



LA/**O**ntarioInternational  
*Los Angeles World Airports*

# LA/Ontario International Airport (ONT) Part 150 Noise Exposure Map (NEM) Update

**Harris Miller Miller & Hanson Inc.**  
**Public Workshop**  
**March 19, 2015**

# Meeting Agenda

- **Noise Exposure Map Background**
  - Federal Regulations/Land Use Compatibility Guidelines
  - Previous Noise Exposure Map
- **Noise Exposure Map Update**
  - Purpose
  - Process and Tasks
  - Land Use Inventory, Aviation Forecasts and Contours
  - Project Schedule and Team
- **Public Review of Noise Exposure Map Update**
  - NEM Documents: Public Review and Comment
  - Public Workshop Stations

# Noise Exposure Map Background

## Federal Regulations



Federal Aviation  
Administration

- **Code of Federal Regulations (14 CFR) Part 150, “Airport Noise Compatibility Planning”**
  - Voluntary federal program providing access to funding
  - Sets national standards for analysis
  - Over 250 airports have participated
- **Two principal Part 150 elements**
  - Noise Exposure Map (NEM)
  - Noise Compatibility Program (NCP)

# Noise Exposure Map Background Federal Regulations



Federal Aviation  
Administration

## The ONT Noise Exposure Map includes:

- Airport layout and airport operation
- Land uses in the airport environs
- Noise/land use compatibility
- Aircraft noise exposure contour maps
  - Base Year (year of submission: 2015)
  - Forecast Year (5-year forecast: 2020)

# Noise Exposure Map Background Federal Regulations



Federal Aviation  
Administration

- **Roles and Responsibilities**
  - **FAA**
    - Funds NEM project
    - “Accepts” NEM
  - **Project Sponsor (LAWA)**
    - Directs NEM update and consultant team
    - Submits NEM to FAA for acceptance



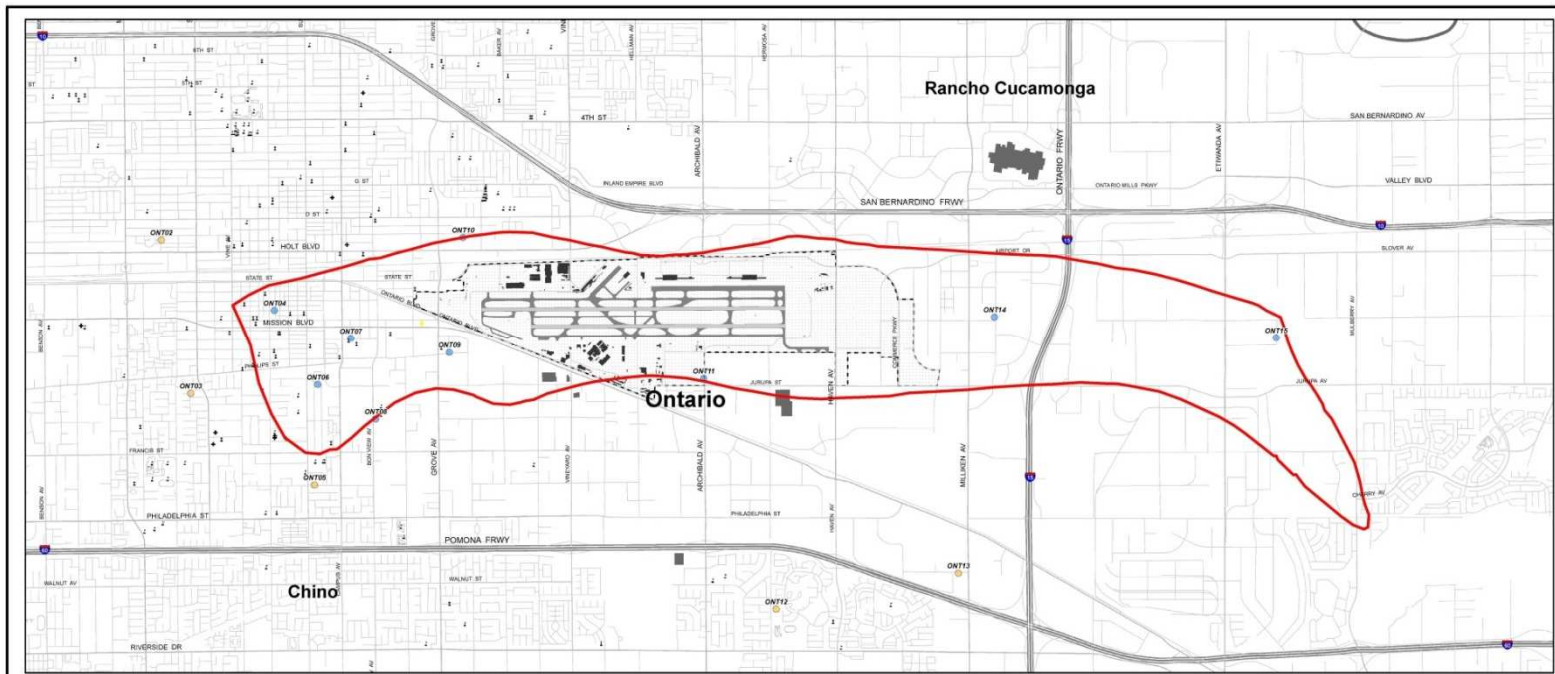
- **Part 150 provides land use compatibility guidelines**
  - All land uses are considered by FAA as compatible with aircraft noise less than CNELE 65 dB
  - Noise sensitive land uses incompatible with aircraft noise of CNELE 65 dB and greater include:
    - Residential
    - Schools and places of worship
    - Nursing homes, hospitals

