

# Southwest Airlines Meteorology Use of NWS Products and Services

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# SWA Facts

## •Pre-COVID:

- Largest domestic carrier with up to 4,000 daily flights
- >4000 flights with over ½ million passengers/day at peak travel times
- Carried >134 million revenue passengers in 2019
- 730 Boeing 737 aircraft (-700, -800, MAX 8)

## •Current state:

- Added 18 new destinations since early 2020
- 120+ destinations across the US (including Hawaii), Caribbean, Mexico and Central America
- Average flight length is approx. 755 mi
- Shortest: 63 nm (DEN-COS)
- Longest: 2,589 nm (PHX-LIH)
- 47 consecutive years of annual profitability until 2020

# SWA Facts (Pre-COVID):

- Largest domestic carrier with up to 3,500 daily flights
  - >4000 flights with over ½ million passengers/day at peak travel times
  - 120+ destinations across the US, Caribbean, Mexico and Central America
- Added 18 new locations since early 2020
- Carried >134 million revenue passengers in 2019
  - 730 Boeing 737 aircraft (-700, -800, MAX 8)
- Average flight length is approx. 755 mi
  - Shortest: 63 nm (DEN-COS)
  - Longest: 2,589 nm (SAN-HNL)
- 47 consecutive years of annual profitability until 2020

# General Information

- ~730 Boeing 737 aircraft (-700, -800, MAX 8)
- Nearly all Southwest 737 aircraft are Category IIIA capable
  - Heads up guidance system equipped (no autoland at SWA)
  - All pilots are trained for landing to Category IIIA minimums
  - These minimums assume the runway equipage is able to support CAT IIIA

