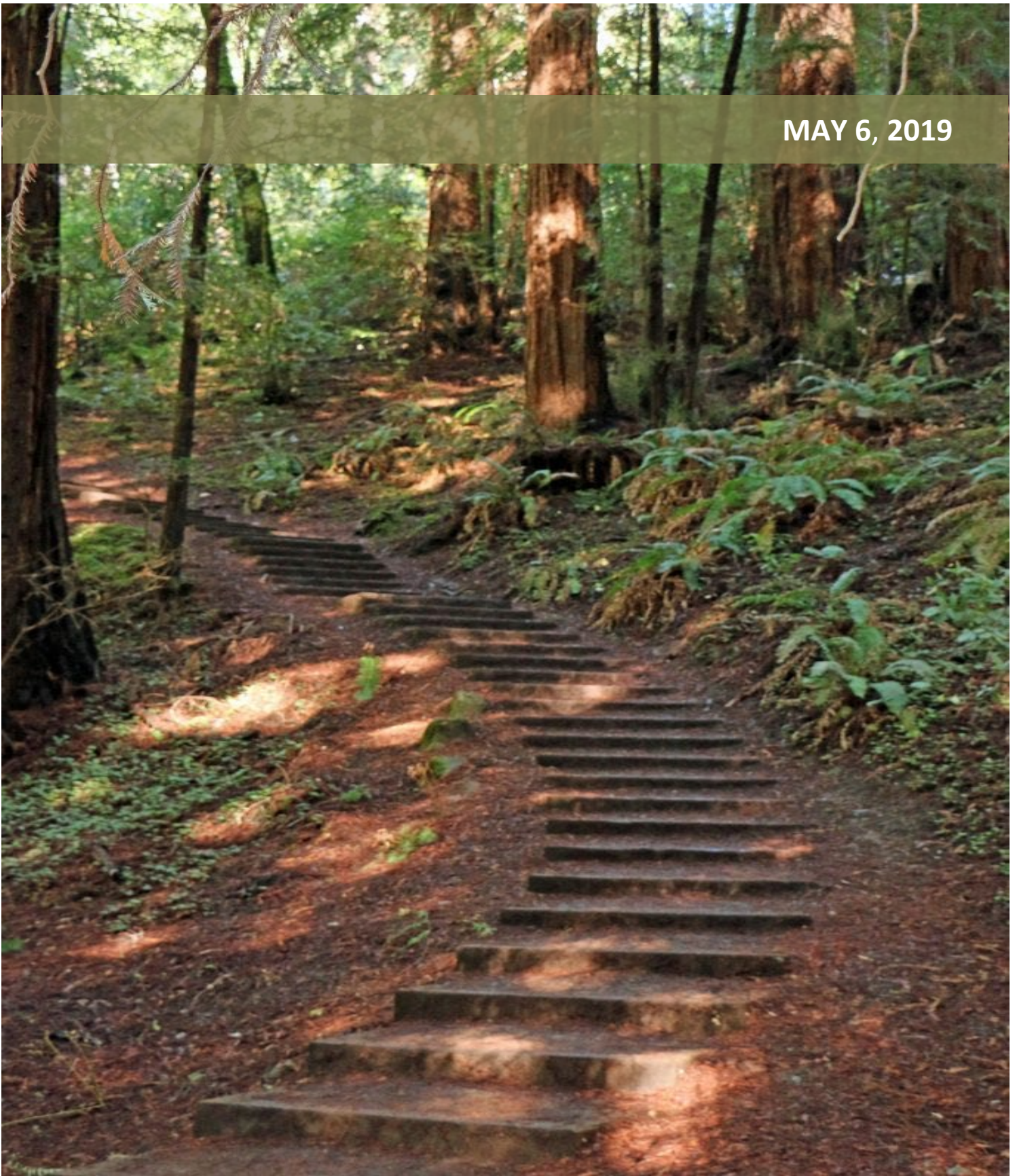


MAY 6, 2019



2018 Muir Woods Shuttle  
**Evaluation Report**

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# Introduction

The Muir Woods Shuttle provides service to Muir Woods National Monument in Marin County, California. The Shuttle service began operation in 2005 as a demonstration project to provide an alternative to automobile access and to alleviate parking demand and traffic congestion. The Shuttle is an integral mode of access to the park and carries almost 21 percent of all park visitors throughout the year.

## Shuttle History

The Shuttle represents a unique partnership of governments on a number of levels. The service was originally designed as a partnership of the National Park Service, County of Marin, and Golden Gate Transit. In 2009, responsibility for the Shuttle shifted to the Marin County Transit District (Marin Transit) under a funding agreement with the National Park Service (NPS). In 2013, Marin Transit formed an additional partnership with the Golden Gate National Parks Conservancy to administer a new fare collection process. The change in how passengers pay their fares eased boarding delays and provided additional convenience to customers.

## Funding

The first three years of operation were funded primarily through a grant from the Federal Highway Administration (FHWA), through 2007.

Funds for the 2008 season were provided by a combination of federal TCSP (Transportation and Community and System Preservation Program) and PLH (Public Lands Highway Discretionary Program) funds. In May 2009, the Shuttle became a permanent Marin Transit route funded partly by the Transit District and partly by NPS.

## Description of Service

For the 2018 season, shuttle service was provided on weekends and holidays as well as weekdays.

In previous years, Marin Transit has typically operated service during regular season that began in May and continued through October.

Since 2013 that winter holiday service was introduced, Marin Transit operated winter service around Thanksgiving weekend and between Christmas and New Year's Day.

During the 2015 season, Marin Transit introduced weekday service as a pilot. Since then weekday service is typically operated from the third week in June through the second week of August.

For the 2018 season, shuttle service was provided on the weekends and holidays year around. Weekend and holiday service began

on Saturday, Jan 20, and operated through Monday, Dec 31. The service ran on five holidays: President's Day, Memorial Day, Independence Day, Labor Day, and Veteran's Day weekend. Weekday service operated from Monday, June 18 through Friday, August 10.

Figure 1 shows the routing of the Shuttle for the 2018 season. Service is provided along two routes: Route 66 serves the Pohono Park & Ride lot, and Route 66F serves downtown Sausalito and Marin City.

In 2018, schedules for weekend and holiday service were divided into peak and off-peak periods that correspond to different levels of service. The peak period runs from Memorial Day weekend through Labor Day weekend. The off-peak season runs from late January up until the start of the peak season and from the end of the peak season through December.

During the peak season, service on Route 66 between the Pohono Park & Ride Lot and Muir Woods is provided approximately every ten minutes. The first trip departs at 8:35 am and the last return trip leaves the park at 7:35 pm. During the off-peak season, service is provided every 20 minutes on Route 66 with generally the same span of hours as the peak season. Beginning in mid-September, service ends earlier to coincide with the park's closing time.