***CNELE – Community Noise Equivalent Level***

# Noise Exposure Map Background

## Previous Noise Exposure Map

- Los Angeles World Airports (LAWA) completed ONT Part 150 study in 1990 – NEM and NCP
- Federal Aviation Administration (FAA) published the Letter of Acceptance of the NEM in 1991



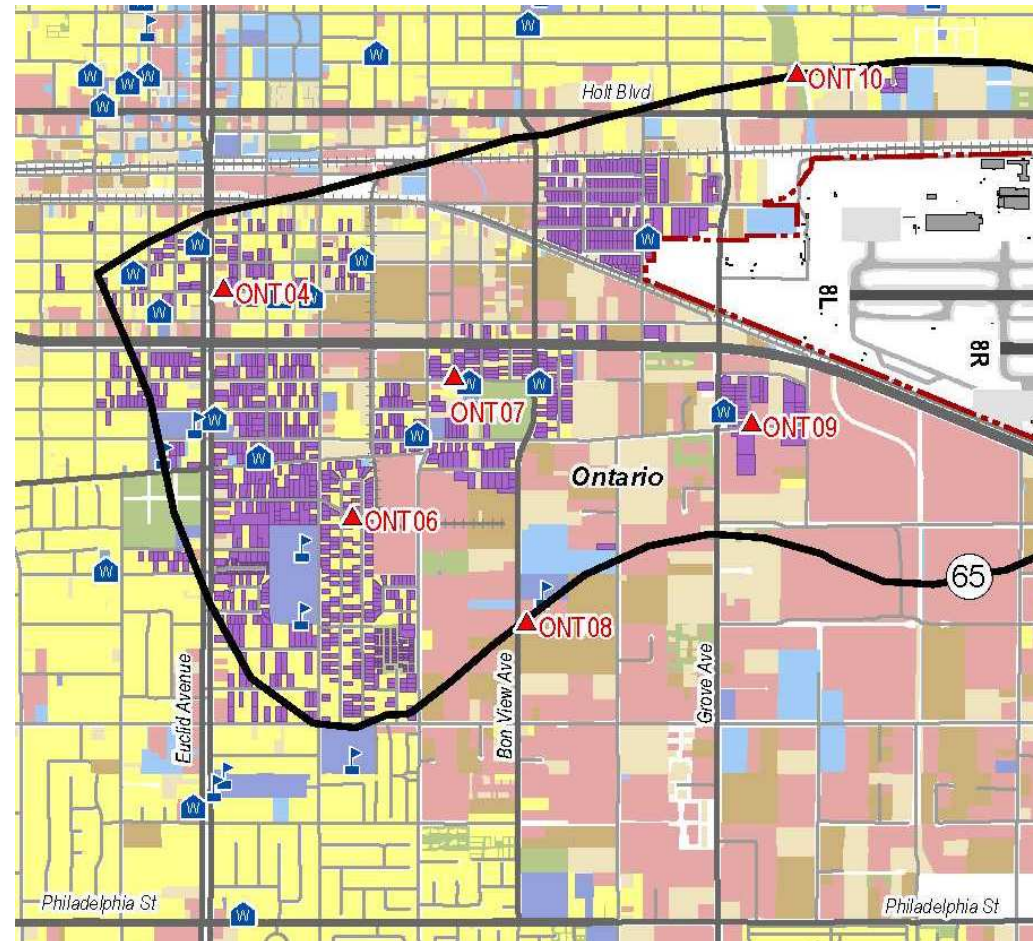
# Noise Exposure Map Background

## Previous Noise Exposure Map - Mitigation

- Managed by City of Ontario Quiet Home Program

### Achievements:

- Sound insulated 1,429 homes
  - FAA AIP funding - \$38 million
  - LAWA funding - \$12 million
- Acquired 316 parcels
  - FAA AIP funding - \$42 million
  - LAWA funding - \$36 million
- Over \$100 million in funding





