

May 2, 2022



2021 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 typically carries almost 18 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.

To manage visitation and parking demand, NPS implemented a new web-based parking and transit reservation system for Muir Woods

in 2018, which requires visitors to purchase their parking reservation and pre-purchase shuttle tickets for a specific window of time.

## 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

The Muir Woods National Monument closed at the beginning of the COVID-19 pandemic in March 2020, when Governor Newsom placed the State of California under a shelter in place order. The Muir Woods Shuttle was suspended at the same time.

Although the Muir Woods National Monument reopened to the public at the end of June 2020, reduced visitation meant there was not sufficient demand to resume shuttle service. The Muir Woods Shuttle program remained suspended until the state's economy reopened

on June 15<sup>th</sup>, 2021. For the 2021 season, shuttle service was provided on weekends and holidays from June 19<sup>th</sup> through December 31<sup>st</sup>.

In the program's early years, Marin Transit operated service during a regular season that began in May and continued through October.

Since winter holiday service was introduced in 2013, Marin Transit has 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. Weekday service has continued since, and typically operates from the third week in June through the second week of August. Weekday service did not run in the 2021 season.

For the 2021 season, the shuttle ran service for six holidays: Independence Day, Labor Day, Veteran's Day, Thanksgiving, Christmas, and New Year's. Muir Woods Shuttle did not operate weekday service in 2021 other than the aforementioned holidays, which are considered holiday service.

Figure 1 shows the routing of the Shuttle for the 2021 season. Prior to COVID-19 pandemic service was typically provided along two one routes, Route 66, which serves the Pohono Park & Ride lot and Route 66F, which serves downtown Sausalito (including the ferry terminal) and Marin City. The 66F service was suspended during the 2021 season.

In 2021, schedules for weekend and holiday service were divided into peak and off-peak periods that correspond to different levels of service. The peak period typically runs from Memorial Day weekend through Labor Day weekend. The off-peak season runs the remainder of the year. However, in 2021, the peak season was shorter than a typical season and began operating on June 19<sup>th</sup>, since season start was delayed due to COVID-19 pandemic. The peak season in 2021 concluded on August 8<sup>th</sup>, after which the lower-frequency off-peak service was provided on the route.

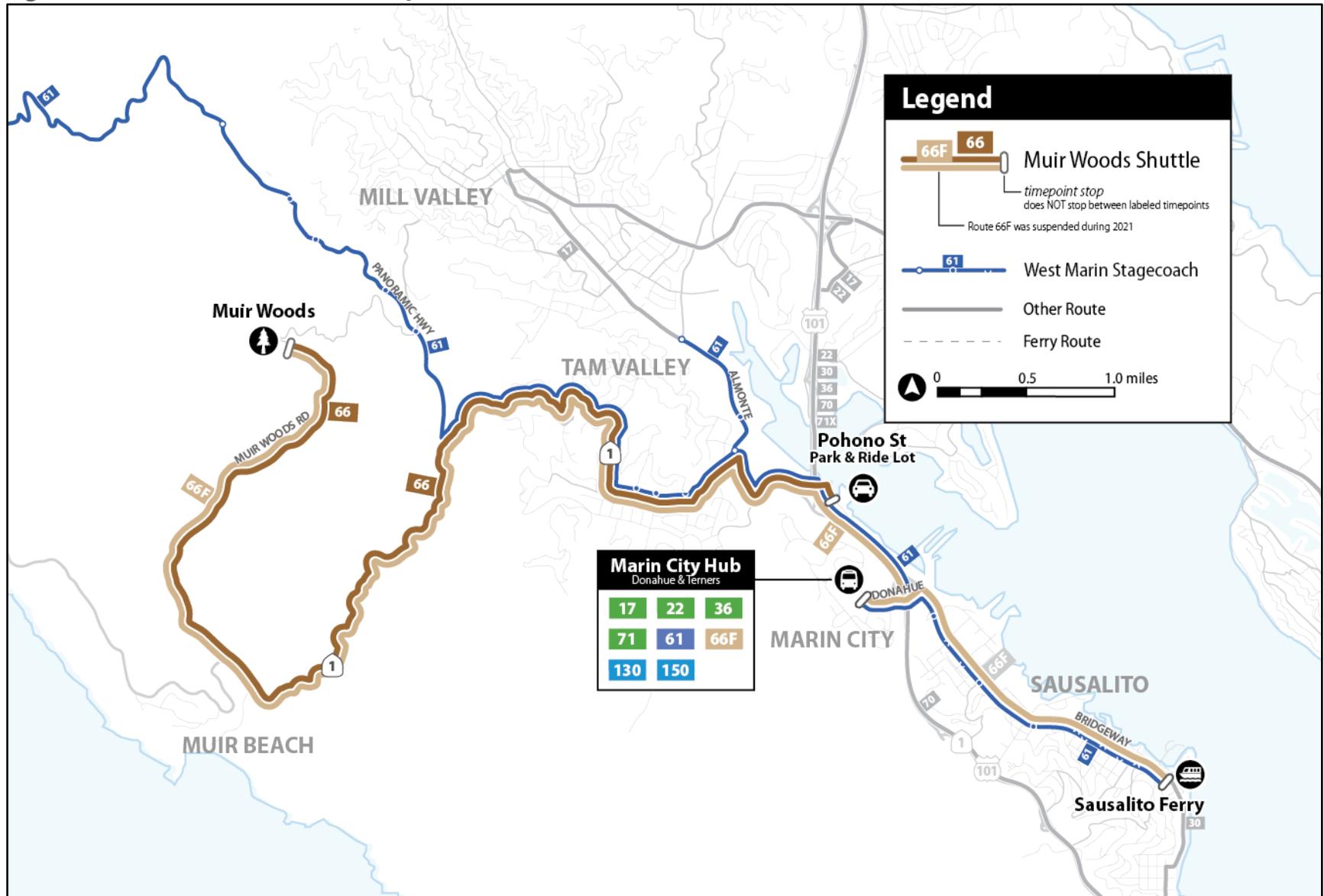
During the peak season, service on Route 66 between the Pohono Park & Ride Lot and Muir Woods is provided approximately every 10 minutes. The first trip departs Pohono at 8:35 am and the last return trip leaves the park at 7:35 pm. During the off-peak season, service is provided every 20 minutes on Route 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.

