/14/2004 and 8/29/2004. The peak period was the first 1/2 of August, with an average of 750 visitors per day.

**Figure 1**  
**Netul Daily Head Count, Summer 2004**



## Transit Ridership Information

During the summer of 2004, three regional transit routes were added to serve Fort Clatsop. Additionally, a shuttle was added between the Netul parking area and the Fort Clatsop visitor center:

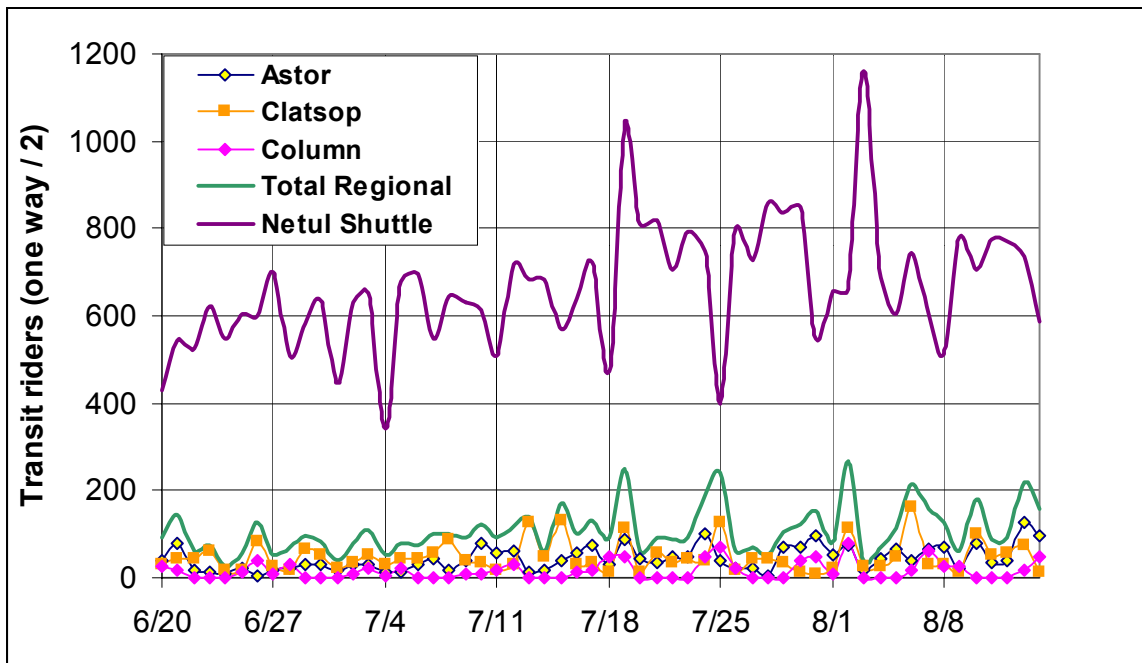


**Table 1**  
**Transit Routes to Fort Clatsop**

Route	From – To	Headway	Buses used
Astor	Astoria – Netul Landing	1 hour	1
Column	Astoria – Netul Landing via Astoria Column	4 / day (Friday – Monday only)	1
Clatsop	Fort Stevens – Netul Landing	1 hour	1
Clatsop – short turn	Fred Meyer (Warrenton) – Netul Landing	1 hour (connects to route 101 express)	~0.5
Netul A and B	Netul Landing – Visitor Center	10 – 20 minutes	~1.5

One-way ridership was reported by the transit operator on a daily basis. This was divided by 2 to obtain round-trip ridership, and is plotted in Figure 2. The “total regional” line is the sum of reported ridership for the Astor, Clatsop and Column routes. Overall ridership on the Sunset Empire Transportation District (which includes routes other than those to Fort Clatsop) has increased significantly since 2003 (Table 2). Note that the head count shown in Figure 1, and the Netul Shuttle ridership shown in Figure 2 come from Fort Clatsop and SETD respectively. Therefore, the range of dates in the two figures is somewhat different. Furthermore, while one would expect the Netul Shuttle ridership and the Netul headcount numbers to be similar, some day-to-day discrepancies were observed.

**Figure 2**  
**Daily Transit Ridership**



**Table 2**  
**SETD Monthly Reported Ridership (one-way trips)**

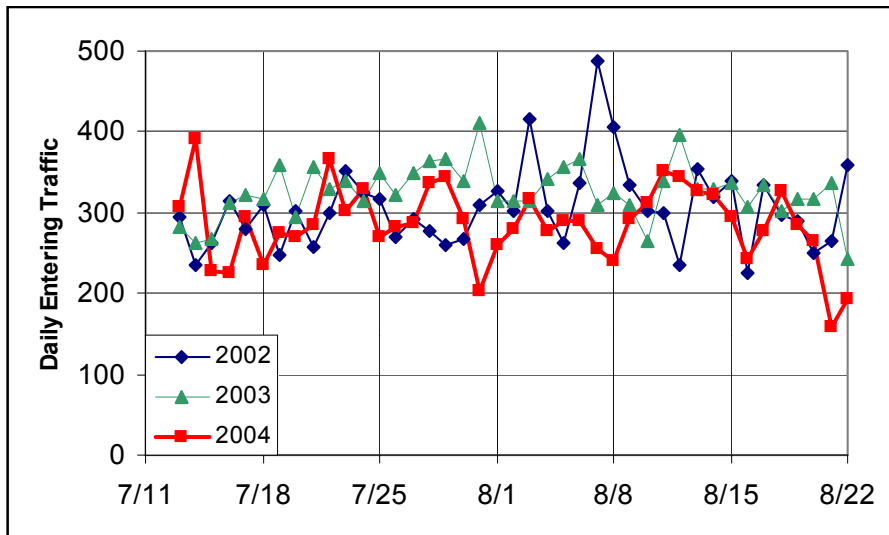
	2003	2004	Percent Increase* 2003 - 2004
June	18,732	25,265	35%
July	17,581	26,468	50%
August	21,684	17,962 as of 8/20	28%

**Traffic Counts**

Daily traffic counts were available, either for the entrance to the visitor center (2002, 2003) or for the entrance to Netul Landing (2004). They indicate a slightly lower traffic volume in 2004 (Figure 3). Since a larger number of people were arriving by high occupancy vehicles (transit buses) in 2004, the lower traffic volume does not necessarily imply a lower visitation level in 2004.

Overall, the strategy of reducing traffic volume by having visitors use transit appears to have worked. During the peak month of 7/16 – 8/15 an average of 335 vehicles per day arrived in 2003, while an average of 292 vehicles per day arrived in 2004. However, in 2004, some 85 passengers per day arrived by public transit (see Table 3). Had these transit passengers arrived by car (with each car holding 3 people), there would have been approximately 30 more cars per day in 2004, yielding a total of 322 automobile equivalents in 2004, approximately equal to the traffic volume observed in 2003.

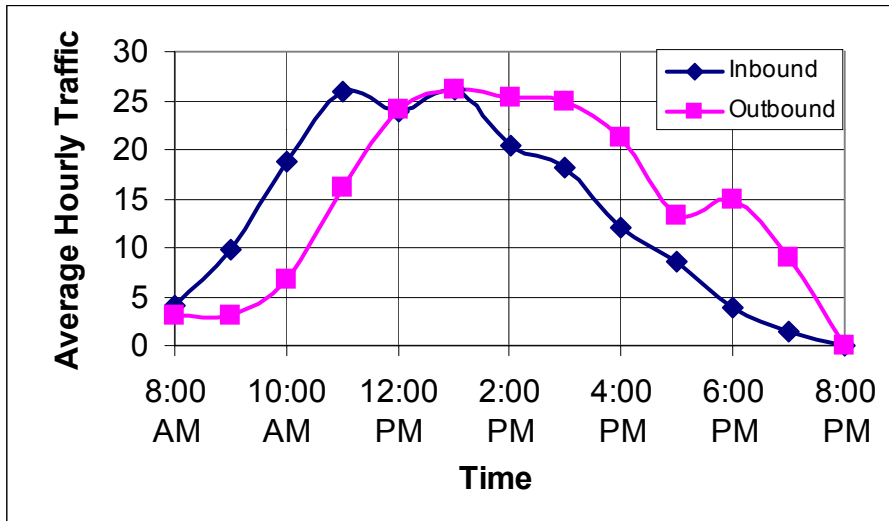
**Figure 3**  
**Daily Traffic Counts**



15-minute counts were also gathered between 9 AM on Friday 8/27/2004 and 8 PM on Tuesday 8/31/2004. Figure 4 shows the hourly averages from these counts, both inbound and outbound to Netul Landing.

\* Adjusted for partial month in August 2004

**Figure 4**  
**Hourly Traffic**



In mid-July 2004, the Park also collected information on parking lot occupancy and turnover. Average length of stay was a bit under 2 hours, and peak parking occupancy tended to occur between noon and 1 pm, consistent with Figure 4.

