

LAX/Community Noise Roundtable

Work Program A1 – Initial Review of the Final Environmental Assessment for the FAA SoCal Metroplex Project

September 14, 2016

Presentation Outline



- Background on the FAA's Metroplex Project
- Procedure Implementation Schedule
- Changes to Proposed Procedures Based on Community Input
- The FAA's Response to the Roundtable's Comment Letter
- FAA Presentation at the October 12, 2016 Special Roundtable Meeting
- FAA Community Engagement Opportunities
- Questions



- 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 (SoCal) 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 SoCal Metroplex process has resulted in the development of new approach and departure procedures that will change where and how aircraft fly over the Los Angeles Basin





Southern California Metroplex General Study Area



- The FAA initiated the SoCal Metroplex EA process in January 2014
- The FAA briefed key government officials/agencies and solicited input at meetings held in November and December 2014
- On June 8, 2015, the FAA released the Draft Environmental Assessment (EA) with an initial 30-day Public Comment Period, which was extended to October 8, 2015
- Eleven public workshops were held in June and July 2015
- FAA issues a Finding of No Significant Impact/Record of Decision (FONSI ROD) on August 31, 2016



- The SoCal Metroplex EA FONSI ROD:
 - "Documents the FAA's findings that the SoCal Metroplex Project will not have significant environmental impacts and explains the basis for those findings; and,
 - Approves certain Federal actions associated with the implementation of the Proposed Action. Implementation of the Proposed Action will result in no airport-related development, land acquisition, construction, or other ground disturbance activities."
- Any petitions for review of the FONSI ROD must be submitted in the appropriate United States Court of Appeals ". . .no later than 60 days after the order is issued in accordance with the provisions of 49 U.S.C. § 46110.", which is October 31, 2016



- The SoCal Metroplex EA FONSI ROD covers:
 - 37 new RNAV STARs
 - 41 new RNAV SIDS
 - 1 revised No Action RNAV
 - 8 revised No Action RNAV SIDS
 - 3 revised and 21 maintained No Action conventional STARs
 - 1 revised and 41 maintained No Action conventional SIDs
 - 21 RNP approaches
 - 2 Localizer-Performance with Vertical guidance (LPV) approaches
- Initial implementation of these procedures will occur in phases beginning on November 10, 2016 continuing through April 27, 2016



| Phase 1 (Publish on 11/10/16) | |
|--|--------------------------------------|
| 1. BUR ILS Y or LOC Y RWY 08, AMDT 6 (Conventional) | 12. LAX ILS OR LOC RWY 07L, AMDT 8 |
| 2. BUR ILS Z OR LOC Z RWY 08, AMDT 39 (Conventional) | 13. LAX ILS OR LOC RWY 07R, AMDT 7 |
| 3. BUR RNAV (GPS) Z RWY 08, AMDT 2 | 14. LAX RNAV (GPS) Y RWY 06L, AMDT 2 |
| 4. BUR RNAV (RNP) Y RWY 08, AMDT 2 | 15. LAX RNAV (GPS) Y RWY 06R, AMDT 3 |
| 5. BUR VNY WEESL ONE ARRIVAL (RNAV) | 16. LAX RNAV (GPS) Y RWY 07L, AMDT 3 |
| 6. CRQ RNAV (RNP) Z RWY 06, ORIG | 17. LAX RNAV (GPS) Y RWY 07R, AMDT 3 |
| 7. CRQ RNAV/GPS Y RWY 06 ORIG | 18. LAX RNAV (RNP) Z RWY 06L, AMDT 1 |
| 8. LAS STAAV SEVEN DEPARTURE (RNAV) | 19. LAX RNAV (RNP) Z RWY 06R, AMDT 2 |
| 9. LAS TRALR SEVEN DEPARTURE (RNAV) | 20. LAX RNAV (RNP) Z RWY 07L, AMDT 1 |
| 10. LAX ILS OR LOC RWY 06L, AMDT 13 | 21. LAX RNAV (RNP) Z RWY 07R, AMDT 1 |
| 11. LAX ILS OR LOC RWY 06R, AMDT 19 | 22. LAX_SMO WAYVE ONE ARRIVAL (RNAV) |



