

## **State of California**

### **ENVIRONMENTAL PROTECTION AGENCY DEPARTMENT OF TOXIC SUBSTANCES CONTROL SB 673: CUMULATIVE IMPACTS AND COMMUNITY VULNERABILITY SYMPOSIUM**

#### **MEETING SUMMARY**

July 27, 2017

9:00 a.m. to 4:00 p.m.

South Coast Air Quality Management District  
Auditorium  
21865 Copley Drive  
Diamond Bar, California

888-790-1885, Passcode 1663094

#### Presenters/Panelists in Attendance:

Álvaro Alvarado, Ph.D., California Air Resources Board (CARB)  
Brian Dyson, Ph.D., Operations Research Analyst, Office of Research and Development, United States Environmental Protection Agency (USEPA)  
Rick Fears, P.G., Senior Engineering Geologist, California Department of Toxic Substances Control (DTSC)  
Shannon Griffin, Office of Research and Development, USEPA  
Charles Lee, Senior Policy Advisor for Environmental Justice, USEPA  
Melissa Lunden, Ph.D., Chief Scientist, Aclima, Inc.  
Jesse Marquez, Executive Director, Coalition for a Safe Environment  
Mohsen Nazemi, Deputy Director, Brownfields Environmental Restoration, DTSC  
Kevin Olp, Program Manager, Environmental Task Force, California Environmental Protection Agency (CalEPA)  
Andrea Polidori, Ph.D., Atmospheric Measurements Manager, South Coast Air Quality Management District (SCAQMD)  
Andrew Slocombe, Research Scientist, California Office of Environmental Health Hazard Assessment (OEHHA)  
Gina Solomon, M.D., M.P.H., Deputy Secretary for Science and Health, CalEPA  
Robina Suwol, Founder, California Safe Schools

#### Department of Toxic Substances Control (DTSC) Staff:

Barbara A. Lee, Director  
Ana Mascareñas, M.P.H., Assistant Director for Environmental Justice and Tribal Affairs  
Tim Chauvel, Public Participation Specialist (via webcast)

Rizgar Ghazi, Acting Deputy Director for the Hazardous Waste Management Program  
Evelia Rodriguez, Senior Hazardous Substances Engineer  
Corey Yep, Senior Research Analyst

South Coast Air Quality Management District (SCAQMD) Staff:

Derrick Alatorre, Deputy Executive Director, Office of Legislative, Public Affairs, and Media

Also Present – Public Speakers:

Jonathan Flores, Office of California State Senator Ricardo Lara

Florence Gharibian, Del Amo Action Committee

Jesse Marquez, Coalition for a Safe Environment

Duncan McKee

Janet Whittick, Policy and Communications Director, California Council for Environmental and Economic Balance

## **1. Welcome**

Derrick Alatorre

Derrick Alatorre, Deputy Executive Officer, Office of Legislative, Public Affairs, and Media, SCAQMD, welcomed everyone to the Senate Bill (SB) 673: Cumulative Impacts and Community Vulnerability Symposium. He stated SCAQMD works closely with the DTSC on Excide and on the air toxics investigation in Paramount and Compton.

Ana Mascareñas

Ana Mascareñas, Assistant Director for Environmental Justice and Tribal Affairs, DTSC, thanked SCAQMD for hosting the symposium. She stated the symposium is in response to SB 673, which went into effect on January 1, 2016, as part of a partnership with the Environmental Justice and Permitting Divisions to address cumulative impacts and community vulnerability to inform permit decisions for hazardous waste treatment, storage, transfer, and disposal facilities.

Jonathan Flores

Jonathan Flores, Office of California State Senator Ricardo Lara, stated Senator Lara authored SB 673. Mr. Flores provided an overview of the background and goals of SB 673. He stated Senator Lara promotes robust public participation. The involvement of all stakeholders, including industry, is critical for the success of this effort. He stated Senator Lara's office looks forward to being engaged and serving as a resource and legislative partner.

Rizgar Ghazi

Rizgar Ghazi, Acting Deputy Director for the Hazardous Waste Management Program, DTSC, stated the first symposium in response to SB 673 was held in Northern California in March of 2017. This second symposium will dig deeper into data management and how to collect data to be used to provide information to look at cumulative impacts and community vulnerability.

## **2. Cumulative Impacts: Vulnerability, Risk, and Health**

**Presenter:** Gina Solomon, M.D., M.P.H., Deputy Secretary for Science and Health, CalEPA

Gina Solomon, MD, MPH, Deputy Secretary for Science and Health, CalEPA, provided an overview, accompanied by a slide presentation, of the science and history of environmental justice; key concepts, vulnerability factors, challenges, and current approaches to cumulative impacts; and the new technologies and potential future tools to measure them. She summarized that all existing approaches to cumulative impacts have serious limitations, but newer approaches are emerging that provide better exposure measurements and markers of toxic stress and overall health.