Service on Route 66F to and from Sausalito is provided every hour during the off-peak season. The route also serves Marin City to allow for connections to and from regional and

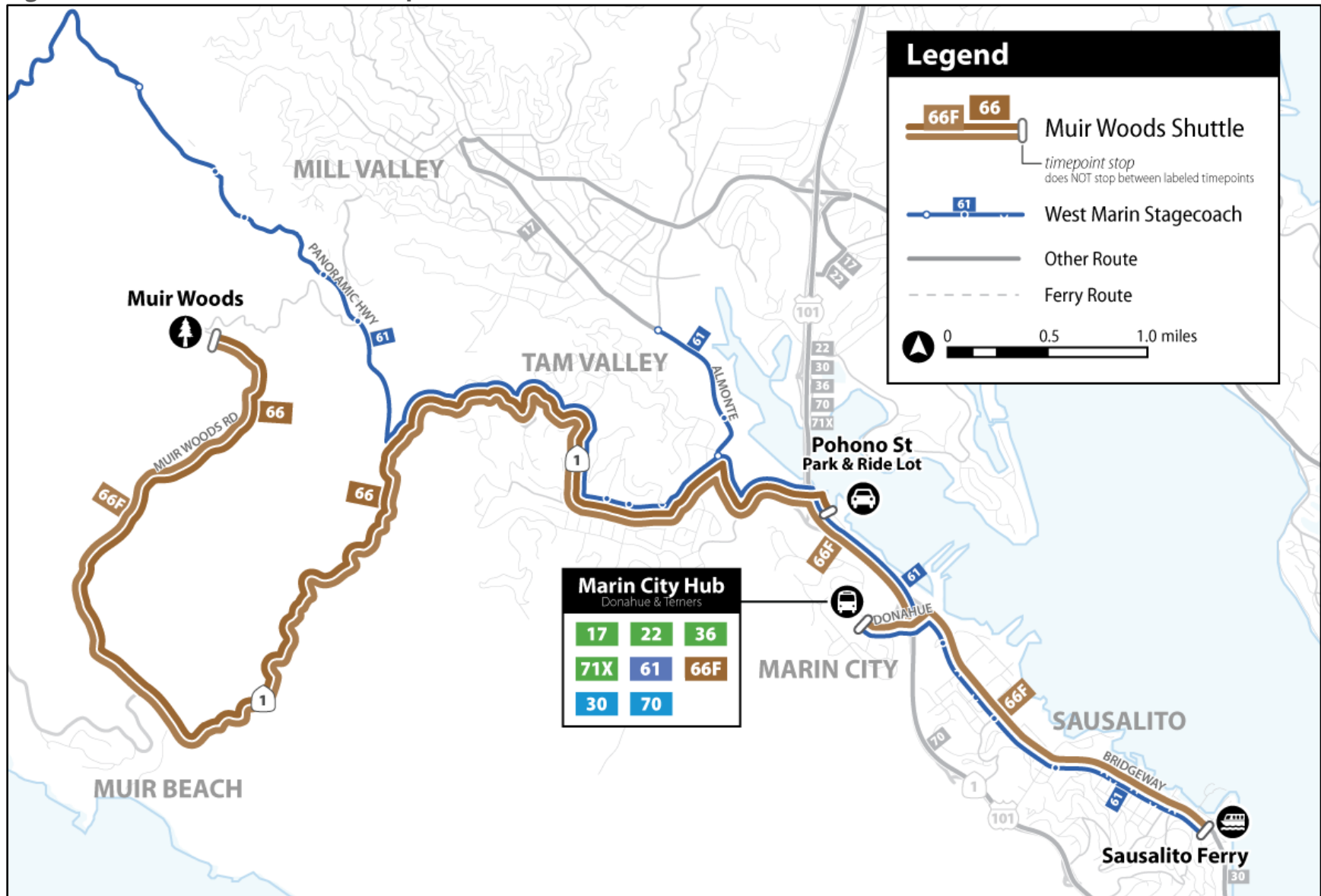
local buses. During the peak season, additional service is added to provide half-hourly service to and from Sausalito.

Weekday service is provided every half hour on Route 66F. The tenants of the adjacent office building utilize the Pohono Park & Ride lot during the work week (Monday-Friday). For this reason, the Shuttle does not operate the Route 66 alignment on weekdays.

In total, the Shuttle provided service on 72 peak summer days (including 39 weekdays), and 75 off-peak season days (including Jan 1<sup>st</sup>). Table 1 summarizes service changes over the last five years of operations.

The District has continually taken steps to improve the service in response to customer feedback and service evaluations. The 2018 efforts focused on design and fabrication of the mobile information kiosk (Figure 2). The partners also prepared for the new web-based reservation system that allows visitors to plan their trip in advance and reserve shuttle seats and a parking space.

Figure 1: 2017 Muir Woods Shuttle Map



**Table 1: Summary of Operations, 2014–2018**

	2014	2015	2016	2017	2018
Season Start	March 29	April 4	April 2	May 13 <sup>(2)</sup>	January 1
Weekend & Holiday Service	65 days	63 days	79 days	64 days	108 days
Weekday Service	-	39 days	39 days	44 days	39 days
Avg. Frequency (Off-peak/Peak/Weekday)	20/10/- min	20/10/30 min	20/10/30 min	20/10/30 min	20/10/30 min
Service Hours <sup>(1)</sup>	4,619	4,620	4,672	4,376	6,428
Standard Fare (adult round-trip)	\$5.00	\$5.00	\$5.00	\$5.00	\$3.00

**Notes:**

- (1) Actual operated hours may differ from planned hours due to canceled or added service.
- (2) Season start delayed due to closure of Highway 1.

**Figure 2: Muir Woods Shuttle Mobile Information Kiosk**



**Fares**

To manage visitation and parking demand, NPS implemented a new web-based parking and transit reservation system for Muir Woods in late 2017. In the 2018 season, the partner agencies upgraded the reservation system to include fare payment. Under the new system, visitors are required to purchase their parking reservation and they can pre-purchase shuttle tickets for a specific window of time.

The round-trip adult fare is \$3.00 per person. No fare is charged for youth ages 15 and

younger, seniors with a Lifetime NPS Pass, and disabled individuals with a Federal Lands Access Pass. One-way fares are not available.

In previous years, passengers transferring from another local Marin Transit route had the option of purchasing a Day Pass that could be used on the Shuttle. Under the online reservation system, this option is no longer available.

The reservation system has alleviated capacity issues experienced on the Shuttle in previous seasons by making arrival patterns more predictable.

The pricing structure of \$8 for a parking reservation and \$3 for a Shuttle seat reservation provides an incentive to take the Shuttle.

**Figure 3: MWS Reservation System**



### Customer Liaisons

Marin Transit hires Customer Liaisons to assist passengers waiting for the Shuttle at the Pohono Park & Ride Lot and at the Sausalito Ferry. The Liaisons provide passengers with park and Shuttle service information, particularly on the fare payment process.

