



The Gateway Cities  
**Air Quality Action Plan**

## AQAP Advisory Roundtable—September 15, 2011 Meeting Summary

**Location:** Gateway Cities Council of Governments  
16401 Paramount Blvd.  
Paramount, CA 90723

**Time:** 5:00 PM to 8:30 PM

**Invited Participants (highlighted names were in attendance)**

**Academic & Educational**

Brian Cole, UCLA School of Public Health  
Norm Kirschenbaum, Tri-Cities Regional Occupational Program  
Joe Magaddino, California State Univ. Long Beach

**Community Representatives**

Diana del Pozo-Mora, Mothers of East LA  
Juan Diaz, Our Lady of Lourdes Church  
Joan Greenwood, West Long Beach Neighborhood  
Richard Havenick, Port Community Advisory Committee, POLA  
Harold Tseklenis, Downey Community Representative

**Environmental**

Luis Cabrales, Coalition for Clean Air  
Robert Cabrales, Communities for a Better Environment  
Amanda Eaken, Natural Resources Defense Council  
Adrian Martinez, Natural Resources Defense Council (Alternate)  
Angelo Logan, East Yard Communities for Environmental Justice  
Jesse Marquez, Coalition for a Safe Environment

**Public Health Advocates**

John Miller, Physician  
Elisa Nicholas, LBACA

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Jessica Tovar, LBACA  
Neal Richman, Breathe California of Los Angeles County  
Paul Simon, LA County Department of Public Health  
Zahirah Washington Mann, Legal Aid Foundation Los Angeles  
Malcolm Carson Legal Aid Foundation Los Angeles

**Private Sector**

Victor Caballero, Express Transportation Services  
TL Garrett, Pacific Marine Shipping Association  
Marisa Olguin, Vernon Chamber of Commerce  
Patty Senecal, Western States Petroleum Association

**Public Sector**

Richard Cameron, Port of Long Beach  
Peter Greenwald, SCAQMD  
Susan Nakamura, SCAQMD (Alternate)  
Christopher Patton, Port of Los Angeles  
Zorik Pirveysian, Port of Los Angeles  
Alan Hicks, U.S. Department of Transportation  
Cynthia Marvin, Air Resources Board

**At-Large**

Alex Cherin, Englander, Knabe & Allen  
Andrea Hricko, University of Southern California  
Alex Pugh, Southern California Edison  
Lupe Valdez, Union Pacific  
Max Pike, California Environmental Associates  
Elizabeth Warren, FuturePorts

**Project Team:**

**GCCOG:** Jerry Wood, Karen Heit

**Metro:** Adrian Alvarez, Danielle Valentino

**ICF Team:** Scott Broten (ICF), Ed Carr (ICF), Andrew Papson (ICF), Jonathan Heller (HIP), Susan DeSantis (AA), Chester Britt (AA), Maria Yanez-Forgash (AA), Kristen Torres (AA), Greg Andrade (AA); Elizabeth Hansburg (AA)

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**Agenda**

**I. Opening Comments and Introductions**

*Susan DeSantis, Arellano Associates*

Ms. DeSantis welcomed the roundtable members and thanked them for their dedication and participation in this process to improve air quality in the Gateway Cities.

**II. Agenda Overview**

Ms. DeSantis provided an agenda overview. She noted that, in addition to several oral reports and presentations, the meeting was to include an in-depth discussion of the I-710 Health Impact Assessment (HIA) Noise Chapter findings and preliminary recommendations. She described the time line for the participation framework, explaining that the I-710 products would be completed by the end of October so that they could be submitted to the I-710 EIR/EIS Team in early November. After these documents have been submitted, she said, the Committee will turn its attention to the Health Impact Assessment. This introduction was followed by a discussion of possible additional meetings and dates.

**III Oral Reports**

**A. Construction Phasing and Staging Emissions**

*Ed Carr, ICF International*

Mr. Carr began by outlining the key assumptions, the most important being the length of time to build, 17 years, and the breakdown of the construction process into segments. From this, Mr. Carr was able to develop an estimate of monthly emissions for each segment, and a sum total for the life of the project. Mr. Carr described the spreadsheet model used to estimate the construction vehicle emissions, specifically NO<sub>x</sub>, based on the equipment used. He also described the PM<sub>10</sub> and PM<sub>2.5</sub> emissions generated by fugitive dust during the land clearing and grading at the start of construction. His recommendations included ways to reduce NO<sub>x</sub> emissions by using newer construction equipment. To reduce PM<sub>10</sub> and PM<sub>2.5</sub> emissions, he recommended that construction take place in smaller work areas, thus disturbing the land in smaller pieces, and keeping the soil wet using water or surfactants to prevent it from becoming airborne.