### **Questions from the Audience**

Jesse Marquez, Executive Director, Coalition for a Safe Environment, asked if he could now tell his doctor he has Allostatic Load Stages 1 and 2. Dr. Solomon stated C-reactive protein tests have become a reasonably standard medical test in recent years and there are other tests that are not yet available. She stated the need for more studies that compare the stressors of different communities.

Janet Whittick, Policy and Communications Director, California Council for Environmental and Economic Balance, asked about the role of causation in the upcoming new technologies and tools in the permitting process. Dr. Solomon agreed that background and causation are important. She stated many emerging areas have measures of integrated effects that get further from the individual source the more they get into the integrated effect.

### **3. Addressing Community Vulnerability Through Collaboration**

**Presenters:** Robina Suwol, Founder, California Safe Schools, and Jesse Marquez, Executive Director, Coalition for a Safe Environment

Robina Suwol, Founder, California Safe Schools, stated children and adults have a right to learn, work, and live in a healthy environment. She stated she has been working closely with communities and school districts throughout the state and country for two decades. She gave the example of working with Paramount, California, since 2013 when concerned teachers and residents contacted her. She provided residents with information and directed them to resources and services. She stated working together helps great things happen.

Jesse Marquez, Executive Director, Coalition for a Safe Environment, stated one policy change can create a new cumulative impact on a vulnerable population. He provided an overview, accompanied by a slide presentation, outlining the many environmental justice community issues that have come about after a change in port policy forced tenants to relocate the storage of empty containers in the community of Wilmington, California.

### **Panel Questions for Discussion**

Ms. Mascareñas asked how communities can work with agencies and government more collaboratively. Ms. Suwol suggested being honest, direct, and a good listener to agencies and communities. It is important to build trusting relationships. Mr. Marquez suggested bringing an identified list of concerns that need to be addressed to meetings with agencies and government representatives.

Barbara Lee, Director, DTSC, stated the DTSC, through the Office of Environmental Justice and Tribal Affairs, is working to connect with communities to better understand issues that are not in the DTSC scope of practice. She asked how to approach issues in a fresh, collaborative, and productive way that have heretofore been ignored because of the DTSC's lack of authority to

change them. Mr. Marquez suggested developing trusting relationships with communities and educating them about the purpose of the DTSC and how it can help them. Ms. Suwol stated regulatory agencies and the public have more in common than not. There are respectful dialogues and discussions taking place to move toward common goals in protecting health and the environment.

#### **4. Case Study**

**Presenter:** Mohsen Nazemi, Deputy Director of the Brownfields and Environmental Restoration Program at DTSC

Mohsen Nazemi, Deputy Director of the Brownfields and Environmental Restoration Program at DTSC, provided an overview of the work of the DTSC. Along with the regular duties of permitting, enforcement, hazardous waste facilities, and doing site mitigation and cleanup of various contaminated sites, the DTSC does investigations, in collaboration with the USEPA, CalEPA, and the Regional Water Board to identify sources that may be included on the National Priority List, identify sites that need to undergo cleanup, and undertake emergency actions where needed. He gave examples of investigating in the Fountain Valley, Paramount, and West Pomona areas, identifying lead smelter sites in California and whether or not they were active, and doing a study along the I-710 Corridor and identifying stationary sources that may have caused contamination in the soil and groundwater that impacts the vulnerable communities in that area.

#### **5. West Oakland Air Pollution Monitoring Project**

**Presenter:** Melissa Lunden, Ph.D., Chief Scientist, Aclima, Inc.

Melissa Lunden, Ph.D., Chief Scientist, Aclima, Inc., provided an overview, accompanied by a slide presentation, of new technology and transparency, platforms, networked sensors, mapping, and scaling with high-performing low-cost sensors. She stated Aclima captures not only pollutants but climate change gasses and will move to other modalities as good ways to measure them are found.

#### **Questions from the Audience**

Florence Gharibian, Del Amo Action Committee, asked if using sensor technology for environmental measurement would apply to looking at the benefit of trees in reducing pollution or monitoring indoor vapor intrusion in homes. Dr. Lunden stated Aclima is currently focused on larger-scale sensing systems and studying data on the difference tree cover can make to mitigating problem areas and reducing impacts on the environment and health. She agreed that individual exposure in homes is an important future project.

Duncan McKee stated regulations are based on averages. He asked if sensors can take real-time measurements of spikes and emissions. Dr. Lunden stated sensor-based devices sample once per second and can capture individual plumes well, both from mobile and stationary platforms. She stated the hope that this kind of data can help inform new types of studies to determine if spikes, frequencies, and levels lead to health impacts.

