



LAX Community Noise Roundtable

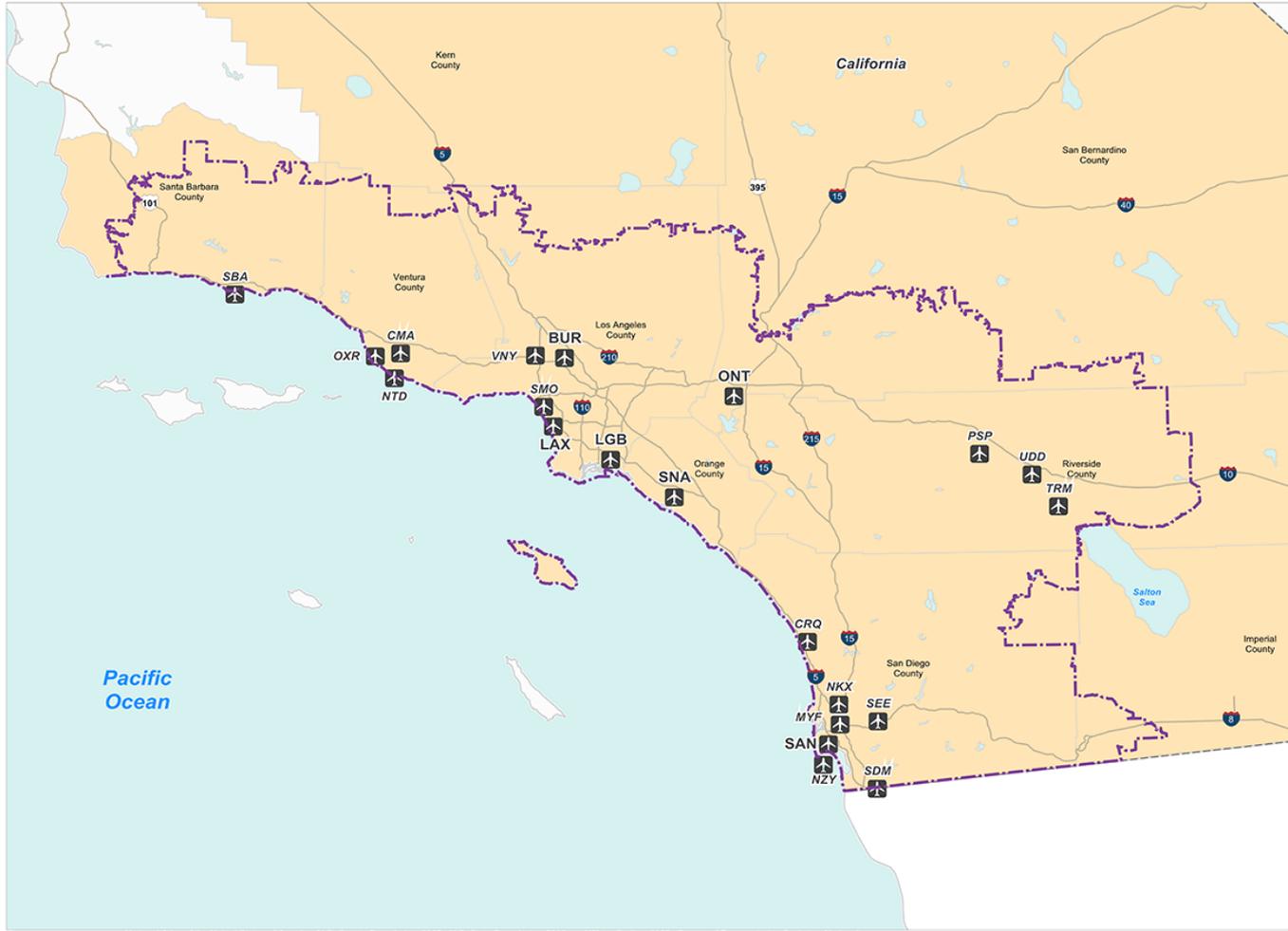
Southern California Metroplex
Environmental Assessment

May 13, 2015



- **The Federal Aviation Administration (FAA) has been working with aircraft operators for several years to improve efficiency and reduce complexity in the Southern California airspace**
- **This effort, known as the Southern California Metroplex, is a part of the FAA's NextGen initiative to improve airspace efficiency throughout the United States by utilizing satellite-based navigation technology**
- **The Southern California Metroplex process will result in new approach and departure procedures that may change where and how aircraft fly over the Los Angeles Basin**

Southern California Metroplex General Study Area



LEGEND

- General Study Area Boundary
- Study Airport
- California County in Study Area
- State Boundary
- U.S. and Interstate Highways
- Water

Notes:

- BUR** Bob Hope Airport
- CMA** Camarillo Airport
- CRQ** McClellan-Palomar Airport
- LAX** Los Angeles International Airport
- LGB** Long Beach Airport/Daugherty Field
- MYF** Montgomery Field Airport
- NKX** Miramar Marine Corps Air Station
- NTD** Point Mugu Naval Air Station
- NZY** North Island Naval Air Station
- ONT** Ontario International Airport
- OXR** Oxnard Airport
- PSP** Palm Springs International Airport
- SAN** San Diego International Airport
- SBA** Santa Barbara Municipal Airport
- SBM** Brown Field Municipal Airport
- SEE** Gillespie Field
- SMO** Santa Monica Municipal Airport
- SNA** John Wayne-Orange County Airport
- TRM** Jacqueline Cochran Regional Airport
- UDD** Bermuda Dunes Airport
- VNY** Van Nuys Airport

Projection: Lambert Conformal Conic
Scale: 1,750,000



Sources: National Atlas of the United States of America; U.S. County Boundaries, 2005; U.S. State Boundaries, 2005; and Water Bodies, 2005; Bureau of Transportation Statistics; National Transportation Atlas Database National Highway Planning Network, 2012; FAA: NFDC Airport database, 2014; ATAC Corporation; Study Area Boundary, 2014.
Prepared by: ATAC Corporation, April 2014.