# Noise Exposure Map Update

## Purpose

- **FAA informed the City of Ontario Quiet Home Program that continued federal funding for noise mitigation requires updated NEMs**
- **According to updated FAA guidelines, an NEM:**
  - **must reflect reasonable representation of current and/or forecast conditions**
  - **must be updated if there is a substantial increase or significant decrease in the noise contour over incompatible land uses**
  - **must be reviewed by airport and verified by FAA/ADO if more than five years old**

# Noise Exposure Map Update Process and Tasks

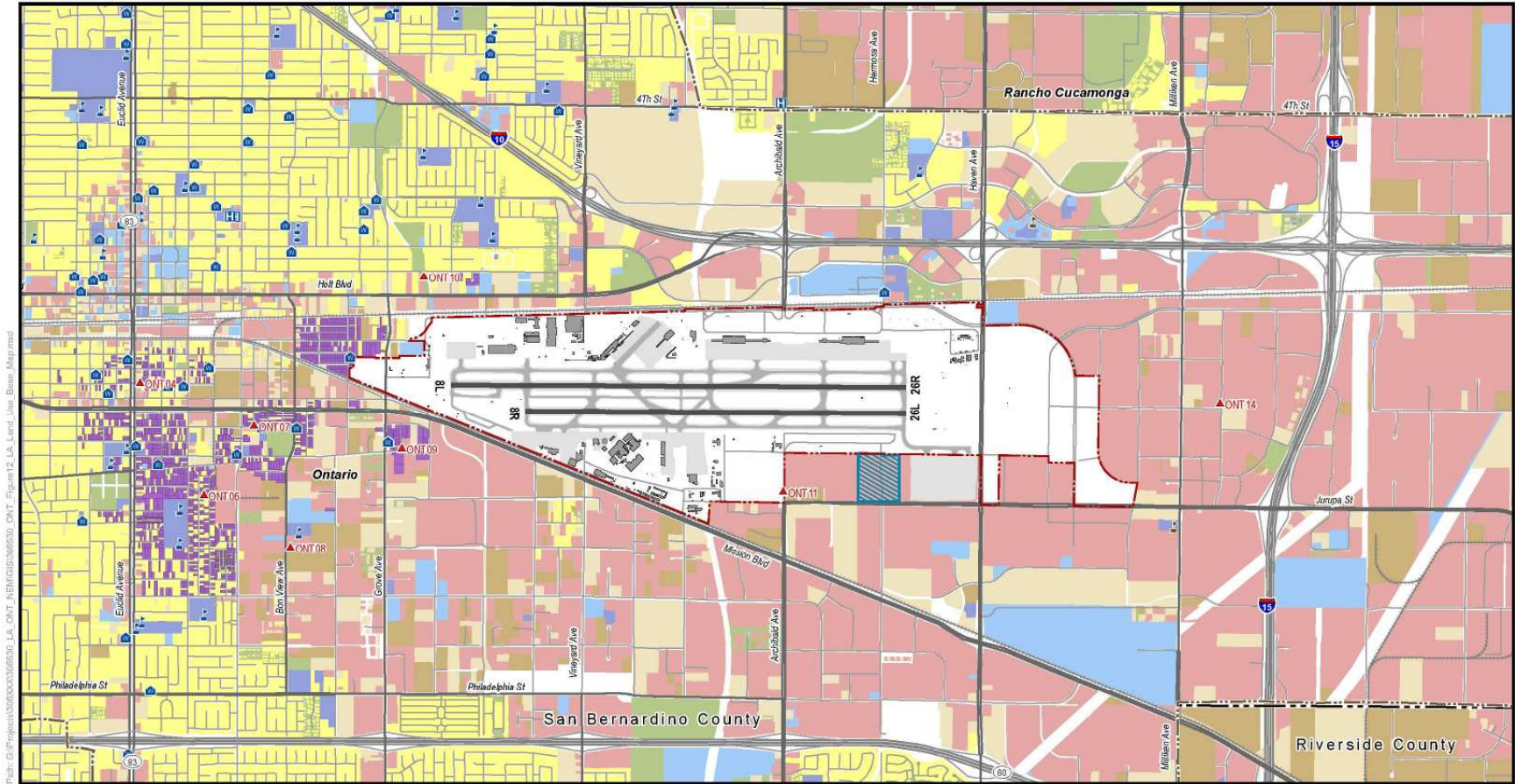
- **Review implementation status of NCP**
- **Obtain airport layout and airport operation**
- **Inventory land use**
- **Collect and process current aircraft operations**
- **Model noise exposure using the FAA-approved forecast of aircraft operations**
- **Develop two noise exposure contour maps**
  - **Year of submission to FAA - 2015**
  - **Five-year forecast - 2020**

