

June 6, 2024

Го:	Members of the Technical Advisory Committee
From:	Jason Jewell, Managing Director

Subject: Fiscal Year 2023-24 Third Quarter Amtrak Pacific Surfliner On-Time Performance Analysis

Overview

On-time performance reflects the quality and dependability of the Pacific Surfliner service, and has a considerable effect on repeat ridership, based on the customer travel experience. This report summarizes the on-time performance of the Amtrak Pacific Surfliner service during the third quarter of state fiscal year 2023-24, covering the months of January, February, and March 2024.

Recommendation

Receive and file as an information item.

Background

The Amtrak Pacific Surfliner route operates in a complex environment, along the 351-mile Los Angeles – San Diego – San Luis Obispo (LOSSAN) Rail Corridor (Corridor), which traverses through a six-county coastal region in Southern California. As illustrated in Figure 1 on the next page, the rail right-of-way along the corridor is hosted by four different host railroads, including the Union Pacific Railroad (UPRR), the Burlington Northern Santa Fe Railway (BNSF), the Southern California Regional Rail Authority (SCRRA), and North County Transit District (NCTD).

In addition to the Amtrak Pacific Surfliner intercity passenger rail service, Amtrak long-distance trains, Metrolink commuter trains, and COASTER commuter trains also operate along the north-south corridor.

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Before the COVID-19 pandemic necessitated service reductions in late March 2020, the LOSSAN Corridor was bustling with over 150 daily one-way train operations, spanning 41 stations. Within this bustling activity, the Pacific Surfliner service alone accounted for 27 trains and served 27 stations. Today, the Pacific Surfliner has expanded its reach to 29 stations, maintaining a schedule of 20 daily one-way trains, equating to ten round trips. Reflecting on the fiscal year 2018-19, the last complete fiscal year before the pandemic's impact, the Pacific Surfliner boasted nearly 2.8 million passenger trips, with an additional 5.4 million trips taken on the combined commuter rail services of Metrolink and COASTER.

Impact of COVID-19 Pandemic

The COVID-19 pandemic significantly impacted transit operations globally. includina the LOSSAN corridor's three rail services. Following Governor Newsom's March 15, 2020, safer-at-home order, the Pacific Surfliner, COASTER, and Metrolink experienced notable declines in ridership and revenue, leading to temporary service reductions starting late March 2020. As conditions improved, rail services gradually resumed. COASTER was the first to return to full service on May 29, 2021, coinciding with Metrolink's new Saturday service on its Ventura County Line. The Pacific Surfliner service restoration began on June 28, 2021, increasing from 12 to 18 daily one-way trips, and further expanded on October 24, 2021, to 21 daily one-way trips. Metrolink's significant service expansion occurred on April 4, 2022, with the addition of 26 trains, marking a pivotal recovery milestone since the pandemic onset.

Impacts of Temporary Track Closures in San Clemente Due to Falling Debris

On April 27, 2023, Pacific Surfliner service was suspended between San Juan Capistrano and Oceanside due to active debris movement on the slope adjacent to the Casa Romantica Cultural Centers and Gardens in San Clemente, just north of the San Clemente Pier. The debris fall occurred two miles north of where the Orange County Transportation Authority (OCTA) was conducting track stabilization work near the Cyprus Shore Homeowners Association, although the events were unrelated. During this closure, service adjustments included limited train service between San Diego and Oceanside, bus connections between Oceanside and Irvine, modified train service between San Juan Capistrano and Irvine, and regular train service from Los Angeles to San Luis Obispo. Regular Pacific Surfliner service resumed on May 27, 2023, after emergency stabilization of the affected hillside.

Recurring debris movement from the same slope led to another suspension of service starting June 5, 2023. On June 23, the Metrolink Board of Directors contracted Condon-Johnson & Associates, Inc., to design and install a temporary barrier wall to protect the tracks. This second closure extended through the end of the fourth quarter of FY 2023 and into the first quarter of FY 2024, with service fully restored on July 17, 2023, following the completion of the barrier wall.