In total, the Shuttle provided service on 17 peak summer days and 48 off-peak season days. 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. In 2018 Marin Transit provided a mobile information kiosk for use at Pohono Park and Ride to help guide passengers of the Muir Woods Shuttle

service and provide drivers with a break area. The partners also implemented a new web-based reservation system that allows visitors to plan their trip in advance and reserve shuttle seats and a parking space.

Figure 1: 2021 Muir Woods Shuttle Map



**Table 1: Summary of Operations, 2016–2021**

	2016	2017	2018	2019	2020 <sup>(3)</sup>	2021
Season Start	April 2	May 13 <sup>(2)</sup>	January 1	January 1	January 1	June 19 <sup>(4)</sup>
Weekend & Holiday Service	79 days	64 days	108 days	113 days	24 days	65 days
Weekday Service	39 days	44 days	39 days	39 days	0 days	0 days
Avg. Frequency (Off-peak/Peak/Weekday)	20/10/30 min	20/10/30 min	20/10/30 min	20/10/30 min	20 min	20/10 min
Service Hours <sup>(1)</sup>	4,672	4,376	6,428	6,381	932	2,037
Standard Fare (adult round-trip)	\$5.00	\$5.00	\$3.00	\$3.00	\$3.25	\$3.25 <sup>(5)</sup>

**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.

(3) Season suspended due to COVID-19 pandemic and Muir Woods Park closure.

(4) Season start delayed due to COVID-19 pandemic.

(5) On November 15<sup>th</sup>, 2021, the MWS round-trip adult fare was raised to \$3.50.

**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 2018, 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 was \$3.25 per person for most of 2021 and was raised to \$3.50 on November 15<sup>th</sup>. 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. (Figure 2)

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

The pricing structure of \$9 for a parking reservation and \$3.50 for a Shuttle seat reservation provides an incentive to take the Shuttle.

**Figure 2: 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. The Liaison arrived 30 minutes before the first shuttle departed Pohono and stayed until the last outbound shuttle departed Pohono.

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 Pohono.

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. These staffing levels help ensure efficient operations and a quality passenger experience.

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

### Marketing and Passenger Information

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 the park's visitor information center, online, and on signage near the highway exits.

The emphasis of the Shuttle marketing strategy has changed. 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 Changeable Message Signs (CMS), installed along Highway 101, continue to be one of the most effective means of advertising the Muir Woods Shuttle.

Most passengers used to learn about the Shuttle through the CMS, however due to recent changes and the reservation system, more passengers are finding Shuttle information online through web searches and transit trip planners.

Historically, the CMS warned of full parking at the Woods. This was the first notification to visitors that they should taking the shuttle.

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 site to pre-purchase shuttle seats.