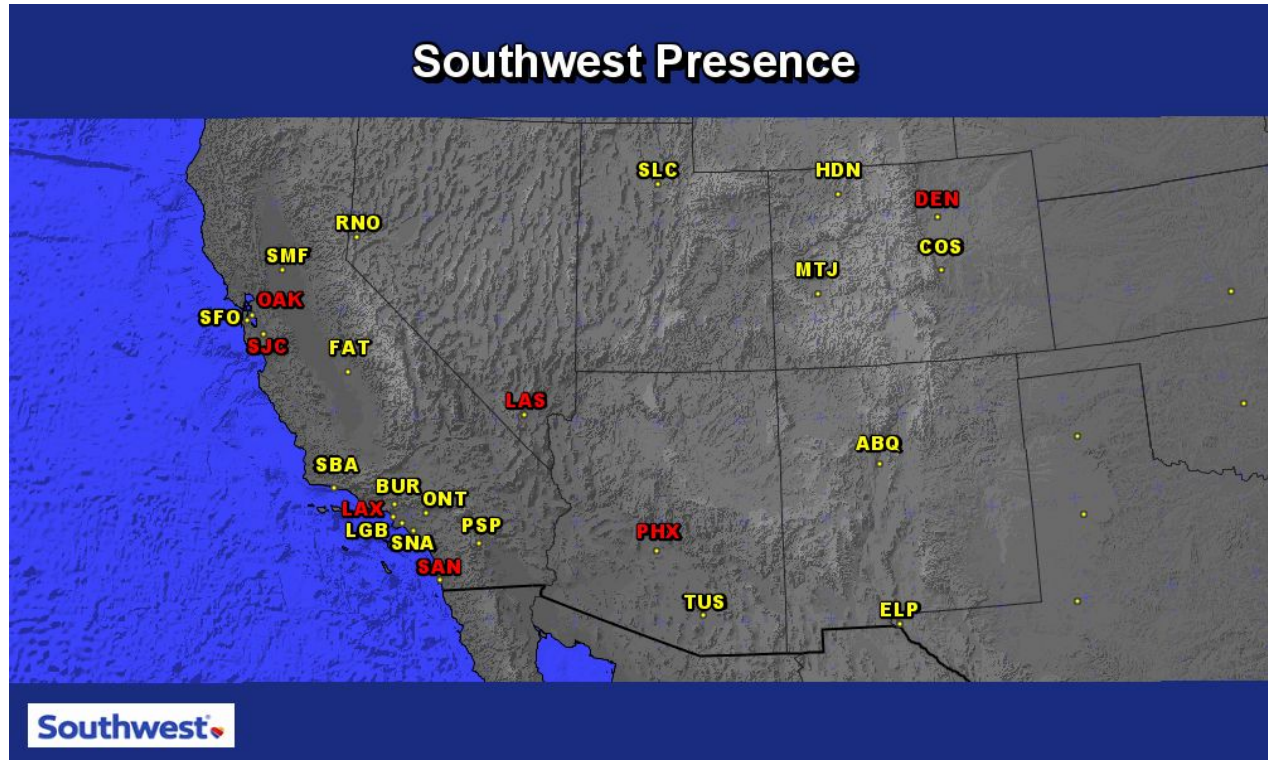




# Busiest Airports (September 2021)

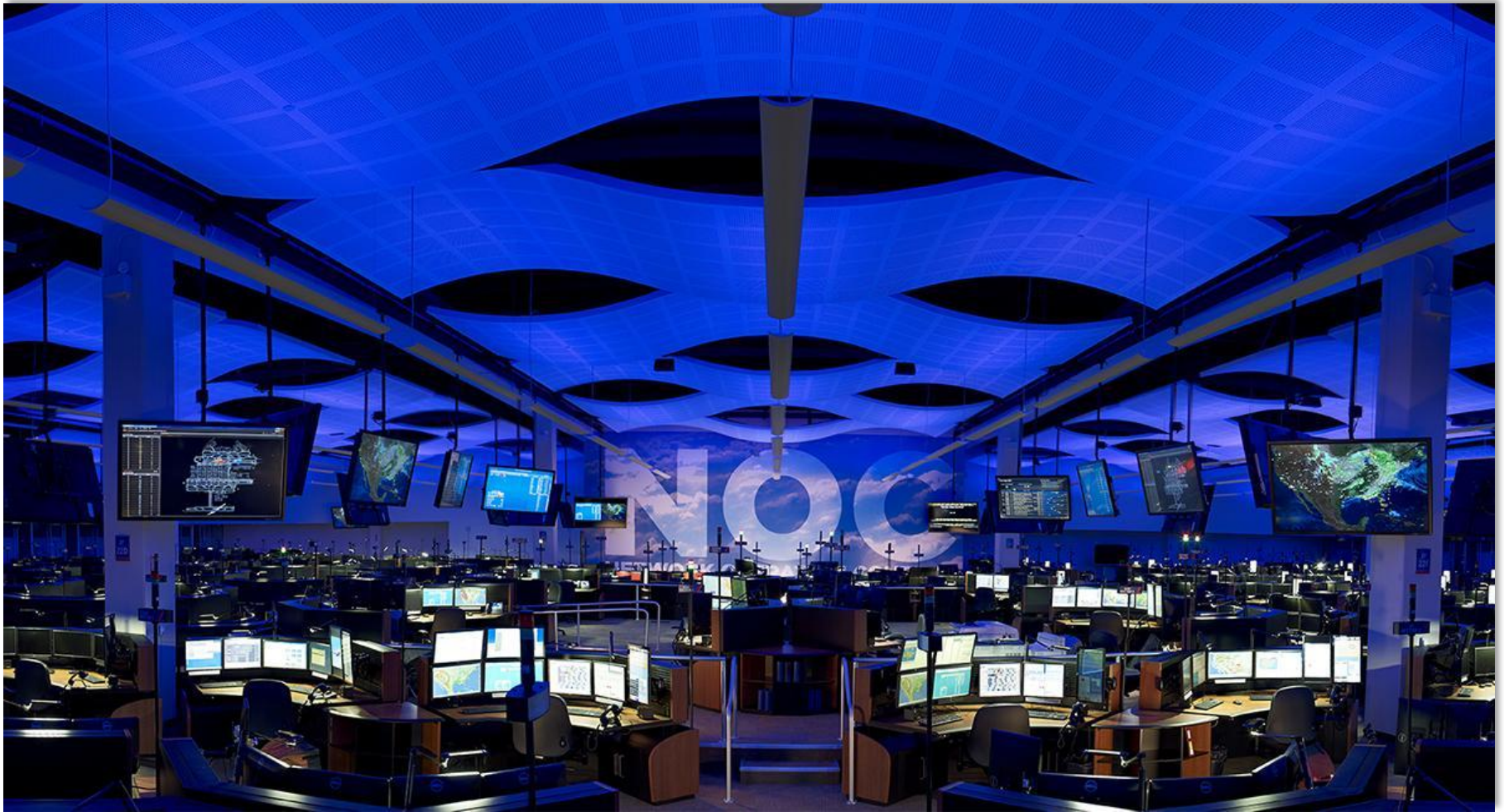
City	Max Daily Departures	# of Gates	Nonstop Cities Served
<b>Denver</b>	<b>249</b>	<b>23</b>	<b>86</b>
<b>Las Vegas</b>	<b>212</b>	<b>21</b>	<b>66</b>
Chicago (MDW)	205	37	80
Baltimore	196	36	70
Dallas (DAL)	195	18	69
<b>Phoenix</b>	<b>193</b>	<b>24</b>	<b>63</b>
Orlando	180	20	51
Houston (HOU)	155	20	74
Nashville	127	16	55
<b>Oakland</b>	<b>112</b>	<b>11</b>	<b>33</b>
St. Louis	109	17	57
Atlanta	98	18	43
<b>San Diego</b>	<b>95</b>	<b>10</b>	<b>30</b>
<b>San Jose (SJC)</b>	<b>90</b>	<b>18</b>	<b>25</b>
<b>Los Angeles</b>	<b>87</b>	<b>12</b>	<b>28</b>
Fort Lauderdale	75	16	34

