



# Northwest Regional Working Group Meeting

## February 14, 2023



U.S. Department of Transportation  
Federal Railroad Administration

# Agenda – Northwest Regional Working Group Meeting

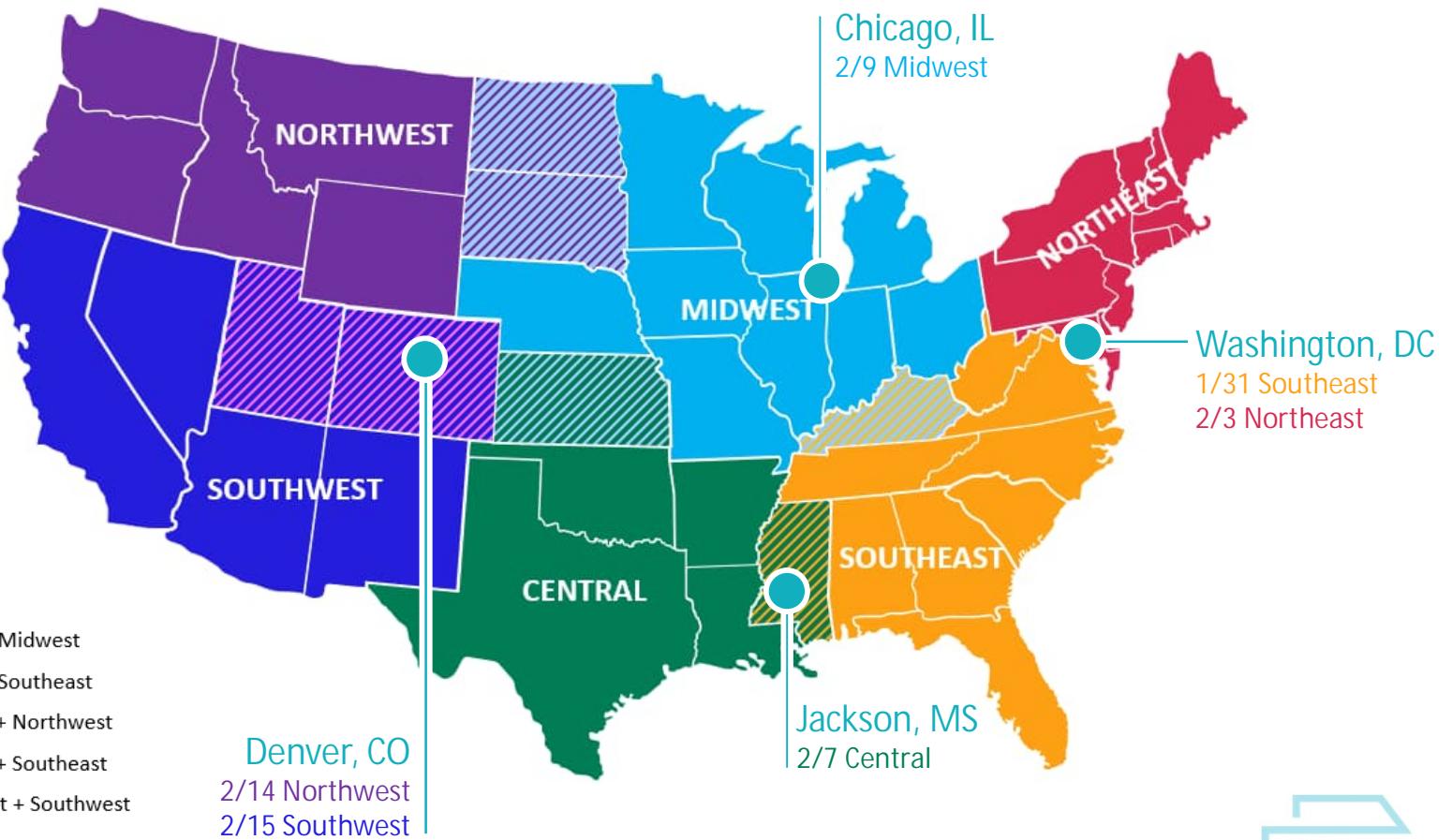
- Welcome & Introductions
- Long-Distance Service 101 and Study Overview
- Current Long-Distance Network and Routes
- Pre-1971 and Discontinued Routes
- Baseline and Market Conditions
- Potential New Market Connections and Opportunities
- Evaluation Factors Review and Discussion
- Amtrak and Communities Working Together
- Closing and Next Steps

This document contains materials specific to the Northwest Region for the following agenda items:

- Current Long-Distance Network and Routes
- Baseline and Market Conditions

Additional materials about the FRA Long-Distance Service Study presented at each Regional Working Group Meeting are available on the project website:  
<https://fralongdistancerailstudy.org/meeting-materials/>

# Long-Distance Service Study: Working Group Meeting 1 (Northwest)



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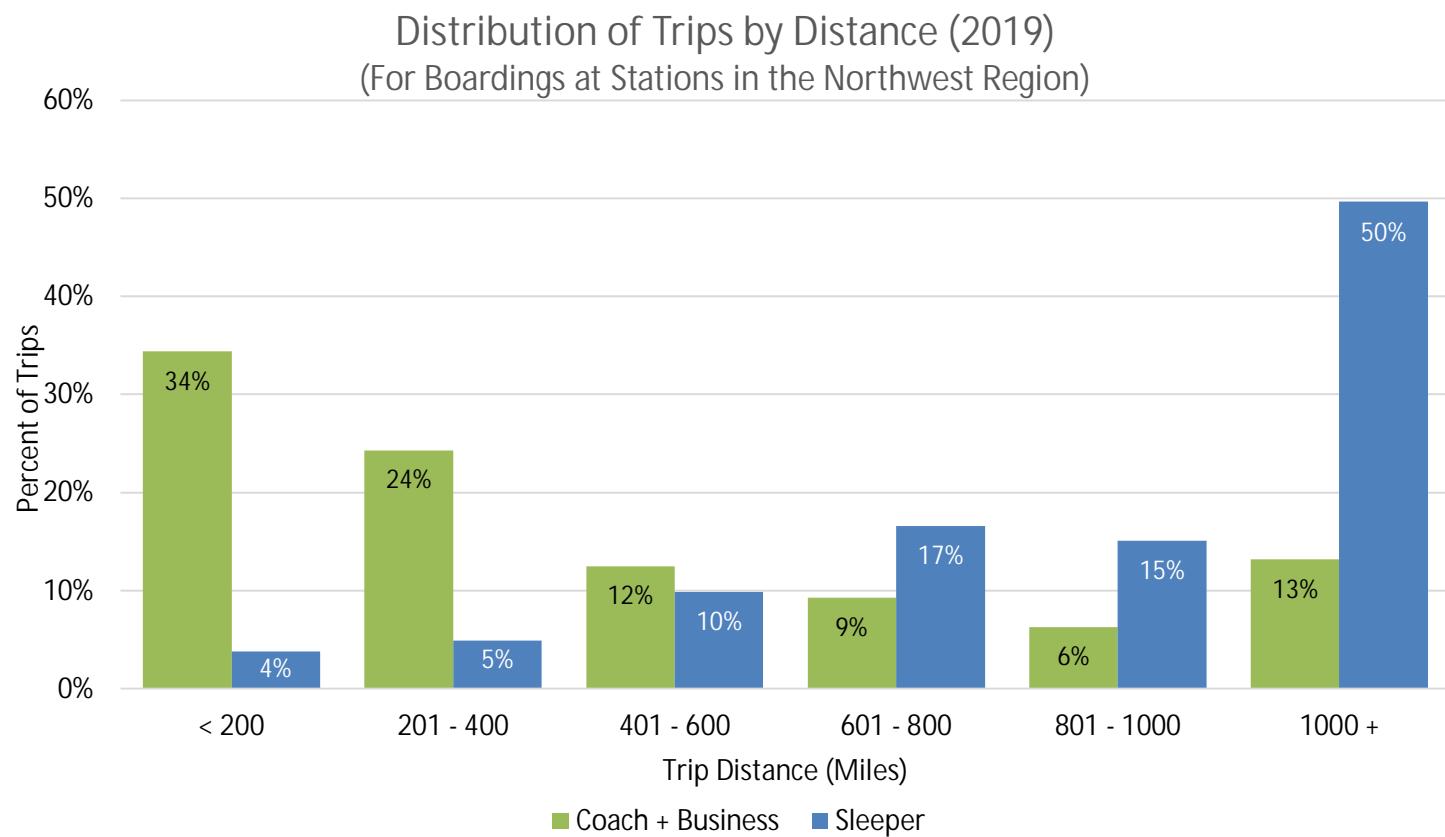
# CURRENT LONG- DISTANCE NETWORK & ROUTES – NORTHWEST



# Northwest Long-Distance Service and Performance

## Average Trip Length: Northwest Region

- Distribution of trips by trip distance for Long-Distance routes at stations in the Northwest Region
- 58% of Coach and Business Class trips are less than 400 miles, compared to 61% for Long-Distance overall
- 50% of Sleeper Class trips are greater than 1,000 miles, compared to 41% for Long-Distance overall



Source: Amtrak, Fiscal Year 2019. Data on trips by route, service class, and trip distance.  
Note: One Long-Distance route in the Northwest Region, the *Coast Starlight*, includes Business Class in addition to Coach and Sleeper Class.