#### **Tour Bus**

During 2002 and 2003, the park collected information on people arriving by means other than private auto (tour bus, bike, etc.) This was before the park was served by regular transit service. The average number of people arriving daily by these other means during the months of July and August were 65 in 2002 and 74 in 2003. Most of these people are presumably arriving by tour bus.

#### **Visitor Sign-In Book**

Information from the visitor sign-in book is available from July 2003 through August 2004. This information includes time and date of visit, number of people in the party, where visitors are staying, and where visitors live. It does not include all visitors, only those who choose to use the sign-in book. For example, during the peak month from mid-July to mid-August 2004, there were approximately 23,000 visitors according to the Netul head count, but 2,700 entries in the sign-in book, accounting for approximately 9,000 of those visitors.

#### **Bookstore Sales**

Sales in the bookstore were recorded for several years. In June 2004, there was a significant increase in sales. However, given a recent expansion of the bookstore, this increase in sales may not accurately reflect an increase in visitation. During the summer months of 2003 and 2004, bookstore sales were as follows:

- June–August 2003: \$189,403
- June–August 2004: \$227,063

## Findings

Based on the analysis and review of all the data sources, the following section outlines findings for seven key topics: Access to Fort Clatsop; Visitation Trends; Ticket Reservation System; Netul Landing; Parking Access; Visitor Experience and Transit Service. In addition, there is a brief discussion of findings regarding the collaborative effort of the partnering organizations.

### Access to Fort Clatsop

Prior to 2004, access to Fort Clatsop was either by private automobile or tour bus. On a peak summer day, there would typically be about 300 automobiles (each with 1 – 4 people) and perhaps 2 tour buses (each with 35 to 40 people). In 2004, several transit feeder routes were added. Both the Park and the transit agency report that most passengers on these routes are using them to go to Fort Clatsop. Our rough estimate of 2004 mode split for access to Fort Clatsop (Table 3) is based on the following:

- For public transit, assume that 2/3 of the riders<sup>1</sup> on the Clatsop and Astor routes use them to go to Fort Clatsop. Therefore, the transit ridership is 2/3 of 1/2 of the total one-way ridership figures.
- For tour bus and other, make an estimate based on data from 2002 and 2003.
- The Netul Total Count is the reported Netul head count.
- Private auto is the Netul head count, less the other modes (public transit, tour bus and other).

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**Table 3**  
**Estimated Mode Split**

	7/15-8/14	Daily Persons	Percent
<b>Public Transit</b>	2623	85	11%
<b>Private Auto</b>	18173	586	79%
<b>Tour Bus and other</b>	2200	71	10%
<b>Netul Total Count</b>	22996	742	100%

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As Table 3 indicates, the estimated mode share for public transit is approximately 11%, which is similar to ridership reported in the 2004 visitor evaluation (9% of visitors said they used transit, and, given the sample size, is consistent with an actual transit usage between 7 and 13%). Overall, public transit enjoyed a respectable mode share, particularly given that this is the first year transit service was being provided to Fort Clatsop. The marketing materials and the concerted effort by the partners to encourage transit may help to explain the 11% mode share.

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<sup>1</sup> The 2/3 may be a conservative assumption. Interviews with the transit agency indicate that virtually all of the riders on these routes are using them to reach Fort Clatsop.

## Visitation Trends

For years prior to 2004, the NPS Statistical Unit in Denver estimated visitation at Fort Clatsop by taking vehicle counts and multiplying them by an assumed occupancy factor. The factor used by the NPS Statistical Unit varies by month, as follows:

- June: 3.84
- July: 3.82
- August: 4.08
- September: 3.04

Two pieces of evidence suggest that these assumed occupancy factors might be too high. First, the average group size reported in the visitor logs is substantially lower (Table 4).

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**Table 4**  
**Group Size from Visitor Sign-In Sheet**

Month	All Parties	Parties of 9 or fewer
July 2003	3.37	3.02
August 2003	3.21	3.06
September 2003	2.63	2.43
October 2003	2.70	2.43
November 2003	3.08	2.66
December 2003	2.92	2.70
January 2004	3.02	2.47
February 2004	2.72	2.71
March 2004	3.08	2.89
April 2004	3.12	2.76
May 2004	2.99	2.51
June 2004	3.04	2.80
July 2004	3.26	2.94
August 2004	3.43	2.89

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Second, the daily counts of vehicles entering Netul landing are about 290 per day during the summer peak. If one excludes tour buses, park vehicles, and deliveries, this still leaves approximately 280 private vehicles per day. If 586 users per day (Table 3) are arriving by private automobile, this implies a vehicle occupancy of approximately 2, far lower than the value assumed by the NPS Statistical Unit.

Given the apparent discrepancies in vehicle occupancy, it is difficult to compare reported visitation figures from years prior to 2004 with reported visitation in 2004.

The visitor evaluation finds that a majority of visitors (66%) were staying overnight in the area. Moreover, anecdotal evidence from the Chamber of Commerce indicates that during July and August, local hotels are at 90%-95% occupancy. This suggests that during the peak summer months, growth in visitation may be constrained by the availability of lodging, and so increased visitation may occur during the remaining ten months of the year.

## Ticket Reservation System

### *Background*

Fort Clatsop implemented a ticket reservation system during the summer of 2004 in anticipation of increased visitation during the Lewis and Clark Bicentennial. The reservation system limits the numbers at the site of the fort to 50 visitors every 20 minutes, or 150 visitors per hour. Large crowds at the site of the fort and visitor center detract from the visitor experience, as visitors have difficulty freely wandering through the fort, viewing the demonstrations and hearing the interpretation provided by the rangers. The timed ticket reservation system provides a systematic method for controlling the number of visitors at the site of the fort, and by spreading visitation more evenly over the course of the day, it can be a valuable means of enhancing the visitor experience. In addition, the timed entry ticket also serves as a 3-day regional bus pass, giving users free access to the regional transit service the day of their visit as well as the day prior to and the day after their visit. According to the visitor evaluation, however, nearly two thirds of visitors (63%) had not used, or did not plan to use their ticket as a bus pass. An additional 20% were unaware that their ticket also served as a bus pass.

Visitors could purchase their timed tickets through the National Park Service Reservation Center, either online or by phone. Tickets purchased at least two weeks before a visit were mailed to the visitor. Visitors purchasing tickets less than 14 days before their visit could print out their own e-ticket. They had two options:

1. Order and print the ticket(s) online, or
2. Call the Ticket Reservation Center, where their ticket is processed and they receive a confirmation number and password. Visitors could then go online, enter the confirmation number and password and print out their ticket.

Alternatively, visitors without access to a printer (or online access) could print out their tickets at one of the ticket locations in the region.

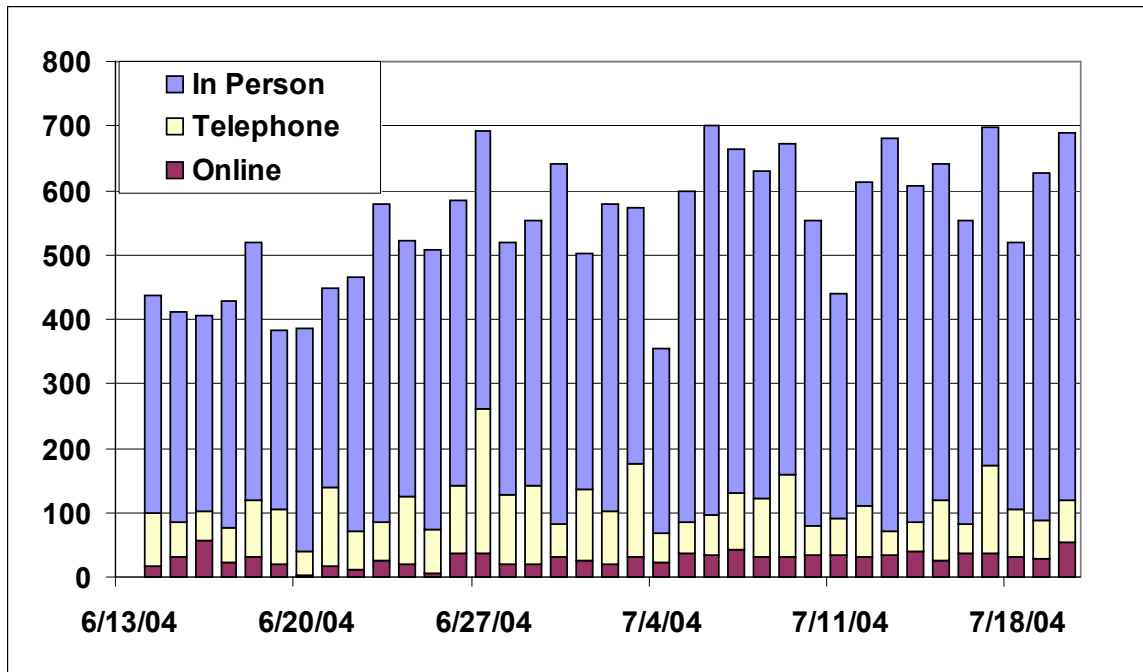
### *Assessment of Operations*

The qualitative interviews reveal that the ticket reservation system did not function as anticipated; it did not serve as a means for controlling the number of visitors to Fort Clatsop. There are several reasons for this. First, use of the reservation system was relatively low. Fort Clatsop has collected data on the numbers who purchased their tickets by each of the three possible methods: online, by phone, or in-person at the visitor center. According to these data, most visitors bought their tickets at Fort Clatsop during the course of their visit (Figure 5). Relatively few visitors used the ticket reservation system (either by phone or online).<sup>1</sup>

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<sup>1</sup> According to the evaluation data, 16% of visitors used the ticket reservation system or bought their ticket at a local business for their current visit, but there is a high incidence of missing data (22.5%) for this question.