*Discussion: At the conclusion of Mr. Carr's presentation, several members asked questions regarding the assumption in the model that the construction fleet would change every year. They asked if the assumption was that the construction fleet would always be the newest, state-of-the-art equipment and therefore have lower emissions. Mr. Carr explained that this change in fleet reflects what happens over the course of a long duration project and this is a standard feature of CARB's OFFROAD model. He explained that because of the economic recession, new construction equipment is not available as quickly as the model had originally assumed. This new parameter was introduced and while emissions are likely to remain higher from construction equipment, this will be counteracted to some degree by the decrease in truck volume and emissions also because of the economic recession.*

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**B. Noise Chapter of the Health Impact Assessment.**

*Jonathan Heller, HIP*

Mr. Heller began by outlining how sound is measured and the notation used to describe it. He outlined FHWA and Caltrans' noise guidelines. Mr. Heller explained that noise measurements are collected at sensitive receptor sites such as hospitals, daycare centers, libraries, etc., per Caltrans policy. He emphasized the difference between noise production and noise exposure, and further explained that the noise as heard at any one location is a function of the force with which the sound is being produced at the source, the distance from the source to the location, and the physical barriers between the two. Next, Mr. Heller described the five health conditions that are linked with noise exposure using examples from public health literature: annoyance, sleep disturbance, heart disease, academic achievement, and hearing loss.

Mr. Heller said that his projections of the change in magnitude of noise emissions for each the I-710 EIR/EIS alternatives were hampered by the lack of noise modeling data available from Caltrans. He explained that the Early Action Report recommended sound walls as a way to reduce exposure to freeway noise, but at this point no decision has been made on whether or where the project will include additional sound walls. Despite the lack of available data, Mr. Heller was able to generally predict the impact (positive or negative) and severity of the health outcomes and to show the strength of the causal relationships reflected in the literature. Mr. Heller reviewed the Preliminary Recommendations in which he recommended further analysis and noise modeling in the 710 Corridor and using the results to predict changes in health outcomes. His recommendations also included land use planning and design mitigation techniques.

*Discussion: The discussion immediately following the presentation focused on soundwalls. Members were curious to know how much of the I-710 freeway is flanked by soundwalls, and all saw the value of placing a land use layer on the GIS map that Mr. Heller created containing the Caltrans noise level measurements. Adrian Alvarez informed the Committee that Metro is funding a study to see what areas are missing soundwalls and the feasibility of building them. One member was concerned because the study that Mr. Heller has undertaken only estimates the noise in the year 2035, but there is no projection of the noise exposure and impact for the 17-year construction period.*

*Roundtable members asked Mr. Heller to elaborate on the “noise mitigation techniques for cargo handling equipment” as a proposed solution (slide 28). Mr. Heller gave one past such mitigation and agreed to conduct research to be more specific. One member suggested the need for a sound engineer to do a detailed study of the conditions and make specific recommendations. This idea was supported by many roundtable members, as was the suggestion to develop an ongoing noise-monitoring plan for areas along the I-710 corridor. It is expected that these two ideas would be added to the Noise chapter as additional recommendations.*

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**IV. Roundtable Discussion on the Health Impact Assessment (HIA) Noise Effects**

Ms. DeSantis outlined the following questions for the Roundtable Discussion:

1. What is noise to you? (*Discuss sound thermometer on projector screen— from your perspective, and review World Health Organization guidelines and FHWA/Caltrans standards*)
2. Were the current noise conditions accurately described in the presentation? (*Discuss the Existing Conditions slide*)
3. Are there other major noise sources that have not been identified?
4. Brainstorm noise reduction measures (*Review the HIP Noise Recommendations; Is anything missing? Should any of the recommendations be changed?*)

The Roundtable broke into four discussion group tables to further consider the Noise chapter. (See Attachment to the Meeting Summary for Roundtable Reports.)