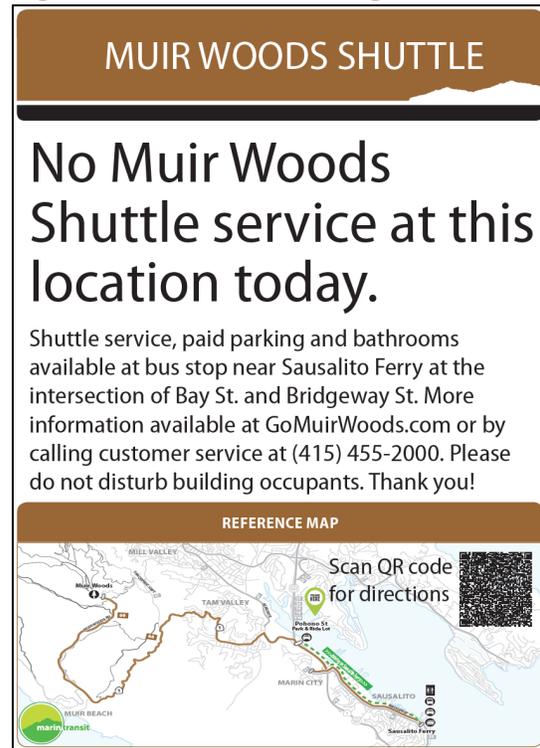
Schedules and signs are posted at each stop. Information is also provided to customers online and over the phone by both Marin Transit and National Park Service staff, and visitors can plan their trips in advance using Google Transit and the NPS reservation website.

### Evaluation Methodology

Visitors are encouraged to purchase their advanced tickets through the NPS's web-based reservation system. The Shuttle accepts same day walk-ups pending availability 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.

Figure 3: Informational Sign at Pohono



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 2021, 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 2021 season, there

were 36,082 one-way passenger trips on the Shuttle. This represents a 75.4% decrease in ridership compared to 2019, which is due to the shortened 2021 season (starting in mid-June) and reduced service (no weekday service during the peak season and ending the peak season in mid-August) compared to 2019.

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

**Table 2: Shuttle Ridership by Month, 2016 – 2021** (unlinked passenger trips)

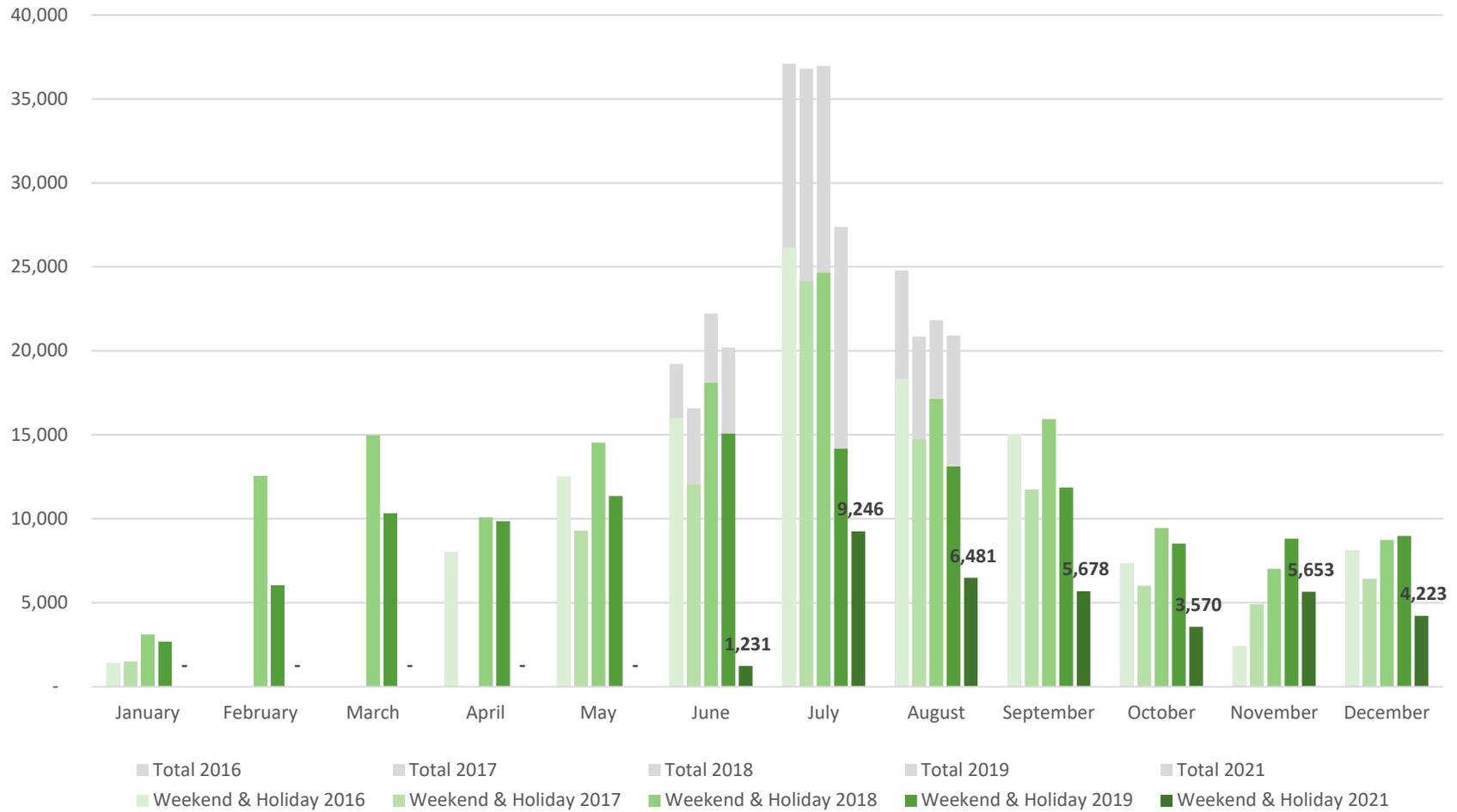
Month	2016	2017	2018	2019	2021	% Change 2019–2021 <sup>(2)</sup>
January	1,414	1,502	3,112	2,689	-	-100.0%
February	-	-	12,560	6,044	-	-100.0%
March	-	-	14,964	10,335	-	-100.0%
April	8,018	-	10,084	9,858	-	-100.0%
May	12,506	9,284	14,530	11,355	-	-100.0%
June	19,216	16,588	22,226	20,195	1,231 <sup>(1)</sup>	-93.9%
July	37,103	36,806	36,970	27,380	9,246 <sup>(1)</sup>	-66.2%
August	24,780	20,860	21,836	20,910	6,481 <sup>(1)</sup>	-69.0%
September	15,050	11,750	15,934	11,853	5,678 <sup>(1)</sup>	-52.1%
October	7,370	6,016	9,442	8,525	3,570	-58.1%
November	2,404	4,908	7,022	8,818	5,653	-35.9%
December	8,127	6,410	8,732	8,979	4,223	-53.0%
<b>Total</b>	<b>134,574</b>	<b>114,124</b>	<b>177,412</b>	<b>146,941</b>	<b>36,082</b>	<b>-75.4%</b>

