Metroplex

An Update on Southern California Airspace Modernization

LAX Roundtable Meeting

October 12, 2016

FAA | NextGEN

Agenda

- LAX Roundtable Recommendations
- November 10, 2016 Procedures
- Community Engagement
- Schedule
- Questions/Answers

LAX ROUNDTABLE RECOMMENDATIONS EVALUATED

LAX Roundtable Recommendations Evaluated
(1 of 3)

- A3 - Early turn of aircraft departing to the west (El Segundo / Westchester centric)
  - Criteria does not allow RNAV waypoints to be placed at the shoreline due to close proximity to end of LAX runways
  - The Metroplex LAX RNAV departure procedures have waypoints that are located beyond the shoreline and do not turn prior to that point
    - Exceptions are separation and safety
- A6 - Improperly flown LOOP departures (Beach Cities)
  - The LAX ORCKA RNAV SID was designed to remain away from beach communities
  - Provides positive course guidance

LAX Roundtable Recommendations Evaluated
(2 of 3)

- A10 - Turboprop community overflights (Palos Verdes centric)
  - The largest turboprop operator at LAX was SkyWest Airlines
    - SkyWest retired their Embraer Brasilia fleet in mid-2015
  - LAX turboprop departures over Palos Verdes have fallen by an average of 55%
  - Development of turboprop SID would require Class Bravo airspace redesign
    - Class Bravo airspace changes are regulatory and out of scope for Metroplex projects
  - The LAX JEDDD SID used by turboprop departures has been canceled
    - Turboprop aircraft flying the Seal Beach SID proceed straight out until crossing the shoreline then as assigned by ATC

LAX Roundtable Recommendations Evaluated
(3 of 3)

- A11 - Continuous Descent Approaches at Lower Altitudes (La Habra Heights centric)
  - La Habra Heights is located in an area where LAX arrivals are being sequenced
  - Criteria for glideslope angle is 3 degrees or less
    - LAX glideslopes are at 3 degrees
  - Higher altitudes would require interception of LAX glideslope at an unsafe angle

Shifting and Exposing Noise to New Residential Areas
EA Comment (290-01)
(1 of 3)

- LAX Roundtable EA Comments:
  - Shifting noise from one community to another
    - The LAX east flow BIGBR 1 and BRUEN 1 STARS shifted traffic up to 2.3 nautical miles from its current location
  - Exposing new residential areas to overflights
    - The TRTON 1 SID shifted routes towards the beach cities
    - The GARDY1 SID shifted routes to areas that do not experience departure traffic
  - Lowering altitudes over certain communities
  - Creating a concentration of flights over a narrow area when compared over existing conditions

Shifting and Exposing Noise to New Residential Areas EA Comment (290-01)

(2 of 3)

- FAA Response
  - Procedures were designed wherever possible to remain within the existing historical flight tracks
  - Close proximity of LAX to other Metroplex area airports presents design challenges
  - LAX east flow SIDs procedurally separate from LAX arrivals to the east flow runways
  - The BIGBR and BRUEN STARs were designed to establish independent flows between north and south runway complex traffic
    - Reduces ATC and flight deck workload

Shifting and Exposing Noise to New Residential Areas
EA Comment (290-01)
(3 of 3)

- FAA Response (cont'd):
  - The LAX TRTON SID procedurally separates traffic from Special Activity Airspace (hazardous military activities)
  - The LAX GARDY SID:
    - Procedurally separates from ONT SIDs and STARs and LAX east flow STARs
    - Establishes a usable procedure to climb over rapidly rising terrain
      - Reduces excessive radar vectors by ATC

Aircraft Flying at Lower Altitudes
EA Comment (290-02)
(1 of 2)

- LAX Roundtable EA Comments:
  - Aircraft on easterly and over ocean operations will fly over CLIFY at 7000 feet when previously they flew at 8000 feet
  - Aircraft will fly 1000 feet lower over Malibu on the LADYJ

Aircraft Flying at Lower Altitudes
EA Comment (290-02)
(2 of 2)

- FAA Response:
  - East operations are utilized less than 5% of the time due to weather phenomenon
  - Aircraft are 1000 feet lower over CLIFY/SMO in LAX east operations for connectivity to the newly design RNP approaches
    - Procedures will be closely monitored and evaluated to determine feasibility of a higher vertical window
  - Created LAX MDNYT STAR serves LAX arrivals from midnight to 6:30 AM
    - MDNYT STAR allows aircraft to fly up to 2000 feet higher
    - MDNYT STAR closely follows the flight tracks of existing procedures
  - Increasing the altitude of the LAX LADYJ SID would create numerous traffic conflicts