| Phase 1 (Publish on 11/10/16) | |
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| 23. LGB ILS OR LOC RWY 30, AMDT 33 (Conventional) | 34. SAN LUCKI ONE ARRIVAL (RNAV) |
| 24. LGB RNAV (GPS) Z RWY 30, AMDT 3 | 35. SAN RNAV (GPS) Y RWY 27, AMDT 4 |
| 25. LGB RNAV (RNP) RWY 12 AMDT 2 | 36. SAN RNAV (RNP) Z RWY 27, ORIG |
| 26. LGB RNAV (RNP) RWY 25R, AMDT 1 | 37. SAN SWEETWATER VISUAL RWY 27, AMDT 2 |
| 27. LGB RNAV (RNP) Y RWY 30, AMDT 2 | 38. SAN ZZOOO ONE DEPARTURE (RNAV) |
| 28. LGB VORTAC RWY 30 APCH AMDT 9 (Conventional) | 39. SBA GAUCH ONE DEPARTURE (RNAV) |
| 29. LGB_SNA_SLI_FUL-TOA KAYOH-SIX ARRIVAL (Conventional) | 40. SBA MISHN ONE DEPARTURE (RNAV) |
| 30. ONT/ONT SATELLITE SETER FOUR ARRIVAL (Conventional) | 41. SBA PITBL ONE ARRIVAL (RNAV) (will be designated "Not Available" until the 4/27/16 publication cycle) |
| 31. PSP RNAV (RNP) Z RWY 13R, AMDT 1 | 42. SDM CHASR ONE ARRIVAL (RNAV) |
| 32. SAN BAYVU FIVE STAR (RNAV) | 43. SMO RNAV (GPS) RWY 21, ORIG |
| 33. SAN LOC RWY 27, AMDT 6 | 44. SMO RNAV (GPS) Y RWY 03, ORIG (CAT A-D) |

Source: FAA



| Phase 1 (Publish on 11/10/16) | |
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| 45. SMO RNAV (GPS) Z RWY 03, ORIG (CAT A/B only) | |
| 46. SMO VOR-A, AMDT 11 | |
| 47. SNA RNAV (GPS) Y RWY 02L, AMDT 2 (RNAV/GPS) | |
| 48. SNA RNAV (RNP) Z 02L, ORIG | |
| 49. SNA RNAV (RNP) Z RWY 20R, AMDT 2 | |
| 50. T ROUTE (T-326) RECOMMNEDATION V66 NEW | |
| Phase 1a (Publish on 1/5/2017) | |
| 1. ONT RNAV (RNP) RWY 8L, AMDT 1 | |
| 2. ONT RNAV (RNP) Z RWY 8R, ORIG | |
| 3. ONT RNAV (RNP) Z RWY 26L, AMDT 1 | |
| 4. ONT RNAV (RNP) Z RWY 26R, AMDT 1 | |



| Phase 2 (Publish on 3/2/17) | |
|--|--------------------------------------|
| 1. BUR _VNY JANNY THREE ARRIVAL (RNAV) | 12. LAX CASTA SEVEN DEPARTURE (RNAV) |
| 2. BUR OROSZ ONE DEPARTURE (RNAV) | 13. LAX DOTSS ONE DEPARTURE (RNAV) |
| 3. BUR SLAPP ONE DEPARTURE (RNA | 14. LAX FIXIT FOUR DEPARTURE (RNAV) |
| 4. BUR_VNY ROKKR ONE ARRIVAL (RNAV) | 15. LAX GARDY ONE DEPARTURE (RNAV) |
| 5. BUR_VNY VVERA ONE DEPARTURE (RNAV) | 16. LAX HLYWD ONE ARRIVAL (RNAV) |
| 6. CRQ_LEGOZ ONE ARRIVAL (RNAV) | 17. LAX HOLTZ TWO DEPARTURE (RNAV) |
| 7. LAS BOACH SEVEN DEPARTURE (RNAV) | 18. LAX ILS or LOC RWY 24R, AMDT 25 |
| 8. LAS KEPEC FOUR ARRIVAL (RNAV) | 19. LAX ILS or LOC RWY 25L, AMDT 13 |
| 9. LAX ANJLL ONE ARRIVAL (RNAV) | 20. LAX ILS or LOC RWY 25R, AMDT 18 |
| 10. LAX BIGBR ONE ARRIVAL (RNAV) | 21. LAX KARVR FIVE DEPARTURE (RNAV) |
| 11. LAX BRUEN ONE ARRIVAL (RNAV) | 22. LAX LADYJ ONE DEPARTURE (RNAV) |