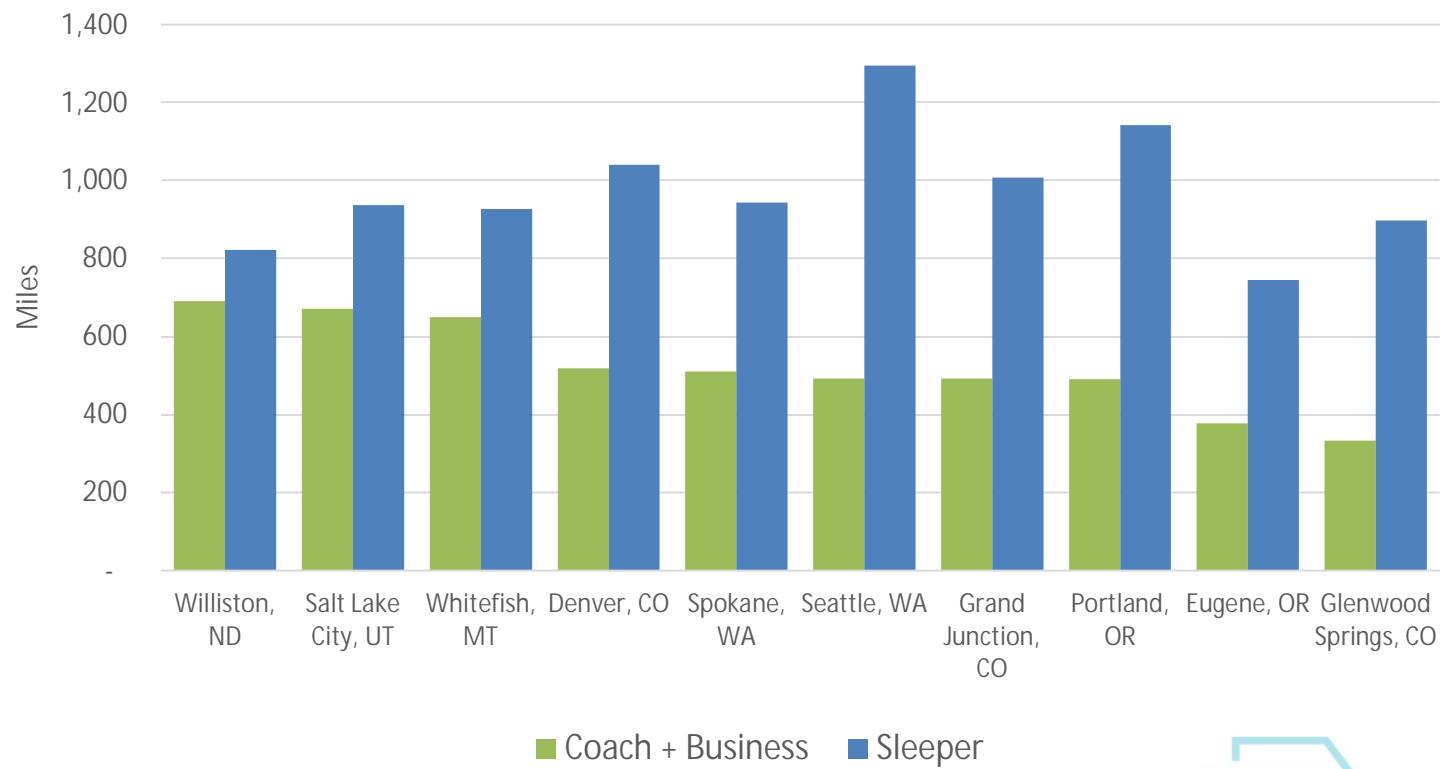
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# Northwest Long-Distance Service and Performance

## Trip Length by Service Class

- Average trip length by service class for riders on Long-Distance routes boarding at stations in the Northwest Region
- Williston, ND, served by the *Empire Builder*, has the longest Coach Class trips on average
- Seattle, WA, served by the *Coast Starlight* and the *Empire Builder*, has the longest Sleeper Class trips on average

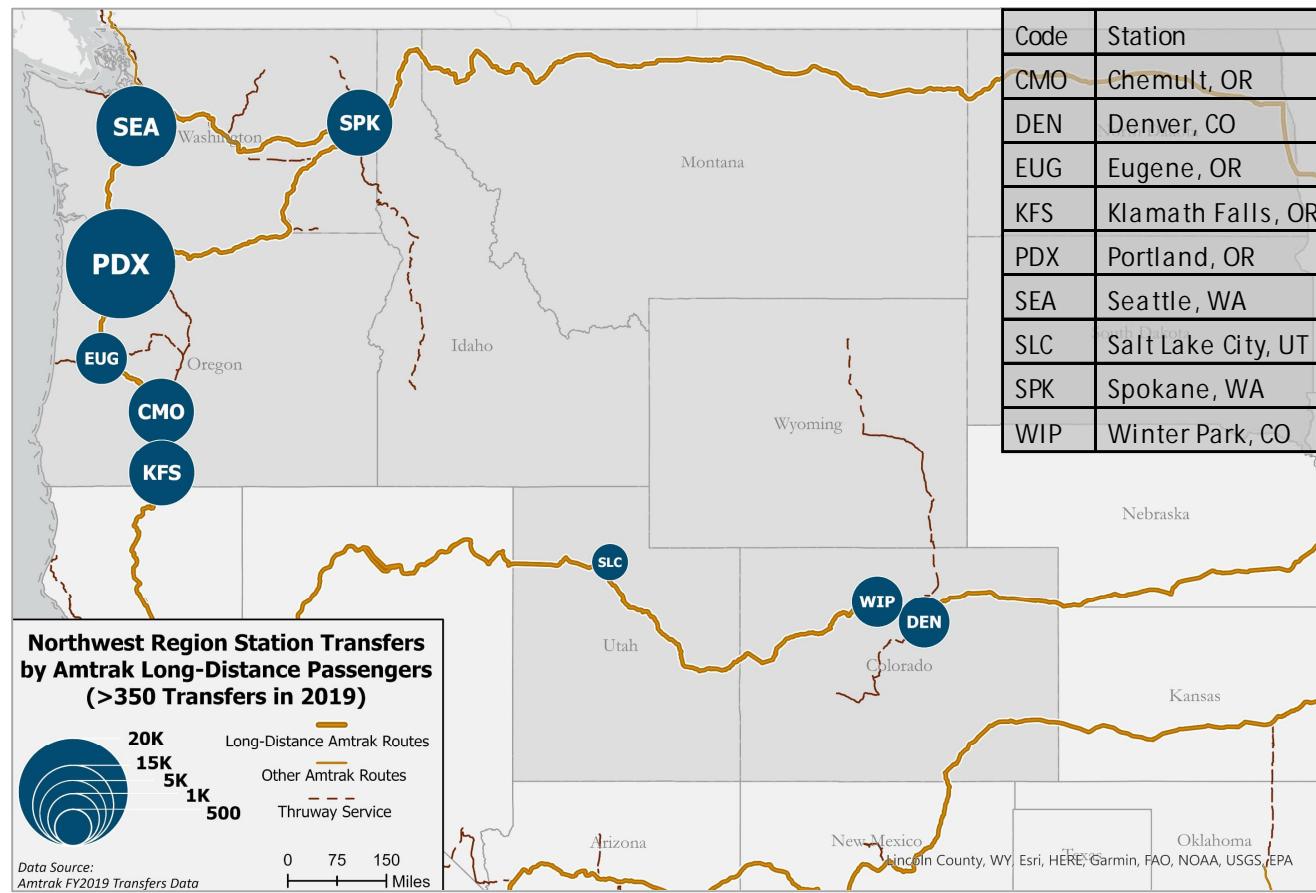
Top 10 Stations in the Northwest Region by Total Boardings (2019)  
Average Trip Distance by Service Class



Source: Amtrak, Fiscal Year 2019. Data on trips by route, service class, and trip distance.  
Note: One Long-Distance route in the Northwest Region, the *Coast Starlight*, includes Business Class in addition to Coach and Sleeper Class.