This season, one liaison was scheduled at Pohono on weekends from June through September for a shift that started at 9:30 am and ended at 3:30 pm. An additional staff member was stationed in Sausalito to perform similar duties as the Pohono greeter and assist passengers transferring from the ferry. After the last bus from Sausalito, staff typically relocate to Muir Woods to assist with loading returning passengers.

Customer Liaisons have continually proven to be an integral part of the service and significantly enhanced the customer experience. Many passengers who take the Shuttle are tourists and not familiar with the area. Some are also unfamiliar with using public transit. The recent addition of Customer Liaisons at the Sausalito stop has been

extremely valuable. As demand from that location has grown, the service had begun to experience similar challenges to those at the Pohono stop due to overcrowding and passenger confusion.

### Marketing

Marketing for the Shuttle service has primarily focused on Bay Area visitors, with emphasis on travelers based in San Francisco. Information on the Shuttle is distributed through visitor information centers, online, and on signage near the highway exits.

Schedules and signs are posted at each stop, including the Sausalito Ferry Terminal. Information is also provided to customers online and over the phone by both Marin Transit and National Park Service staff, and visitors can plan their trips in advance using Google Transit and 511.

One of the most effective means of advertising the Muir Woods Shuttle continues to be the Changeable Message Signs (CMS). Three permanent CMS are installed along Highway 101 to alert motorists about parking conditions at Muir Woods and direct them to the Pohono Park & Ride Lot exit. Blue road signs installed closer to the exit guide drivers further along the off-ramp and into the parking lot.

Historically, more than half of passenger survey respondents indicated that they found out about the Shuttle through the CMS. Increasing numbers of passengers are finding



Shuttle information online through web searches and transit trip planners.

### **Evaluation Methodology**

Visitors are required to purchase their advanced tickets through the NPS's web-based reservation system. The Shuttle accepts same day walk-ups through an on-board fare collection process. Data on Shuttle ridership and fare revenues is provided through a combination of farebox data and fare collection reports from the Conservancy's reservation system.

Conservancy staff also provide data on park visitation levels. Marin Transit staff compile the Shuttle financial numbers and operating statistics.

Customer Liaisons, NPS and Conservancy staff, and MV Transportation operations staff provide qualitative observations of the service. These include commentary on on-time performance, weather conditions, traffic circulation, fare collection, pass ups, service strengths and weaknesses, and suggestions to improve the service.

This evaluation report provides an overview of trends and changes over time and presents recommendations for the Shuttle's future.

# Ridership and Productivity

This section summarizes the number of Muir Woods Shuttle passengers in 2018, Shuttle productivity or passengers per revenue hour, and the proportion of Muir Woods visitors who chose to ride the Shuttle. These figures are compared with prior years.

## Ridership

Ridership is measured as one-way, unlinked passenger trips. During the 2018 season, there were 177,412 one-way passenger trips on the Shuttle. This represents a 55.5% decrease in ridership compared to 2017.

Table 2 shows total ridership trends over the past five seasons by month.

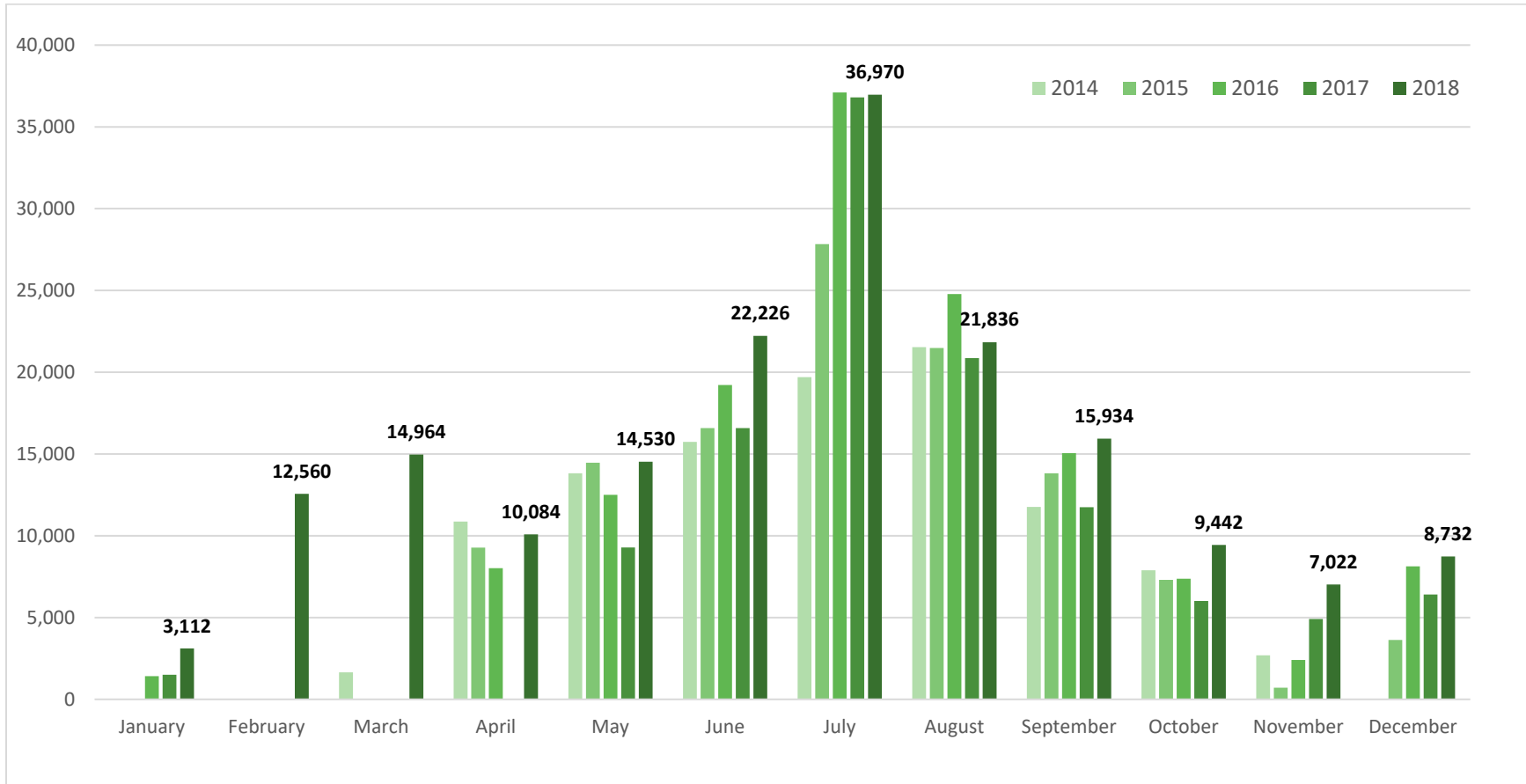
July had the highest total monthly ridership, largely due to the additional weekday service. Generally, ridership has continued to climb each year.