| Phase 2 (Publish on 3/2/17) | |
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| 23. LAX MDNYT ONE STAR (RNAV) Added per SoCal Metroplex | 34. LAX RNAV (RNP) Z RWY 24R, AMDT 1 |
| 24. LAX MOOOS ONE DEPARTURE (RNAV) | 35. LAX RNAV (RNP) Z RWY 25L, AMDT 2 |
| 25. LAX MUELR THREE DEPARTURE (RNAV) | 36. LAX RNAV (RNP) Z RWY 25R, ORIG |
| 26. LAX OCEAN THREE STAR (CONVENTIONAL) | 37. LAX SKWRL ONE DEPARTURE (RNAV) |
| 27. LAX OLAAA ONE ARRIVAL (RNAV) | 38. LAX TUSTI ONE DEPARTURE (RNAV) |
| 28. LAX ORCKA ONE DEPARTURE (RNAV) | 39. LAX VISTA THREE STAR (CONVENTIONAL) |
| 29. LAX OSHNN SIX DEPARTURE (RNAV) | 40. LAX ZILLI THREE DEPARTURE (RNAV) |
| 30. LAX PNDAH ONE DEPARTURE (RNAV) | 41. LGB FRITR ONE DEPARTURE (RNAV) |
| 31. LAX RNAV (GPS) Y RWY 24R, AMDT 2 | 42. LGB ZOOMM ONE DEPARTURE (RNAV) |
| 32. LAX RNAV (GPS) Y RWY 25L AMDT 4 | 43. LGB_FUL_SLI_TOA REDHL ONE DEPARTURE (RNAV) |
| 33. LAX RNAV (GPS) Y RWY 25R, AMDT 3 | 44. LGB_SNA DSNEE ONE ARRIVAL (RNAV) |

Source: FAA



| Phase 2 (Publish on 3/2/17) | |
|--|--|
| 45. LGB_SNA ROOBY ONE ARRIVAL (RNAV | 56. SAN SAYOW ONE DEPARTURE (RNAV) |
| 46. NTD_CMA_OXR GUERA ONE ARRIVAL (RNAV) | 57. SAN TOPGN ONE ARRIVAL (RNAV) |
| 47. ONT RAJEE ONE DEPARTURE (RNAV) | 58. SMO BONJO ONE ARRIVAL (RNAV) |
| 48. ONT SNSHN ONE DEPARTURE (RNAV) | 59. SMO CHOII ONE DEPARTURE (RNAV) |
| 49. PSP_UDD_TRM SIZLR ONE ARRIVAL (RNAV) | 60. SMO CTRUS ONE DEPARTURE (RNAV) |
| 50. SAN COMIX ONE ARRIVAL (RNAV) | 61. SMO PEVEE FOUR DEPARTURE (RNAV) |
| 51. SAN ECCHO ONE DEPARTURE (RNAV) | 62. SMO SANTA MONICA ONE DEPARTURE (RNAV) (PROPS) |
| 52. SAN MMOTO ONE DEPARTURE (RNAV) | 63. SNA PIGGN ONE DEPARTURE (RNAV) |
| 53. SAN PADRZ ONE DEPARTURE (RNAV) | 64. SNA PLZZA ONE DEPARTURE (RNAV) |
| 54. SAN PLYYA ONE ARRIVAL (RNAV) | 65. VNY HARYS ONE DEPARTURE (RNAV) |
| 55. SAN SATELLITE CWARD ONE DEPARTURE (RNAV) | 66. VNY ROSCOE ONE DEPARTURE (RNAV) <i>(PROPS)</i> |