In a subsequent development, another landslide on January 24, 2024, from private property above the city-owned Mariposa Trail Pedestrian Bridge once again scattered debris onto the track. OCTA, along with its partners, quickly responded by removing debris and the damaged bridge spans. A 200-foot-long catchment wall at Mariposa Point was constructed to safeguard the rail right of way. Despite the ongoing construction, limited Pacific Surfliner passenger

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service was able to resume in early March. Specific morning and evening trains operated through San Clemente to maintain connectivity while allowing construction to continue during mid-day. Full passenger service was restored on March 25, 2024, ahead of schedule, thanks to expedited work and robust cooperation among transportation agencies.

Special Considerations for the Pacific Surfliner Service During Temporary Track Closures in San Clemente

Ridership Data: Under normal operations, Pacific Surfliner trains are designated by three-digit numbers: the 500's series for trains operating between San Diego and Los Angeles, and the 700's series for those extending north of Los Angeles. However, during temporary track closures, to make it easily distinguishable, trains running between San Diego and Oceanside are identified by a four-digit number in the 1000's series using the same 500 or 700 series number. Due to the structure of Amtrak's fare collection system, each segment of a journey-whether train or bus bridge-is recorded separately when passengers transfer between services. This standard procedure for handling multiple carriers or modes of transport may cause an apparent increase in recorded passengers during disrupted service periods. Amtrak is aware of this issue and is actively working on adjusting ridership figures to reflect more accurate counts. And with the track closures in San Clemente reoccurring in January 2024, and despite the resumption of full service in late March, the impact of these disruptions were reflected in the LOSSAN Agency's third-quarter ridership data, mirroring the challenges experienced from FY23 Q4 through FY24 Q1.

On-Time Performance Data: The LOSSAN Agency sources its on-time performance (OTP) data for the Pacific Surfliner from Amtrak's On-Time Performance Monitoring and Reporting System (OTP MRS). Beginning in the fourth quarter of FY 2023, it was discovered that the OTP data omitted some trains operating between San Diego and Oceanside during temporary track closures in San Clemente. These omissions were attributed to a programming issue, identified during discussions with Amtrak. Although minor data omissions were also noted in Q3 with the most recent track closures in San Clemente, they did not significantly affect the overall Q3 results. Moving forward, LOSSAN will continue to collaborate with Amtrak to ensure the integrity of the data and guarantee that future reports accurately reflect the actual service performance.

Discussion

This report provides an update on the average systemwide OTP of the Amtrak Pacific Surfliner for the third quarter (Q3) of FY 2023-24. The following metrics

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give an overview of the Pacific Surfliner train OTP scores for the reporting quarter, as well as information about delay causes:

- Endpoint OTP
- Total Trains Operated
- Total Trains Cancelled or Suspended
- Customer OTP
- Ridership
- Endpoint OTP by Train
- Total Train Miles
- Systemwide Delays by Responsible Party, Per 10,000 Train Miles
- Systemwide Delays by Delay Type, Per 10,000 Train Miles
- Host-Responsible Delays, Per 10,000 Train Miles
- Total Delays Around Stations (or Other Specific Locations)

Endpoint OTP

Endpoint OTP represents the percentage of trains arriving to their final station within 15 minutes of their schedule arrival time. This metric is part of the Uniform Performance Standards that the LOSSAN Agency is required to report to the California State Transportation Agency (CalSTA), which sets a 90 percent endpoint OTP standard.

	FY 2024	FY 2024	
Values	Q2	Q3	% Change
Late	311	331	6.4%
On-Time	1,492	1,586	6.3%
Operated	1,803	1,917	6.3%
Endpoint OTP	82.8%	82.7%	-0.01%

Figure 2: Endpoint OTP by Total Trains Operated

As shown in Figure 2, for Q3 FY 2023-24, 1,586 of 1,917 operated Pacific Surfliner trains arrived at their endpoint station on-time, while 331 trains arrived late. This results in a **systemwide endpoint OTP score of 82.7 percent** for Q3 FY 2023-24, representing a 0.01 percent increase from 82.8 percent endpoint OTP for the previous quarter.

On any given date, an incident can lead Amtrak to either cancel or suspend one or more scheduled trains. Cancelled trains are treated as late trains, and are reflected in endpoint and customer OTP calculations, but suspended trains are not included. A cancellation means that Amtrak decided not to operate the train less than four hours before its scheduled departure. A suspension means that

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Amtrak decided not to operate the train at least four hours before its scheduled initial terminal departure. The table in Figure 3 shows that for Q3 FY 2023-24, 24 trains were cancelled, and 417 trains were suspended, representing a 1,092 percent increase from the previous quarter. This increase was directly tied to the landslide on January 24, 2024, which scattered debris onto the tracks from private property above the Mariposa Trail Pedestrian Bridge closing the tracks through March 6, 2024, where limited train service was reinstated until full operations were restored on March 25, 2024.