# Noise Exposure Map Update

## Land Use Inventory

- **On Airport**
  - **LAWA provided existing airport layout data and expects runway configuration to remain the same through 2020**
- **Communities surrounding airport**
  - **Geo-spatial data in seven land use categories were collected from LAWA, City of Ontario and San Bernardino County:**  
*Residential, Public Use (noise sensitive and non-noise-sensitive uses), Recreational/open space, Commercial use, Manufacturing and Production, and Vacant/undefined*

# Noise Exposure Map Update Land Use Inventory



Path: G:\Projects\306000000\3060530\_ONT\_NENG\GIS\6530\_ONT\_Figure12\_LA\_Land\_Use\_Base\_Map.mxd

Data Source: LARA (Airport Area), June 16, 2014; LARA (Airport Runways), June 16, 2014; LARA (Airport Buildings), June 18, 2014; CAL-Atlas (Schools), March 11, 2014; CAL-Atlas (Prisons), March 11, 2014; CAL-Atlas (Places of Worship), March 11, 2014; CAL-Atlas (County Boundaries), March 10, 2014; Environmental Systems Research Institute Inc. (Hospitals), May 03, 2012; NTRC (Riverside), June 21, 2014; CAL-Atlas (Land Use), March 11, 2014; CAL-Atlas (Parks), March 11, 2014; CAL-Atlas (Local Parks), July 03, 2012; LARA (Aerial Data / Land Use), June 16, 2014; LARA (Municipal Parks), June 16, 2014; Riverside County (Parks Data / Land Use), March 6, 2014  
Prepared By: Harris Miller Miller & Hanson Inc., January 2015

- |   |                              |                          |
|---|------------------------------|--------------------------|
| Noise Monitoring Station (NMS) Location | Residential Use              | School                   |
| ONT Airport Property Boundary           | Public Use 1                 | College                  |
| Runway                                  | Public Use 2                 | Hospital                 |
| Airport Buildings                       | Recreational / Open Space    | Place of Worship         |
| Airport Pavement                        | Commercial Use               |                          |
| Municipal Boundary                      | Manufacturing and Production |                          |
| County Boundary                         | Vacant / Undefined           |                          |
|   | Historic                     | Primary Highways         |
|   | Noise Mitigated Parcel       | Primary Roads & Highways |
|   |                              | Local Roads              |
|   |                              | Railroad                 |

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Figure 12  
Land Use Base Map

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# Noise Exposure Map Update

## Aviation Forecasts

- **Forecasts developed for two calendar year time frames:**
  - **2015 and 2020**
- **Baseline was 2013 operations**
  - **Actual flight tracks and aircraft identification data for all operations captured on ANOMS™**
- **Met with FAA Air Traffic Control Tower**
- **Interviewed aircraft operators including:**
  - **FedEx, UPS, Cinco Air Charter, Guardian Jet Center**