Notes:

(1) Note that there was no peak-season weekday service in 2021.

(2) Note that the suspension of Route 66F throughout 2021 resulted in reduced service year-round.

**Figure 4: Shuttle Ridership by Month, 2016 – 2021 (unlinked passenger trips)**



July had the highest total monthly ridership, which corresponds with the highest total park visitation. Overall ridership and park visitation in 2021 was lower than previous years due to the ongoing COVID-19 pandemic. However, as the economy opens back up, ridership on the Shuttle has improved relative to the seasonal trend.

Figure 5 shows ridership by day on weekends and holidays. Monday, September 6<sup>th</sup> (Labor Day) had the highest daily ridership at 1,039 passenger trips. This was the only day in the season when daily ridership surpassed 1,000 unlinked trips.

## Productivity

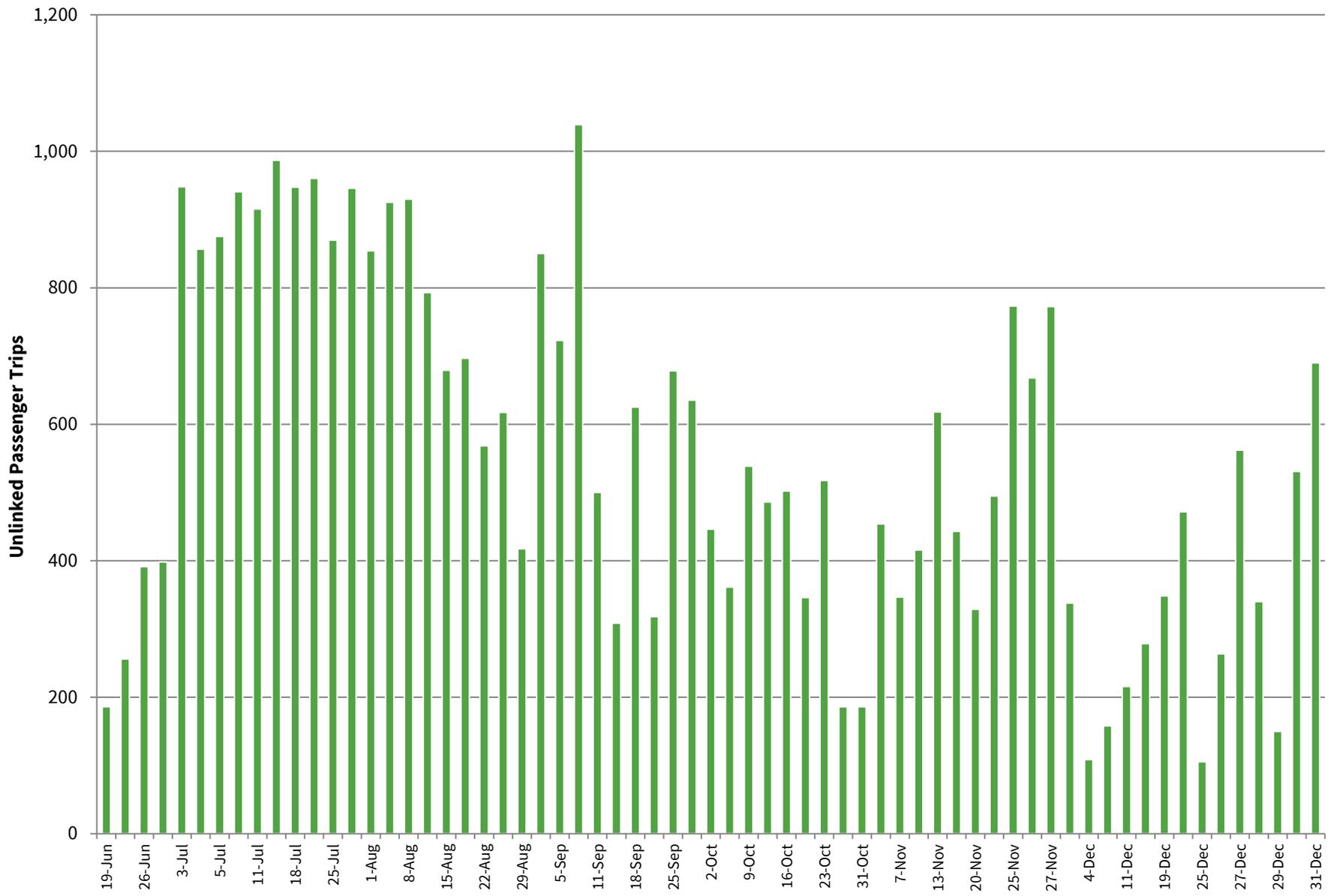
Service productivity is measured in passengers per revenue hour or per trip. Overall, the service carried an average of 18 passengers per hour and 9.5 passengers per trip for the 2021 season.