Exhibit 4-1



- **On September 24, 2012, the LAX Community Noise Roundtable sent a letter to the FAA recommending noise abatement measures for FAA to consider in the Metroplex process**
- **On January 8, 2014, the FAA sent a letter to the Roundtable indicating that the Roundtable’s recommendations were forwarded to the Southern California Metroplex Design and Implementation team “for consideration during the procedure design process.”**
- **The FAA’s letter also indicated that in order to implement the procedures more quickly, the designs would remain within the thresholds of an Environmental Assessment (EA), rather than trigger a lengthy Environmental Impact Statement (EIS)**

FAA's Approach to Public Outreach and Input



- **The FAA's approach to public outreach and receiving public input for the Southern California Metroplex process is consistent with other Metroplex efforts throughout the country**
- **The FAA will release the proposed arrival and departure routes, and receive public comment during the Draft Southern California Metroplex EA process**
- **The Draft Southern California Metroplex EA will evaluate and disclose any potential noise impacts resulting from the proposed Metroplex procedures based on NEPA requirements**



- **The Draft EA is scheduled to be released on June 10, 2015**
- **Following that, the FAA will hold public meetings in the Southern California to describe the Metroplex process and explain the initial findings of the Draft EA**
- **The length of the public comment period will be at least 30 days**



- **During the 30-day (minimum) public comment period, interested members of the public may:**
 - **Download and review the Draft EA**
 - **Attend at least one of the public workshops to learn more about the proposed airspace changes and to speak with the FAA directly about the Metroplex process**
 - **Submit written comments regarding the aspects of the Metroplex process that concern them**



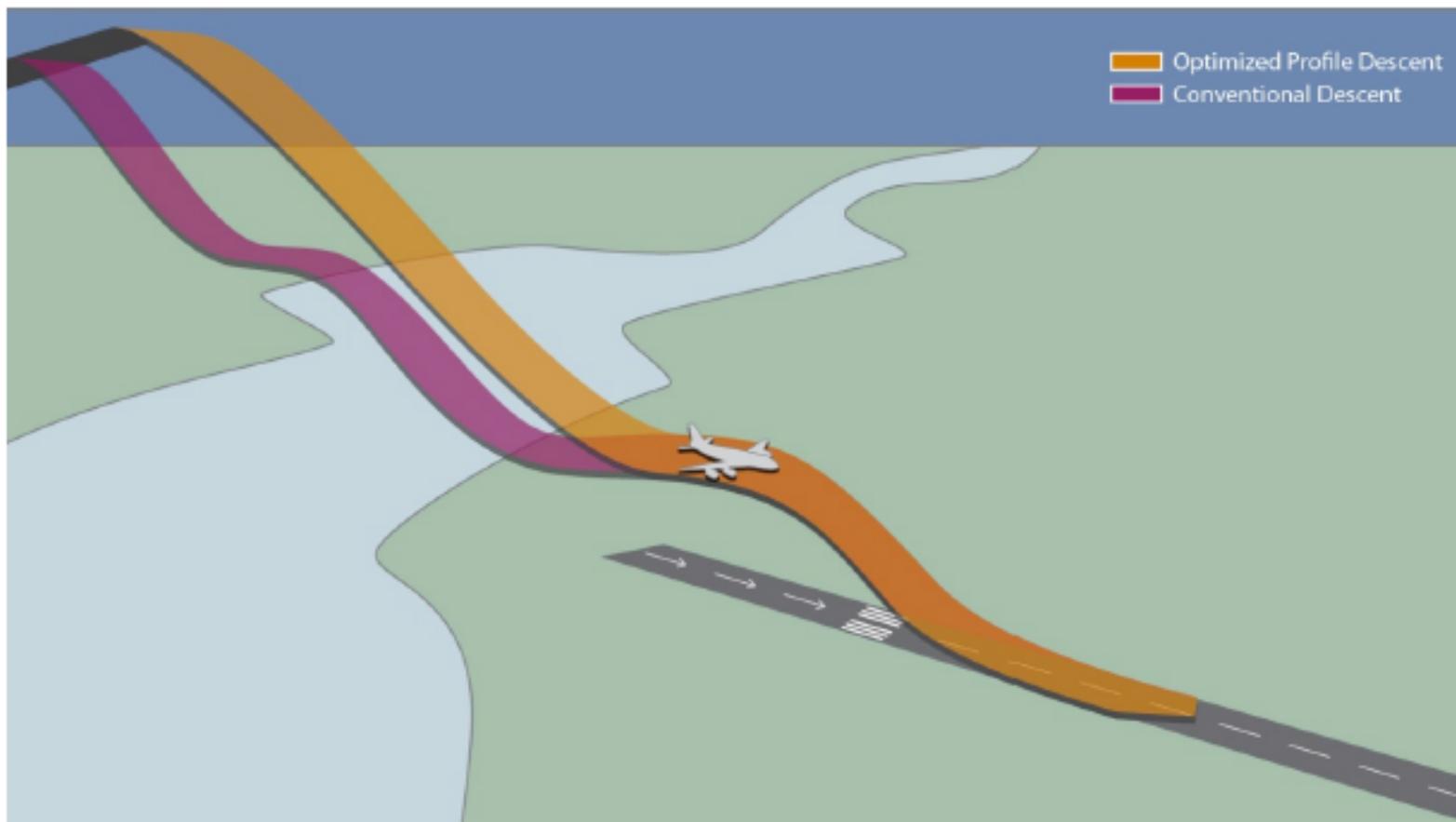
The Metroplex procedures may include:

- **Optimized Profile Descent (OPD)**
 - Uses flight-idle throttle settings and keeps the aircraft “clean” until several miles from touchdown
- **Performance Based Navigation (PBN), Required Navigation Performance (RNP), and Area Navigation (RNAV) departures and approaches**
 - Reduces distance flown, increases precision and repeatability, and reduces pilot/controller communications

Optimized Profile Descent Compared to a Conventional Descent



Exhibit 1-6 Optimized Profile Descent Compared to a Conventional Descent



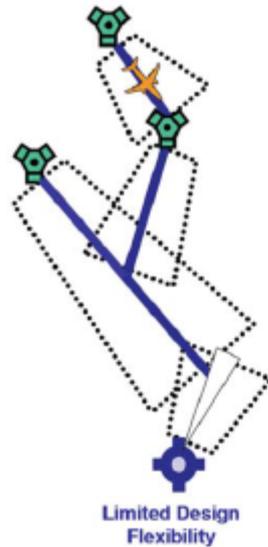
Source: ATAC Corporation, December 2012.
Prepared by: ATAC Corporation, October 2013.

Depictions of Conventional, RNAV, and RNP Procedures

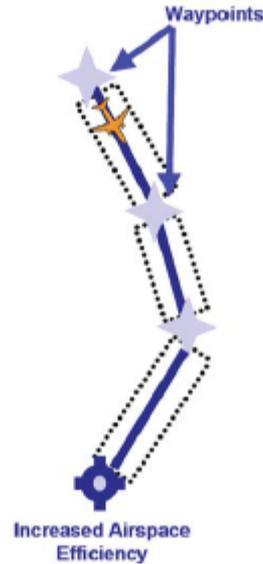


Exhibit 1-5 Navigational Comparison – Conventional/RNAV/RNP

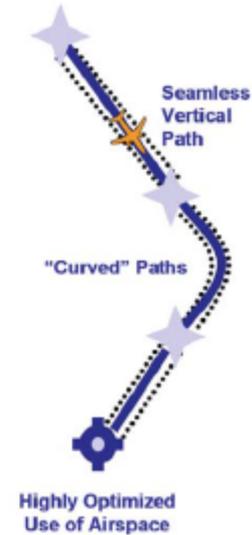
Current Ground NAVAIDs



RNAV



RNP



Legend

- | | | |
|------------------|------------------|----------|
| Navigational Aid | Route | Airport |
| Aircraft | Route Deviations | Waypoint |

Notes:

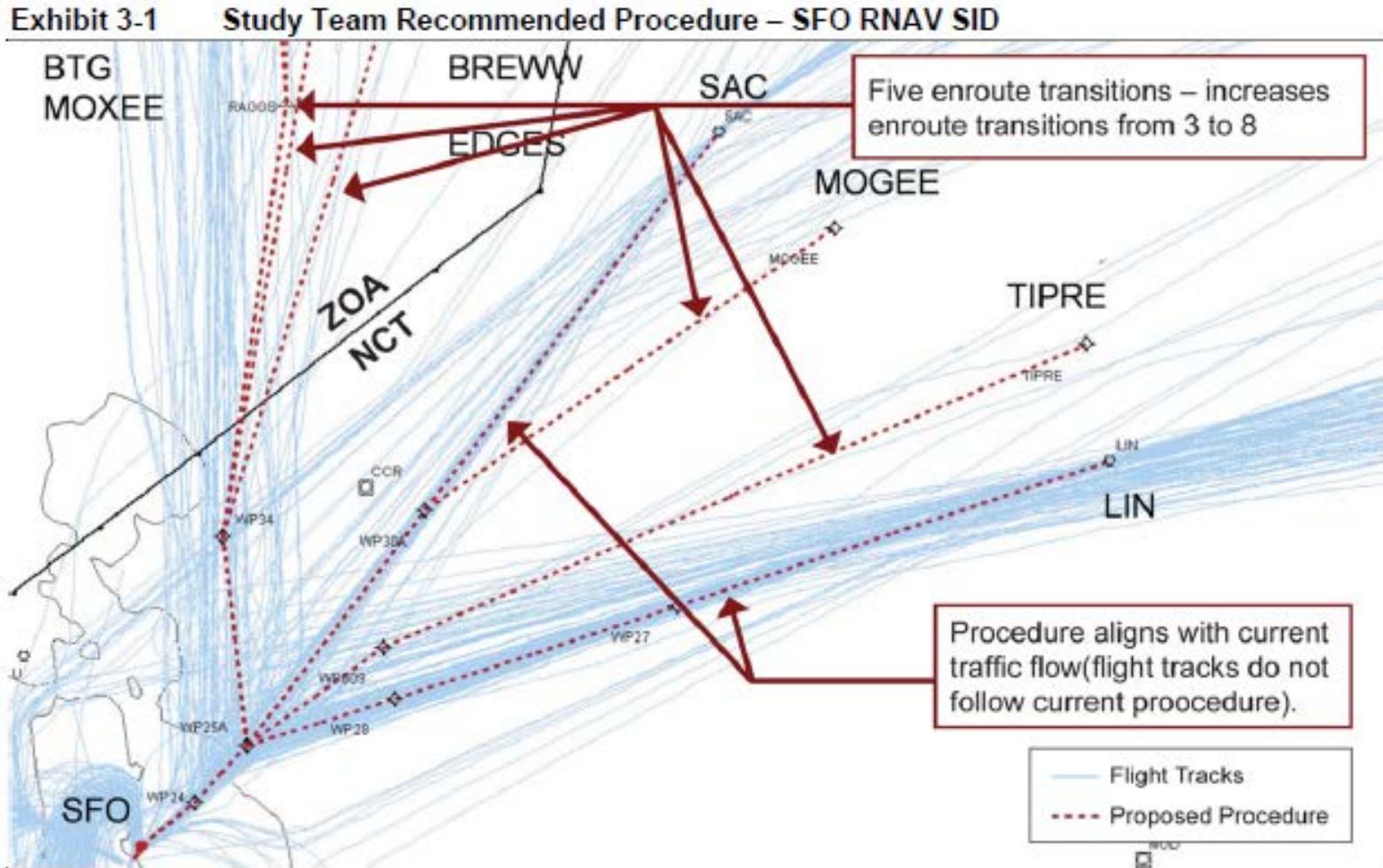
NAVAID – navigational aid
RNAV – Area Navigation