# Noise Exposure Map Update

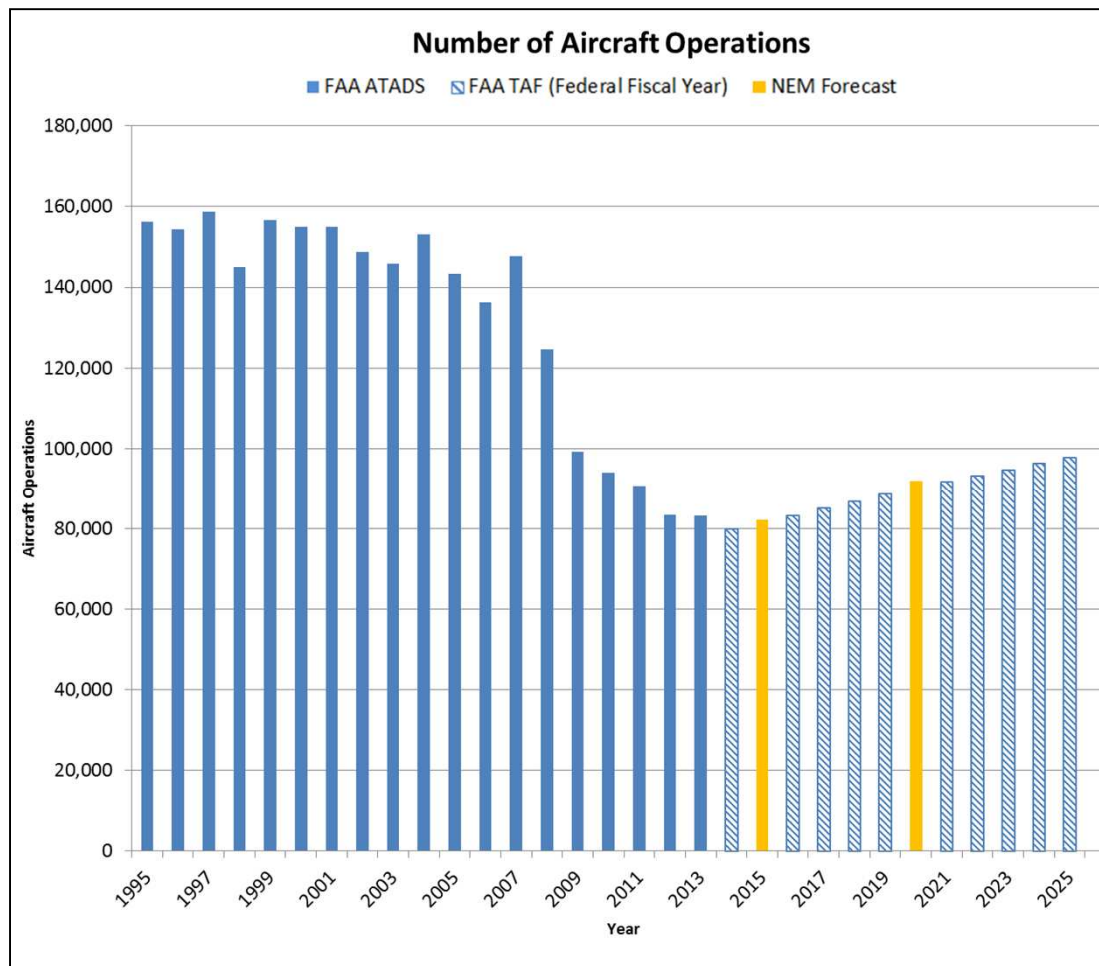
## Aviation Forecasts

- **Conducted analysis of operations data compiled from:**
  - **US DOT T100**
  - **OAG passenger schedules**
  - **FAA tower counts (ATADS)**  
**FAA Terminal Area Forecast (TAF)**
  - **FAA ASDI information via FlightAware.com**
  - **FAA ETMSC (Enhanced Traffic Management System Counts)**
  - **Industry forecasts prepared by:**
    - **Airbus**
    - **Boeing**
    - **FAA**

# Noise Exposure Map Update

## Aviation Forecasts

### Aircraft Operations from FAA ATADS and TAF, and NEM Forecast



# Noise Exposure Map Update

## Aviation Forecasts

### NEM Forecast Aircraft Operations

Aircraft Category	2015 Operations	2020 Operations	Average Annual Growth Rate
Passenger	45,469	53,436	3.3%
Cargo Jet	11,576	12,444	1.5%
Cargo Feeder	8,969	8,993	0.1%
General Aviation	16,050	17,033	1.2%
<b>Total</b>	<b>82,063</b>	<b>91,906</b>	<b>2.3%</b>

*Note: Totals may not add up due to rounding*

- **NEM forecast operations approximately 1% above FAA TAF (prepared in 2014)**
- **FAA approved forecasts on August 28, 2014**