Table 3 below shows productivity measures by month compared to 2019. Overall, productivity measured in passengers per hour and passengers per trip decreased compared to the 2019 season.

**Table 3: Shuttle Productivity, 2019 – 2021**

Month	Passengers per Trip			Passengers per Hour		
	2019	2021	% Change	2019	2021	% Change
January	7.6			9.2		
February	17.2			20.8		
March	22.0			25.4		
April	25.3			26.0		
May	19.1			22.5		
June	13.7	2.9	-78.8%	21.6	7.8	-64.0%
July	14.3	8.7	-39.2%	25.2	23.3	-7.4%
August	16.5	11.3	-31.7%	25.7	22.5	-12.6%
September	19.8	14.6	-26.4%	22.1	22.7	3.0%
October	25.4	9.2	-63.6%	25.4	13.8	-45.6%
November	18.7	12.9	-31.1%	23.0	19.0	-17.5%
December	16.1	8.1	-49.3%	21.4	11.7	-45.1%
<b>Total</b>	<b>16.7</b>	<b>9.5</b>	<b>-43.2%</b>	<b>23.0</b>	<b>18.0</b>	<b>-22.0%</b>

**Figure 5: Daily Weekend & Holiday Ridership, 2021** (unlinked passenger trips)



## Mode Share

Another important indicator of Shuttle service success is the percentage of park visitors who choose to take the Shuttle. During days that the Shuttle was in service, 183,043 people visited Muir Woods and 18,041 of them chose to ride the Shuttle<sup>1</sup>. This represents a 9.9% average mode share, which is 5.9% lower than the prior year.

Mode share is the transportation term for the proportion of park visitors that take the Shuttle.

Figure 6 and Figure 7 show percentage mode share of the Shuttle by day during the peak and off-peak seasons, respectively. On the

busiest days, the Shuttle carried up to 20% of all park visitors.

Weather has a significant impact on the level of 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 historically 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

**Table 4: Mode Share, 2019 – 2021**

		2019	2021	% Change 2019-2021
<b>Peak Weekend/Holidays</b>	Park Visitations	136,035	59,263	-56.4%
	Shuttle users	27,247	6,593 <sup>(1)</sup>	-75.8%
	<b>Mode Share</b>	20.03%	11.13%	-44.5%
<b>Peak Weekdays</b>	Park Visitation	121,405	No service	-100.0%
	Shuttle users	11,558	No service	-100.0%
	<b>Mode Share</b>	9.52%	No service	-100.0%
<b>Off-Peak Weekend/Holidays</b>	Park Visitation	207,791	123,780	-40.4%
	Shuttle users	34,665	11,448 <sup>(1)</sup>	-67.0%
	<b>Mode Share</b>	16.68%	9.25%	-44.6%
<b>Total</b>	Park Visitations	465,231	183,043	-60.7%
	Shuttle users	73,470	18,041	-75.4%

Notes:

(1) Note that both the peak season and off-peak were shorter in 2021 than in 2019.