City	Average Daily Departures
ABQ	21
BUR	52
COS	13
DEN	229
ELP	18
FAT	4
HDN	2
LAS	181
LAX	66
LGB	27
MTJ	2
OAK	87
ONT	25
PHX	162
PSP	7
RNO	20
SAN	73
SBA	5
SFO	21
SJC	67
SLC	32
SMF	69
SNA	49
TUS	8



**Total = 1,240**

# Network Operations Control

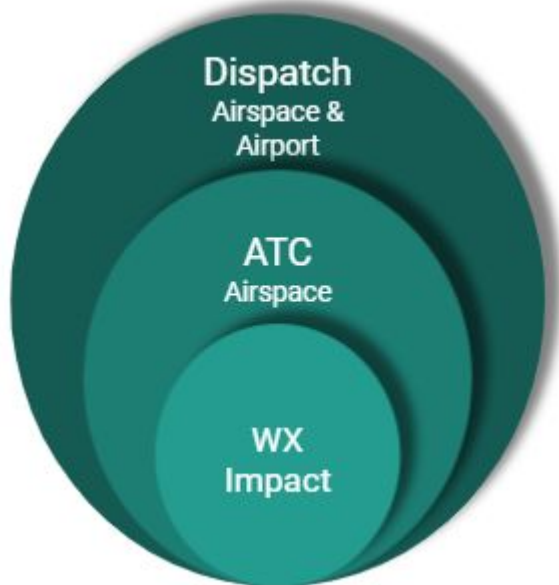




# NOC Overview

- This is considered the decision maker for the airline
- 24/7/365 coverage
- Comprised of Employees from various groups

## Primary



## Secondary



# SWA Meteorology – What we do (1/2)

- Focus on big picture
  - 80/20 strategic/tactical
  - Decision support, NOT decision-makers
  - Part of operational risk management processes
- Daily briefings to operational decision-makers
  - Additional meetings for hurricanes and winter storms
- Ground Operations Support
  - Station Forecast
  - Weather Watch
- Tactical Support
  - Issue TAFs
  - ETOPS/Hawaii forecasts



# SWA Meteorology – What we do (2/2)

- Meteorological Investigative Review
  - Turbulence injuries
  - Hail events
  - Ground incidents
- Participation in industry workgroups



# *SWA Partnership with the NWS*

- Concentrated effort to build relationship with NWS
  - WFO/CWSU/National Centers