| Phase 2 (Publish on 3/2/17) | | |
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| 67. VNY WLKKR ONE DEPARTURE (RNAV) | | |
| Phase 3 (Publish on 4/27/17) | | |
| 1. BUR_SMO_VNY THRNE ONE ARRIVAL (RNAV) | 10. LAX SNSTT ONE ARRIVAL (RNAV) | |
| 2. LAX (RNP) Z RWY 24L, AMDT 2 | 11. LAX TRTON ONE DEPARTURE (RNAV) | |
| 3. LAX CHATY FOUR DEPARTURE (Conventional) | 12. LAX WNNDY ONE DEPARTURE (RNAV) | |
| 4. LAX DARKK ONE DEPARTURE (RNAV) | 13. LAX_HHR CRSHR ONE ARRIVAL (RNAV) | |
| 5. LAX GOATZ ONE ARRIVAL (RNAV) | 14. LAX_HHR IRNMN ONE ARRIVAL (RNAV) | |
| 6. LAX HUULL ONE ARRIVAL (RNAV) | 15. LGB BAUBB1 STAR (RNAV) | |
| 7. LAX ILS or LOC RWY 24L, AMDT 27 | 16. LGB PCIFC ONE ARRIVAL STAR (RNAV) | |
| 8. LAX RNAV (GPS) Y RWY 24L, AMDT 5 | 17. LGB TOPMM ONE DEPARTURE (RNAV) | |
| 9. LAX SMO ZUUMA ONE ARRIVAL (RNAV) | 18. LGB_SNA_FUL_SLI_TOA HAWWC1 ONE DEPARTURE (RNAV) | |



| Phase 3 (Publish on 4/27/17) | |
|--|-------------------------------------|
| 19. ONT EAGLZ ONE ARRIVAL (RNAV) | 30. LAX_SMO_BOGET ONE ARRIVAL (RNAV |
| 20. ONT GLRNO ONE ARRIVAL (RNAV) | |
| 21. ONT KARLB ONE ARRIVAL (RNAV) | |
| 22. ONT SCBBY ONE ARRIVAL (RNAV) | |
| 23. ONT ZIGGY SIX ARRIVAL (Conventional) | |
| 24. SNA FINZZ ONE DEPARTURE (RNAV) | |
| 25. SNA HHERO ONE DEPARTURE (RNAV) | |
| 26. SNA HOBOW ONE DEPARTURE (RNAV) | |
| 27. SNA MIKAA ONE DEPARTURE (RNAV) | |
| 28. SNA OHSEA ONE ARRIVAL (RNAV) | |
| 29. SNA TILLT ONE ARRIVAL (RNAV) | |



- Based on community input, FAA added one new STAR and amended four procedures associated with LAX:
 - New STAR: LAX MDNYT STAR
 - LAX STARs relocated the CLIFY waypoint to remain within historical flight tracks, created DAHJR waypoint to keep altitudes higher than current state until east of Culver City
 - LAX RNP to Runway 06
 - LAX RNP to Runway 07
 - LAX LADYJ SID
- FAA also identified procedures where community-requested changes could not be made



Proposed LAX Midnight Operation



- The Metroplex Team considered community input and developed the MDNYT STAR to replace the current RDEYE STAR for midnight to 6 a.m. local time arrivals to LAX landing on east bound runways.
- The current RDEYE STAR requires aircraft to cross SMO at 8,000 feet and routes aircraft towards Malibu. There are no other altitude restrictions on the RDEYE STAR west of SMO.
- The MDNYT STAR contains an altitude restriction of 8,000 to 10,000 feet over new waypoint CLIFY (colocated with SMO) and a second altitude of 7,000 feet at new waypoint SASSI (over the ocean)
- The lateral track of the MDNYT STAR remains over the ocean and away from Malibu.