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# Northwest Service and Performance Characteristics



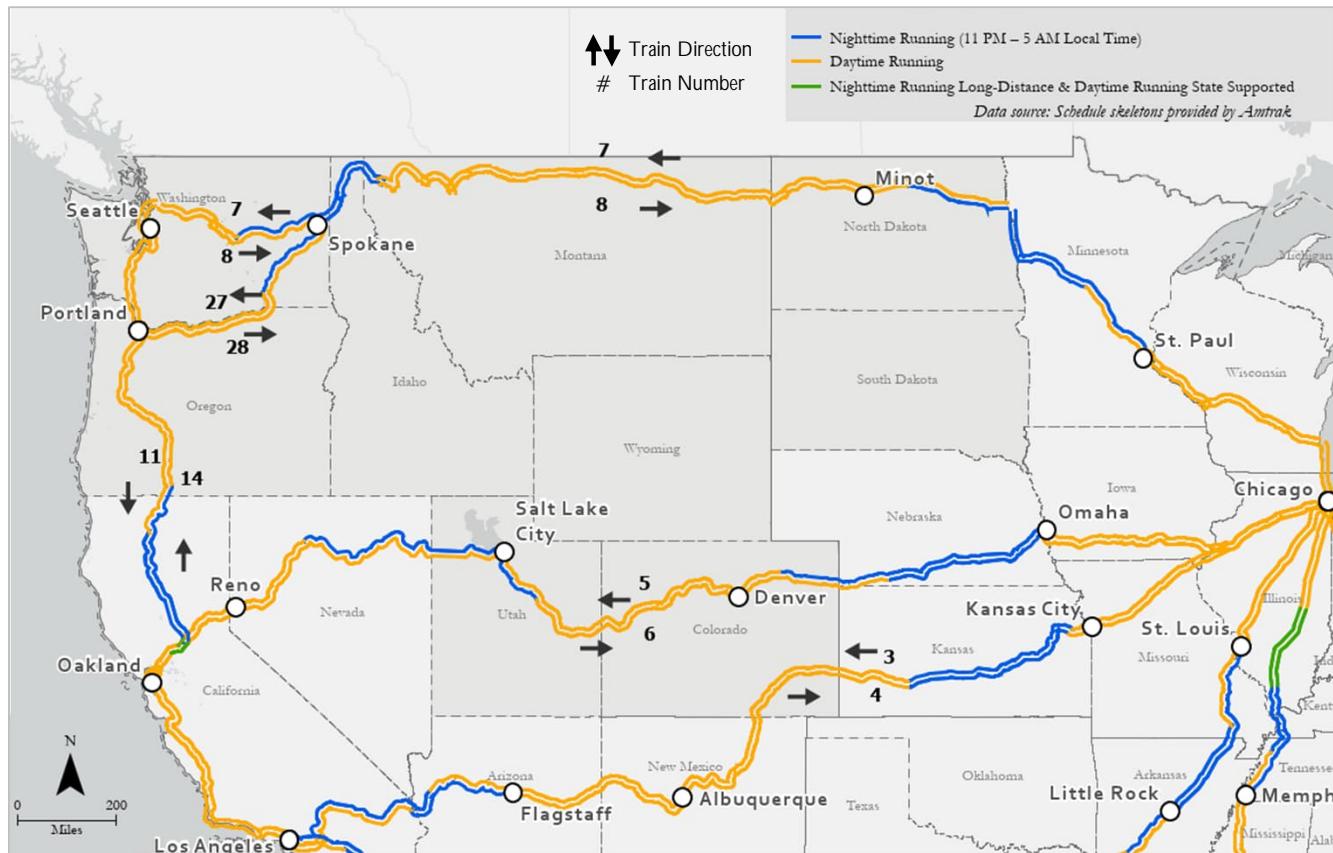
## Long-Distance Passenger Transfers in the Northwest Region\*

- Stations with more than 350 transfers in 2019
- Top transfer stations
  - Portland, OR (18K)
  - Seattle, WA (11K)
  - Chemult, OR (4K)
  - Spokane, WA (3K)
  - Klamath Falls, OR (3K)

\* Includes Long-Distance passenger transfers between Amtrak Services (Long-Distance service, State-Supported services, Amtrak Thruway Bus services). Map may not show all Thruway Bus Services.

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# Northwest Service and Performance Characteristics



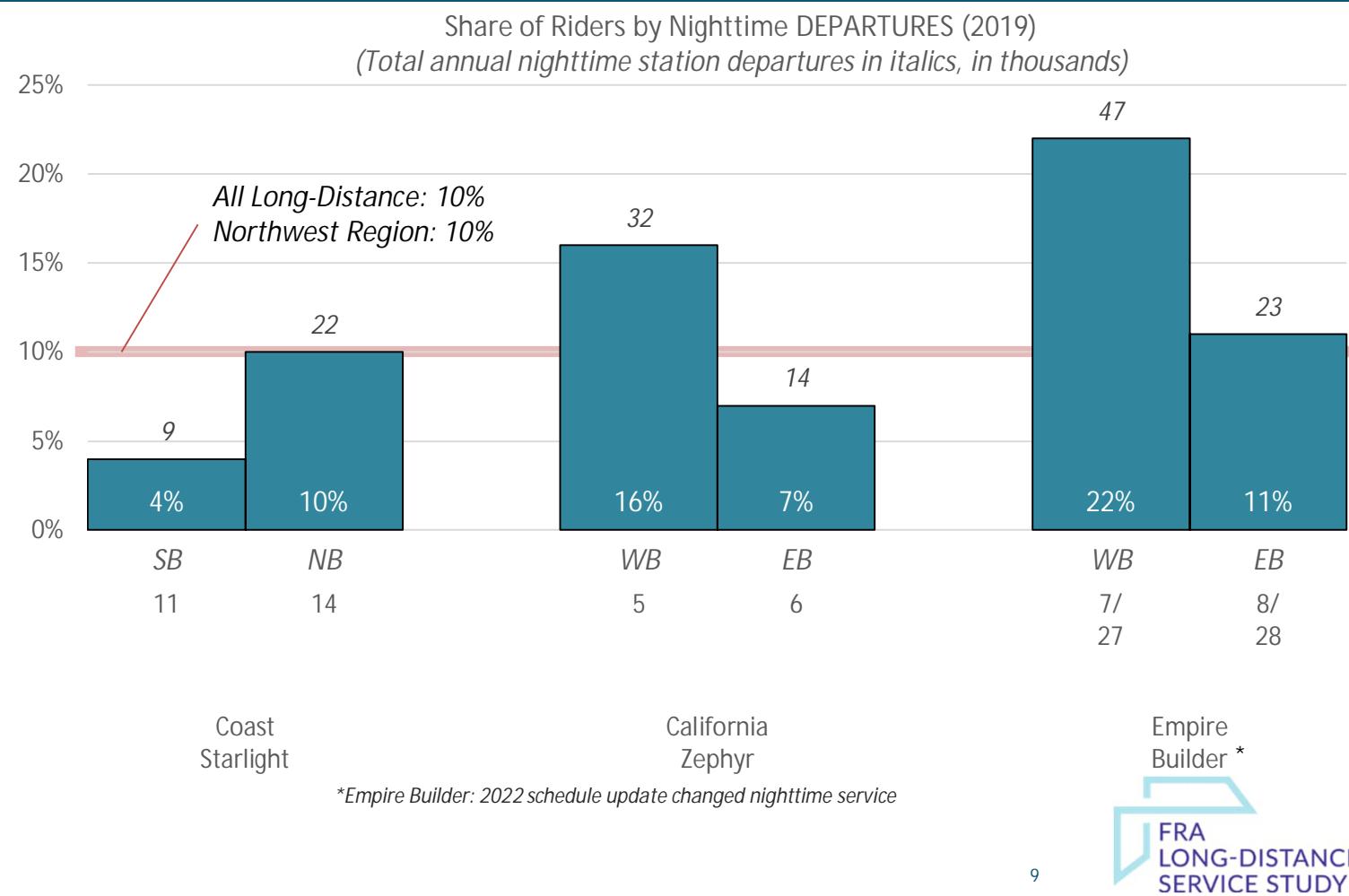
## Daytime and Nighttime Service

- Larger markets served at night:
  - *California Zephyr*
    - Salt Lake City (EB/WB)
    - Provo, UT (EB)
  - *Empire Builder*
    - Spokane (EB/WB)
    - Fargo (EB/WB)
    - Grand Forks, ND (EB)
    - Sandpoint, ID (EB/WB)
    - Libby, MT (WB)
    - Devil's Lake, ND (EB)
    - Rugby, ND (EB)