	FY 2024	FY 2024	
Status	Q2	Q3	% Change
Cancelled	23	24	4.3%
Suspended	14	417	2878.6%

37

441

1091.9%

Figure 3: Total	Trains	Cancelled of	r Suspended
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Figure 4 shows historical monthly systemwide endpoint OTP from October 2021 to the present. Notes within the chart highlight the events that have had significant impacts on OTP.



Total



Customer OTP measures the on-time arrival of every passenger, including those who detrain at intermediate stops along a route and those who ride the entire route.

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The 80 percent goal shown in red in Figure 5 is set by Amtrak. For Q3 FY 2023-24, customer OTP averaged 85.1 percent, representing a **1.9 percent increase** from 83.5 percent in the previous quarter.



<u>Ridership</u>

Various passenger related delays may impact train OTP. In general, the higher the systemwide ridership, the higher the incidences of passenger related delays. The chart in Figure 6 shows historical monthly ridership. As shown in Figure 6, for Q3 FY 2023-24, there were **370,331 passenger trips** on the Pacific Surfliner, representing a 27.0 percent decrease from 507,414 passenger trips in the previous quarter. This decrease stems from a landslide on January 24, 2024, which scattered debris onto the tracks from private property above the Mariposa Trail Pedestrian Bridge, causing disruptions and leading to limited train service until full operations were restored on March 25, 2024.

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Figure 6: Total Monthly Ridership

Endpoint OTP by Train

One major delay incident can result in cascading delays that impact multiple trains throughout the day. One factor is that individual train consists are normally used by multiple trains throughout the day. For example, upon its arrival to Santa Fe Depot in San Diego, the same equipment used to operate southbound Train 564 is then used to operate northbound Train 777. Therefore, delays experienced by southbound Train 564 have the potential to result in delays for northbound Train 777, as well as any additional trains operated with the same train consist.

Figure 7 shows individual endpoint OTP for each of the trains that operated during Q3 FY 2023-24, during the temporary track work period. For Q3 FY 2023-24, ten trains reached the endpoint OTP goal of 90 percent or above. The train with the **lowest endpoint OTP average score for the quarter was Train 777.**

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		3-Month	# Trains On	# Trains
Train	Orig-Dest	Average	Time	Operated
1564	LAX-SAN	100.0%	14	14
1761	SAN-SLO	100.0%	2	2
1765	SAN-GTA	100.0%	18	18
1785	SAN-GTA	96.5%	55	57
1777	SAN-SLO	94.7%	54	57
1790	GTA-SAN	94.7%	18	19
1569	SAN-LAX	94.1%	16	17
785	SAN-GTA	91.2%	83	91
581	SAN-LAX	91.1%	82	90
595	SAN-LAX	91.1%	82	90
572	LAX-SAN	89.7%	26	29
790	GTA-SAN	89.0%	81	91
580	LAX-SAN	87.9%	80	91
761	SAN-SLO	87.8%	79	90
769	SAN-GTA	86.8%	79	91
564	LAX-SAN	85.7%	78	91
586	LAX-SAN	85.7%	24	28
587	SAN-LAX	84.8%	39	46
774	SLO-SAN	84.6%	77	91
765	SAN-GTA	83.5%	76	91
1769	SAN-GTA	83.3%	20	24
573	SAN-LAX	82.8%	24	29
770	GTA-SAN	82.4%	75	91
562	LAX-SAN	79.1%	72	91
1770	GTA-SAN	79.1%	34	43
794	SLO-SAN	77.8%	70	90
1784	GTA-SAN	72.5%	29	40
784	GTA-SAN	70.3%	64	91
591	SAN-LAX	70.3%	52	74
1774	SLO-SAN	68.4%	39	57
777	SAN-SLO	48.4%	44	91
1794	SLO-SAN	0.0%	0	2
System		82.7%	1586	1917

Systemwide Delays by Responsible Party, Per 10,000 Train Miles

Delay minutes are attributed to a variety of causes, or delay types, using a three-letter coding system. In addition, each delay type is categorized under one of three responsibility groups: Host, Amtrak, or Third Party.