**Figure 5**  
**Means of Ticket Purchase**



The data from the visitor evaluation suggest that the relatively small usage is due to a lack of awareness. Indeed, 70% of survey respondents reported that they had not heard about the ticket reservation system before arriving at Fort Clatsop. Qualitative interviews also support this finding. Of the visitors interviewed during the on-site visit, only a few had used the ticket reservation system. Interviews with park staff and partners also confirm that many visitors were arriving to the area unaware that they would need a timed ticket to visit Fort Clatsop.

In addition, a number of different stakeholders felt that visitors were averse to the ticket reservation system because they do not want to be on a “schedule” during their vacation. Visitors feel inconvenienced by having to plan the exact timing of their visit. One partner felt that families, in particular, might find it difficult to adhere to a timed ticket entry system.

In nearly all of the qualitative interviews, stakeholders complained about problems with the ticket reservation system (both the web interface and the phone system).<sup>\*</sup> In particular, the park staff and partners were most likely to discuss problems concerning ticketing. In interviews, some of the following comments were made with regard to the reservation system:

*“It killed us”*

*“It hurt perceptions of the shuttle service”*

*“People just want to see the fort; they won’t use a phone or web system”*

*“The system needs major tweaking; need someone who is looking at it from the customer’s experience...the customer’s view...”*

<sup>\*</sup> The ratings of the ticket reservation system from the visitor evaluation were not included in this analysis because the number of visitors using the ticket reservation system was quite small, and more than one-fifth of those in the evaluation did not tell us where they purchased their tickets.

*“You might need some kind of metering system, but maybe not the timed ticket. Meter people into the park without hitting them with something unexpected”*

*“The process of getting tickets is too cumbersome”*

All the park staff interviewed stated that they received complaints from visitors regarding the ticket reservation system. Staff from the Chamber of Commerce and local visitor centers (places where tickets were sold) spent much more time than anticipated explaining the system and assisting visitors with the process of purchasing and printing their tickets (they reported walking visitors through the entire online process). In addition, these staff had to deal with angry and frustrated visitors who didn't understand the reason for the new systems. In the qualitative interviews, stakeholders agreed that returning visitors were the ones most upset by the new systems.

While staff at the Chamber of Commerce and local visitor centers felt they could convince most visitors discouraged by the ticket reservation system to visit the fort, they also felt a small number may have decided not to visit, based on their experience with the ticket reservation system and the perceived complication of having to ride a shuttle to the fort. Interestingly, several stakeholders mentioned that they thought local residents were staying away from Fort Clatsop during the summer months, in order to avoid having to deal with the ticket system and the shuttle bus. One park staff member also mentioned that there were a large number of local residents who visited the fort just before the new systems were implemented in June 2004.

Complaints about the ticket reservation system included:

- The web interface is not user friendly
- Visitors cannot process their ticket because they do not have an email account
- Visitors do not want to give credit card information online or over the phone
- Visitors cannot print out the ticket, due to problems with the password they were given on the phone (or incorrect recall of the password)
- Visitors have to wait too long on the phone; there are too many “prompts” before finally talking to someone on the phone
- The phone operator at the Reservation Center cannot answer the visitors' specific questions regarding Fort Clatsop; the phone operator is not helpful
- The Reservation Center has limited hours (operations close at 7 pm PST)
- The Reservation Center is giving visitors wrong information

Given the problems with the ticket reservation system, Fort Clatsop adapted to the situation by no longer requiring that visitors have a ticket before they arrive at the park. Staff at the Chamber of Commerce and local visitor centers, as well as staff at Fort Clatsop began telling visitors that they did not need a timed ticket; they could visit the fort and purchase their ticket at the Fort Clatsop visitor center after their visit (they would need to show a ticket to the bus driver in order to ride the shuttle back to Netul Landing). The staff at the Chamber of Commerce and local visitor centers developed the strategy of printing out the reservation list for the current day and directing visitors to the fort at times of the day when there were few reservations. According to some of the partners and the park staff, Fort Clatsop was able to ease visitor complaints by relaxing the requirement for a ticket reservation.

## **Netul Landing**

### *Background*

Netul Landing was built to be the new entryway or gateway to Fort Clatsop during the peak summer months. Located one mile south of the existing visitor center along the Lewis and Clark River, proposed development of the Netul Landing area included transit facilities (consisting of parking, shuttle shelter, restrooms and shuttle bus loading area), a day use and river access area,



and a foot trail connecting Netul Landing and the visitor center. To date, the transit facilities have been constructed. Visitors can park at Netul Landing (though parking is limited) or they can arrive at Netul using the local transit service. During peak season, visitors must take an intra-park shuttle from Netul Landing to the fort, as the parking lots near the fort are closed between June 14 and September 6.

Ideally, Netul Landing offers the opportunity to enhance the visitor experience, and it can serve this purpose in a number of different ways. First, in combination with the shuttle service, Netul helps disperse visitation at the fort and results in less overall crowding. Second, with the opening of Netul Landing and the closing of the parking lots near the fort, a more peaceful ambience can be created around the fort and visitor center area. The lack of traffic congestion at the fort enhances the visitor experience while also making it a safer environment for visitors. In addition, Netul Landing provides a place to orient visitors. All visitors arriving at Netul are greeted by rangers and receive a brief orientation on their visit to the fort. There are also a number of informative panels on the walls of the shelter, where visitors can learn more about the Lewis and Clark expedition.

#### *Assessment of Operations*

On a number of different dimensions, operations at Netul Landing seem to work well. During the on-site evaluation visit, Netul Landing did not appear too crowded, and most visitors were able to board a shuttle bus within 15 minutes of their arrival. Visitors seemed to genuinely enjoy the interpretation provided by rangers, and many took advantage of the information provided on the interpretative panels. One complaint, however, cited by a couple of visitors, as well as park staff, was they had difficulty hearing the ranger's orientation, because the bus drivers would start the shuttle bus engines while the ranger was speaking.

During the site visit one overall observation about Netul Landing is that the success of the site is dependent on the effectiveness of the rangers. The rangers set the tone of the visit by greeting every incoming group of visitors to explain the new systems to them, to determine if they have a timed ticket, and to assign those without a ticket to an intra-park shuttle. While most of those interviewed felt that the rangers did a good job at Netul, there were several stakeholders who felt that more could be done to cater to the elderly.

Qualitative interviews with park staff and visitors indicate that many visitors were arriving at Netul Landing confused about where they were and the process of visiting the fort. As some rangers related, visitors often arrived at Netul asking, "is this the fort?" They had not heard about the timed tickets, and they were unaware that they would have to take a shuttle to visit the fort. The evaluation data support this finding. In the visitor evaluation, a majority said they were not aware of the timed ticket reservation system before arriving at Fort Clatsop (70%), and a similarly large number reported that they had not heard about the intra-park shuttle service (66%). Moreover, when visitors completing the evaluation were asked where their car was parked, some visitors were unsure about which response to check. "Netul Landing" was a response option, but visitors did not realize that this was the name of the place where their vehicle was parked.

While some visitors take the process (i.e. riding the shuttle) in stride, others are less sanguine. In particular, nearly all park staff reported that returning visitors were the ones most likely to be upset by the new systems. A number of park staff reported that some visitors (they were not sure how many) were leaving Netul upon learning that they would have to take a shuttle up to the fort. At the same time, other park staff was upbeat about their ability to soothe any upset visitors and felt they were able to convince most visitors to take the shuttle to the fort.