# Northwest Long-Distance Service and Performance

## Time of Day Analysis: Nighttime Departures

- Departures at stations in the Northwest Region only
- By volume of boardings, Salt Lake City (*California Zephyr*) and Spokane (*Empire Builder*) have the highest volume of annual nighttime departures
- One other nighttime departure occurs in Provo, UT on the EB *California Zephyr* (6), while on the *Empire Builder*, nighttime service is also found in eastern North Dakota, including Fargo

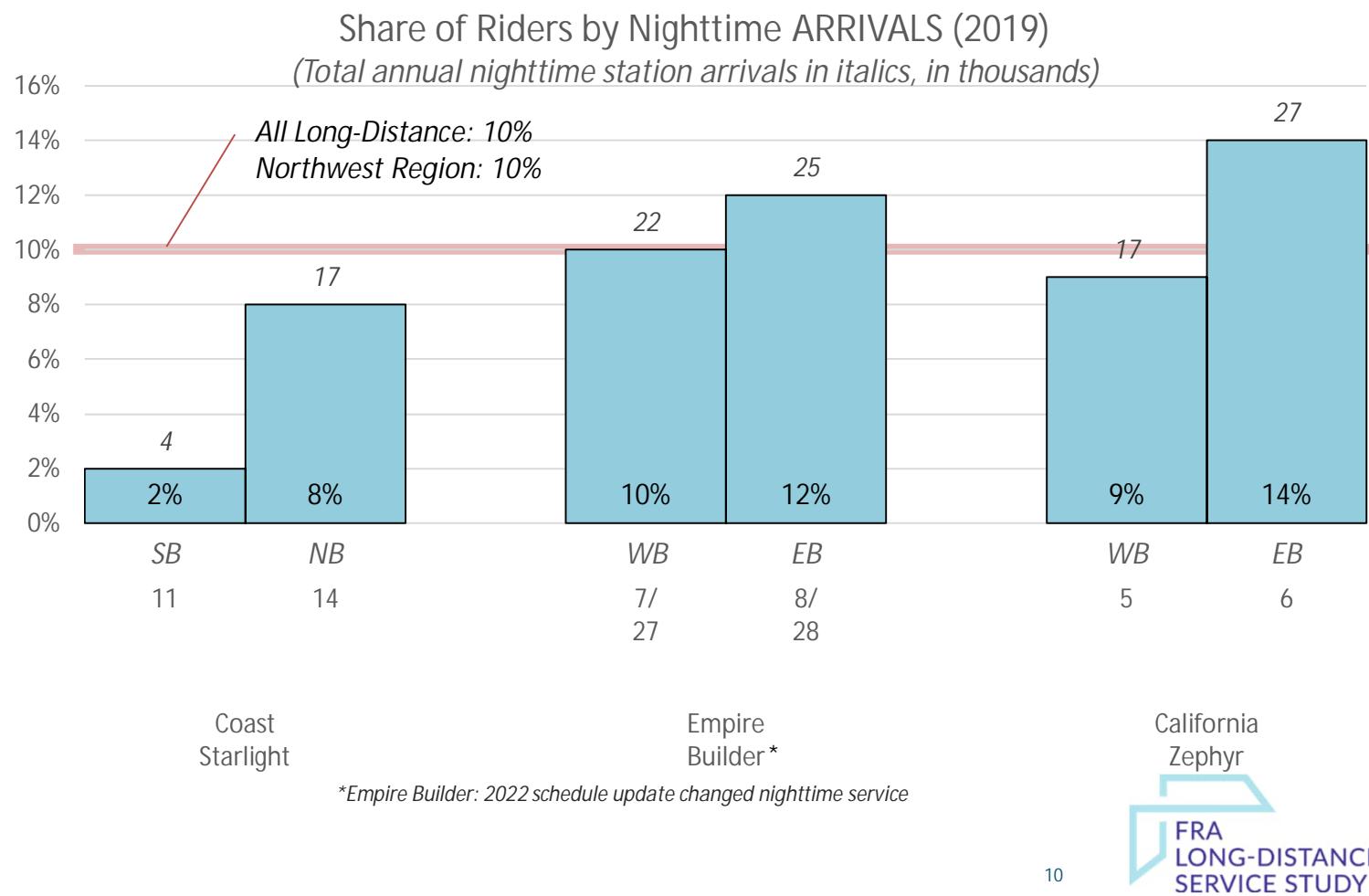


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# Northwest Long-Distance Service and Performance

## Time of Day Analysis: Nighttime Arrivals

- Arrivals at stations in the Northwest Region only
- By volume of arrivals, Salt Lake City (*California Zephyr*) and Spokane (*Empire Builder*) have the highest volume of annual nighttime arrivals
- One other nighttime arrival occurs in Provo, UT on the EB *California Zephyr* (6), while on the *Empire Builder*, nighttime service is also found in eastern North Dakota, in Fargo and Grand Forks