Concentration of Flight Paths
EA Comment (290-03)
(1 of 2)

- LAX Roundtable Comments:
  - New RNPs concentrate flights over waypoints such as CLIFY and TRNDO
  - Design Team considered routing aircraft over commercial, industrial, overwater and highway areas where possible

Concentration of Flight Paths
EA Comment (290-03)
(2 of 2)

- FAA Response:
  - Design Team considered routing aircraft over commercial, industrial, overwater and highway areas where possible
  - Each procedure was designed individually and considered the proximity to other procedures
  - Advanced navigation may result in concentration of flight tracks

Making Adjustments to Procedures after Implementation
EA Comment (290-04)
(1 of 2)

- LAX Roundtable Comments:
  - Many people will only notice changes after implementation
  - Consider making adjustments to procedure after implementation
  - The Roundtable would like to work in collaboration with the FAA to identify areas of concern

Making Adjustments to Procedures after Implementation
EA Comment (290-04)
(2 of 2)

- FAA Response:
  - FAA will closely monitor and evaluate the performance of the procedures
  - FAA fully intends to continue to support the LAX Roundtable

Roundtable's September 24, 2012 Recommendations
EA Comment (290-05)
(1 of 2)

- LAX Roundtable Comments:
  - A7: Extended Downwind Approach (Monterey Park centric)
  - A10: Turboprop Community Overflights (Palos Verdes centric)
  - A6: Improperly Flown LOOP Departures (Beach Cities)
  - A3: Early Turn of Aircraft Departing to the West (El Segundo / Westchester centric)
  - A11: Continuous Descent Approaches at Lower Altitudes (La Habra Heights centric)

Roundtable's September 24, 2012 Recommendations EA Comment (290-05)

(2 of 2)

- FAA Response:
  - The FAA received and considered the recommendations during the design process as previously discussed except for A7
  - The Metroplex Design Team developed RNP approaches to the west flow runways at LAX to remain west of I-710

De-confliction of SMO and LAX Departure EA Comment (290-06)

(1 of 2)

- LAX Roundtable Comment:
  - The Roundtable support the proposed procedures that will de-conflict SMO and LAX

De-confliction of SMO and LAX Departure EA Comment (290-06)

(2 of 2)

- FAA Response:
  - The Metroplex Design Team developed a SID that reduces reportable ground delays from SMO Runway 21

Noise Metrics
EA Comment (290-07)
(1 of 2)

- LAX Roundtable Comment:
  - Requests FAA to conduct noise analysis using CNEL since FAA accepts CNEL for airport improvement projects

Noise Metrics
EA Comment (290-07)
(2 of 2)

- FAA Response:
  - CNEL for airport improvement projects accommodates state requirements for airport sponsors
  - SoCal Metroplex is solely an FAA federal project and does not involve local or state agencies

Information Provided in the Draft EA
EA Comment (290-08)
(1 of 2)

- LAX Roundtable Comments:
  - The Draft EA provides insufficient information such as altitudes, waypoints coordinates, number of flights, and RNP/RNAV adoption rates
  - Subsequent information on Google Maps provides additional information but lacks ability to allow specific assessments of impacts
  - The Draft EA does not provide assumptions such as temperature, weather conditions, volume of traffic after 2021, runway configuration, or changing fleet mix

Information Provided in the Draft EA
EA Comment (290-08)
(2 of 2)

- FAA Response:
  - Noise modeling and methodology met NEPA Requirements
    - Years modeled were 2016 and 2021
  - The Final EA discusses in details assumptions, methodology, temperature, humidity