During the site visit, the only time in which Netul Landing felt crowded was during the arrival of a tour group. With the drop-off of the tour group, 40 to 50 visitors were immediately added to the site, resulting in a more crowded feel. Since the tour group filled the intra-park shuttle, some visitors had to wait for the next shuttle to the fort. While visitors did not express anger at having to

wait, it was clear that the only reason they were lingering at Netul was to catch the next shuttle to the fort. Based on observation from the site evaluation, most visitors did not seem to mind waiting up to 15 minutes for the shuttle. Beyond that, however, the wait at Netul begins to detract from the visitor experience, as there is not enough to see or do to occupy the visitors' time.

The site visit revealed that a foot trail from Netul Landing to the fort would increase the functionality of Netul, allowing multi-modal access to Fort Clatsop. Visitors who do not wish to take the shuttle would have the option of walking. During peak periods, such as midday, a foot trail might also help ease peaks in visitation. Rather than having all visitors board a shuttle at Netul, some could enjoy a walk to the fort at their own pace. Moreover, from the historic canoe landing near the fort, it is only a ¾ mile walk back to Netul Landing, and so it is likely that some visitors would choose to walk back to the parking lot at Netul.

One partner mentioned that a foot trail would significantly enhance the visitor experience, enabling visitors to be “explorers,” with a scenic walk to the fort. The partner felt a significant number of visitors would use and appreciate the foot trail.

## **Parking Access**

### *Background*

The parking lot at Netul contains a total of 76 marked spaces, with space for recreational vehicles (RVs) at the south end of the lot. There is also a dirt area that is set aside as a picnic and open land use area, but due to a lack of funding, this scheduled construction did not occur. During peak operations this past summer, this unpaved area became a de facto overflow parking area, bringing the total capacity at Netul Landing to approximately 100 spaces. The configuration of the lot – long (one quarter of a mile) and narrow – is largely the result of geographic and ecological constraints. On one side of the parking lot is the river and on the other side is Fort Clatsop Road. In addition, there is a salmon-rearing habitat located near the front parking lot.<sup>7</sup> Visitors arriving in their vehicles pass the shelter at Netul and drive about a quarter of a mile before reaching the entrance to the visitor parking lot. Transit and tour buses have a separate entrance near the shelter at Netul, where they can loop around to drop-off and pick-up visitors.

Between June 14 and September 6, the two parking lots near the visitor center were temporarily closed. The two lots provide a total of 55 regular parking spaces, 3 handicapped spaces and 15 spaces for buses and RVs.

### *Assessment of Operations*

Signage in the surrounding communities directing visitors to the parking lot at Fort Clatsop is quite good; signs are large and easy to read. In qualitative interviews, several visitors noted that they had simply followed the signs to the parking lot and had no trouble finding Fort Clatsop. One stakeholder, however, felt that it was confusing to have to pass the shelter at Netul and still drive about a quarter mile before reaching the entrance to the parking lot.

A concern raised by all the park staff in the qualitative interviews (as well as bus drivers and partners) is that the elderly and those with physical disabilities have difficulty walking from the far parking lot to the shelter at Netul. Although there is a sidewalk, the distance is quite far for visitors who have any difficulties with walking, and according to the visitor evaluation data, one-in-five visitors (21%) said that there were one or more individuals in their travel party who could only walk limited distances. In particular, stakeholders pointed out that the problem is especially acute for visitors in RVs. While those traveling in cars can circle around and drop off visitors close to the shelter, RV's (which tend to be populated by the elderly) are prohibited from driving close to the

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<sup>7</sup> In the original design the front parking lot was significantly larger. The salmon-rearing habitat was discovered during construction, so the north lot was scaled back and parking spaces added to the south lot.

shelter. In qualitative interviews with the visitors, several groups mentioned the long walk from the parking lot as being a problem, though the evaluation data suggest that a large majority of those who can only walk limited distances reported that they did not have any access or service problems in the park (90%).<sup>7</sup> Another concern raised by some park staff is that there are not enough handicap spots near the shelter at Netul; the three existing spots are nearly always full.

During the on-site evaluation visit, the parking lot generally was not crowded. However, in their interviews, several park staff noted that at times the lot is at capacity, and as a result some cars have left Netul without visiting the fort. Between 7/12/2004 and 7/22/2004, observations were made of occupancy and turnover. Average parking occupancy peaked at midday (Table 5).

**Table 5**  
**Average Parking Occupancy—July 12–22, 2004**

Time	Front 32 Spaces	Front 3 ADA Spaces	Rear 33 Spaces	Rear 2 ADA Spaces	Number of RVs (6)	Total
10:00 AM	27.6	1.6	2.1	0.0	2.3	33.6
11:00 AM	31.9	1.9	15.8	0.0	3.8	53.3
12:00 PM	31.3	2.4	25.1	0.1	3.8	62.6
1:00 PM	30.9	2.4	26.3	0.1	3.0	62.6
2:00 PM	29.5	2.4	21.1	0.0	3.8	56.8

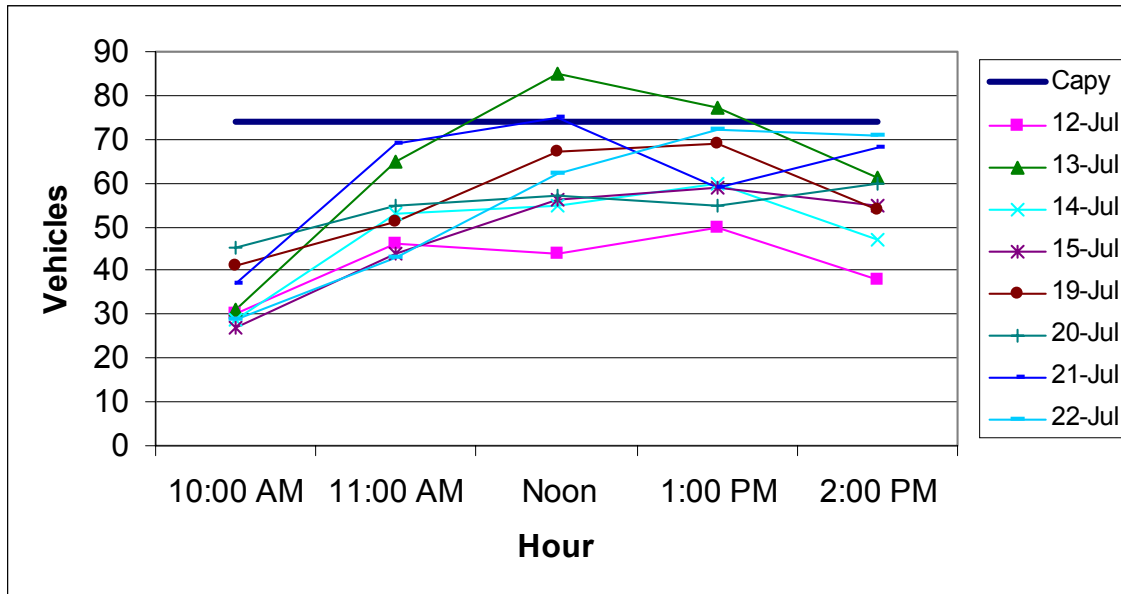
The range of observations over the 11 days is shown in Table 6. Figure 6 shows the hourly observations for total occupancy. In this figure, the total capacity is taken as 74 marked spaces, rather than 76 spaces, because the two rear ADA spaces are generally unused. An occupancy that is higher than capacity indicates that parking is occurring in the unpaved areas.

**Table 6**  
**Parking Occupancy: Low-High Range**

Time						
10:00 AM	24-33	1-3	0-7	0-0	0-5	27-45
11:00	31-33	1-3	6-27	0-0	1-8	43-69
12:00 PM	26-33	1-3	15-42	0-1	2-8	44-85
1:00 PM	28-33	1-3	15-38	0-1	2-4	50-77
2:00 PM	26-32	0-3	7-32	0-0	1-9	38-71

<sup>7</sup> Based on findings from the qualitative interviews, this 90% is surprisingly high. However, the evaluation question asks specifically about “access or service problems in the park,” and it may be that when visitors were responding to the question, they were focusing on their experience at the site of the fort, and not thinking about Netul.

**Figure 6**  
**Parking Occupancy, July 12–22, 2004**



Length of stay was monitored for 74 cars, and ranged from 40 minutes to about three hours, with a mean of 110 minutes (1:50).

There are occasions when the parking lot is operating beyond capacity. If there is a significant increase in visitation, this will become a more frequent occurrence.