Source: U.S. Department of Transportation, Federal Aviation Administration, "Performance-Based (PBN) Brochure," October 2009.

Prepared by: ATAC Corporation, March 2013.



Example of a Proposed Departure Procedure at SFO



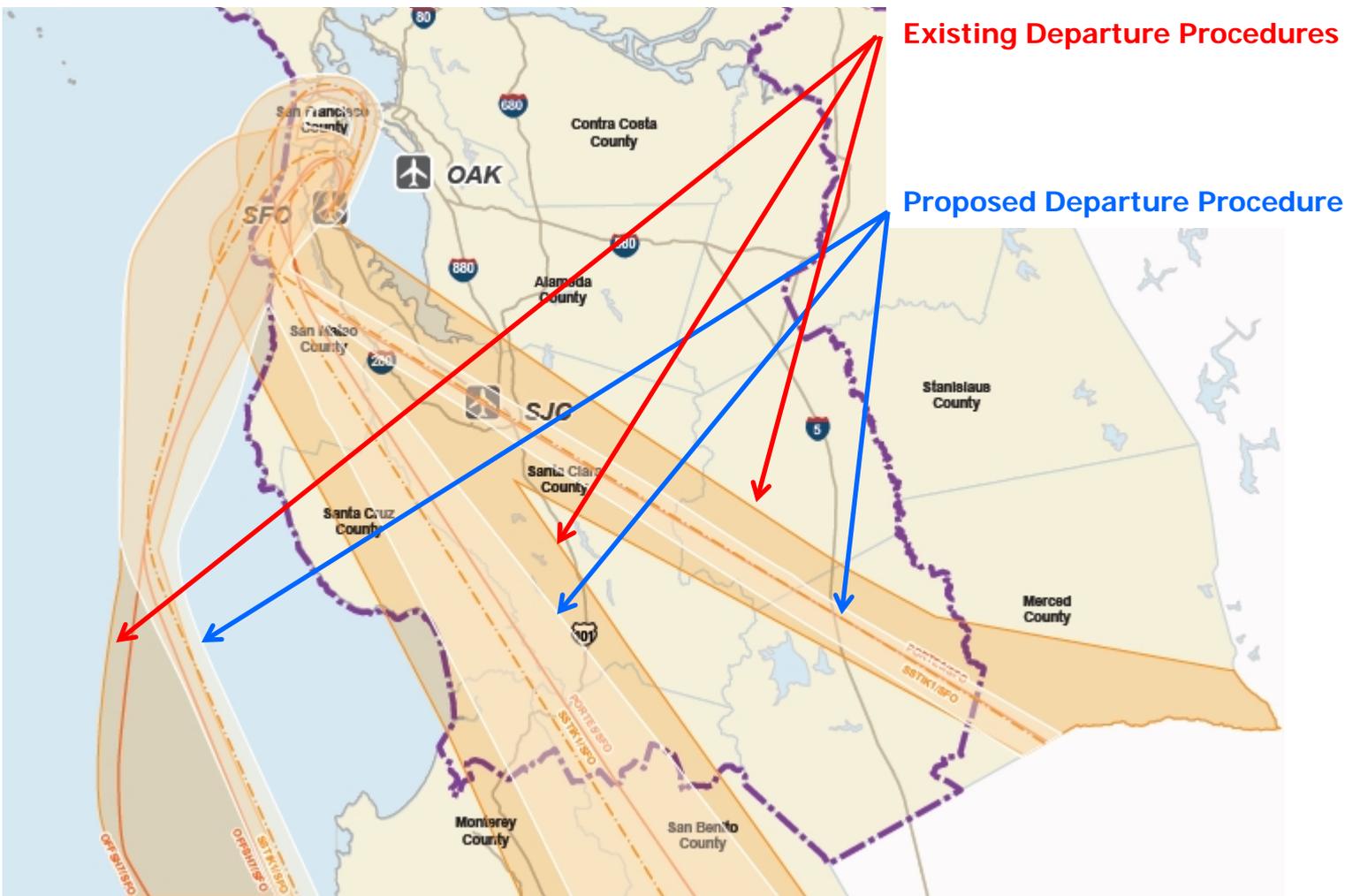
Source: NorCal OAPM Metroplex Study Team, June 2011.
Prepared by: ATAC Corporation, November 2013.