- The Metroplex Design Team developed STARs for LAX arrivals landing on west bound runways
- · The current procedure routes aircraft over the SMO ground based navigational aid
- After the Metroplex Team considered community input, CLIFY waypoint (vertical restriction of 7000 through 8000) was repositioned to a point within 120 feet of the SMO ground based navigational aid to remain within historical tracks descending to 7000 feet
- The DAHJR waypoint has a vertical restriction of 6000 feet which will cause arrivals to remain at higher altitudes than current state until east of Culver Citv
- · The Metroplex Design Team reviewed vertical restrictions on the STARs and determined no other changes to the proposed procedure were feasible

FAA NextGEN





Source: FAA







- The Metroplex Team designed the LAX ZUMMA STAR for aircraft landing on eastbound LAX runways, arriving from over the ocean
- Industry representatives requested a runway transition from the WAKER waypoint in order to simplify flightdeck automation.
- The Metroplex team developed runway transitions beginning at WAKER and also added the new waypoint KILIE in order to route LAX arrivals further offshore before beginning turn towards the airport.

FAA NextGEN





Changes Based on Community Input





Source: FAA

FAA Reviewed Community Input, No Change Possible



Proposed Santa Monica (SMO) CTRUS SID



- The SMO_CTRUS SID is for SMO departures from Runway 21
- One of the purposes of the Metroplex Project is to increase efficiency of the NAS by de-conflicting (3 NM required) the departures to the west from the SMO and LAX airports and reducing delays greater than 15 minutes.
- Aircraft depart on runway heading, then make a right turn prior to reaching the shoreline in order to provide required separation between departures from SMO and Los Angeles International Airport (LAX) Runway 24R
- The Metroplex Team considered community input, re-examining the CTRUS SID and determined that due to terrain and separation requirements no changes to the proposed procedure were feasible

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Comments to turn SMO departures sooner or maintain runway heading longer did not meet terrain and departure separation requirements.

Source: FAA



- 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."
- On September 2, 2015, the Roundtable submitted a formal comment letter on the Draft Metroplex EA



- The Roundtable's September 2015 comment letter covered the following topics:
 - Exposing new residential areas to aircraft overflights
 - Lowering aircraft altitudes over communities
 - Concentration of flights
 - Post-implementation adjustments
 - Prior recommendations from September 24, 2012 letter
 - De-confliction of SMO and LAX departures to alleviate departure delays
 - Noise metrics used (CNEL in CA)
 - Information provided in the EA insufficient to assess potential impacts



• Exposing new residential areas to aircraft overflights

 "The noise analysis prepared for the EA determined that the Proposed Action, when compared to the No Action Alternative, would not result in any significant or reportable noise impacts anywhere within the General Study Area."

• Lowering aircraft altitudes over communities

- "In response to community concerns while still meeting the Purpose and Need of the Proposed Action, the FAA has created the MD-NYT STAR procedure to serve LAX during the hours of midnight [to] 6:00 a.m. The MDNYT STAR closely follows the flight tracks of existing procedures and remains within historic flight tracks. The MDNYT STAR allows aircraft to fly up to 2,000' higher as they arrive into LAX."
- "Regarding the LADYJ departure procedure, the FAA evaluated the possibility of increasing the altitude of the procedure at the shoreline, but determined that doing so would create numerous traffic conflictions with other procedures and airspace containment issues."



• Concentration of flights

- "The FAA considered multiple versions of each air traffic procedure before reaching a final design, and several versions did not meet the Project's Purpose and Need as stated in Chapter 2 of the EA document." "Although a minor change to one procedure might alleviate some community concerns, the operational impact of that change on other procedures/routes is often significant. The close proximity of LAX to many other airports also presents a challenge when modifying proposed or existing routes."
- "The noise analysis prepared for the EA determined that the Proposed Action, when compared to the No Action Alternative, would not result in any significant or reportable noise impacts anywhere within the General Study Area. The proposed action procedures were designed wherever possible to remain within the existing historical flight tracks."



• Post-implementation adjustments

- "If the Proposed Action is approved and implemented, the FAA would closely monitor the performance of the new procedures. The FAA is always open to engaging with and developing collaborative and constructive relationships with communities, airports, and governmental officials."
- Prior recommendations from the Roundtable's September 24, 2012 letter
 - "Thank you for providing your recommendations and explaining your noise concerns.
 The FAA received the 2012 letter and considered your recommendations and concerns during the design process."