### Visitor Experience

The visitor evaluation and the qualitative interviews reveal that visitors continue to enjoy their experience at Fort Clatsop, particularly the activities at the site of the fort replica. As one ranger expressed, “when they are at the fort they are always happy.” When asked to evaluate their overall experience at Fort Clatsop, an overwhelming majority (91%) rated their visit positively, with 64% saying their visit was “excellent” and an additional 27% saying it was “good.” Visitors were also asked to rate specific aspects of their visit. The interpretation provided by Fort Clatsop earned the most favorable responses among visitors. More specifically, large majorities – approximately 80% -- agreed (with most visitors strongly agreeing) that:

- The educational and historical interpretation provided at the fort added to the quality of their visit (55% strongly agree, 27% agree)
- The historical interpretation provided by the rangers at Netul Landing added to the quality of their visit (49% strongly agree, 28% agree)
- The visitor displays at Netul Landing added to their quality of their visit (45% strongly agree, 31% agree)

Likewise, for the qualitative interviews, when visitors were intercepted after their visit and asked to assess their experience, all visitors said they had a very positive experience. They mentioned the ranger interpretation at the fort replica and the displays at the visitor center as contributing to a very enjoyable visit.

The visitor evaluation and the qualitative interviews were also used to gauge how the visitors felt about the pace of their visit and the level of crowding. A majority of visitors did not feel that the crowds in and around the fort made their visit less enjoyable (70% disagree), nor did they feel that the noise levels detracted from their visitor experience (73% disagree). Likewise, nearly seven-in-

ten disagreed that they did not have to spend more time than they wanted at Fort Clatsop.<sup>†</sup> Informal interviews with visitors during the on-site visit also find that visitors did not feel crowded and were able to enjoy Fort Clatsop at their own pace. In their interviews, most park staff confirmed that the new systems seemed to spread visitation out more evenly over the course of the day (as anticipated). Only one ranger commented that the visitors seemed to be rushed through the site more this year compared to previous years.

As another way of assessing visitors' attitudes toward the new experience being provided at Fort Clatsop, the evaluation contained the following trade-off question:

*Some people prefer to open the parking lot near the visitor center so they do not have to take the intra-park shuttle bus, even if it means more traffic congestion and crowding around the visitor center and the fort. Others feel that the parking lot should stay closed and visitors should continue to take the intra-park shuttle bus, because it decreases traffic congestion and crowding around the visitor center. Which view comes closer to your own?*

When asked to make this trade-off, a majority (63%) felt that the parking lot should remain closed, whereas a much smaller number—18%—felt that the parking lot should be opened so that visitors do not have to take the shuttle. These data indicate that a majority of visitors appreciate the quiet, open spaces that have resulted from the closing of the parking lots near the visitor center, and they are willing to take the shuttle in order to preserve the tranquil ambience. Likewise, most of the park staff felt that the new systems had a positive impact on the atmosphere around the visitor center and the fort replica. With the closing of the parking lots near the visitor center, visitors and staff were able to enjoy a more peaceful ambience. Interestingly, though, one partner felt that the closing of the visitor center parking lot had a detrimental effect on the personality of the park, as there was no more “energy” at the site, and visitors were no longer using the picnic grounds near the visitor center (due to the inconvenience of bringing a picnic on the intra-park shuttle).

Despite the positive experience at the fort, in all the qualitative interviews the park staff indicated that the number of visitor complaints had increased significantly this summer compared to last summer, and this was difficult on the staff, because they were simply not accustomed to hearing complaints. Some felt that this year complaints outnumbered compliments, whereas the reverse had been true in previous years. All returning staff at Fort Clatsop felt that dealing with the new systems and with visitor complaints made their job harder and more demanding this year.

In particular, park staff (as well as other stakeholders) reported that returning visitors are the ones who are most upset by the changes in operations; they view the closing of the parking lot as an inconvenience, and unnecessary given the current levels of visitation. On a positive note, most park staff felt that the number of complaints had decreased since the beginning of the summer when the new systems became operational. As is often the case with new systems, complaints tend to decrease over time as the kinks are worked out and as everyone becomes more familiar with the new operation.

As noted previously in the report, all the park staff mentioned hearing visitor complaints about the ticket reservation system. In addition, park staff indicated that many visitor complaints pertained to the fee structure, particularly among Parks Pass holders.<sup>†</sup> At the beginning of the summer, Parks Pass holders were being charged \$4 for entrance into Fort Clatsop (they usually pay no fee with their pass). The park received many complaints, and they lowered the fee for Pass holders to \$2. Consequently, the complaints from pass holders decreased. In addition, the fee for youth (age 4-16) was decreased from \$4 to \$2. These changes in fee structure, however, inadvertently created a new

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<sup>†</sup> While visitors tended to disagree with statements that the fort was too crowded, there was too much noise and they had to spend too much time at Fort Clatsop, these opinions were not intensely held. By contrast, in assessing the educational and historical interpretation provided by Fort Clatsop, visitors' favorable opinions were more intense.

<sup>†</sup> Moreover, the visitor evaluation indicates that a sizeable proportion of the visitor base—about three-in-ten—have one of the different types of passes offered by the National Park Service.

set of complaints. Visitors purchasing their tickets online or by phone were being penalized, because the fees were not reduced at the Ticket Reservation Center. Several park staff mentioned that these visitors were angry when they arrived at Fort Clatsop and realized that they could have paid less had they bought their tickets at the fort rather than using the ticket reservation system. Given that relatively few visitors were using the ticket reservation system, this differential in pricing was not as big a problem as it otherwise might have been (i.e. if many visitors were using the reservation system).

In the qualitative interviews stakeholders also mentioned that “misinformation” was a cause of dissatisfaction among visitors. That is, visitors were upset when they felt that they were being given incorrect information about visiting Fort Clatsop. On the website, for example, the Astoria Transit Center is listed as a site to buy tickets, but in fact, tickets were not being sold there. Park staff as well as transit bus drivers heard complaints from visitors who were told that there was no parking at the fort. Technically, it is true that the parking lots at the visitor center were closed, but visitors were very annoyed to arrive on transit and find that in fact they could have parked at Netul. In addition, some visitors were told that they had to have a ticket prior to visiting the fort, but they later learned that they could purchase their ticket at the visitor center, after seeing the fort. As one partner stated, “people are getting different information from different places...{we} need everyone to give the same information.”

## **Transit Service**

### *Background*

Fort Clatsop partnered with Sunset Empire Transportation District (in Oregon) and Pacific County Transit (in Washington) to provide additional transit service to visitors during the summer months. Due to limited parking at Netul Landing, and as part of its effort to alleviate traffic congestion at the fort as well as in the community large, three transit routes (the Astor, Column, and Clatsop routes) were added for the summer months to supplement current service being provided by Sunset Empire. These three feeder routes were designed specifically to provide service for visitors staying in the local area. In addition, Pacific County Transit added service from the Washington side to Astoria.

The exterior of all the buses used for the transit service, with the exception of one -- the Netul B bus-- are attractively designed with a Lewis and Clark bus wrap. The intent is to appeal to visitors by making the buses more “fun,” and to differentiate the service from other local transit buses. In the qualitative interviews, several stakeholders commented on the attractiveness of the buses. In addition, the buses for the intra-park shuttle were also supposed to be ultra-quiet, low floor, quick loading (double door) buses, but the selected bus failed durability tests, and therefore delivery was not accepted. Several partners and park staff indicated disappointment that Sunset Empire was not able to acquire the ultra-quiet buses, for this upgrade in the buses would have resulted in less noise and pollution in and around the fort, thus enhancing the visitor experience and providing a stronger justification for the shuttle system.

The findings for transit service are divided in two sections: the regional bus service and the new intra-park shuttle service between Netul Landing and the fort.

### *Regional Service*

In general, the transit bus drivers enjoyed their experience driving the Fort Clatsop feeder routes. They did not hear many complaints from visitors using the service; rather, visitors tended to have questions about the frequency of service and where the bus stops, etc. In other words, visitors were concerned about the logistics of using transit; they wanted to be sure they boarded the right bus and they did not miss the transfer at Netul Landing.

With regards to ridership, all the transit bus drivers agreed that the number of visitors using transit had increased over the course of the summer. They also reported that ridership was variable; on some days they had many riders, and on other days they had hardly any. While some stakeholders felt that the service enjoyed decent ridership numbers for its first season, others felt that the regional service was not being used very much, largely because it is difficult to get people out of their cars.

In the qualitative interviews, stakeholders discussed several aspects of the service that could be improved. First, a number of the bus drivers and some of the partners said that the bus stop signage in the communities needs to be improved and bus shelters need to be provided. For example, there is neither a shelter nor signage at the Kentucky Fried Chicken stop on the Astor route, so visitors are confused on where to wait for the bus, and they do not realize that they need to flag down the bus; moreover, there is no area for the bus to safely pull over and pick up passengers.<sup>7</sup> At the Fred Meyer stop, there is a bus shelter, but it is not well maintained and there is no signage indicating that the stop provides bus service to Fort Clatsop. Staff at the Astoria-Warrenton Chamber of Commerce (located in the same shopping plaza as the Fred Meyer bus stop) reported that they would walk outside their building with the visitors in order to point them directly to the bus stop.