**V. Presentations**

**A. Near-Roadway Monitored to Modeling Final Comparison Report Findings**

*Ed Carr, ICF*

Mr. Carr began by reviewing the purpose of this portion of the study, which is to compare the modeling used in the I-710 EIR/ EIS with observed air quality data. He explained which observed data set was used and the necessary adjustments made to the EIR/EIS model to enable the comparison. Mr. Carr explained how the statistical analysis generated scatter plots for NO<sub>x</sub> and CO separately and Q-Q plots of both emission types in winter and summer seasons. The results of the analysis showed poor correlation, as is typical with these kinds of studies. The poor correlation most likely stems from the uncertainty of traffic volumes, specifically trucks. This uncertainty was remedied to some degree by a later comparison Mr. Carr ran of new weight-in-motion data and the EIR/EIS modeling. Mr. Carr explained that knowing the hourly truck volumes contained in weight-in-motion data made a big improvement in the model's correlation measure.

Discussion: *At the conclusion of this presentation, one member suggested that Mr. Carr consider the work of Yifang Zhu, PhD., a professor at UCLA's School of Public Health. Another member requested a peer review of the methodology used to predict emissions because the projections may be considered by Caltrans as a basis for policy decision making. Ms. DeSantis responded that the Project Team was seriously considering the recommendation for peer review of the methodology.*

**B. Ultrafine Particles Near Roadways**

*Ed Carr, ICF*

This presentation was given as an introduction to familiarize committee members with the properties of ultrafine particles found near roadways. It was not a study of the health impacts of ultrafine particles near the I-710 freeway. Mr. Carr reviewed the characteristics of ultrafine

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particles and processes that create them. He explained that vehicle exhaust pipes are the main source of ultrafine particles in an urban environment. In addition, heavy-duty diesel trucks emit significantly higher levels of emissions than light-duty trucks over the same distance. However, as the distance from the roadway increases, the level of ultrafine particles falls rapidly, reaching background levels within 200 to 300 meters in a downwind urban environment. Lastly, he reviewed ultrafine data specific to the L.A. region and proposed regulations and questions for further study.

*Discussion: At the conclusion of his presentation, Mr. Carr responded to questions on specific ways to reduce emissions, noting that at this point diesel particulate traps are the best technology for reducing the emission of ultrafine particles. When used in conjunction with oxidation catalyst techniques, they are even more effective. The group then speculated on whether the danger of ultrafines comes from their small size or their chemical composition. One member shared expertise and said that the high surface area characteristic of ultrafine particles is also a source of toxicity.*

### **VII. Public Comments**

There were no public comments.

### **VIII. Wrap Up and Next Steps**

Ms. DeSantis briefed group on upcoming dates and the project's time line.

### **IX. Adjournment**

The meeting adjourned at 8:30 PM.

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**Roundtable Reports:**

Table #1 (Facilitator: Chester Britt)

- Support two meetings in Oct to cover HIA findings
- Support webinars for each of the HIA topics and to record and post online.

Notes:

1. What is noise to you?
  - a. Reviewed thermometer noise graphic.
    - i. Add things that relate directly to I-710 expansion project.
      1. Truck acceleration/deceleration
      2. Truck braking or honking horn
    - ii. Incorporate OSHA standards.
    - iii. Add description of exponential nature of noise.
    - iv. Add description of human perception (frequency) and sensitivity (decibels) to noise.
  - b. Review Caltrans vs. WHO standards.
    - i. Where did levels chosen as thresholds come from? What is research and rationale for these?
    - ii. More explanation needed on significance of these standards for understanding the context.
2. Were the current noise conditions accurately described in the presentation?
  - a. Reviewed Caltrans noise monitoring map.
    - i. Why are measurements in South Gate so high?
    - ii. Should add other significant fixed noise sources to help explain levels measured.
3. Brainstorm on noise reduction measures.
  - a. Get details on types of materials Caltrans is considering to use for soundwalls and other specifications such as height limitations.
    - i. Other countries like Japan use perforated panels and flared tops to contain the sound.
    - ii. What other things besides soundwalls should Caltrans consider?
  - b. When recommending new technologies, HIP should do research and be more specific.
  - c. Recommendations should be related more to the other chapters of the HIA so any changes to those areas are clearly seen.
  - d. Recommendation to use zero emission noise vehicles to also help mitigate engine noise.
  - e. The best way to mitigate noise is in the design of the freeway:
    - i. Consider using rubberized asphalt
    - ii. Consider minimizing grade changes that cause acceleration/deceleration
    - iii. Limiting curves

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- f. Consider softscape improvements like landscaping which also has air quality and aesthetic benefits.
- g. Do additional research on emerging and other new technologies that could be brought forward by trucking industry to reduce noise.
- h. Is HIP conducting a cost benefit analysis of the recommendations?
- i. Even if you do all on-dock transfers in 2035 you still will have increases in truck traffic that you have to mitigate.