FAA Briefing to LAWA



• FAA provided LAWA with additional feedback at a recent briefing

- Aircraft altitudes at La Habra Heights cannot be increased as requested due to aircraft the requirement to intercept the glideslope from below for safety
- Waypoints cannot be added at the shoreline as they are too close to the departure starting point. (The purpose of this recommendation was to help pilots identify the shoreline to reduce early turns.)
- No changes to turboprop departure procedures to reroute turboprops off the PV Peninsula. The JEEDD procedure was canceled. Turboprop traffic has declined significantly.



• De-confliction of SMO and LAX Procedures

- "Thank you for your comment. Please see Topical Response 04 LAX-SMO Departure Interactions."
- Excerpt from Topical Response 04: "The designs, while not allowing simultaneous departures from LAX and SMO, allow aircraft to turn away from LAX traffic sooner compared to existing procedures, in order to meet separation requirements. The designs are expected to reduce the number of departure delays above 15 minutes at SMO, reduce frequency of idling aircraft waiting to depart from SMO, and reduce verbal communication among the three FAA air traffic control facilities. This is expected to result in increasing airspace efficiency, which meets the purpose and need of the Project."



- Noise metrics used (CNEL in CA)
 - "Please see Topical Response 10 CNEL and Supplemental Noise Metrics."
 - Excerpt from **Topical Response 10**: "Several commenters noted correctly that FAA Order 1050.1E recognizes the Community Noise Equivalent Level (CNEL) as an alternative metric for California. The intent of recognizing CNEL as an alternative metric was to accommodate airport-related projects subject to review under both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). CEQA requires CNEL, who, [sic] to meet both FAA policy and procedure requirements and State of California requirements. The State of California is the only state that requires local and state agencies to use CNEL when assessing aircraft noise effects. The Southern California Metroplex project is solely sponsored by the FAA and does not involve or require local or state agency decisions; therefore, FAA's use of their primary metric, DNL, is appropriate."



• Information provided in the EA insufficient to assess potential impacts

 "The noise modeling methodology, which included consideration of, among other things, local environmental data such as temperature and humidity, as well as forecasted operations in 2016 and 2021, is discussed in detail in Sections 4.3.1 and 5.1.2 of the EA. Please also see Section 3.2 of the Aircraft Noise Technical Report for a description of the detailed assumptions of the noise model."

FAA Presentation at a Special Roundtable Meeting



- The FAA has offered to attend a Roundtable meeting to discuss the SoCal Metroplex EA
- During the previous agenda item, the Roundtable voted to hold a Special Roundtable Meeting as follows:
 - Date: Wednesday, October 12, 2016
 - Time: 7 to 9 pm
 - Location: Samuel Greenberg Board Room, Clifton A. Moore Administration Building, 1 World Way, Los Angeles, CA 90045

FAA Community Engagement Opportunities



Scheduled Community Engagement

| Airport and Select Government Officials | September 6, 2016 13:00 @ LARO |
|---|---|
| Airport and Select Government Officials | September 7, 2016 09:00 @ LARO |
| Airport and Select Government Officials | September 7, 2016 13:00 @ LARO |
| Community Pre-implementation Meeting | October 25, 2016 D.W. Griffith Middle School (LAX) |
| Community Pre-implementation Meeting | October 26, 2016 Palms Middle School (SMO/Culver City) |
| Community Pre-implementation Meeting | October 27, 2016 Liberty Station-Corky McMillin Event Center (SAN) |
| Community Pre-implementation (Webinar) | October 2016 |
| Community Pre-implementation (Webinar) | October 2016 |
| Community Pre-implementation (Webinar) | October 2016 |
| National Park Service | Coordinating meeting date and location |
| Tribal Representatives | Coordinating meeting(s) date and location |
| | |

FAA NextGEN

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For more information Google SoCal Metroplex EA or go to:

http://metroplexenvironmental.com/socal_metroplex/socal_intr oduction.html

https://www.faa.gov/nextgen/communityengagement/socal/

LAWA will continue to post information on its Metroplex webpage as it becomes available:

http://www.lawa.org/welcome_lax.aspx?id=12168