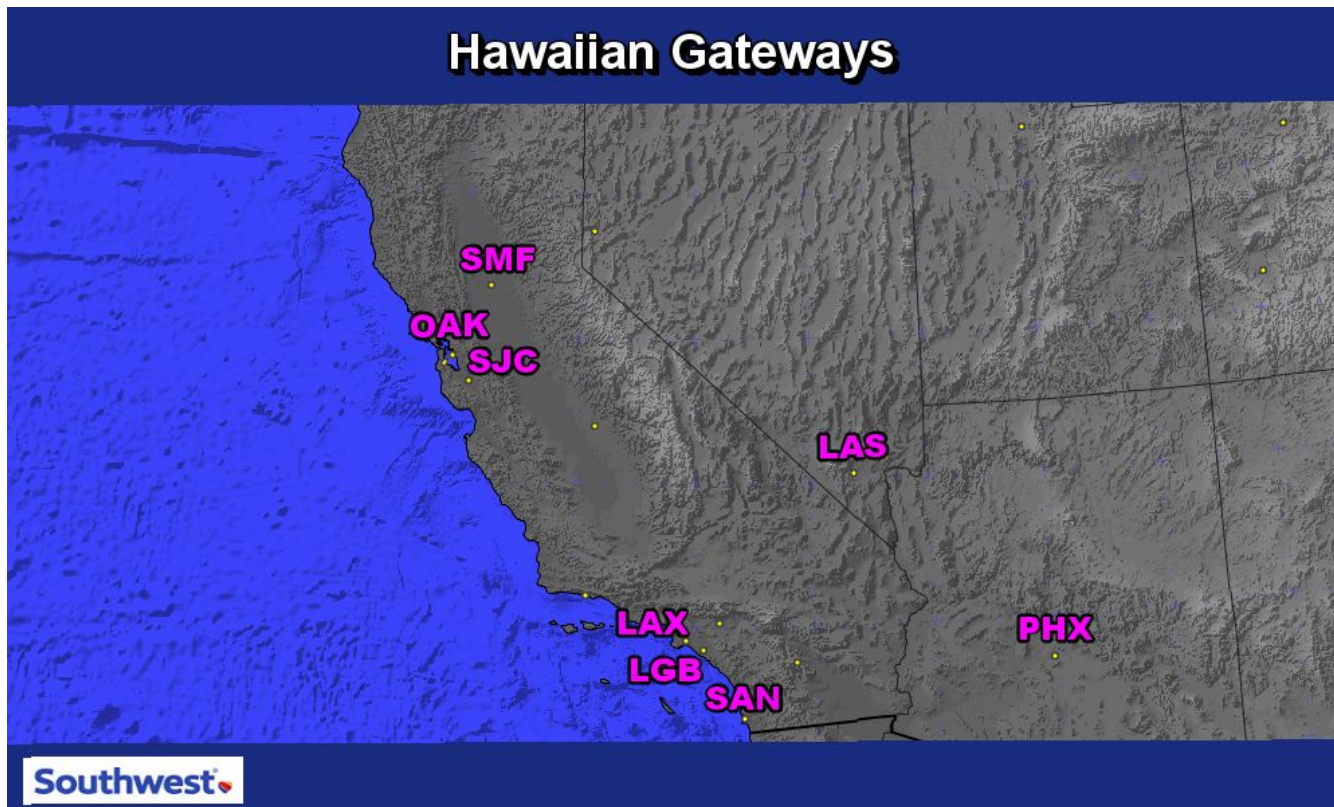
- Collaboration delivered through:
  - Workshops
  - Ad Hoc Meetings
  - Research Projects

# *SWA Partnership with the NWS*

- Communicate via phone and NWSChat
- Use a vast array of WFO/CWSU products:
  - Forecast discussions
  - Point forecasts
  - Graphiccasts
  - PNS
  - Dedicated Aviation Websites
    - McCarran Airport Weather
    - San Francisco Marine Stratus Forecast System\*
- TAFs
  - Used for long and short term operational decision making
  - Most used NWS product
- National Centers are also crucial
  - AWC's TCF
  - SPC's Convective Outlook
  - NHC's Forecast Tracks

# Operational Sensitivity in the Southwest

- Serving Hawaiian Islands since 2019
  - Over 100 flights per day
- Gateways susceptible to Heatwaves



Thank you!