The Muir Woods Shuttle service typically begins the first weekend in April. For the 2018 season, shuttle ran service from January through December. This resulted in 39 additional days of service compared to 2017.

**Table 2: Shuttle Ridership by Month, 2014 – 2018** (unlinked passenger trips)

Month	2014	2015	2016	2017	2018	% Change 2017-2018
January	0	0	1,414	1,502	3,112	107.2%
February	-	-	-	-	12,560	-
March	1,646	-	-	-	14,964	-
April	10,866	9,278	8,018	-	10,084	-
May	13,820	14,462	12,506	9,284	14,530	56.5%
June	15,740	16,586	19,216	16,588	22,226	34.0%
July	19,700	27,832	37,103	36,806	36,970	0.4%
August	21,532	21,484	24,780	20,860	21,836	4.7%
September	11,760	13,820	15,050	11,750	15,934	35.6%
October	7,886	7,302	7,370	6,016	9,442	56.9%
November	2,692	712	2,404	4,908	7,022	43.1%
December	28	3,630	8,127	6,410	8,732	36.2%
<b>Total</b>	<b>105,670</b>	<b>115,106</b>	<b>134,574</b>	<b>114,124</b>	<b>177,412</b>	<b>55.5%</b>

**Figure 4: Shuttle Ridership by Month, 2014 – 2018** (unlinked passenger trips)



The increase from 2017 to 2018 is due to two factors: the earlier start of the season and the new reservation model. The reservation system requires visitors to plan their trip, pre-purchase tickets, and reserve a parking space in advance. This makes them aware of the option to take the Muir Woods Shuttle. In addition, the pricing structure of the parking reservation and shuttle seat incentivizes the use of the shuttle over driving.

Figure 5 shows ridership by day on weekends and holidays. Figure 6 shows ridership for the peak season and weekday service for the 2018 season. Saturday, July 7 had the highest daily ridership at 2,856 trips. There were an additional 28 days when daily ridership surpassed 2,000 unlinked trips.

## Productivity

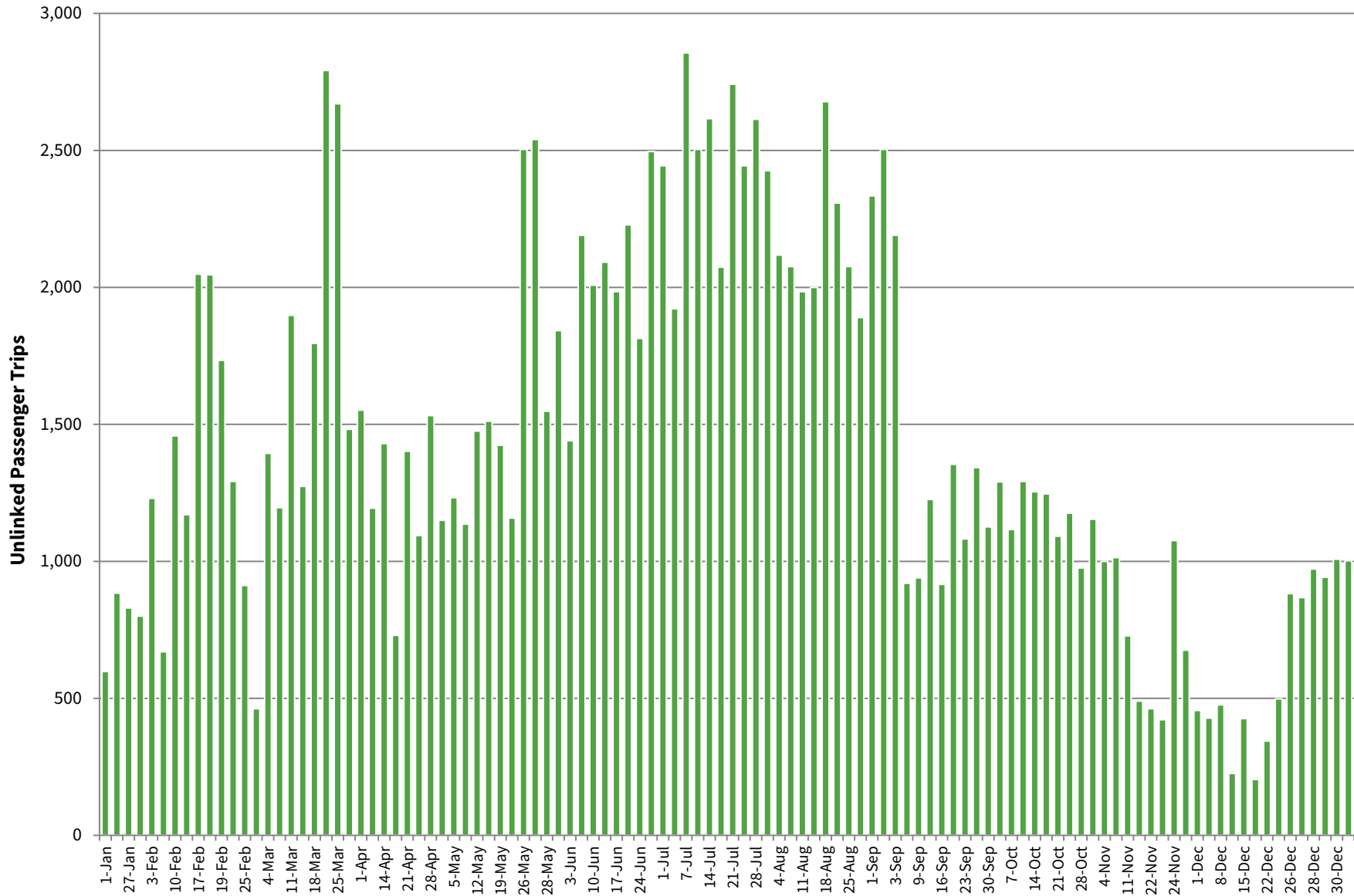
Service productivity is measured in passengers per revenue hour or per trip. Overall, the service carried an average of 27.6 passengers per hour and 22.5 passengers per trip for the 2018 season. Weekend and holiday service averaged 28.9 passengers per hour, or about 22.7 passengers per trip, while weekday service averaged 20.61 passengers per hour and 20.87 passengers per trip.

Table 3 below shows productivity measures by month compared to 2017. Overall, productivity measured in passengers per hour and passengers per trip increased compared to the 2017 season.