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

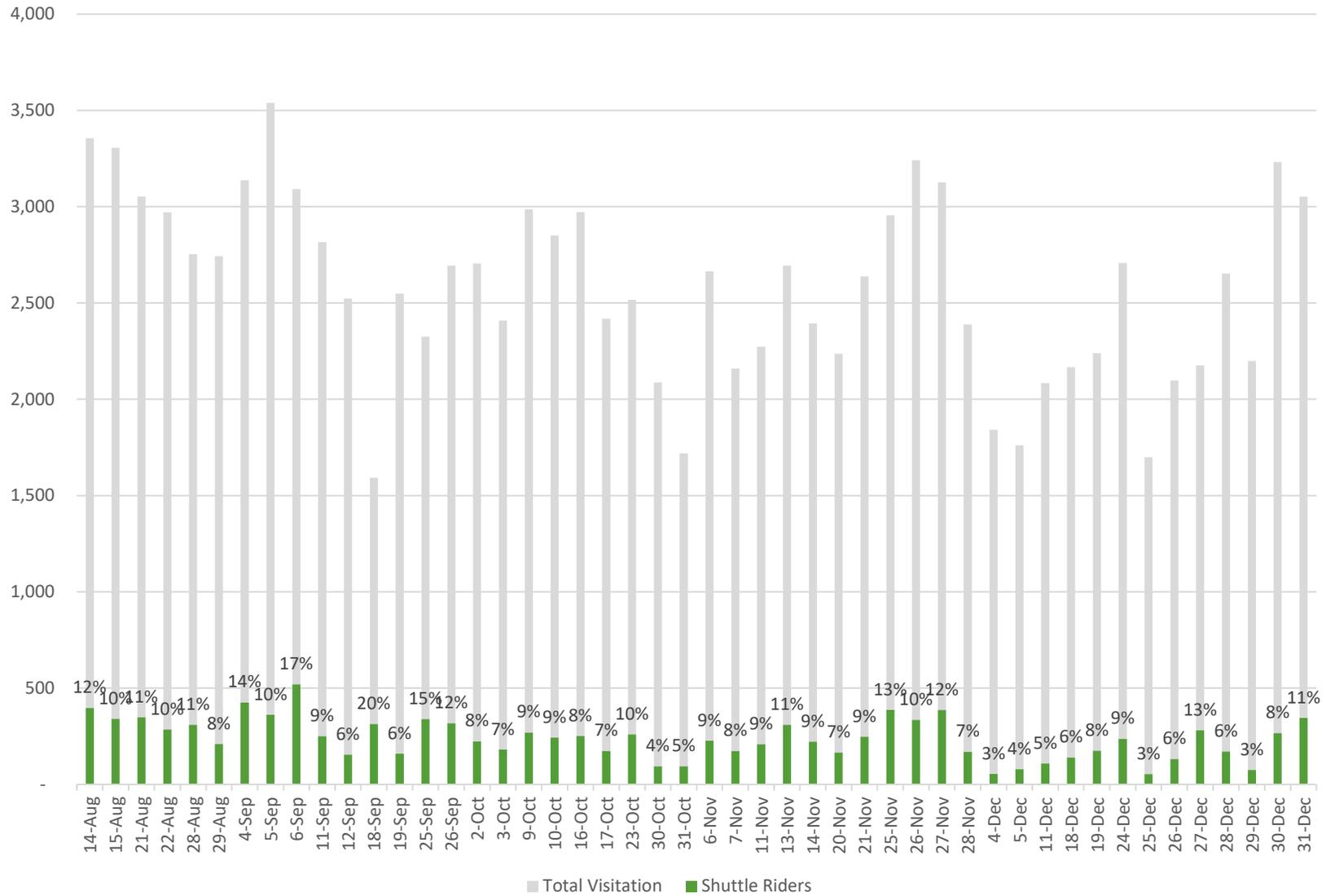
the steep and winding nature of the roadway. In previous seasons, there were lines and significant wait times for many passengers despite the high frequency of service at Pohono and additional service from Sausalito. This was due to the irregularity of passenger arrivals coupled with high numbers in the midday.

The online reservations system allowed shuttle riders to pre-purchase their shuttle tickets. 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.