Proposed Action - Study Airports Departures, West Flow



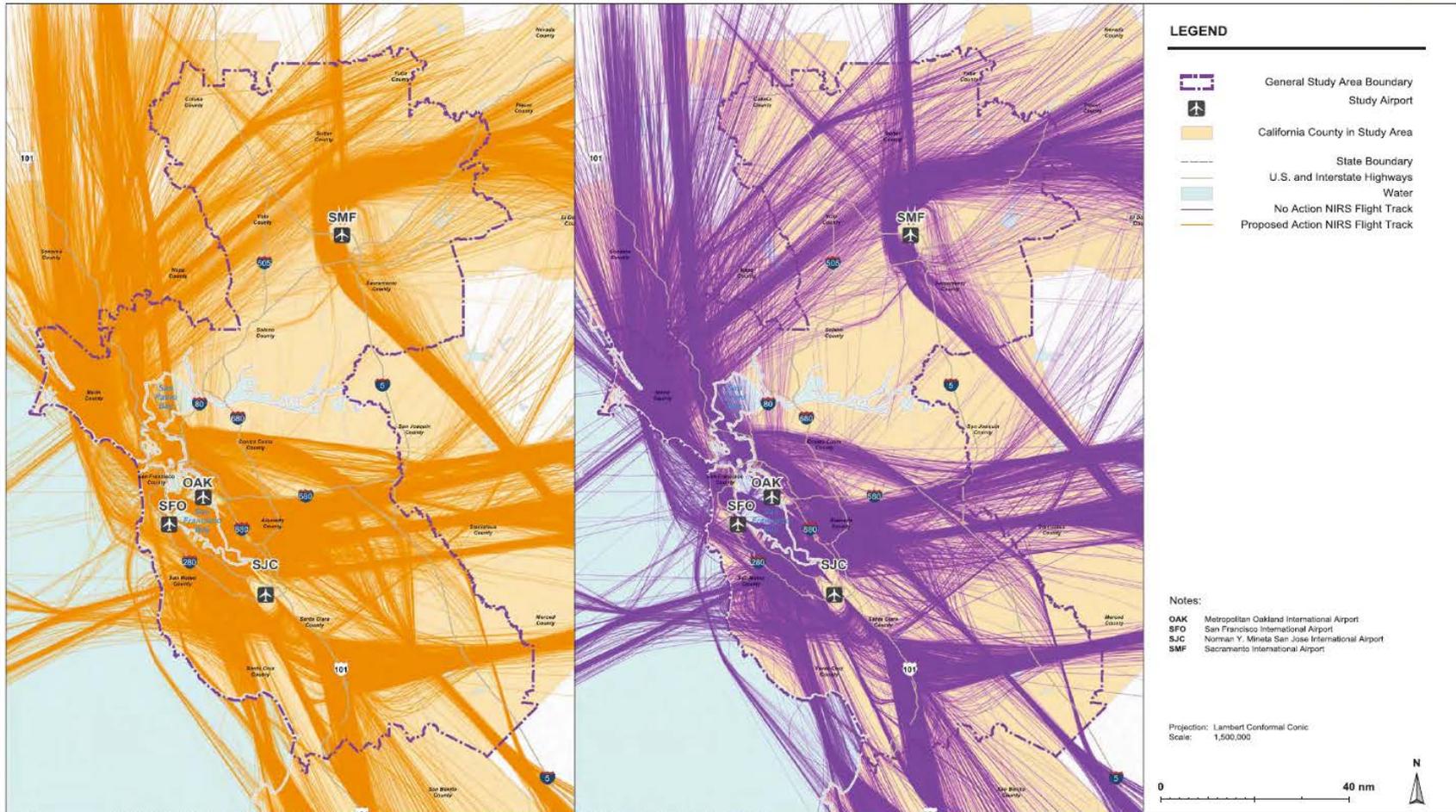
Example of One Proposed Departure Procedure Replacing Two Existing Procedures in Northern California



Example of Modeled Flight Tracks in Northern California



ATAC



Sources: National Atlas of the United States of America, U.S. County Boundaries, 2005; U.S. State Boundaries, 2005; and Water Bodies, 2005; Bureau of Transportation Statistics, National Transportation Atlas Database National Highway Planning Network, 2012; FAA, NFDCA Airport database, 2013; ATAC Corporation: Study Area Boundary, 2013; No Action NIRS Tracks, 2013; and Proposed Action NIRS Tracks, 2013.
Prepared by: ATAC Corporation, February 2014.



- **Because the airspace changes are expected to occur above 3,000 feet mean sea level, aircraft noise exposure will likely be presented in a grid format using census blocks and summarized in tables**
- **Changes in aircraft noise exposure will be evaluated in three distinct Day-Night Average Sound Level (DNL) zones as follows:**
 - **DNL 65 and greater**
 - **DNL 60 to 65**
 - **DNL 45 to 60**

Evaluating Changes in Aircraft Noise Exposure in an EA



Table 1 Criteria for Determining Impact of Changes in Aircraft Noise

DNL Noise Exposure Level	Increase in DNL with Proposed Action	Aircraft Noise Exposure Change Consideration
DNL 65 and higher	DNL 1.5 dB or higher ^{1/}	Exceeds Threshold of Significance
DNL 60 to 65	DNL 3.0 dB or higher ^{2/}	Information Disclosed When Evaluating Air Traffic Actions
DNL 45 to 60	DNL 5.0 dB or greater ^{3/}	Information Disclosed When Evaluating Air Traffic Actions

Notes:

- 1/ Source FAA, Order 1050.1E, Appendix A, Paragraph 14.3; Title 14 C.F.R. Part 150.21 (2)(d); and Federal Interagency Committee on Noise, Federal Agency Review of Selected Airport Noise Issues, August 1992.
- 2/ Source FAA Order 1050.1E, Appendix A, Paragraphs 14.4c and 14.5e; and Federal Interagency Committee on Noise, Federal Agency Review of Selected Airport Noise Issues, August 1992.
- 3/ Source FAA Order 1050.1E, Appendix A, Paragraph 14.5e.