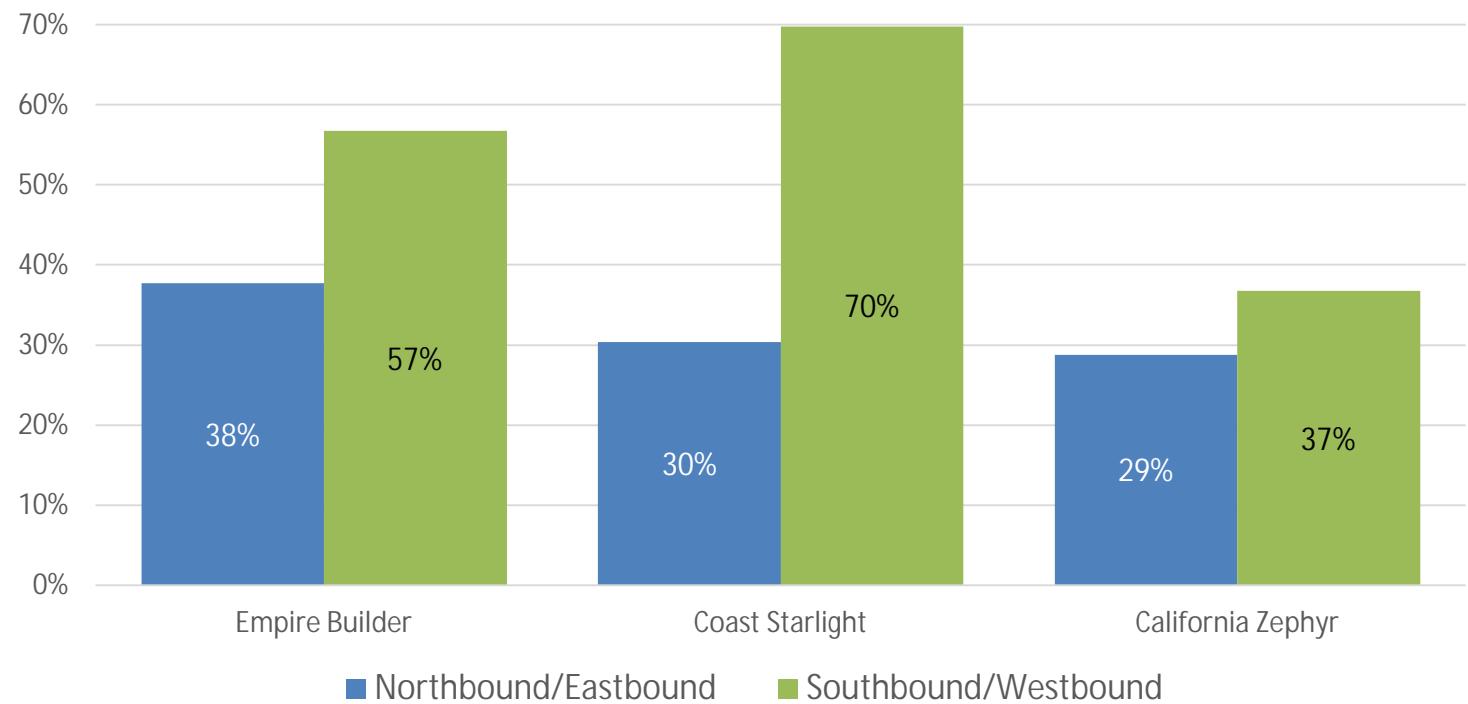


# Northwest Long-Distance Service and Performance

## Customer On-Time Performance

- On-time is defined as percent of customers arriving at a destination station in the Northwest within 15 minutes of the scheduled arrival time
- 43% of Long-Distance customers in the Northwest Region arrive on-time

Customer On-Time Performance (2022)  
Percent of Customers Arriving On-Time by Direction



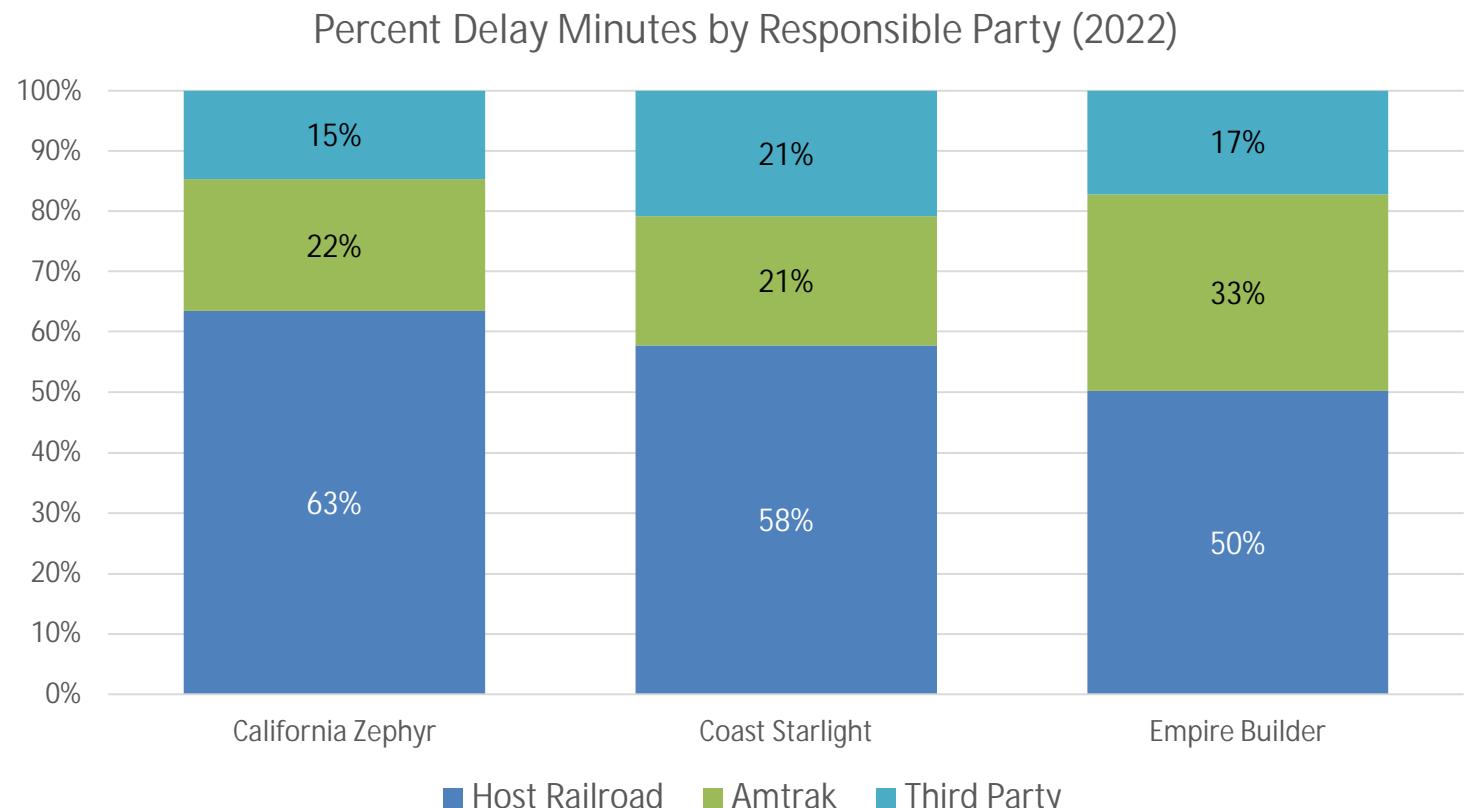
Source: Amtrak, Fiscal Year 2022. Performance data by route and station.

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# Northwest Long-Distance Service and Performance

## Amtrak-Reported Delay Minutes: Reason for Delay

- Three types of delay minute responsibility: Amtrak-responsible, Host Railroad-responsible, and third-party
- Freight train interference is the top source of Host Railroad delays, accounting for 46% of Host Railroad delay minutes for routes serving the Northwest Region
- Delays related to crews are the largest source of Amtrak responsible delay, accounting for 23% of Amtrak responsible delay minutes for routes serving the Northwest Region



Source: Amtrak. Long-Distance Route Delay Minutes Fiscal Year 2022

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## Current Long-Distance Network & Routes – Northwest Summary

- Trips on Long-Distance routes in the Northwest Region are longer than the average for Long-Distance overall
  - Nearly 20% of Coach and Business Class trips are over 800 miles long compared to 15% on Long-Distance overall
  - 50% of Sleeper Class trips are over 1,000 miles long compared to 41% on Long-Distance routes overall
- Portland is the largest transfer hub in the Northwest Region, serving the Empire Builder and Coast Starlight connecting with the Cascades state-supported service
- *California Zephyr* and *Empire Builder* routes are two-night trips end to end
  - Spokane has nighttime departures eastbound and westbound on the *Empire Builder*
  - Salt Lake City has nighttime departures eastbound and westbound on the *California Zephyr*
- Customer on-time performance for stations in the Northwest Region is 43%, as compared to 42% overall
  - Westbound *Empire Builder* and *California Zephyr* trains arriving in the region from Chicago have better customer on-time performance than trains starting in the region traveling towards Chicago
  - Southbound *Coast Starlight* trains starting in Seattle have better customer on-time performance than northbound trains from Los Angeles

# BASELINE AND MARKET CONDITIONS – NORTHWEST



# Overview of Sources and Methods

- Trip Flow Data:
  - Total trips for all modes between MSAs from Federal Highway Administration's (FHWA) Next-Gen National Household Travel Survey National Passenger origin-destination (O-D) data (2020) (<https://nhts.ornl.gov/od/>)
  - Represents annual trips by the U.S. population throughout all of 2020
  - 2020 data impacted by COVID-19 conditions
  - Provides insights into travel demand between cities
- Amtrak O-D Pairs Data:
  - Volume of trips on Long-Distance passenger trains from Amtrak (2019) between station pairs
  - Provides insights into Long-Distance passenger train travel between stations
- Trips analyzed were at least 100 miles in length

# Definitions

## Market

- Trip making to or from a community (for example, a city or a larger geography such as an entire region)

## MSA

- Metropolitan Statistical Area: A standardized county or equivalent-based area having at least one urbanized area of 50,000 or more population