# Noise Exposure Map Update

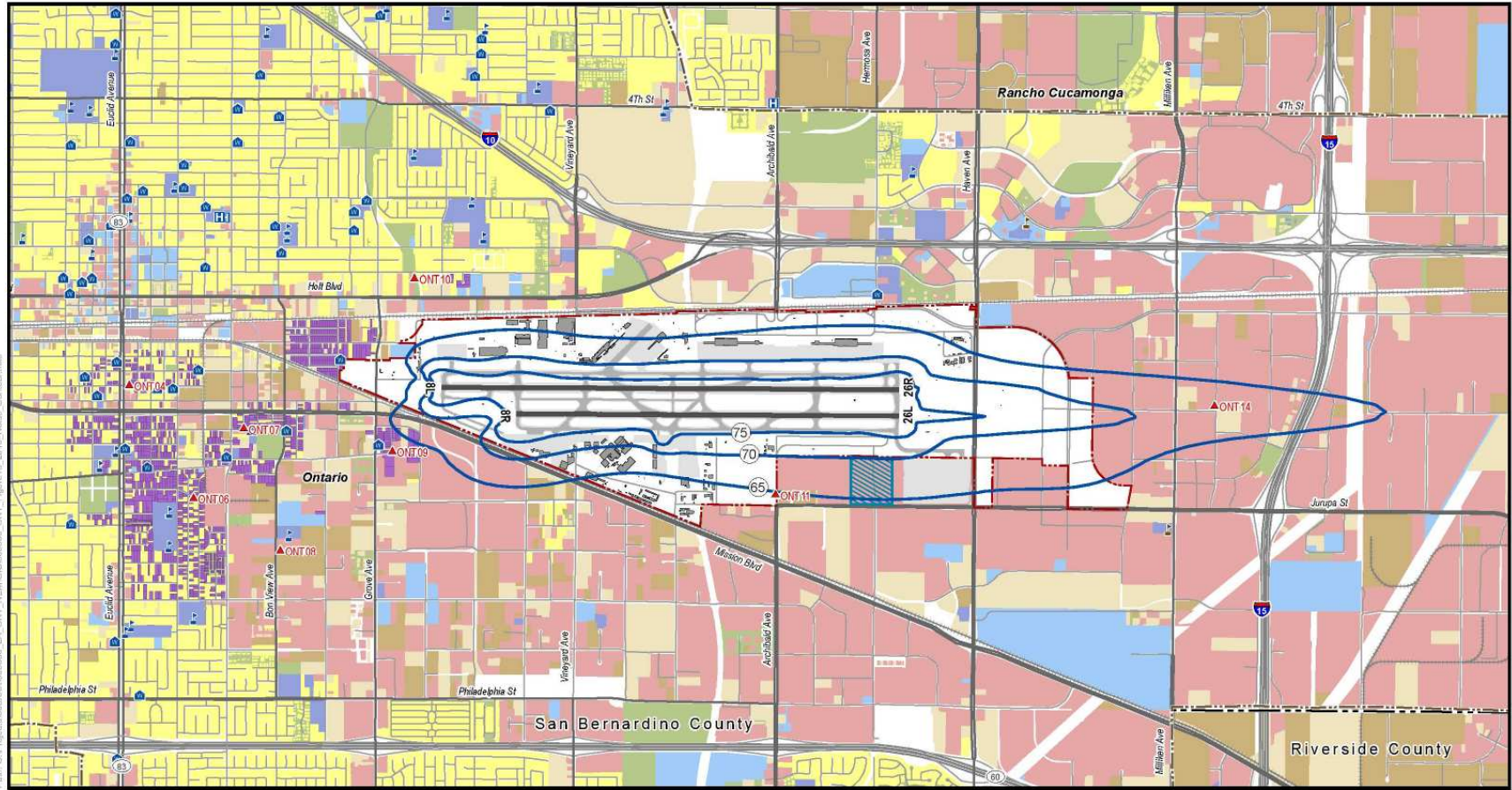
## Aviation Forecasts – Fleet Mix

- **Phase out of Stage 2 aircraft > 75,000 pounds by end of 1999**
  - B-727, B-737 (older series), DC-8, DC-9
- **Retirement of most Stage 2 aircraft that were certified as Stage 3 using “hushkits”**
- **Changes anticipated between 2015 and 2020**
  - FedEx MD-10/DC-10 aircraft retired
  - MD-80 operations replaced with quieter B-737 aircraft

# Noise Exposure Map Update Contours

- **FAA Integrated Noise Model (INM) v. 7.0d**
  - **Runway configuration (no changes)**
  - **Aircraft operations forecast and fleet mix approved by the FAA**
  - **RealContours™ to process all radar tracks, derive runway use and model each individual flight track**
  - **Aircraft specific noise and performance characteristics within the INM**
  - **Terrain and average meteorological data**

# Noise Exposure Map Update Contours - 2015



Path: G:\Projects\306000000\3060530\_LA\_ONT\_NEM\GIS\3060530\_ONT\_Figure13\_2015\_Noise\_Contours.mxd

Data Source: LARA (Airport Area) - June 10, 2014; LARA (Airport Runways) - June 10, 2014; LARA (Airport Buildings) - June 10, 2014; CAL Atlas (Schools) - March 11, 2014; CAL Atlas (Hospitals) - March 11, 2014; CAL Atlas (Places of Worship) - March 11, 2014; CAL Atlas (County Boundaries) - March 10, 2014; Environmental Systems Research Institute, Inc. (Roads) - May 03, 2012; NTA (Railroads) - June 02, 2014; CAL Atlas (Aerial) - March 11, 2014; CAL Atlas (Paved) - March 11, 2014; CAL Atlas (Local Parks) - July 03, 2012; LARA Parcel Data / Land Use - June 10, 2014; LARA (Moguel's Parcel) - June 10, 2014; Riverside County Parcel Data / Land Use - March 5, 2014  
Prepared By: Harris Miller Miller & Hanson Inc., January 2015