Source: FAA Order 1050.1E, Appendix A, June 8, 2004.

Prepared By: ATAC Corporation, November 2013.

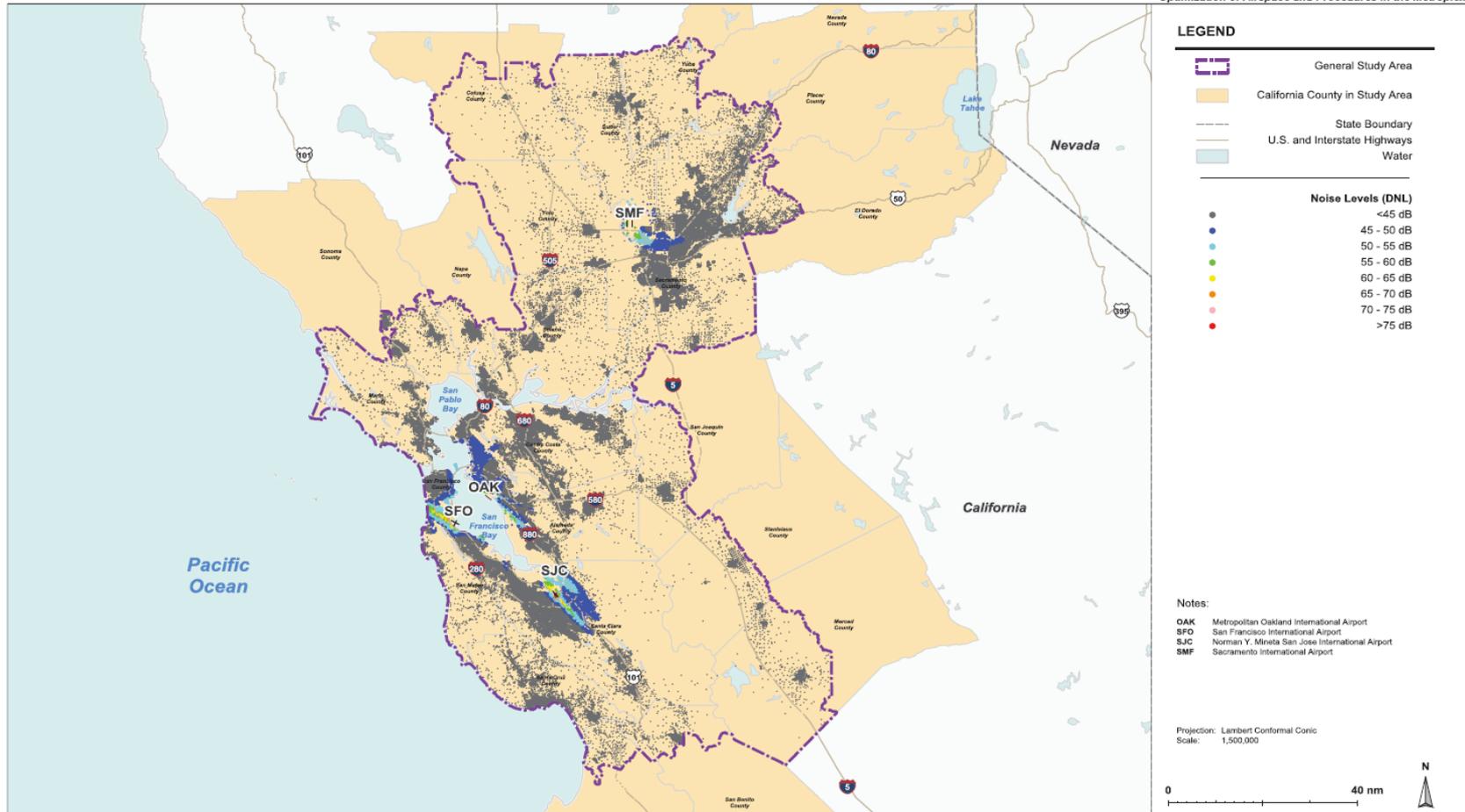


- **Increases of 1.5 dB or greater over noise sensitive land uses exposed to DNL 65 and greater are considered significant per guidance in the FAA's environmental orders and would trigger further environmental review**
- **Increases in aircraft noise exposure in the DNL 45 to 60 and DNL 60 to 65 zones will be disclosed in the Draft Metroplex EA, but do not exceed the NEPA significance threshold**
- **As previously stated, in order to avoid preparing the more costly and time-consuming EIS, the Metroplex process will eliminate procedures that result in increases of 1.5 dB or greater within the DNL 65 zone**

Example of Noise Exposure by Census Block in Northern California



Environmental Assessment for Northern California
Optimization of Airspace and Procedures in the Metroplex



Sources: National Atlas of the United States of America: U.S. County Boundaries, 2005; U.S. State Boundaries, 2005; and Water Bodies, 2005; Bureau of Transportation Statistics: National Transportation Atlas Database National Highway Planning Network, 2012; FAA: NFDC Airport and Runway databases, 2012; ATAC Corporation: Study Area Boundary, 2012, and Noise Levels, 2013.
Prepared by: ATAC Corporation, November 2013.