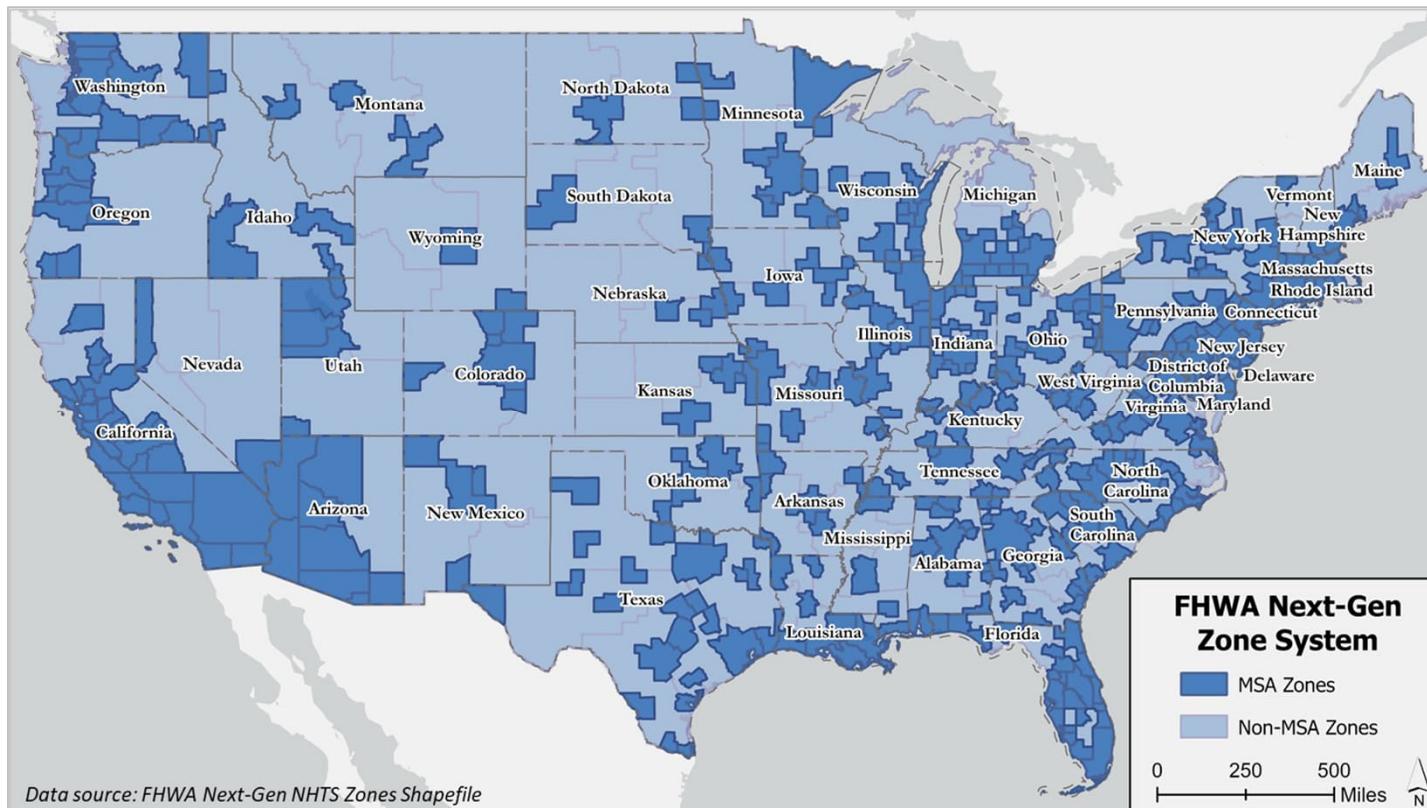
## Smaller MSA

- MSA with a population less than 250,000 residents

## Small Community

- Community served by an Amtrak station located outside an MSA

# FHWA Next-Gen Zones



- FHWA Next-Gen data represent trips between and within zones
- About 600 zones nationwide
- About 450 zones are either an MSA or part of an MSA
- Areas outside of MSAs are grouped into non-MSA zones. Non-MSA zones often are large in terms of land area

## Northwest Region – Market Opportunities

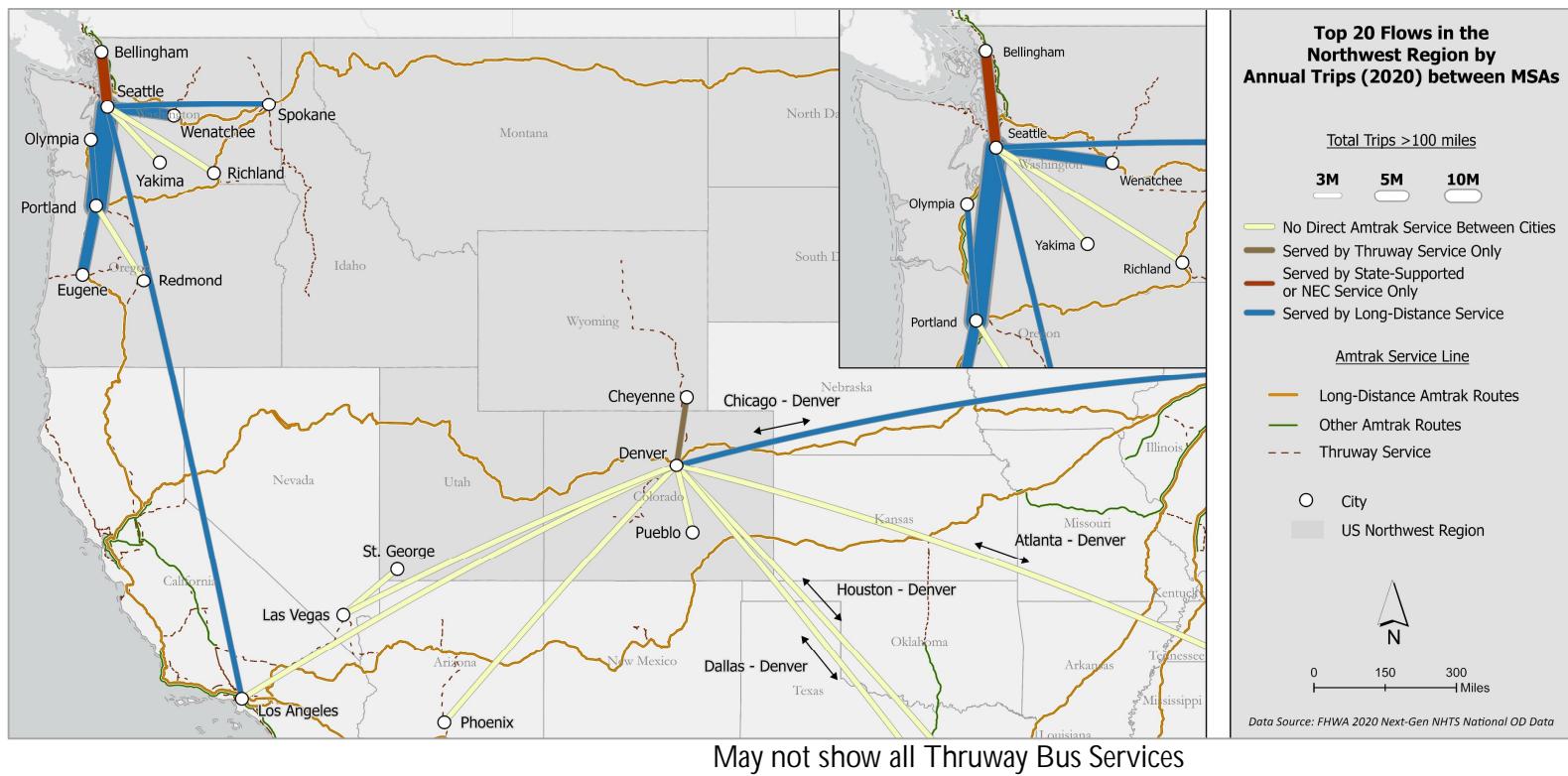
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- The next few slides are based on FHWA Next-Gen data for all trips and all travel modes