- Existing 2015 NEM Contour (65-75 dB CNEL)
- Noise Monitoring Station (NMS) Location
- ONT Airport Property Boundary
- Runway
- Airport Building
- Airport Pavement
- Municipal Boundary
- County Boundary
- Residential Use
- Public Use 1
- Public Use 2
- Recreational / Open Space
- Commercial Use
- Manufacturing and Production
- Vacant / Undefined
- Historic
- Noise Mitigated Parcel
- School
- College
- Hospital
- Place of Worship
- Primary Highways
- Primary Roads & Highways
- Local Roads
- Railroad

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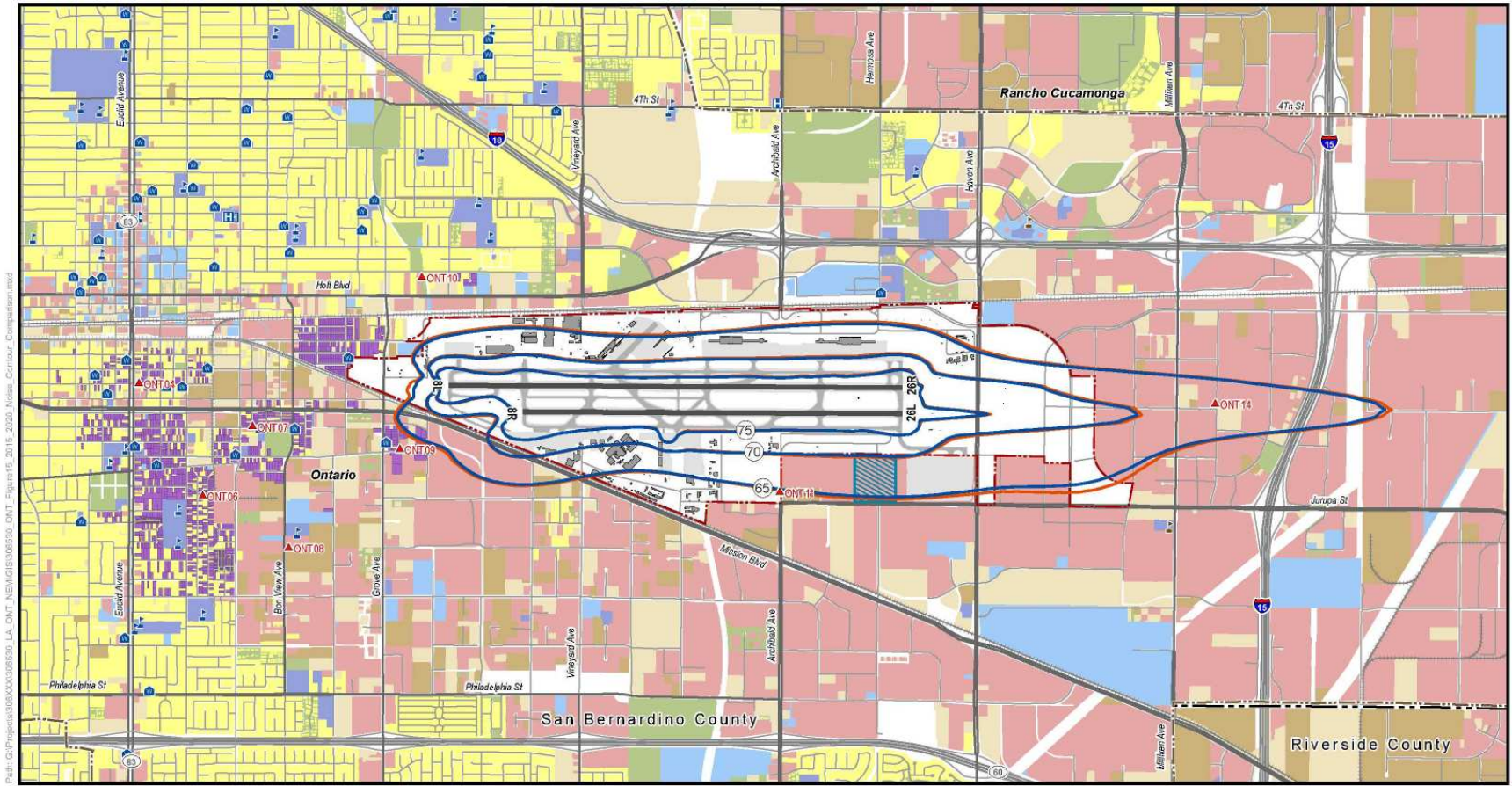
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Figure 13  
Existing Conditions (2015) Noise Exposure Map

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# Noise Exposure Map Update Contours – Comparison of 2015 and 2020