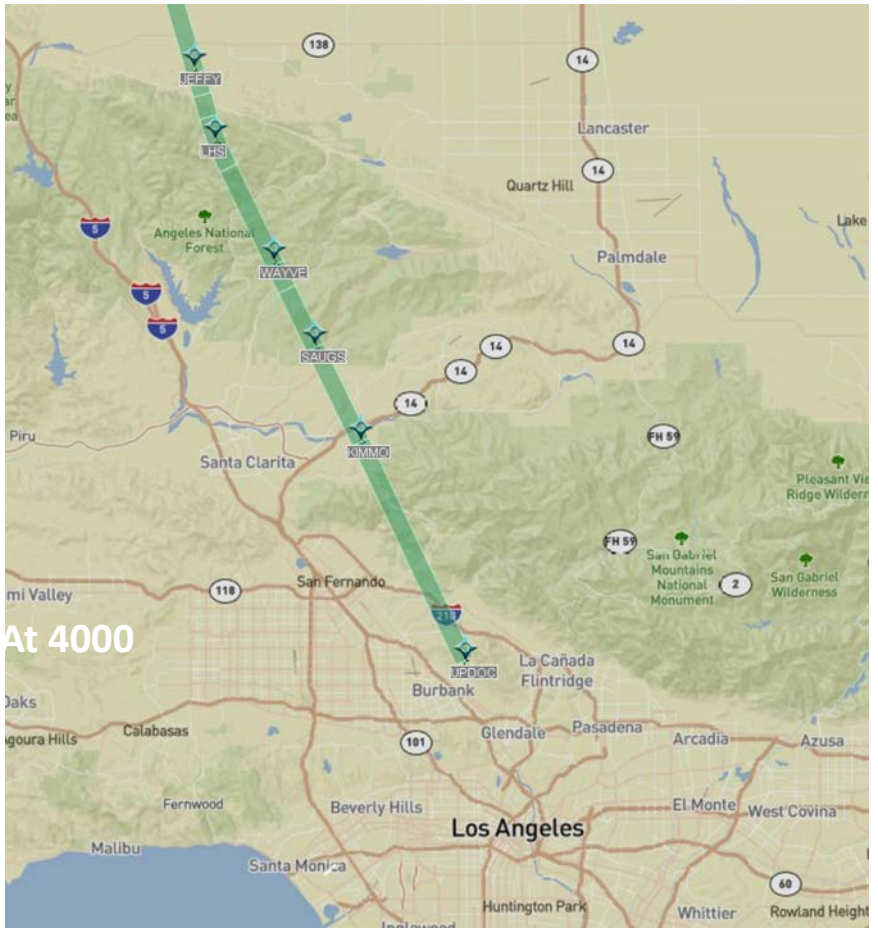
METROPLEX PROCEDURES
NOVEMBER 10, 2016

SIDs, STARs and Approaches
November 10, 2106 Implementation

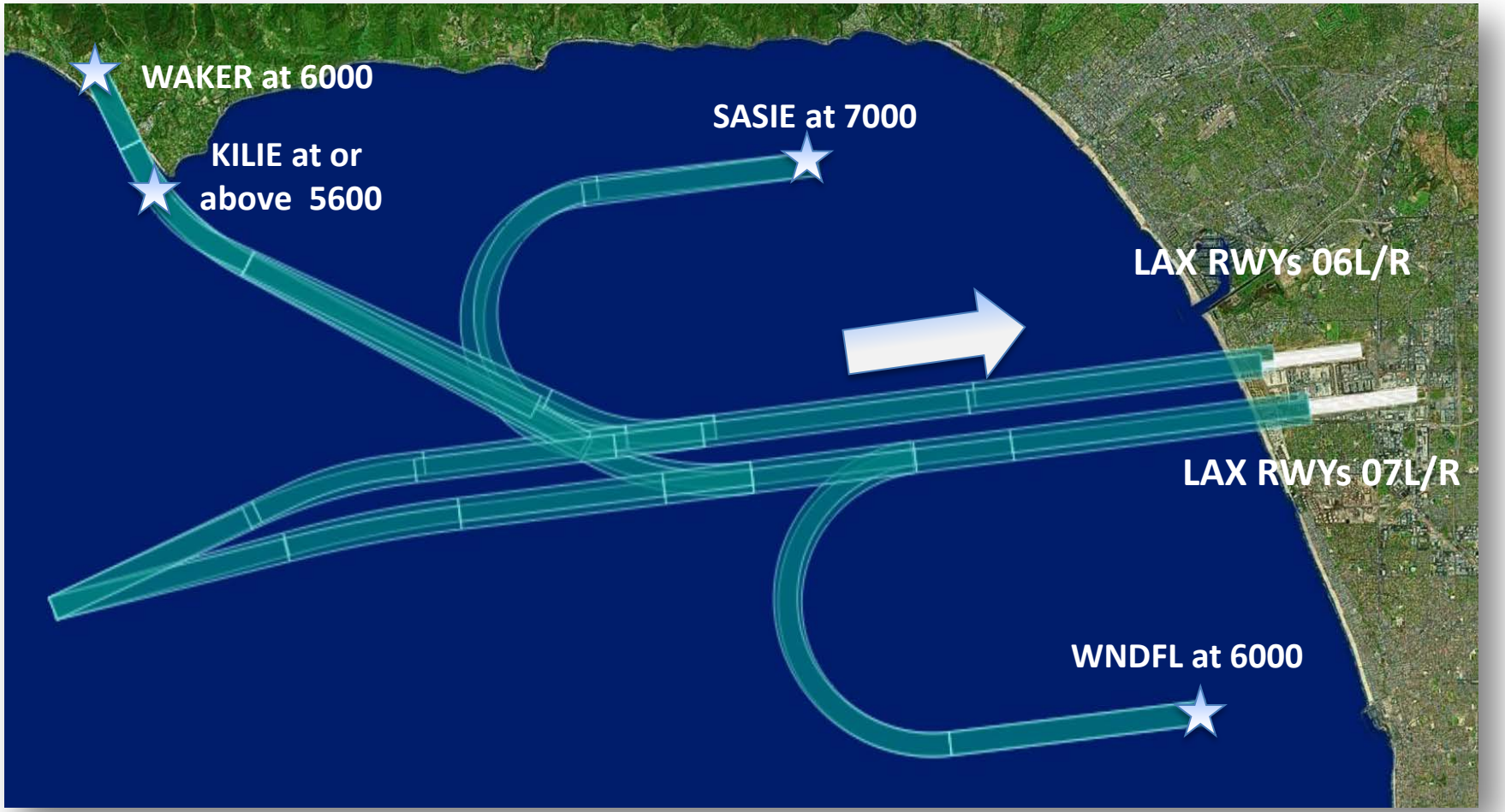
November 10, 2016	
BUR/VNY WEESL ONE STAR (RNAV)	LAX ILS or LOC RWY 07R (Conventional)
LAX/SMO WAYVE ONE STAR (RNAV)	LAX GPS Y RWY 07R (RNAV)
LAX ILS or LOC RWY 06R (Conventional)	LAX RNP Z RWY 07R (RNAV)
LAX GPS Y RWY 06R (RNAV)	LAX ILS or LOC RWY 07L (Conventional)
LAX GPS Z RWY 06R (RNAV)	LAX GPS Y RWY 07L (RNAV)
LAX ILS or LOC RWY 06L (Conventional)	LAX RNP Z RWY 07L (RNAV)
LAX RNP Z RWY 06L (RNAV)	SMO GPS RWY 21 (RNAV)
LAX GPS Y RWY 06L (RNAV)	SMO VOR-A (Conventional)