# Northwest Region – Market Opportunities

## Top 20 Trip Flows

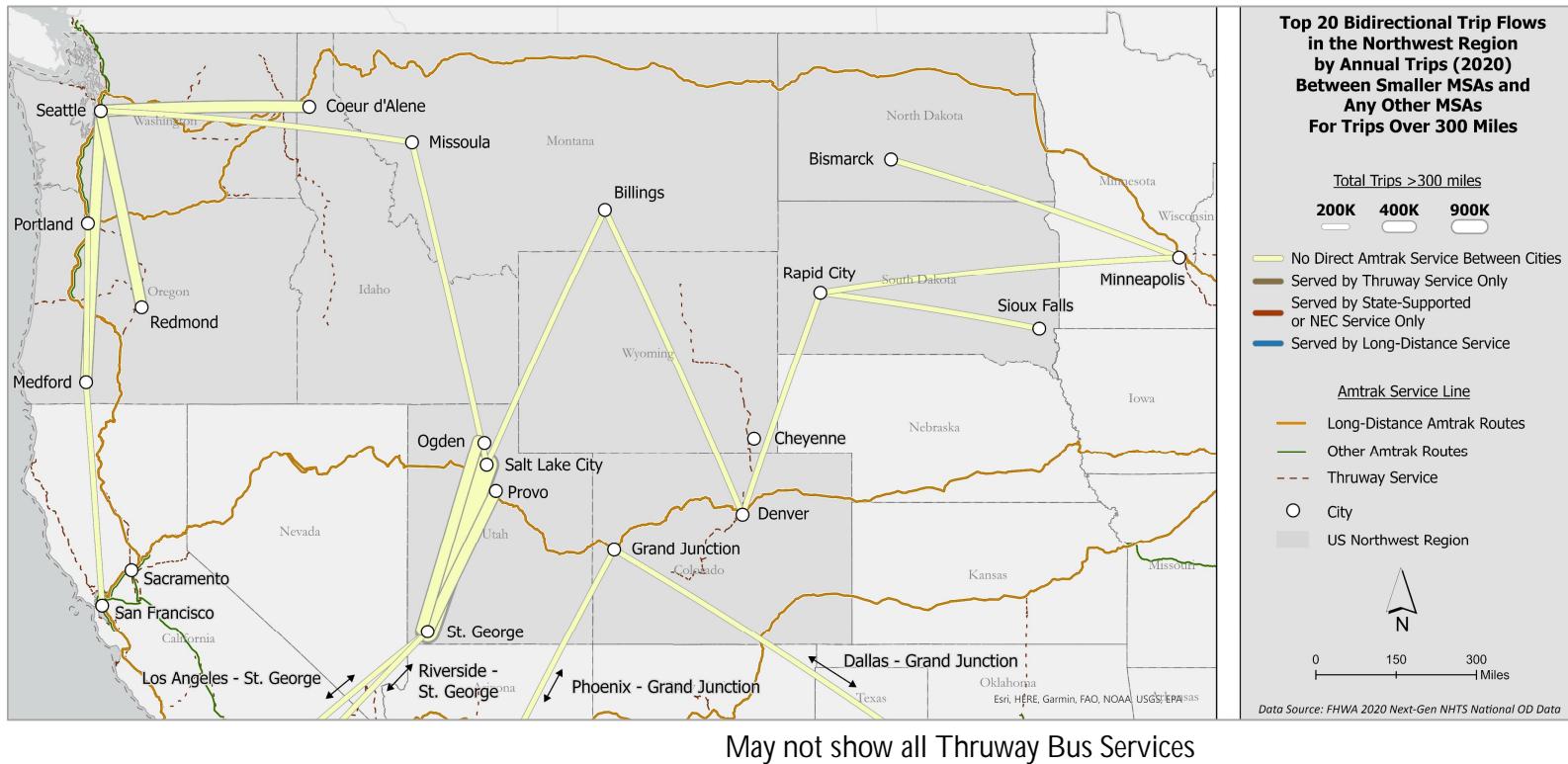
- Trip flows with one trip end in the Northwest
- Based on Next-Gen and showing total trips over 100 miles across all modes
- Trip flow colors indicate availability of Amtrak service between MSAs



# Northwest Region – Market Opportunities for Smaller MSAs

## Top 20 Trip Flows Connecting Smaller MSAs

- Trip flows between MSAs with one trip end in a smaller MSA in the Northwest
- Total trips over 300 miles across all modes
- Top flows are mostly between MSAs not directly connected by Amtrak service



## Northwest Region – Current Amtrak O-D Pairs

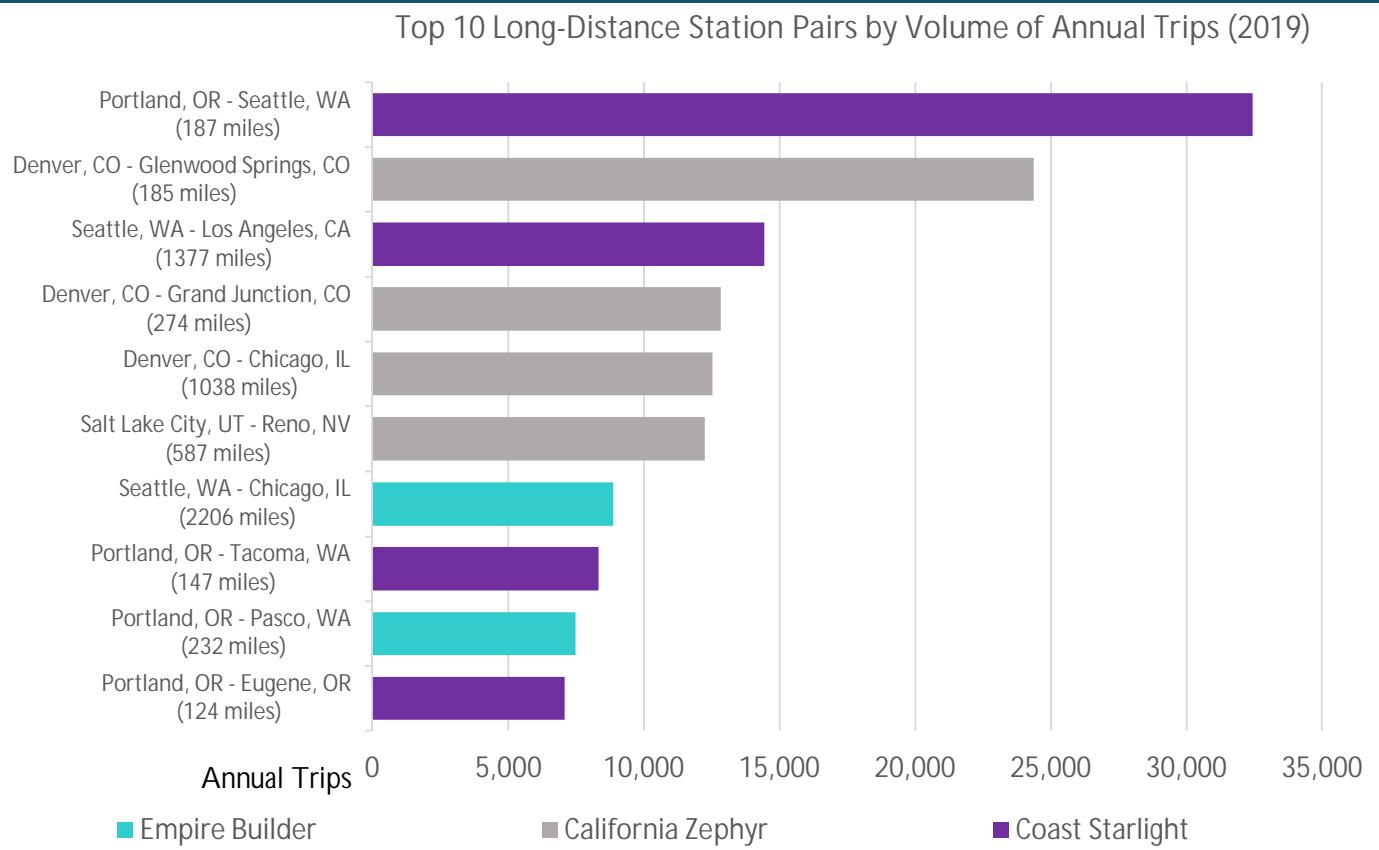
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- The next few slides are based on Amtrak FY 2019 ridership data for rail trips over 100 miles in length on Long-Distance passenger trains
- The slides focus on top station pairs overall and on trips connecting to a small community

## Northwest Region – Current Amtrak O-D Pairs

### Amtrak Ridership: Top 10 Station Pairs

- Six of the top 10 pairs have both trip ends within the Northwest Region
- Portland appears in four pairs and Denver and Seattle in three
- State-supported *Cascades* route overlaps with three station pairs