Bus drivers, as well as some of the partners and the visitors said that limited parking at the Astoria Transit Center, a major node, is a problem. As observed during the site visit, there is a large sign on the side of the Astoria Transit Center building that reads: “Shuttle Bus Parking. Lewis and Clark Site Info.” The sign has a nice visual image and is clearly visible from Route 101, but it is somewhat misleading, because the Astoria Transit Center has only 6 parking spots for visitors, and these are not clearly designated as such (it was only after asking the staff person at the Astoria Center that the Volpe staff person learned which spots could be used by visitors). The other spots in the lot are designated as “reserved.”

In the qualitative interviews, several visitors said there were no parking spaces left in the parking lot at the Astoria Transit Center, and they had difficulty finding a spot on the street that offered more than two hour parking. The search for a parking space was aggravating because it added even more time to the process of visiting the fort.

#### *Intra-park Shuttle Service*

Findings from the visitor evaluation indicate that visitors are satisfied with the shuttle service being provided. Large majorities agreed that the buses are clean (93%); they offer a comfortable ride (90%), and the drivers are helpful (84%), and in fact, more than six-in-ten strongly agreed with each of these statements. Roughly three-quarters of respondents agreed that the frequency of the service is adequate, with about one-half strongly agreeing.

The transit bus drivers said that some visitors grumbled about having to take the intra-park shuttle, but generally, they did not hear a lot of complaints. In qualitative interviews with visitors, most seemed neutral and seemed to take it in stride, though a few visitors were more negative and were not sure why the shuttle was necessary. In talking to the park staff, however, they were more likely to indicate that they were hearing complaints from visitors regarding the intra-park shuttle.

One bus driver and several of the partners indicated during their interviews that tour groups were particularly unhappy about having to use the intra-park shuttle. More specifically, the following complaints were mentioned:

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<sup>7</sup> In addition, the Kentucky Fried Chicken stop on the Astor route is denoted on the map as “KFC,” but many visitors may not know what “KFC” stands for. If there is not enough room to spell out Kentucky Fried Chicken, there should be a footnote below the Astor Route schedule explaining “KFC.”

- Seniors (who are the ones largely populating tour groups) are more likely to have trouble boarding and de-boarding.\* Having to disembark from motor coaches to board the shuttle to the fort is physically demanding on many of the tour group visitors.
- Requiring tour groups to use the intra-park shuttle only adds to the travel time of the tour group, and thus decreases the amount of time they can spend at Fort Clatsop, as well as other area attractions. In particular, many of the tour groups are so large, they require two shuttle buses to accommodate their numbers; this adds even more time spent on transportation.

Tour operators reported that their customers were unhappy with changes in operations at Fort Clatsop, and as a result, some would not be returning to Fort Clatsop in the future. While visitors continue to enjoy the fort, the process of getting to and from the fort was too cumbersome and took too long. According to data provided by American West Steamboat Company, the ratings for Fort Clatsop dropped significantly this year compared to previous years. Between 1999 and 2003, the scores for Fort Clatsop, on a scale of 1 to 5 (with 1 being the worst and 5 being the best) were consistently high, ranging from 4.1 to 4.5. In 2004, the score for Fort Clatsop dropped to 3.1.

In addition, bus drivers, as well as some rangers mentioned that better signage is needed directing visitors on where to load for the different buses. Currently, there is no signage for the four transit bays, so visitors have difficulty distinguishing the two services (transit versus intra-park shuttle) and must rely on the bus drivers and rangers to tell them which bus to board. As one bus driver related, there is a “herd mentality”; when visitors see a bus coming, they immediately stampede toward the bus, regardless of whether or not it is the bus they need. Furthermore, the transit service and the intra-park shuttle buses have the same design logo (with the exception of the Netul B bus), and all the buses say “Fort Clatsop.” On one or two occasions, visitors have boarded a bus that they thought was going to the fort, when in fact it was a regional transit bus traveling to one of the nearby communities.

### **The Partnership**

The focus of this evaluation is the assessment of new systems at Fort Clatsop, but during the course of the qualitative interviews with partners, the functioning of the partnership itself was also discussed. Partners commented on how well the partnership has worked and whether partnering to provide regional solutions is an effective strategy.

Overall, the partners felt that taking a regional approach to issues of congestion, noise and safety in the local communities is the best approach. As one partner commented, tourism is a main industry in the area, and collaborating to develop regional solutions boosts local revenues. Moreover, partners said they need to work together to provide visitors with the best possible experience. While the partners felt that adjustments are needed to the systems introduced at Fort Clatsop, they agreed that they would continue their commitment for the 2005 summer.

In general, the partners felt that the partnership has worked well. One partner, however, indicated that the partnership lacked someone in charge who would provide a cohesive approach and make sure that tasks were completed as agreed upon. In this partner’s view, too many individuals acted independently, with no one in charge to provide direction.

Despite problems that the partners may have had with the new systems at Fort Clatsop (as described in this report), they commended the efforts of the management and staff at Fort Clatsop and commented that Fort Clatsop had done a good job managing the issues and problems that arose during the course of the summer. Operations at Fort Clatsop worked as well as they did because each of the partners, including Fort Clatsop, the transit agencies, and the Chambers of Commerce and visitor centers, put a great deal of effort into providing visitors with the best

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\* According to American West Steamboat Company, the average age of their customers is 67 years old.



possible experience. There was constant communication among the partners, and when problems arose, the front-line staff among the partnering organizations took the initiative to solve those problems on the spot.

## Conclusions

Most of the new systems introduced at Fort Clatsop during the summer of 2004 functioned as expected. The shuttle system metered visitors into the park, resulting in a more even distribution of visitors through the course of the day (compared to previous summers). Visitors felt they were able to enjoy the fort at their own pace and did not feel crowded during their visit. Moreover, with the closing of the parking lots near the visitor center, there was much less noise and hubbub in that area of the park, and the visitor evaluation suggests that a majority of visitors are willing to take the shuttle in order to preserve the peaceful ambience up at the fort and the visitor center.

A number of visitors used regional transit to reach the park, resulting in a respectable transit mode share, especially for a rural area.

Other aspects of the new systems did not operate as expected. The ticket reservation system, for example, was supposed to work in combination with the shuttle system to control the flow of visitors into Fort Clatsop. However, awareness and use of the ticket reservation was relatively low, and many of the visitors who tried to use the reservation system had difficulty, with both the web interface and the phone system.

While many visitors accepted riding the shuttle as part of their visit to Fort Clatsop, there were also visitors who were quite vocal in their negative reaction (especially returning visitors). Other segments of its visitor base that tended to be upset by the new systems include tour groups, the handicapped, and Parks Pass holders (though the restructuring of the fees eased complaints coming from Parks Pass holders). In previous summers, Fort Clatsop received very few complaints, so the increase in complaints this summer made the park staff's job more difficult.

Despite the problems with the ticket reservation system and visitor complaints regarding the new systems, nearly all the partners understood the reason for the changes and felt that Fort Clatsop was making every effort to accommodate visitors. The partners agreed that changes to the new systems are necessary to insure its smooth operation in 2005, but that it was important to continue to work together to provide the highest quality experience to those visiting the region.

## Recommendations

Based on its Findings, the Volpe Center offers several key recommendations for consideration. The recommendations pertain to the ticket reservation system, the transit service, parking access, the use of the parking lots near the visitor center, and visitor information. For each recommendation different measures are suggested as a means for implementation.

### **A. NPS Fort Clatsop Memorial should discontinue the ticket reservation system.**

In 2004, the ticket reservation system did not work very well. Given the projections for 2004 visitation, there was a good rationale for introducing the reservation system, but visitation numbers were not as high as expected. Therefore, the reservation system turned out not to be necessary. In any event, given current transit ridership and vehicle occupancy numbers, parking capacity at Netul Landing will be reached before the carrying capacity of the park is reached, and visitation will probably be constrained during the peak summer months by the availability of area lodging. An advance reservation system is also not the norm for National Parks.

With regard to this recommendation, consideration was also given to the fact that the ticket reservation system required a heavy investment of resources; it created a significant workload for park management and staff -- in setting up the system, working with the contractor and handling all the problems that arose with the system. Moreover, given that a new contractor will be responsible for online ticketing next summer, Fort Clatsop would again face significant start-up costs in using a ticket reservation system. In 2004, time spent dealing with the ticket reservation system resulted in less attention paid to marketing, training and programs. With the discontinuation of the ticket reservation system, Fort Clatsop will be able to channel its efforts and resources in ways that will prove more productive in enhancing the visitor experience.