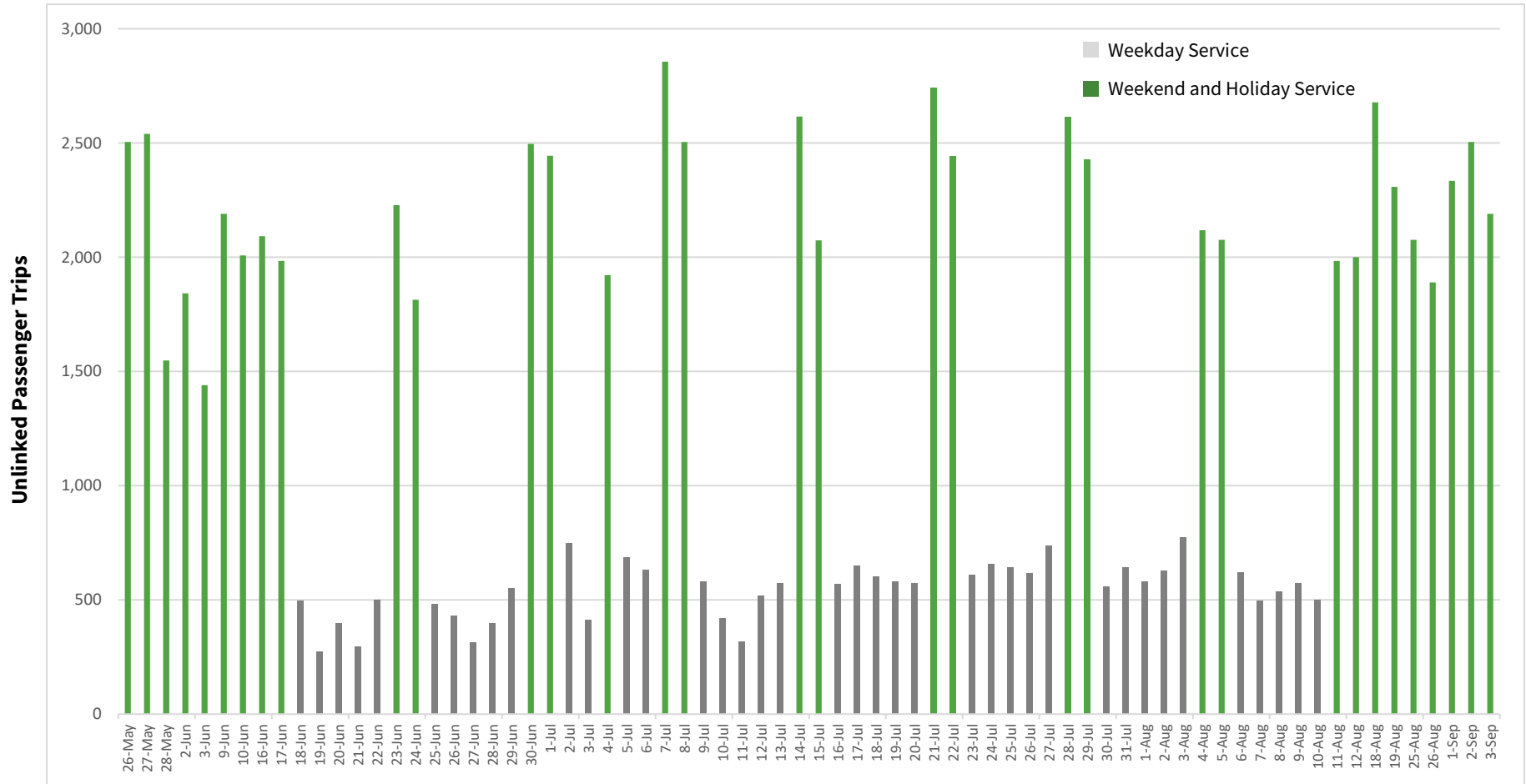
**Table 3: Shuttle Productivity, 2017 – 2018**

Month	Passengers per Trip			Passengers per Hour		
	2017	2018	% Change	2017	2018	% Change
January	17.5	17.3	-1.0%	21.6	20.3	-5.9%
February		31.0			32.0	
March		35.9			35.8	
April	0.0	26.8		0.0	26.3	0.0%
May	13.2	24.2	83.9%	24.1	28.2	17.1%
June	15.0	18.3	22.3%	21.5	23.4	9.3%
July	22.2	24.2	9.3%	31.1	29.2	-5.9%
August	19.2	20.7	7.7%	27.7	26.7	-3.7%
September	15.6	23.5	50.2%	23.4	32.0	36.8%
October	12.7	21.5	68.7%	18.5	31.3	69.0%
November	16.3	17.6	7.9%	20.2	23.5	16.4%
December	24.8	14.5	-41.6%	30.7	20.1	-34.7%
<b>Total</b>	<b>17.8</b>	<b>22.5</b>	<b>26.6%</b>	<b>26.1</b>	<b>27.6</b>	<b>5.8%</b>

**Figure 5: Daily Weekend & Holiday Ridership, 2018** (unlinked passenger trips)



**Figure 6: Peak Season Daily Weekday, Weekend & Holiday Ridership, 2018 (unlinked passenger trips)**



## Mode Share

Another important indicator of Shuttle service success is the percentage of park visitors who

Weather has a significant impact on the level of

**Table 4: Mode Share, 2017 – 2018**

		2017	2018	% Change 2017-2018
<b>Peak Weekend/Holidays</b>	Park Visitations	180,985	148,831	-17.8%
	Shuttle users	31,482	36,743	16.7%
	<b>Mode Share</b>	<b>17.4%</b>	<b>24.7%</b>	<b>41.9%</b>
<b>Peak Weekdays</b>	Park Visitation	106,929	129,909	21.5%
	Shuttle users	11,182	10,583	-5.4%
	<b>Mode Share</b>	<b>10.5%</b>	<b>8.4%</b>	<b>-22.1%</b>
<b>Off-Peak Weekend/Holidays</b>	Park Visitation	125,915	224,572	78.4%
	Shuttle users	14,398	41,380	187.4%
	<b>Mode Share</b>	<b>11.4%</b>	<b>18.4%</b>	<b>61.1%</b>
<b>Total</b>	Park Visitations	413,829	503,325	21.6%
	Shuttle users	57,062	88,706	55.5%

choose to take the Shuttle. During days that the Shuttle was in service, 503,312 people visited Muir Woods and 88,706 of them chose to ride the Shuttle<sup>1</sup>. This represents a 17.6% average mode share, which is 27.8% higher than the prior year. Mode share is the transportation term for the proportion of park visitors that take the Shuttle.

Figure 7 and Figure 8 show percentage mode share of the Shuttle by day during the peak and off-peak seasons including weekday service, respectively. On some of the busiest days, the Shuttle carried up to 42% of all park visitors.

park visitation. It has an even greater effect on Shuttle ridership and mode share. This is likely due to less traffic and more available parking on lower visitation days, making driving to the park less of a hassle than on busy days. On rainy days, mode share tends to drop by 10%.

## Pass-Ups

Passenger pass-ups have been a recurring issue during peak periods when passenger demand exceeded bus capacity. The Shuttle buses carry no more than 37 seated passengers. Standees are not permitted due to the steep and winding nature of the roadway. In previous seasons, there were lines and significant wait times for many passengers

<sup>1</sup> Assumes that each visitor using the Shuttle took a round trip

despite the high frequency of service at Pohono and additional service from Sausalito. This was due to the irregularity of passenger arrivals coupled with high numbers in the midday.