LAX/SMO WAYVE ONE STAR (RNAV)

- The current LAX STAR prop STAR is a conventional ground based procedure
- The STAR was designed without vertical navigation due to complex interaction with other SIDs and STARS
- The STAR provides a segregated route from BUR and VNY airports entering the terminal area
- LAX traffic on this procedure are props only



Proposed LAX RNAV (RNP) RWYs 06L/R and 07L/R



- The Design Team developed the east flow RNAV/RNP approach procedures to gain safety & operational efficiencies
- The LAX east flow STARs and the midnight operations tie into the LAX RNAV/RNP approaches

SCHEDULE

Scheduled Community Engagement

Audience	Date and Location	Location/Venue
BUR, ONT, PSP, SBA and VNY	October 17, 2016 6:00-7:15 PM	Webinar
FUL, LGB, SLI, SNA and TOA	October 17, 2016 8:00-9:15 PM	Webinar
FUL, LGB, SLI, SNA and TOA	October 18, 2016 6:00-7:15 PM	Webinar
CRQ, NZY, SAN and SDM	October 18, 2016 8:00-9:15 PM	Webinar
LAX and SMO	October 20, 2016 6:00-7:15 PM	Webinar
BUR, ONT, PSP, SBA and VNY	October 20, 2016 8:00-9:15 PM	Webinar
LAX and SMO	October 25, 2016 6:00-9:00 PM	D.W. Griffith Middle School, 4765 East 4th Street, Los Angeles, CA 90022
LAX and SMO	October 26, 2016 6:00-9:00 PM	Palms Middle School, 10860 Woodbine St., Los Angeles, CA 90034
CRQ, NZY, SAN and SDM	October 27, 2016 6:00-9:00 PM	Liberty Station-Corky McMillin Event Center, 2875 Dewey Rd., San Diego, CA 92106
CRQ, NZY, SAN and SDM	November 1, 2016 6:00-9:00 PM	La Presa Middle School, 1001 Leland St., Spring Valley, CA 91977
FUL, LGB, SLI, SNA and TOA	November 2, 2016 6:00-9:00 PM	El Modena High School, 3920 E. Spring Street, Orange, CA 92869

Our Commitments

- To partner with our local airports and aviation teams to adhere to established noise abatement policies
- To update the community on changes the Metroplex project is making to the airspace
  - To make the images from this presentation available on the web and in other mobile applications
    - Metroplex Environmental Website

Your Support

- We are hoping you can support FAA where possible
- After implementation and beyond the project's lifetime, FAA will continue to work with you to address concerns
  - Roundtable or Noise Forum

Metroplex

Thank you!

FAA | NextGEN