If the reservation system is discontinued, the following measures should be implemented:

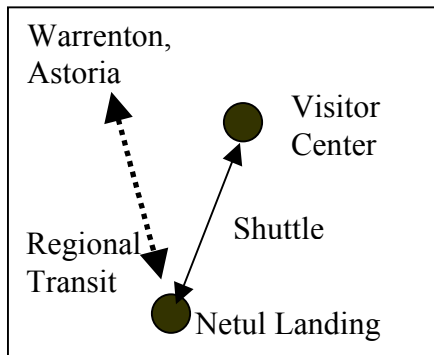
- Use the Fort Clatsop web site and local visitor centers to inform visitors as to the peak and off-peak periods for the park (for example, recommend that they visit early or late in the day).
- Encourage transit use so demand at the Netul Landing parking lot is not overwhelmed.

### **B. Enhance the transit service and its marketing to encourage transit use.**

In the summer of 2004, public transit enjoyed an approximate 9 – 11% mode share, while transit's mode share in rural areas is normally much lower. Currently, the key constraint at Fort Clatsop is the limited parking capacity at Netul Landing, and not the carrying capacity of the Fort. Therefore, transit use should be encouraged. Fort Clatsop, in conjunction with Sunset Empire Transportation District and Pacific County Transit, should enhance the regional transit service by increasing incentives and removing obstacles to its use, as detailed below.

With regard to the routing of the regional transit service in the immediate Fort Clatsop area, there are three options, described below, that Fort Clatsop and the transit agencies should review and consider. While there is no single option that stands out best, Volpe recommends either option 2 or 3 over option 1, as options 2 or 3 make transit more attractive for the visitor by enabling a faster trip and reducing the number of transfers.

1. Continue current practice of having transit buses drop off and pick up at Netul Landing.



Advantages:

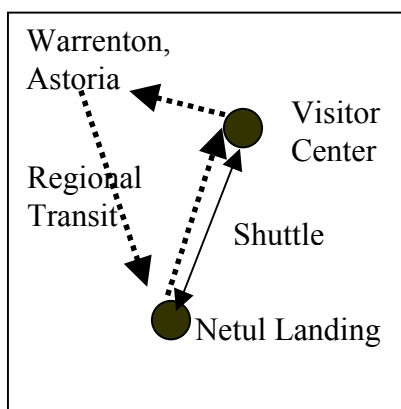
- Fewer buses at the visitor center.
- Orientation for everyone is at Netul Landing.
- Controls visitor flow to the fort.

Disadvantages:

- Extra transfer for transit riders.
- No time savings for transit riders.
- Need clear signage at Netul Landing to ensure riders are on the correct buses.

2. Allow returning transit buses to pick up passengers at the visitor center.

A regional transit bus would first stop at Netul Landing, where it would layover (5 – 10 minutes). During the layover, transit riders and others would receive their orientation. The transit bus would then proceed to the visitor center, where it would drop off the inbound riders. At the same time, it would pick up transit riders who have completed their visit, and return them to Astoria or Warrenton.



Advantages:

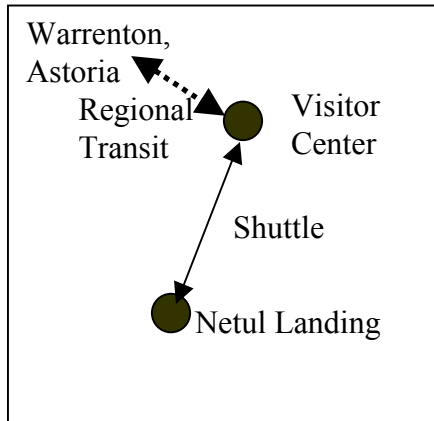
- Preserves the orientation at Netul Landing.
- Saves time and a transfer for transit users leaving Fort Clatsop.
- Avoids a transfer for transit users traveling to Fort Clatsop.
- Provides extra bus capacity from Netul Landing to the visitor center.

Disadvantages:

- More bus traffic at the visitor center.
- Will need clear signage at the visitor center to distinguish among the various buses.
- Slightly more complex transit operation.
- Less control of visitor flow to the fort.

3. *Regional transit buses travel only to the visitor center.*

Regional transit buses would bypass Netul Landing and would drop off and pick up visitors at the visitor center area (with a layover at the visitor center).



Advantages:

- The transit trip is shorter and avoids transfers.
- Less confusion at Netul Landing (all the transit buses will go to the visitor center).
- Sunset Empire provides audio taped orientation on transit (since transit would bypass orientation at Netul).

Disadvantages:

- More bus traffic at the visitor center.
- Need space to park up to 2 transit buses near the visitor center.
- Transit passengers don't receive orientation at Netul Landing, unless they make a special trip.
- Will need clear signage at the visitor center to distinguish among the various buses.
- Less control of visitor flow to the fort.

Depending on which transit option Fort Clatsop National Memorial and Sunset Empire choose to implement, the transit agency will have to review its summer bus schedules and make any appropriate changes. In addition, from a cost point of view, Fort Clatsop should evaluate whether visitation is consistently lower in the second half of August. If it is, Fort Clatsop and Sunset Empire should consider ending the service earlier, possibly one week prior to Labor Day.

*Additional Recommendations*

In addition to the options presented above, the Volpe Center provides the following recommendations to encourage transit use:

***Improve signage at transit stops in the local communities.***

Sunset Empire and the cities of Astoria, Warrenton and Seaside should insure that all the transit stops that serve Fort Clatsop are clearly signed, so there is no confusion on the part of the visitor on

where they should wait for the bus. In addition, a bus shelter should be provided, and a schedule should be posted at each transit stop.

***Fort Clatsop, in conjunction with its partners, should advise visitors that parking at Fort Clatsop is limited.***

It is untruthful to tell visitors that there is no parking at Fort Clatsop, and therefore they must use transit. When they see the parking lot, they will be justifiably annoyed. However, it is completely truthful to tell them that the parking capacity is extremely limited (especially during the midday hours), and thus they are encouraged to use transit. This information should be made available at local visitor centers, chambers of commerce, hotels and other area attractions.

***Improve parking conditions in and around the Astoria Transit Center.***

If the local communities and partner organizations are going to encourage the use of transit, parking needs to be as easy and convenient as possible. Visitors who have to drive around to find parking become understandably frustrated and annoyed; before they have even boarded the transit bus they are in a bad mood. Outlined below are several ways to improve the parking situation:

- Sunset Empire should maximize the number of parking spots available at the Astoria Transit Center, and should clearly designate spots that are available to visitors. The six spaces currently set aside for visitors are insufficient.
- The city of Astoria should extend the time limit for on-street parking around the Astoria Transit Center from 2 hours to 4 hours, so visitors to Fort Clatsop do not have to worry about being ticketed.
- The city of Astoria should capitalize on existing parking capacity that is being underutilized (e.g. State of Oregon Office Building overflow parking lot).

***Market the Fred Meyer in Warrenton as a satellite lot, with twice/hour service.***

In 2004, there were two buses per hour between the Fred Meyer in Warrenton and Fort Clatsop, although they were not spaced at equal 30-minute intervals. This suggests the possibility of adding the appropriate signage, and working with Sunset Empire, Fred Meyer, and the city of Warrenton to market this area as a park-and-ride lot, with twice/hour service (on the hour and on the half hour, if possible) between the lot and Fort Clatsop.

***The NPS WASO Fee Office should provide visitors with a financial incentive to use transit.***

Two options for implementing this recommendation include: 1) offer a discount (\$1 – \$2) on admission to Fort Clatsop to those who have used transit, or 2) charge a parking fee at Netul. The Volpe Center recommends the first option, because it rewards transit users as opposed to penalizing visitors who park. Visitors who park at Netul will be upset to have to pay a fee to park.

***If ultra-quiet buses are acquired, SETD should ensure they have a different exterior design or logo from the current transit buses.***

If the shuttle buses have a distinctive exterior, this will reduce visitor confusion at Netul Landing (and at the visitor center, should regular transit buses stop there). The canoe logo might be used on the shuttles, along with the name of the site, “Fort Clatsop National Memorial.”

**C. Improve parking access at Netul Landing for handicapped.**

***Fort Clatsop should convert two regular parking spaces in the north lot to ADA spaces.***

In the qualitative interviews, rangers mentioned that the ADA spaces at the north end of the lot are nearly always full. Visitors who have a physical handicap would appreciate the addition of two ADA spots. During summer 2005 Fort Clatsop should evaluate whether the two additional ADA spots are both being used, or whether one of them can be converted to a regular space.

*Fort Clatsop should permit those RVs that work safely within the geometry of the north parking lot to park in that lot.*

A number of the visitors who arrive in RV's have physical handicaps and find it difficult to walk from the south lot to the shelter at Netul. Rather than forbidding all RV's from the north lot, Fort Clatsop should determine what size RV could safely maneuver within the north lot, and then post the appropriate signage (i.e. the current sign: "Trailers, Buses, RVs Prohibited Beyond This Point" could be replaced by a sign reading: "Vehicles Longer Than XX Feet Are Not Permitted Beyond This Point").