The new online reservations system allowed shuttle riders to pre-purchase their shuttle tickets on specific buses on the Sausalito route or for specific time slots on the Pohono route. This has alleviated shuttle capacity issues by balancing out the peaks and making arrival time more predictable. Limited seats are held back from the advanced ticketing process to accommodate those riders who show up without tickets.

The process of validating passes has also changed under the new model. Dedicated staff members use handheld scanners to validate pre-purchased tickets and sell walk-up tickets. This differs from previous years when patrons boarded buses for Muir Woods and purchased tickets at the park entry booth.

The new online ticketing system and validation process has reduced passenger wait times. It has also significantly alleviated issues of full Shuttle buses leaving passengers behind during the peak season.



Figure 7: Off-Peak Season Daily Weekend & Holiday Shuttle Mode Share, 2018

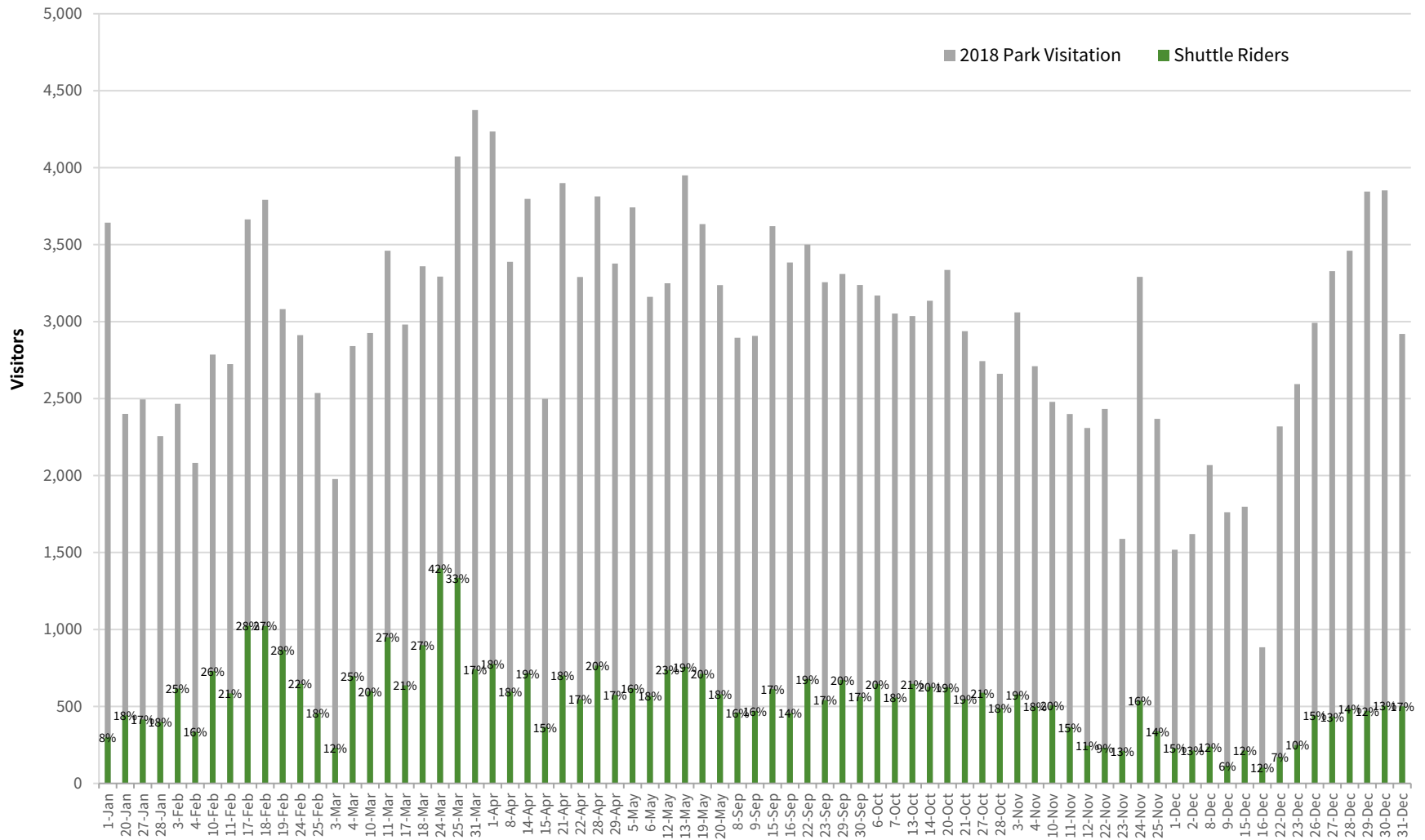
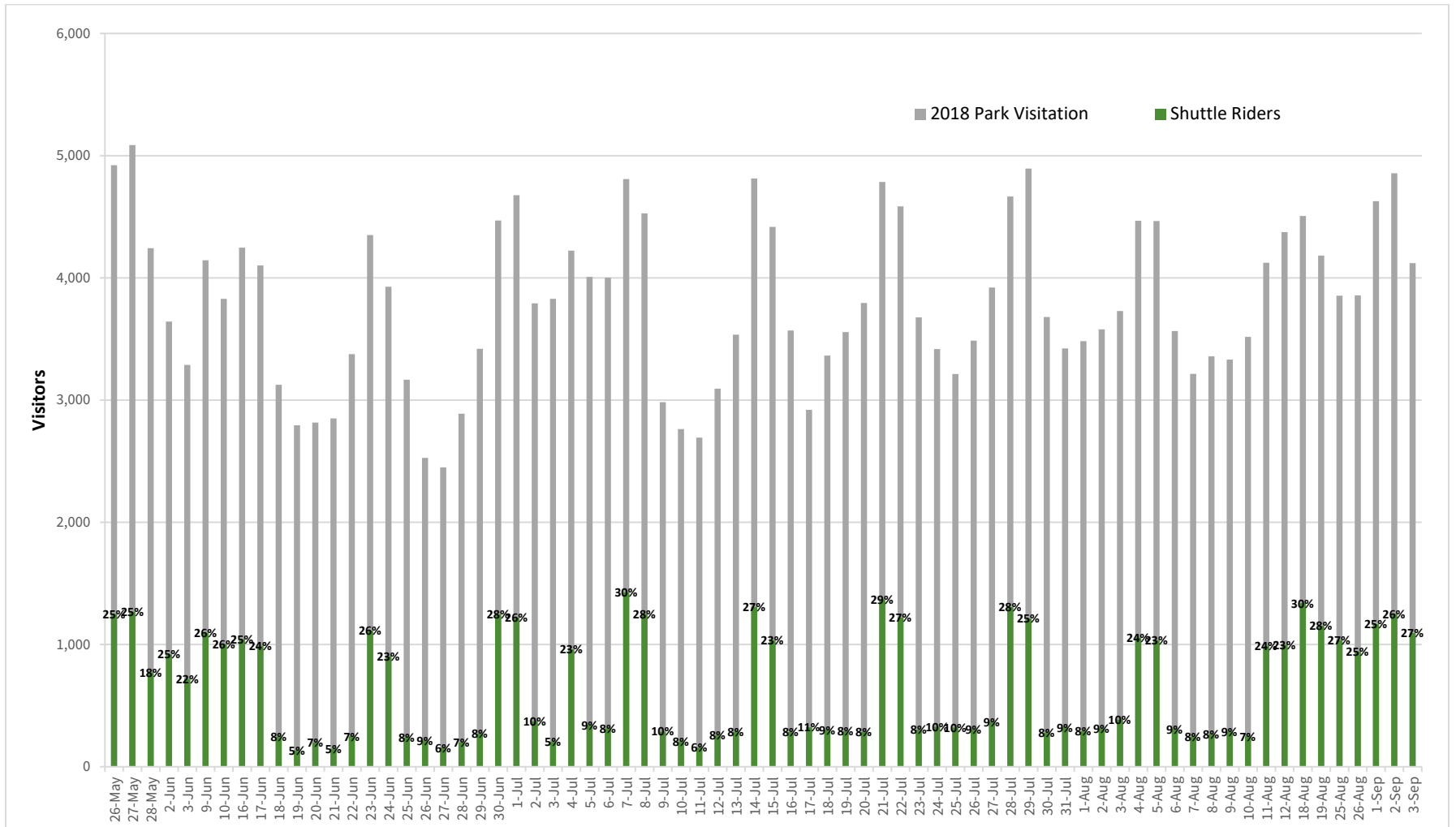