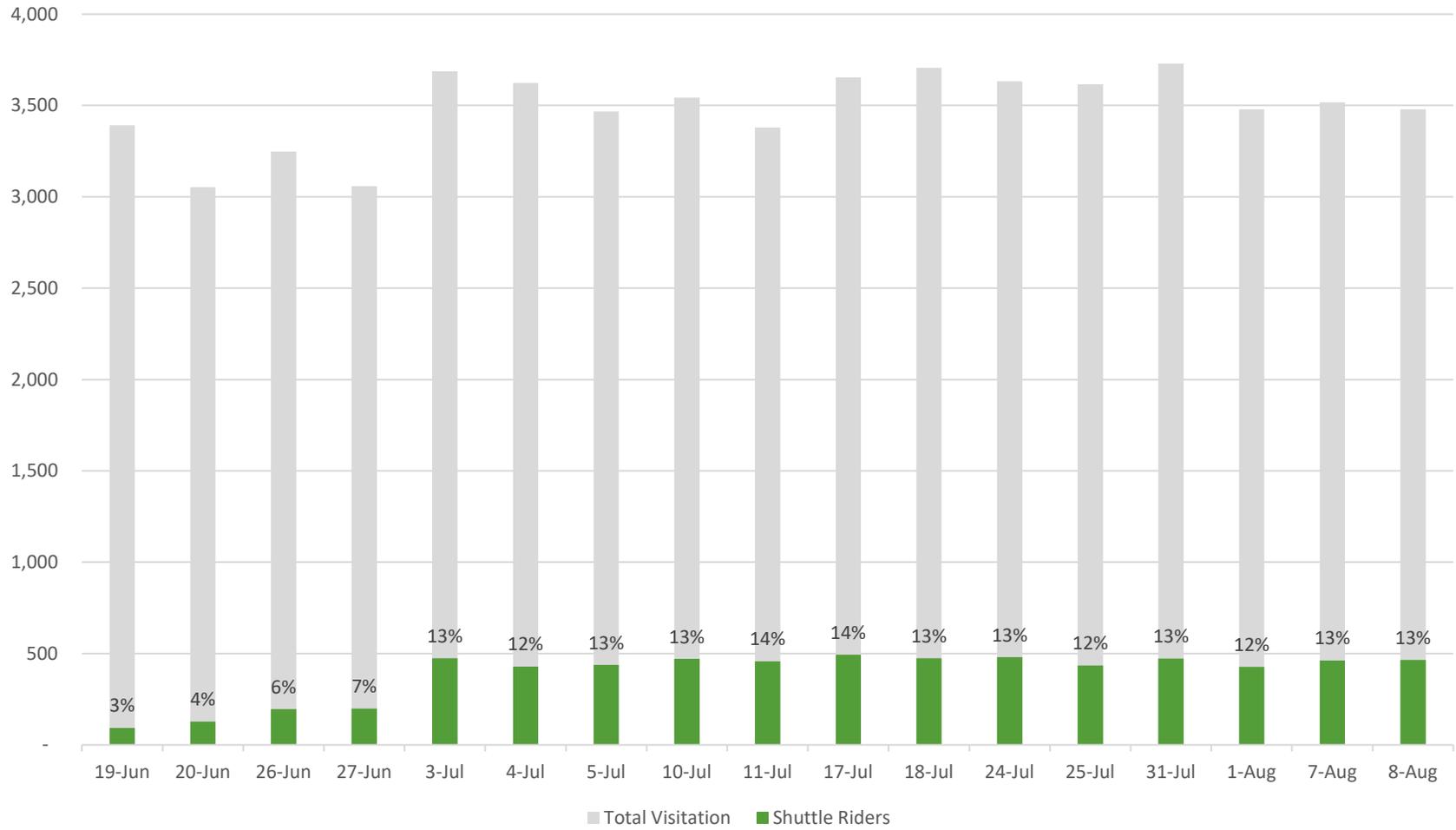
The process of validating passes has also changed under the online reservation model. Dedicated staff members use handheld scanners to validate pre-purchased tickets and sell walk-up tickets. This differs from previous years when patrons boarded buses for Muir Woods and purchased tickets at the park 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 6: Off-Peak Season Daily Weekend & Holiday Shuttle Mode Share, 2021**



**Figure 7: Peak Season Weekend & Holiday Shuttle Mode Share, 2021**



# Service Cost and Farebox Recovery

This section summarizes expenses and revenues for the 2021 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 the age of sixteen, and the NPS credits those revenues to Marin Transit.

The total service cost for the 2021 season was \$407,489, approximately 61% lower than last year. This includes operating, administration, and marketing costs. Operating costs in 2021 were \$337,588, approximately 64% lower than the previous year. These reduced operating

costs reflect the shortened 2021 season, which both started later than 2019 and also transitioned from the fuller peak schedule to the sparser off-peak schedule earlier than in 2019.

Compared to the 2019 season, the net program cost decreased by 50% due to the shortened season.

The only cost category to have increased from the 2019 to 2021 season is maintenance and equipment. Most of these costs were for AVL Communication, which is allocated on a per-vehicle basis. Total maintenance and equipment costs increased by 9% from 2019 to 2021.

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 \$3.50 per round-trip as of November 15<sup>th</sup>, 2021. However, with the NPS

subsidy, total fare revenue per passenger is \$5.00, both before and after the fare change. 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, \$93,220 in fares were collected during the 2021 season – a decrease of 78%. The amount collected represents a farebox recovery rate of 22.9%, 44% lower than in 2019.

### **Cost per Service Hour**

The average cost per service hour for the 2021 season was \$202.92, a 23% increase over the previous season. The increase in per-hour operating costs due a lower number of hours

available (operated service) to spread the high fixed fee of the program.

### **Cost per Trip**

The cost per one-way passenger trip increased to \$11.29, about 58% higher than the previous year. The increase in cost per trip is due to higher overall costs and ridership levels in 2021.