In addition to the two measures just cited, Volpe recommends that Fort Clatsop National Memorial consider the following options for addressing the needs of visitors with physical handicaps (especially those in RVs):

*Option 1*

If the regional transit buses and tour groups are routed directly to the visitor center, Fort Clatsop should allow visitors with physical handicaps (in cars as well as RVs) to use the transit loop at Netul Landing for drop off and pick up.

If the regional transit buses and the tour groups are bypassing Netul Landing, there will be fewer buses using the transit loop, and so the transit loop could be used as a drop off and pick up point for those visitors who are physically handicapped. One of the bays that was formerly used by the transit buses could be designated with a sign for this purpose. In addition, signage would be needed on Fort Clatsop Road, immediately across from the transit loop, informing visitors that those with a physical handicap can drop off and pick up using the transit loop. A sign would also be useful at or near the entrance of the parking lot, for those visitors who did not see the sign near the transit loop.

The advantage to this option is that it addresses the needs of all visitors with physical handicaps. A key disadvantage is that autos and RVs would be mixing with buses in the transit loop, creating a potential safety issue.

*Option 2*

If there is adequate room for buses to turn around in the south lot, Fort Clatsop and Sunset Empire should allow the intra-park shuttle to swing around to the south lot to pick up and drop off visitors before the layover at Netul Landing.

On its way back from the visitor center, the intra-park shuttle could swing by the south lot, dropping off visitors who are parked there and picking up visitors who have trouble with the walk to the shelter. The shuttle would then proceed to Netul Landing where it has a layover during the orientation. In order to implement this alternative, benches will need to be provided in the south lot, preferably under a tent, and adequate signage will be needed.

However, Volpe does not recommend this option if the current frequency of service for the intra-park shuttle (every 20 minutes) is jeopardized. With the single door buses and the resulting long loading and unloading times, there may not be enough slack time in the schedule to allow for an added stop at the south lot and still maintain a 20-minute headway with one vehicle. Although the combination of one bus operation, 20-minute headway, and extra stop at the south parking area may not be feasible, such an operation might be possible if double door buses were to be introduced. Double-door buses would reduce the time for loading and unloading, and may thus create enough slack time to allow the added stop to be implemented.

*Option 3*

Use a golf cart or some similar vehicle for transporting visitors with physical handicaps from the south lot to the shelter at Netul Landing.

Similar to option 2, this recommendation requires that Fort Clatsop provide facilities where visitors can comfortably wait (i.e. tent and benches) and signage explaining the process for pick-up. In addition, there has to be a mechanism for alerting park staff that they have visitor(s) who need to be picked up.

#### **D. Make targeted use of the parking lots near the visitor center.**

As mentioned in this report, the parking lots near the visitor center were temporarily closed during the summer season. The Volpe Center recommends that the National Park Service / Fort Clatsop make targeted use of those parking areas, in order to address some of the problems revealed in the evaluation. More specifically:

##### ***Fort Clatsop should allow tour buses to go directly to the visitor center.***

Tour buses can drop visitors off in front of the visitor center (with engines turned off during de-boarding to mitigate noise), and then the tour buses can wait for the passengers in the overflow parking lot next to the visitor center. Tour groups could either: (1) bypass the orientation at Netul Landing and receive a short orientation upon their arrival at the visitor center, *or* (2) stop at Netul Landing, where they receive a brief orientation on-board their bus, and then proceed directly to the fort.

In order for this policy recommendation to succeed without overwhelming the fort, tour groups should be scheduled at times of the day when the fort is less crowded (i.e. early in the day). If the tour group happens to arrive at the same time as a shuttle bus, the tour group can be routed to the visitor center first, in order to avoid crowding at the fort.

There are several key benefits to this recommended change in operations:

- It avoids the crowds at Netul that inevitably occur with the arrival of a tour group.
- Visitors who are arriving at Netul without a ticket (as many are) will not be delayed at Netul Landing to accommodate a tour group.
- Tour groups will not have to spend their limited time (they are generally on tight schedules) waiting for the shuttle to and from the fort. They will be able to spend more time enjoying the exhibits and demonstrations at the fort and the visitor center.
- Tour groups will not need to transfer buses. Seniors, a key segment of the tour group market, have trouble boarding and disembarking from buses.

#### **E. Improve Visitor Information.**

By discontinuing the ticket reservation system and possibly routing the transit buses and tour groups to the visitor center area, the visit process will be simplified, and so the message to visitors will be streamlined. While the message will no longer be as complicated, providing good visitor information is still critical, and Fort Clatsop National Memorial should make the following enhancements to visitor information:

##### ***Improve signage at Netul Landing to help orient the visitor regarding the process of the visit.***

In the qualitative interviews, park staff mentioned that visitors often arrive at Netul Landing confused about where they are and the purpose of Netul. Improved signage could orient the visitor as they are arriving, thus making the visitor feel more comfortable about what lies ahead. In addition, it would ease the burden on the rangers, who find themselves having to explain the new system to nearly every visitor group arriving at Netul. Specifically, improvements would include the following:

- At the entrance to the parking lot, post a large sign that reads: “Welcome to Netul Landing. Park Here and Ride the Shuttle to Fort Clatsop” (or something to that effect).



- At the far parking lot, and perhaps near the front parking lot, provide signage explaining the visit process, including where to get tickets, the purpose for the shuttle and how often it runs, as well as other general information regarding the visit (a stand-alone, glass enclosed billboard would work well).

***Provide a consistent, accurate message and coordinate all information being disseminated at the different venues.***

It is clear that from the qualitative interviews that Fort Clatsop maintained communication with its partners throughout the summer, obtaining feedback from them on operations and adjusting its service accordingly. Nonetheless, in some cases, visitors were receiving inaccurate information about different aspects of operations. Maintaining a consistent, accurate message is very important to providing a positive experience for visitors. Moreover, if the message is streamlined (i.e. if the visit process is simplified), then communicating a consistent message will be an easier task.

***Expand the use of one-page flyers (describing the new systems and translating the transit bus schedules into a format that is easily understood) that can be distributed at hotels, the chamber of commerce, visitor centers, etc.***

Several of the Chambers of Commerce developed one page flyers – one explaining the process and fees for visiting Fort Clatsop, and one that translated the transit bus schedule into a format that could be more easily understood by visitors. For example, the Astoria-Warrenton Chamber of Commerce printed a customized transit schedule that only showed the Fort Clatsop route, as that bus had a stop adjacent to the Chamber of Commerce. The use of such flyers that provide “distilled” information should be encouraged. If Fort Clatsop National Memorial, in conjunction with Sunset Empire, decides that the regional transit buses will be routed to the visitor center area, the park staff should provide customized transit schedules at the visitor center.

***Use the brochure handed out at Netul as an opportunity to inform visitors about the shuttle schedule.***

Fort Clatsop should include the intra-park shuttle schedule on its brochure, thus relieving some of the anxiety about the shuttle schedule. Visitors can simply look at the brochure and plan which shuttle to take back to Netul.

***Improve visitor information provided on the Fort Clatsop National Memorial website.***

Volpe did not have the resources to conduct an in-depth evaluation of the website. However, a brief study of the site reveals that Fort Clatsop needs to provide more information on the home page about the new systems. For example, the home page should have a paragraph describing Netul Landing and the intra-park shuttle, with links to further information. Currently some of the most valuable information about the visit process is buried in “Frequently Asked Questions” - an area of the site that many visitors may not think to access.

***Consider the use of Variable Message Signs (VMS) as resource for visitor information.***

Unfortunately, limited time and resources did not permit the Volpe Center to investigate the possibility of using VMS as a source of information for the visitors. For example, VMS might be used to update visitors on the availability of parking at Netul Landing, or the location of key transit stops.

***Fort Clatsop should post the “Orders of the Day” more prominently at Netul Landing, and at the fence by the trail that leads to the fort replica.***

If visitors had better access to this schedule of events for the day, they could better plan their visit. This is especially important for visitors who have limited time.

## **F. Other Measures to Improve the Visitor Experience.**

*NPS should build a trail from Netul Landing to the fort.*

Based on impressions from the site visit, Volpe believes a foot trail would enhance the visitor experience. A trail would provide visitors who do not wish to take the shuttle a valid, alternative means of transportation between Netul Landing and the fort, and it would make the fort accessible from Netul Landing when the shuttle buses are not running. The foot trail would enable visitors to appreciate the scenic views provided on the Columbia River, as well as allowing them to be “explorers.” In addition, a trail might help ease the peaks in visitation.

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