Exhibit 4-2

2011 Baseline DNL
Noise Exposure by Census Block

DRAFT March 2014

Example of a Table Showing the Change in Population Exposed to Aircraft Noise in Northern California



Table 12 Change in Potential Population Exposed to Aircraft Noise - 2014

DNL Noise Exposure Level Under the Proposed Action	Increase in DNL with the Proposed Action	Population Exposed to Noise that Exceeds the Threshold
DNL 65 dB and higher	DNL 1.5 dB or greater	0
DNL 60 dB to 65 dB	DNL 3.0 dB or greater	0
DNL 45 dB to 60 dB	DNL 5.0 dB or greater	0

Source: 2010 U.S. Census (population centroid data), August 2012; ATAC Corporation, August 2013 (NIRS modeling results).

Prepared By: ATAC Corporation, November 2013.

Completion and Publication of the Final Metroplex EA



- **After the public comment period closes, the FAA will consider and collectively respond to all of the public comments received on the Draft EA in the Final Metroplex EA**
- **The Final EA will be published on the Metroplex website**
- **The FAA will prepare a Finding of No Significant Impact (FONSI) and Record of Decision (ROD)**
- **Notice of the FONSI/ROD will be published in the Federal Register**



- **After the FONSI/ROD is issued, the FAA will undertake the work required to implement the Proposed Action which may include, but is not limited to, the following:**
 - **Training air traffic controllers on the new procedures**
 - **Publishing the new approach and departure procedures**
- **Aircraft operators will:**
 - **Train flight crews and update their Flight Management Systems with the new procedures**
- **This process may take several months before the new procedures are implemented**



- **Once the new procedures are implemented, the community may notice:**
 - Nothing at all
 - Decreased aircraft overflights and noise levels
 - Increased aircraft overflights and noise levels
 - Concentrated flight tracks over a narrow area
 - Increased aircraft altitudes
 - Decreased aircraft altitudes
 - Aircraft where they have not flown previously
- **The exact effects will depend on the types of changes the FAA plans to make and where those changes are made**