### **Subsidized Cost per Trip**

The average subsidy increased to \$8.71 per passenger in the 2021 season. This is a 105% increase compared to the 2019 season. The average subsidy in 2021 did not meet the District's cost effectiveness target of \$3.00 per passenger.

**Table 5: Shuttle Service Costs, 2016 – 2021**

	2016	2017	2018	2019	2021	% Change 2019-2021
Operating Costs	\$364,799	\$341,911	\$721,916	\$935,346	\$337,588	-64%
Marketing	\$5,087	\$2,758	\$1,909	\$3,594	\$793	-78%
Maintenance & Equipment	\$47,364	\$49,735	\$19,675	\$36,335	\$39,524	9%
Marin Transit Admin/ Customer Liaisons	\$17,541	\$46,710	\$74,895	\$73,549	\$29,427	-60%
Fare Collection <sup>(1)</sup>	\$26,692	\$21,753	\$112	\$0	\$0	0%
<b>Total Cost of Program</b>	<b>\$461,966</b>	<b>\$466,368</b>	<b>\$821,081</b>	<b>\$1,051,988</b>	<b>\$407,489</b>	-61%
Fare Revenue	-	-	\$275,492	\$265,930	\$55,932	-79%
NPS \$2 subsidy	-	-	\$171,616	\$160,580	\$37,288	-77%
<b>Total Fare Revenue</b>	<b>\$268,829</b>	<b>\$219,416</b>	<b>\$447,108</b>	<b>\$426,510</b>	<b>\$93,220</b>	<b>-78%</b>
<b>Net Program Cost</b>	<b>\$193,137</b>	<b>\$246,953</b>	<b>\$373,973</b>	<b>\$625,477</b>	<b>\$314,269</b>	<b>-50%</b>
<b>Total NPS Share of Program Cost<sup>(2)</sup></b>	<b>\$96,569</b>	<b>\$123,476</b>	<b>\$219,757</b>	<b>\$433,654</b>	<b>\$157,135</b>	<b>-64%</b>

Notes:

(1) As part of the fare collection process implemented in 2013, a 10% administrative fee based on total ticket sales was included to cover the costs of fare collection by the Golden Gate National Parks Conservancy. This was phased out with the introduction of the online reservation system in 2018.

(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, 2016 – 2021**

	2016	2017	2018	2019	2021	% Change 2019-2021
Farebox Recovery	58.2%	47.0%	54.5%	40.5%	22.9%	-44%
Cost per Service Hour	96.73	104.91	126.26	164.86	202.92	23%
Cost per passenger Trip	\$3.43	\$4.09	\$4.63	\$7.16	\$11.29	58%
Subsidy per Passenger	\$1.44	\$2.16	\$2.11	\$4.26	\$8.71	105%
Average Fare	\$2.00	\$1.92	\$2.52	\$2.90	\$2.58	-11%

# Conclusions and Recommendations

The Muir Woods Shuttle plays an important 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.

## 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. By 2021, the county had fully eliminated 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 \$9 for a parking reservation and \$3.50 for a Shuttle seat.

## Larkspur Ferry Terminal

In the past few years, there have been ongoing issues with flooding at Pohono Park & Ride lot during king tide events. The flooding impacts the access to the Pohono Park & Ride lot and restricts Shuttle service from operating during these events at this location. As a result, all riders who had a reservation at Pohono had to be redirected to Sausalito or Marin City, which created a lot of confusion and customer service issues.

Staff is currently pursuing a pilot program to move Park & Ride service from Pohono to the Larkspur ferry terminal. Operating Shuttle service from Larkspur will provide connection to Larkspur ferry and SMART rail service and expand the Shuttle coverage from Sausalito to further north in Marin County. It will also locate the service terminal in a commercial area with more passenger amenities.

The pilot program is slated to begin as soon as Memorial Day Weekend 2022, which will also mark the start of the 2022 peak season.

### Sausalito Ferry Terminal

66F service to the Sausalito ferry terminal was suspended in 2021 due to the low Shuttle ridership associated with the ongoing COVID-19 pandemic. As the pandemic wanes and the economy continues to further open up, the 2022 peak season is anticipated to have significantly higher demand for the Shuttle than 2021, and there are plans to restore 66F service to Sausalito at the start of the 2022 peak season (Memorial Day Weekend).

Due to the increased travel times associated with the move from Pohono to Larkspur, staff are recommending that the 66F remove the Marin City stop in order to recover some of the increased revenue hours. Pre-COVID, less than 2% of all 66F riders boarded in Marin City.

### 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. This issue is 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.

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.

In response to this issue, the capacity of online reservations for late day time slots was reduced to accommodate visitors that walk-up late in the day.

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

### 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 slightly slowed ticket validation at Pohono.

In addition, there have been problems historically with scanners not validating tickets due to glare at some stop locations. This impacted recording actual redeemed tickets and subsequently led to under reporting ridership. The issue was fixed in September 2021 by implementing new procedures to make sure the scanners were fully charged and functioning properly.