Table #2 (Facilitator: Elizabeth Hansburg)

- In support of additional meetings & webinar
  - REQUESTS THAT MEETINGS BE VARIED IN THEIR MEETING TIMES; not all in the morning, afternoon, or evening. Diversifying the times will enable more people to participate
- This group skipped question #1

Notes:

1. Question #2: Were the current noise conditions accurately described in the presentation?
  - a. Not for Bixby Knowls; it's louder than what is displayed on the map.
    - i. Makes the outdoor spaces (parks, yards) uncomfortable.
  - b. One member is not convinced that the decrease in noise follows the formula 3 decibels/ X distance from the highway used.
    - i. Surface type, elevation, weather, and physical barriers all play a role.
    - ii. Members calls for additional sampling at sensitive receptor sites.
      1. Study should consult sound engineer to determine how far out to collect data.
    - iii. Since mitigation measures are based on the numbers collected, we need to be very sure that they are accurate.
  - c. Current report only addresses the noise level as measured in decibels; does not take into account the characteristics of the noise.
    - i. The type, frequency, and duration all play a role in how tolerable the noise is.
      1. Hummm.... of the freeway v. Ka-chink, Ka-chink, Ka-chink... of trucks over speed bumps.
2. Question #3: Brainstorm on Noise reduction measures. Anything missing?
  - a. Soundwalls need to be on both sides of the same stretch of freeway.
    - i. If soundwall is only on one side, it makes the noise worse on the opposite side.
  - b. Report has the potential to include specific measures, but doesn't.
    - i. Group calls for report to specify more examples of technology that would be used to mitigate the health effects of noise exposure.

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- c. Report needs to have a clear prioritization of mitigation measures
  - i. Some mitigation measures are personal choices/ responsibilities
    - 1. Example: installing double paned windows in your home as a noise reduction method
  - ii. Some are collective / government responsibilities
  - iii. Example: Soundwalls
  - iv. Report needs to rank order the mitigation measures from broadest (government) to narrowest (personal) responsible party, and (general idea of) the necessary engineering.

Table #3 (Facilitator: Scott Broten)

- Table supports additional meetings & webinar
  - REQUESTS THAT SLIDES BE AVAILABLE AHEAD OF TIME for people who cannot make it to meeting
- This table skipped Question #2

Notes:

1. Question #1: What is noise to you?
  - a. The type of noise is important
    - i. Quality of noise is not necessarily measured in decibels.
    - ii. Investigating the type of noise at the sensitive receptors gives an evaluation of the noise exposure at specific locations.
    - iii. Consistent noise is less disrupting than abrupt noise.
  - b. People react differently to various types of noise; individual variation.
    - i. Chronic exposure elevates stress hormones.
2. Question #3: Brainstorm on Noise Reduction Measures. Anything missing?
  - a. Is there anything more in the research literature?
    - i. Caltrans needs to fund more analysis of the research and technology available.
      1. Group suggests doing an international research literature review.
      2. Soundwalls (most common mitigation here) only achieve a 5 to 10 decibel decrease.
  - b. Local climate factors affect noise levels.
    - i. Is this reflected in the Caltrans noise sampling?
  - c. Use alternative building materials; absorptive panels.
    - i. Very expensive
    - ii. Noise absorption v. deflection determines the impact of various materials
    - iii. Need to look into windows as a mitigation measure

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Table #4 (Facilitator: Andrew Papson)

- Supportive of additional meetings and webinar

Notes:

1. Question #1: What is noise to you? Discuss the thermometer.
  - a. Does not take into account irregular noises such as trains.
  - b. Does not address day and night time thresholds.
2. Question #2: Were the current noise conditions accurately described in the presentation?
  - a. Caltrans data as displayed on map seems reasonable.
  - b. Map could have more detail on it to identify sensitive receptors.
    - i. This could help match the sensitive receptor sites to the priorities.
3. Question #3: Brainstorm noise reduction measures:
  - a. Recommend elaborating on the recommendations that have co-benefits between noise reduction and health.
    - i. This could help prioritize mitigation efforts.
  - b. More detail on zoning options.