Figure 8: Peak Season Daily Weekday, Weekend & Holiday Shuttle Mode Share, 2018



# Service Cost and Farebox Recovery

This section summarizes expenses and revenues for the 2018 season including the weekday service and compares them to the prior year.

Table 5 provides a breakdown of the total cost and revenue for the Shuttle compared to the past four seasons. Table 6 summarizes key cost performance measures. Costs are defined as total program costs. These costs are shared with the National Park Service as follows:

For the first 4,035 revenue hours of each federal fiscal year, operating costs net passenger revenue will be shared 50/50 with the National Park Service. The NPS will pay 100% of operating expenses for revenue hours exceeding 4,035 hours.

All passenger revenues are calculated as \$5.00 per rider over age of sixteen, and the NPS credits those revenues to Marin Transit.

The total service cost for the 2018 season was \$821,081, approximately 76.1% higher than last year. This includes operating, administration, and marketing costs. Operating cost in 2018 was \$721,916, approximately 111% higher than previous

year. The additional operating costs reflects the increase in fees under the new operations contract with MV Transportation for Rural and Seasonal Services effective July 1, 2018.

Compared to the 2017 season, the overall program cost increased by 51% despite the 103.8% increase in fare revenue.

One of the underlying factors in the higher program cost was the transition to the new reservation system. This triggered a substantial operational change from the previous year, including a significant increase in staff administrative costs. These costs were approximately 60.3% higher than 2017 season.

The additional staff time was dedicated to adapting the Shuttle program to support the new reservation model and to deploying the mobile information kiosk.

Pass validation has also changed under the new reservation model, which increased administrative costs associated with validating tickets and customer service. Under the new validation process, dedicated staff members were required to validate pre-purchased tickets and sell walk-up tickets. The partner

agencies dedicated an additional position to support the ticket validation system for 2018 season.

Lastly, the NPS agreed to pay to expand the service expansion to run every weekend throughout the year. Operating year-round has added 39 days of service annually. This contributed to the operating cost increase compared to the 2017 season.

Marketing costs in 2018 continued to decrease compared to previous years. The lack of major changes to the 2018 service enabled staff to reuse most marketing materials. In addition, the expansion to operating year-round service has reduced the need to formally transition between each season. As a result, there is less need to focus on increased mobilization for driver training, signage, and marketing materials.

As part of the fare collection process implemented in 2013, the Golden Gate National Parks Conservancy collected a 10% administrative fee based on total ticket sales to cover the costs of fare collection services. The 10% fees are no longer applicable under the new reservation system.

### **Farebox Recovery**

The regular adult fare is \$3.00 per round-trip. Youth under 16, seniors with a Lifetime

National Park Pass, and disabled individuals with a Federal Lands Access Pass ride the Shuttle for free.

As shown in Table 5, \$447,108 in fares was collected during the 2018 season – an increase of about 103.8%. This growth in fare revenue is attributed to additional days of service and the corresponding 55% ridership increase for 2018 season. The amount collected represents a farebox recovery rate of 54.5%, about 16% higher than in 2017.

### **Cost per Service Hour**

The average cost per service hour for the 2018 season was \$127.74, a 19.9% increase over the previous season. The increase in operating and administrative costs was the primary reason for this growth.

### **Cost per Trip**

The cost per one-way passenger trip increased to \$4.63, about 13.3% higher than the previous year. The increase in cost per trip is due to higher overall costs due to the higher ridership and productivity levels in 2018.

### **Subsidized Cost per Trip**

The average subsidy increased to \$2.11 per passenger in 2018 season. This is a 2.6% lower subsidy compared to the 2017 season. The average subsidy in 2018 met the District's cost effectiveness target of \$3.00 per passenger.

**Table 5: Shuttle Service Costs, 2014 – 2018**

	2014	2015	2016	2017	2018	% Change 2016–2017
Operating Costs	\$350,123	\$386,054	\$364,799	\$341,911	\$721,916	111.1%
Marketing	\$27,886	\$7,239	\$5,087	\$2,758	\$1,909	-30.8%
Maintenance & Equipment	\$49,830	\$37,161	\$47,364	\$49,735	\$19,675	-60.4%
Marin Transit Admin/ Customer Liaisons	\$29,860	\$40,230	\$17,541	\$46,710	\$74,895	60.3%
Fare Collection <sup>(1)</sup>	\$20,440	\$23,117	\$26,692	\$21,753	\$112	-99.5%
<b>Total Cost of Program</b>	<b>\$493,730</b>	<b>\$512,015</b>	<b>\$461,966</b>	<b>\$466,368</b>	<b>\$821,081</b>	<b>76.1%</b>
Fare Revenue (GFI & Ticket Sale)	-	-	-	-	\$275,492	-
NPS \$2 subsidy	-	-	-	-	\$171,616	-
<b>Total Fare Revenue</b>	<b>\$210,502</b>	<b>\$238,543</b>	<b>\$268,829</b>	<b>\$219,416</b>	<b>\$447,108</b>	<b>103.8%</b>
<b>Net Program Cost</b>	<b>\$283,228</b>	<b>\$273,472</b>	<b>\$193,137</b>	<b>\$246,953</b>	<b>\$373,973</b>	<b>51%</b>
<b>Total NPS Share of Program Cost<sup>(2)</sup></b>	<b>\$141,614</b>	<b>\$136,736</b>	<b>\$96,569</b>	<b>\$123,476</b>	<b>\$219,757</b>	<b>78%</b>

Notes:

(1) As part of the fare collection process implemented in 2013, a 10% administrative fee based on total ticket sales is included to cover the costs of fare collection services provided by the Golden Gate National Parks Conservancy.