The rate metric of **minutes of delay by responsible party per 10,000 train miles** is useful for comparing levels of delay for periods or territories that may have differing levels of Pacific Surfliner service. This measure is normalized by dividing the total minutes of delay for all operated trains by the

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total number of miles traveled by all trains, then multiplying the decimal result by 10,000.

For Q3 FY 2023-24, the Pacific Surfliner operated a total of **285,158 train miles**, **representing a 23.0 percent decrease** from the 370,980 train miles operated in the previous quarter.

Host-responsible delay types (shown in yellow in Figure 8) continue to be the **largest category of delay types** for the entire Pacific Surfliner, followed by Amtrak-related delays (shown in blue), then third party (shown in green). While minutes of unused recovery time (coded as NOD) are included in the raw data set used for delay analyses, they are excluded from delay analyses, since NOD is not actually a delay, and just represents the minutes a train spends waiting to avoid operating ahead of schedule.

Overall, for Q3 FY 2023-24, there were **1,751 minutes of delay per 10,000 train miles, representing a 3.0 percent decrease** in the overall delay rate compared to Q2 FY 2023-24. The rate of host-responsible delays decreased by 2.6 percent, the rate of Amtrak-responsible delays decreased by 9.8 percent, and the rate of third party-responsible delays increased by 11.0 percent.



Figure 8: Systemwide Delays by Responsible Party, Per 10,000 Train Miles

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Systemwide Delays by Delay Type, Per 10,000 Train Miles

During Q3 FY 2023-24, the most significant individual delays were categorized under host-responsible and Amtrak delays, specifically signal delays, passenger train interference, and passenger-related issues.

Figure 9: Systemwide Delays by Delay Type, Per 10,000 Train Miles



Systemwide Delays by Delay Type, Per 10,000 Train Miles

Host-Responsible Delays, Per 10,000 Train Miles

Each host territory location is unique and has its own pattern of challenges to be monitored. Figure 11 has three charts showing only host-responsible delays per 10,000 train miles, by host railroad. Overall, for Q3 FY 2023-24, the host-responsible delay rate within BNSF territory increased by **23.3 percent**, and in NCTD territory by **4.9 percent**, while it decreased by **21.4 percent** in SCRRA territory and **5.4 percent** in UPRR territory.

The second chart in Figure 10 clearly illustrates what the prominent delay contributors¹ were within each host territory in Q3 FY 2023-24. In BNSF territory, the top delay types were signal delays, freight train interference, and commuter

¹ Refer to Figure 9 for definitions of three-letter delay codes.

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train interference. In NCTD territory, the top delay types were commuter train interference and passenger train interference. In SCRRA territory, the top delay types were signal delays, commuter train interference, and passenger train interference. In UP territory, signal issues and passenger train interferences continue to remain as the top delay types.



Figure 10: Host-Responsible Delays, Per 10,000 Train Miles







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Total Delays Around Stations (or Other Specific Locations)

Figure 11 shows total minutes of delay along the entire 351-mile route, for all Pacific Surfliner trains combined. The bars in colors represent the total minutes of delay around a station for Q3 FY 2023-24, and the gray bars show the same for the previous quarter. Delays between stations were allocated to the starting station of the delay. For example, whether a train was traveling northbound from Solana Beach to Oceanside, or southbound from Solana Beach to San Diego-Old Town, the delay minutes in both examples would be allocated to Solana Beach.

Overall, **total minutes of delay systemwide decreased by 25.3 percent**, from 67,007 in Q2 of FY 2023-24, to **50,082 in Q3 of FY 2023-24**. The top three delay locations were Oceanside, Carpinteria, and Gaviota stations.



Figure 11: Total Delays Around Stations (or Other Specific Locations)

Summary

For Q3 FY 2023-24, the Amtrak Pacific Surfliner achieved an average systemwide endpoint on-time performance score of 82.7 percent, which is below the 90 percent standard. Most delay types fell under the host responsibility category. The top individual delay types, regardless of responsibility category, were signal delays, passenger train interference, commuter train interference, passenger-related delays, and slow orders.

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Attachment

None.

Prepared by:

Kristopher Ryan Chief Finance Officer (714) 560-5409