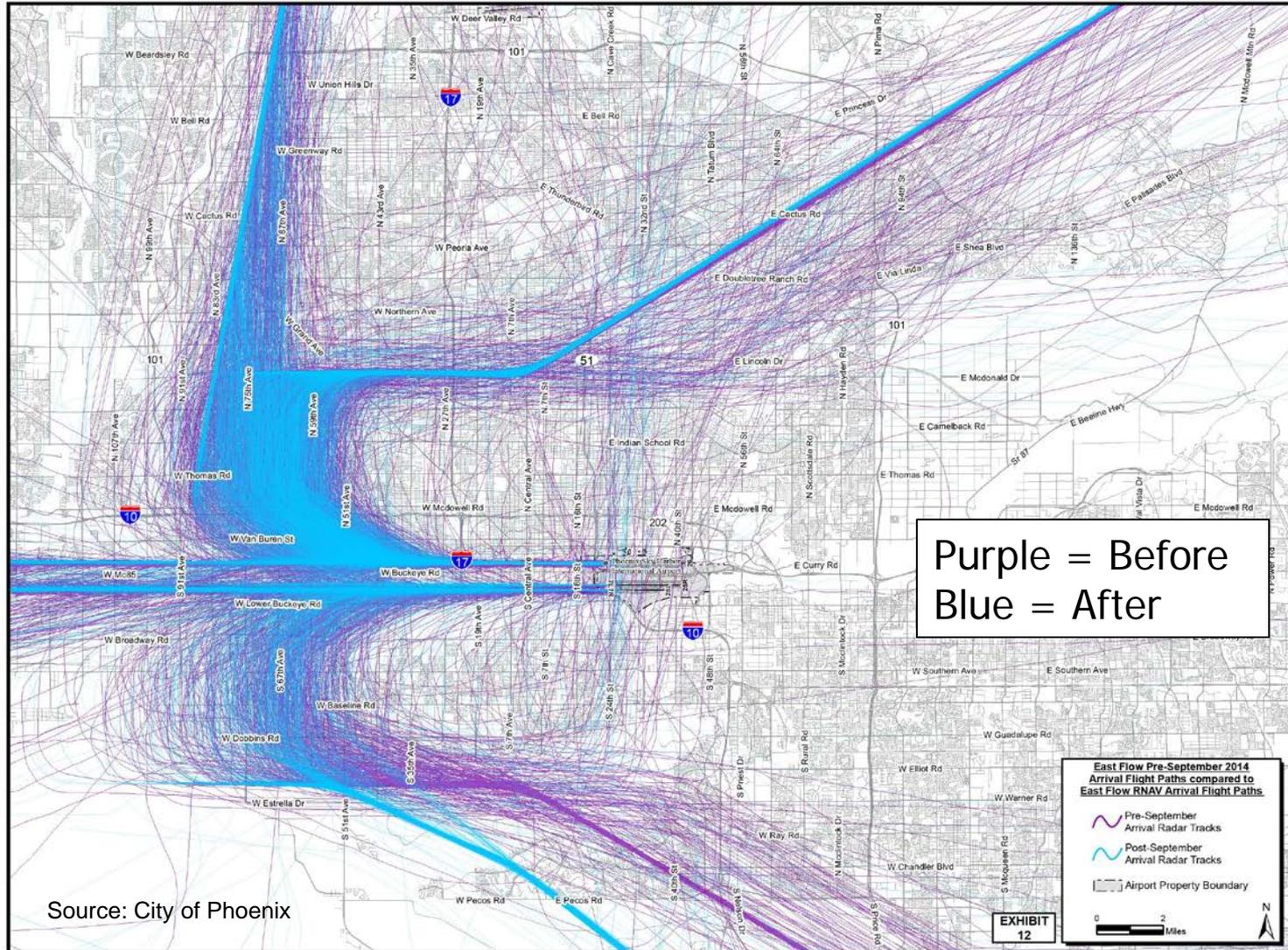


- **Community reaction to FAA's implementation of RNAV/RNP procedures has been mixed:**
 - **Boston RNAV Procedures**
 - **Denver Airspace Redesign**
 - **Houston Metroplex**
 - **New York Airspace Redesign**
 - **Northern California Metroplex**
 - **Phoenix RNAV Procedures**
 - **Portland RNP Approach**
 - **Seattle Greener Skies**

Example of Radar Flight Tracks Before and After Implementation at Phoenix Sky Harbor International Airport



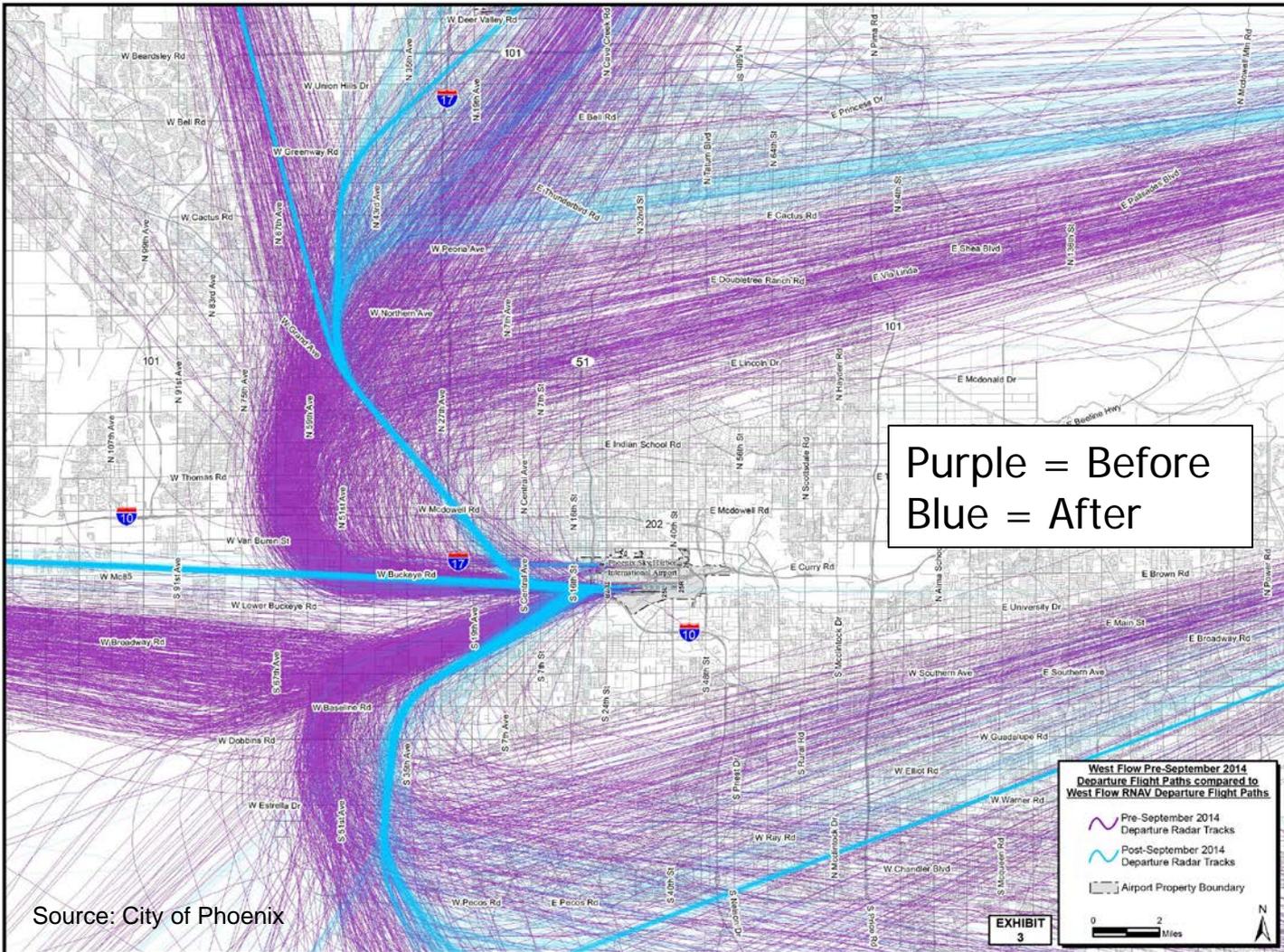
Before & After September 18, 2014 Flight Path Arrivals from the West



Example of Radar Flight Tracks Before and After Implementation at Phoenix Sky Harbor International Airport



Before & After September 18, 2014 Flight Departures to the West





SUMMARY

- **The Southern California Metroplex Draft EA is scheduled to be available June 10, 2015**
- **The 30-day (minimum) public comment period begins with the release of the EA**
- **The interested public should provide written comments on the Draft EA before the public comment period closes**
- **FAA will publish the FONSI/ROD in the Federal Register**
- **Implementation of the proposed procedures could take several months**



Questions?