Path: G:\Projects\3083000\3083000\3083000\_LA\_DNT\_NEM\GIS\061530\_LA\_DNT\_NEM\GIS\061530\_DNT\_Figures\15\_2020\_Noise\_Contour\_Comparison.mxd  
 Data Source: LARA (Airport Area), June 10, 2014; LARA (Airport Runway), June 10, 2014; LARA (Airport Surroundings), June 10, 2014; CAL Atlas (Schools), March 11, 2014; CAL Atlas (Hospitals), March 11, 2014; CAL Atlas (Places of Worship), March 11, 2014; CAL Atlas (County Boundaries), March 11, 2014; Environmental Systems Research Institute, Inc. (Roads), May 03, 2012; NCTD (Roadways), June 29, 2014; CAL Atlas (Railroads), March 11, 2014; CAL Atlas (Highways), March 11, 2014; CAL Atlas (Local Parks), May 03, 2012; LARA Parcel Data (Land Use), June 10, 2014; LARA (Municipal) Parks, June 10, 2014; Riverside County Parcel Data (Land Use), March 2, 2014  
 Prepared By: Harris Miller Miller & Hanson Inc., January 2015

- |   |                              |                          |
|---|------------------------------|--------------------------|
| Existing 2015 NEM Contour (65-75 dB CNEL) | Residential Use              | School                   |
| Forecast 2020 NEM Contour (65-75 dB CNEL) | Public Use 1                 | College                  |
| Noise Monitoring Station (NMS) Location   | Public Use 2                 | Hospital                 |
| ONT Airport Property Boundary             | Recreational / Open Space    | Place of Worship         |
| Runway                                    | Commercial Use               |                          |
| Airport Buildings                         | Manufacturing and Production |                          |
| Airport Pavement                          | Vacant / Undefined           |                          |
| Municipal Boundary                        | Historic                     | Primary Highways         |
| County Boundary                           | Noise Mitigated Parcel       | Primary Roads & Highways |
|   |                              | Local Roads              |
|   |                              | Railroad                 |

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
Figure 15  
Comparison of Existing (2015) and Forecast (2020) Conditions Noise Exposure Map

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# Noise Exposure Map Update

- **No incompatible parcels within the 2015 and/or 2020 Noise Exposure Maps**

# Noise Exposure Map Update Project Schedule

Date	Milestone
March 2014	Project Kickoff
May 2014	Public Workshop 1 – project introduction and public input
August 2014	Develop forecast of aircraft operations and noise model inputs
November 2014	Draft NEM contours
December 2014	Draft NEM report
January 2015	Submit draft study to FAA for review
 March 2015	30-day public review period Public Workshop 2 – present results
June 2015	Submit NEM update to FAA for acceptance

# Noise Exposure Map Update

## Project Team

- **LAWA Staff**
  - **Jess Romo – Airport Manager**
  - **Scott Tatro – Airport Environmental Manager**
  - **Kathryn Pantoja – Environmental Affairs Officer**
  - **David Chan – LAWA Project Manager**
- **Consultant Team Members**
  - **HMMH – Project Management/NEM Development**
    - **Gene Reindel, Bob Behr, Rhea Gundry**
  - **ICF/SH&E (forecasting)**
    - **Peter Stumpp**
  - **CommuniQuest (outreach)**
    - **Christine Eberhard**



# Public Review of Noise Exposure Map Update Document

1. **LAWA Website:** <http://www.lawa.org/ONTPart150.aspx>
2. **Airport Administration Office**  
1923 E. Avion Ave, Ontario 91761
3. **Ovitt Family Community Library**  
215 East C St, Ontario 91764
4. **Ontario Quiet Home Program Office**  
Ontario Housing and Municipal Services  
208 W. Emporia St, 2<sup>nd</sup> Floor, Ontario 91762
5. **Colony High Branch Library**  
3850 East Riverside Dr, Ontario 91761

# Public Review of Noise Exposure Map Update Comments

- **Written comments**
  - **Submit to Comment Station**
  - **Mail to:** LA/Ontario International Airport NEM Update Comments  
c/o David Chan  
Los Angeles World Airports  
Environmental Services Division  
P.O. Box 92216  
Los Angeles, CA 90009-2216
  - **Email to: [ontpart150nemupdate@lawa.org](mailto:ontpart150nemupdate@lawa.org)**
- **Website**
  - <http://www.lawa.org/ONTPart150.aspx>
- **Comment line**
  - **Toll-Free Line: 1-855-279-4698**

# Public Review of Noise Exposure Map Update

## March 19, 2015 Public Workshop Stations

- **Part 150 regulation and NEM Update process**
  - Rhea Gundry (HMMH)
- **NEM Update Results**
  - Bob Behr (HMMH)
- **Aircraft operations forecasting**
  - Peter Stumpp (ICF/SH&E)
- **Public comments**
  - Christine Eberhard (CommuniQuest)