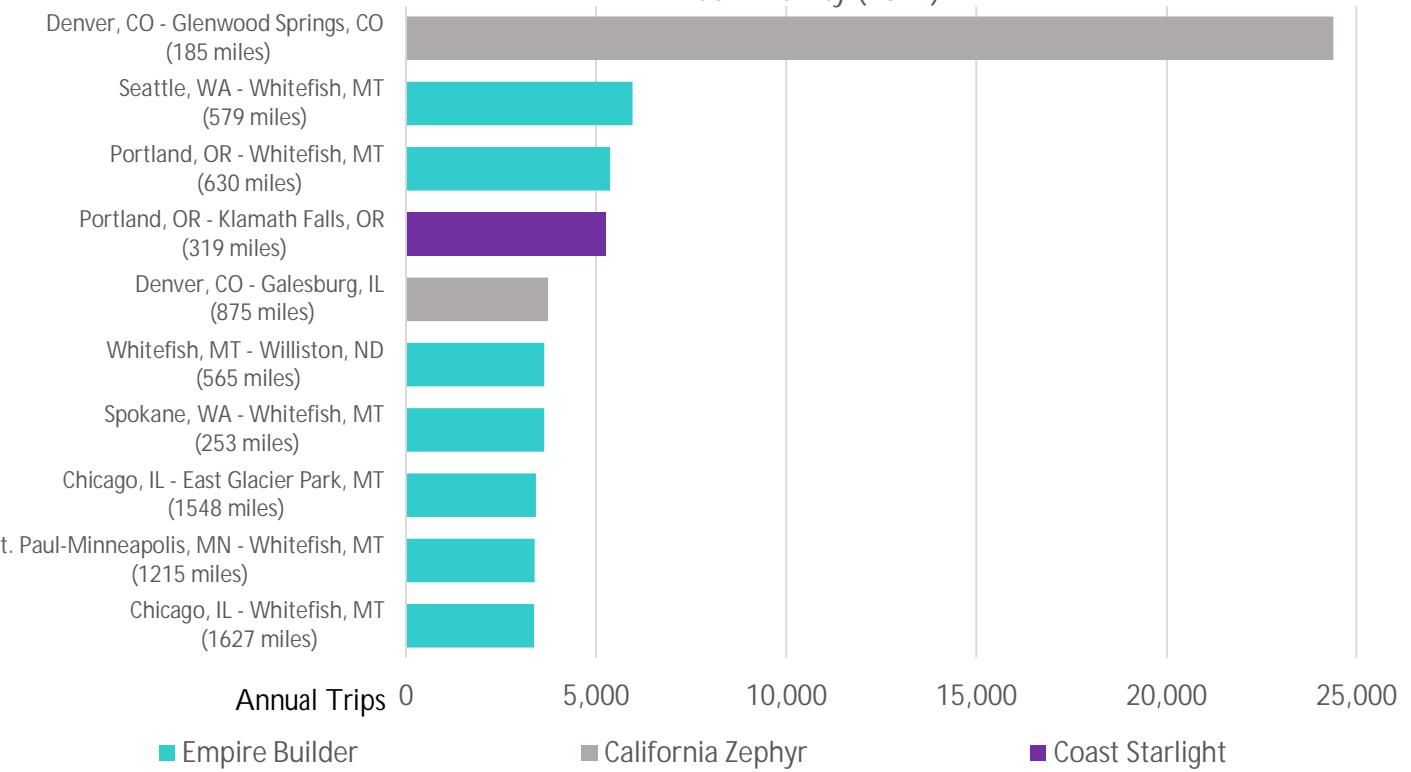


## Northwest Region – Current Amtrak O-D Pairs

### Amtrak Ridership: Top 10 Station Pairs Serving Small Communities

- Seven station pairs are served by the *Empire Builder*, with six featuring a connection with Whitefish, MT
- Three station pairs are over 1,000 miles
- The top four station pairs are intraregional

Top 10 Long-Distance Station Pairs by Volume of Annual Trips Including a Small Community (2019)

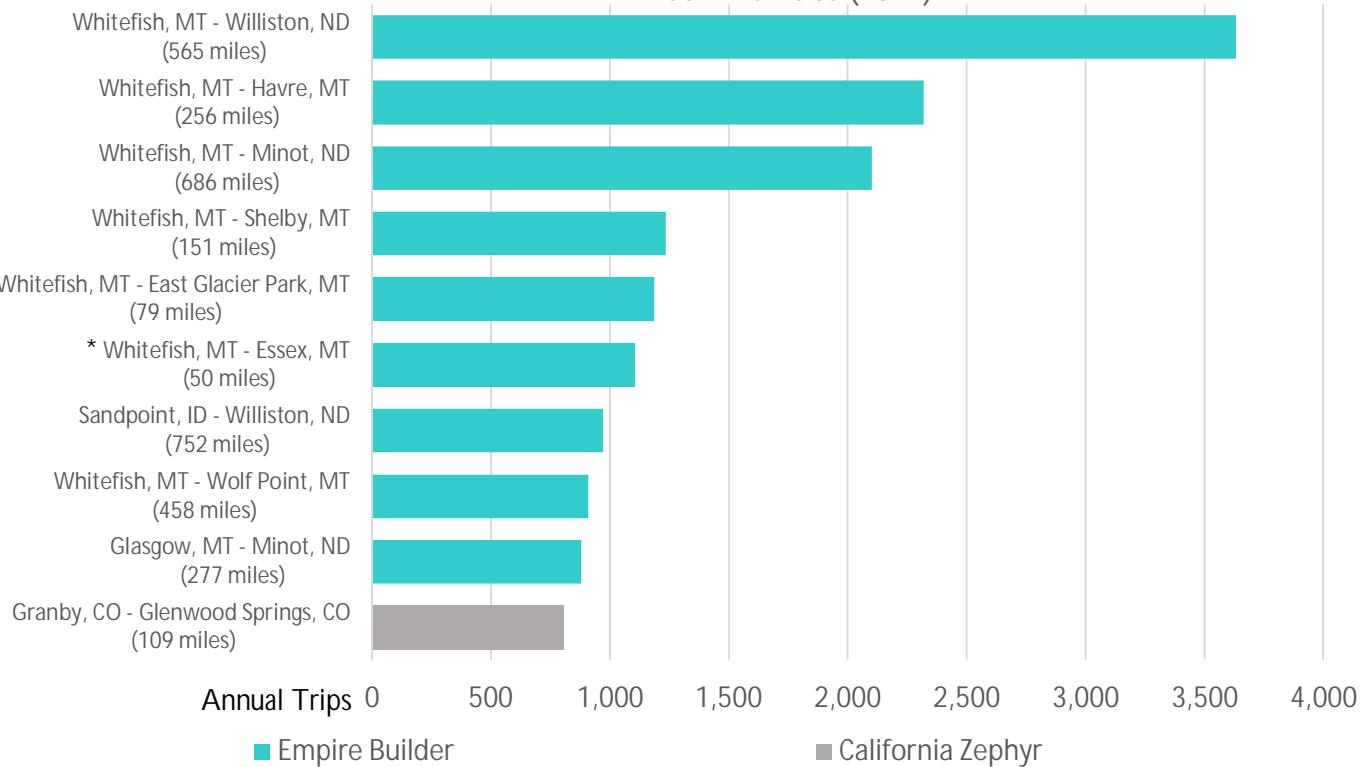


## Northwest Region – Current Amtrak O-D Pairs

### Amtrak Ridership: Top 10 Station Pairs Connecting Small Communities

- Nine of these station pairs are served by the *Empire Builder*
- Seven pairs travel to Whitefish, MT
- All 10 stay within the Northwest Region
- The top pair, Whitefish, MT - Williston, ND, has over 3,500 annual trips

Top 10 Long-Distance Station Pairs by Volume of Trips Connecting Two Small Communities (2019)



## Northwest Market Conditions Summary

- Seattle, Portland, and Denver are the primary markets for travel in the Northwest, connecting 19 of the top 20 city pairs
- Largest markets for trips in the Northwest Region are between Eugene, OR and Bellingham, WA, connected by *Coast Starlight* and state-supported *Cascades* services
  - Eugene - Portland - Olympia - Seattle served by the *Coast Starlight*
  - Seattle - Bellingham connected via *Cascades*
- The *Coast Starlight* and the *California Zephyr* connect many of the top station pairs
- The *Empire Builder* connects many of the top station pairs serving small communities