(2) As part of the new agreement with National Park Service, net passenger revenue is shared 50/50 for first 4,035 revenue hours in each federal fiscal year. The National Park Service will reimburse Marin Transit for operating costs for revenue hours exceeding 4,035 hours. The NPS reimburses Marin Transit for all passenger revenues based on \$5.00 per rider over the age of sixteen.

**Table 6: Shuttle Cost Effectiveness Measures, 2014 – 2018**

	2014	2015	2016	2017	2018	% Change 2017–2018
Farebox Recovery	42.6%	46.6%	58.2%	47.0%	54.5%	16%
Cost per Service Hour	132.22	110.83	98.89	106.58	127.74	19.9%
Cost per passenger Trip	\$4.67	\$4.45	\$3.43	\$4.09	\$4.63	13.3%
Subsidy per Passenger	\$2.68	\$2.38	\$1.44	\$2.16	\$2.11	-2.6%
Average Fare	\$1.99	\$2.07	\$2.00	\$1.92	\$2.52	31.1%

# Conclusions and Recommendations

The Muir Woods Shuttle plays an increasing role in reducing congestion and providing a viable alternative transportation option to the park. Mitigating traffic and parking congestion becomes more and more important as park visitation levels increase. At the same time, the Shuttle has reached maximum capacity during the peak season, and there are no additional vehicles available to increase service.

## Parking

In January 2016, the County gradually began restricting parking along sections of Muir Woods Road. In previous years, as many as 400 vehicles parked along the roadway's narrow shoulder during busy weekends. This led to environmental issues, including erosion, and safety and congestion issues due to visitors walking in the roadway from their cars to the park entrance. In the next few years, the County will eliminate all parking along Muir Woods Road.

Under the new reservation model, the partner agencies changed the parking strategy to emphasize pre-planning and pre-purchase of parking reservations.

Parking reservations are required for all personal vehicles and shuttle riders visiting Muir Woods National Monument. The pricing further incentivizes use of the Shuttle over driving, at \$8 for a parking reservation and \$3 for a Shuttle seat.

## Sausalito Ferry Terminal

The Sausalito bus stop is not immediately visible from the ferry terminal. Growing demand for the Shuttle from Sausalito has increased the number of passengers who have difficulty finding the stop.

Crowds and lack of signage also lead to passenger confusion in this location. More visible signage and a more clearly defined waiting area should alleviate this issue. Staff will work with the City of Sausalito and Golden Gate Transit to determine appropriate means and locations for better signage and pavement markings where feasible.

## Muir Woods

In the past few years, a growing issue has been long wait times at the park for the return trip. This primarily occurs at the end of the day when the park closes. Recently, this issue has been compounded due to visitors that take

transportation network company (TNC) services to the park. These visitors are unable to order a return trip due to lack of cellular service and must rely on the Shuttle for their return.

Recently, the will-call line at Pohono has started to lengthen at the end of the day. The Shuttle must provide additional trips at the end of the day to take passengers to the woods and return them to Pohono when the park closes.

This has continued to be an issue even with the new reservation system. Visitors who pre-purchase their shuttle seats are not required to pre-book their return on specific buses on the Sausalito route or specific time slots on the Pohono route.

Staff is closely monitoring this activity to determine solutions to alleviate capacity issues and balancing out the return demand during the late day peaks.

Solutions may include reducing the capacity of online reservations for late day time slots to accommodate visitors that walk-up late in the day.

Alternatively, the Shuttle service could provide the option for visitors to reserve seats for their return trip once they are at the park. Visitors will likely have a better idea of when they will want to leave. This would eliminate the need for those passengers to wait for the next available Shuttle.

### **Ticket Sales and Validation**

Under the new model, validation of passes has also changed. Dedicated staff members use handheld scanners to validate pre-purchased tickets and sell walk-up tickets.

The scanning process has impacted the speed of ticket validation at Pohono. Staff is considering alternatives to speed up the validation process and reduce issues related to glare at the stop locations and passenger wait times.

### **Marketing and Passenger Information**

The emphasis of the Shuttle marketing strategy has changed. Visitors pre-plan and pre-purchase their shuttle seats and parking. Historically, the CMS warned of full parking at the Woods. This was the first notification to visitors that they should taking the shuttle. Other riders found out about the shuttle through the NPS website or tourist-focused brochures.

Shuttle service messaging has changed across all marketing platforms to inform visitors to pre-plan and pre-purchase their shuttle seats or parking. The new strategy relies more on educating visitors in advance and less on intercepting visitors travelling to the Woods. The CMS messaging now simply states that reservations are required at Muir Woods. Shuttle marketing materials are focused on redirecting riders to the [gomuirwoods.com](http://gomuirwoods.com) site to pre-purchase shuttle seats.

In addition, staff plan to develop a pocket guide to distribute at Pohono and Sausalito. The guide will provide passengers with information on how to use the service to return to their original boarding location.

### **Bus Stops**

Average wait times have reduced due to increased service frequency. Additional passenger amenities at the bus stops continues to be a priority for improving the visitor experience. Marin Transit designed and purchased the Mobile Information Kiosk that went into service in March 2018. This vehicle doubles as a passenger amenity and a driver support/rest area. In addition to the kiosk, permanent signage provides a more permanent and professional appearance.

### **Staffing**

Customer Liaisons continue to be an invaluable resource to passengers. A full-time operations supervisor is stationed at the Pohono Park & Ride Lot. The Liaisons are primarily responsible for providing information to customers and answering questions. This enables the supervisor to focus on operations.

One Customer Liaison has traditionally been located at Pohono, with another Liaison stationed near the Sausalito Ferry. On weekdays, there is one staff person located at the Sausalito bus stop only.

A full-time operations supervisor is stationed at Muir Woods to facilitate vehicle circulation

and check for proof of payment. This supervisor also ensures that passengers board the correct bus for their return trip to Sausalito or Pohono. After the last bus to the park leaves Sausalito, one of the Liaisons typically relocates to Muir Woods to assist the supervisor with return boardings.

These staffing levels help ensure efficient operations and a quality passenger experience. In the 2017 season, there was significant difficulty in hiring enough staff to serve as Customer Liaisons. The position was a less desirable option due to the lack of full-time hours and the requirement to work most weekends and holidays.

For 2018, the additional dedicated position to support the ticket validation system increased the stability and reliability of the staffing at Pohono. This new position was requested as part of the new operations contract with MV Transportation that started on July 1, 2018.