#### **6. USEPA Environmental Justice Program**

**Presenter:** Charles Lee, Senior Policy Advisor for Environmental Justice, USEPA

Charles Lee, Senior Policy Advisor for Environmental Justice, USEPA, stated everyone agrees that there are multiple negative stressors concentrated in certain communities that need to be

addressed. Work has been done to mitigate this issue that can be built upon. He provided an overview, accompanied by a slide presentation, of the EPA's Environmental Justice Program, the growing importance of monitoring and measuring environmental outcomes, EJSCREEN, and the Community-Focused Environmental Risk Screening Tool (C-FERST). He stated tool training videos are posted on the USEPA website. USEPA has made a commitment to annually update EJSCREEN; the 2017 update will soon be completed. USEPA has begun to collect data to identify case studies using the EJSCREEN. He stated USEPA would love to partner with the DTSC and other state agencies on this project.

### **Questions from the Audience**

Mr. Marquez asked about C-FERST training classes. Mr. Lee stated training classes are available and offered to contact Mr. Marquez offline with the dates.

### **7. Environmental Justice Screening and Mapping Tool**

**Presenter:** Kevin Olp, Program Manager, Environmental Task Force, CalEPA

Kevin Olp, Program Manager, Environmental Task Force, CalEPA, provided an overview, accompanied by a slide presentation, of the key features of EJSCREEN, the EPA's environmental justice screening tool, and demonstrated its use. He stated EJSCREEN helps the EPA consider multiple sources of pollution impacts and demographics in its permitting and regulatory activities. It tabulates data in percentiles on maps and reports for easier understanding and interpretation. He suggested going through the training videos on the website for detailed information on navigating EJSCREEN.

### **8. Health Impacts Assessment (HIA)**

**Presenter:** Shannon Griffin, Office of Research and Development, USEPA

Shannon Griffin, Office of Research and Development, USEPA, discussed how Health Impact Assessment (HIA) can link public health to community decisions. She provided an overview, accompanied by a slide presentation, of the social determinants of health, health in all policies, and the history, benefits, process, and resources of HIA. She stated HIA is one of the key strategies for moving toward a Health in All Policies (HiAP) perspective across sectors to improve the health of all communities. She gave the example of the HIA of the Mojave Desert Solar Energy and Tribal Communities Project. She walked everyone through the HIA process involved and stated the report is available online. She stated USEPA recently put out an HIA resource and tool toolkit, which is also available online.

### **Questions from the Audience**

Tim Chauvel, Public Participation Specialist, DTSC, suggested that the DTSC provide guidelines for public outreach documents on incorporating CalEnviroScreen data.

Mr. Marquez asked when USEPA will endorse HIAs as an additional public health assessment tool. Ms. Griffin stated she will pass that question on to the management team.

### **9. Decision Analysis for a Sustainable Environment, Economy, and Society (DASEES)**

**Presenter:** Brian Dyson, Ph.D., Operations Research Analyst, Office of Research and Development, USEPA

Brian Dyson, Ph.D., Operations Research Analyst, Office of Research and Development, USEPA, discussed DASEES, a web-based interactive tool for structured decision-making for the USEPA Sustainable and Healthy Communities Research Program. He provided an overview, accompanied by a slide presentation, of the general decision process, application insights, and DASEES function and philosophy. He outlined the application of DASEES for engaging stakeholders in the decision process by walking through the steps taken in recent workshops and forums, and demonstrated the Brainstorm and Social Network Analysis tools. He stated DASEES structures decision-relevant information, enabling the integration of stakeholder concerns for more inclusive evaluation of consequence assessments.

## **10. Data Needs for Cumulative Impacts and/or Community Vulnerability**

**Presenters:** Andrew Slocombe, Research Scientist, OEHHA; and Álvaro Alvarado, Ph.D., CARB

Andrew Slocombe, Research Scientist, OEHHA, discussed mapping the data needs for cumulative impacts and community vulnerability. He provided an overview, accompanied by a slide presentation, of CalEnviroScreen 3.0, criteria for datasets, improvements made, the role of Geographic Information Systems (GIS), and the future of CalEnviroScreen. He stated ArcGIS is an online tool that displays CalEnviroScreen data and allows access to the attributes of each dataset throughout the mapping tool.

Álvaro Alvarado, Ph.D., CARB, provided an overview, accompanied by a slide presentation, of the purpose, goals, categories such as hazard proximity, and scoring of the Environmental Justice Screening Method (EJSM), and the statewide and regional scoring and improvement of cumulative impacts mapping for the U.S.-Mexico Border Project. He stated the EJSM reflects the published research on air pollution and environmental justice and health and how those affect communities.

## **11. Spatial Prioritization Geographical Information Tool (SPGIT)**

**Presenter:** Rick Fears, P.G., Senior Engineering Geologist, DTSC

Rick Fears, P.G., Senior Engineering Geologist, DTSC, provided an overview, accompanied by a slide presentation, of the concerns of the loss of drinking water wells in the state of California due to anthropogenic groundwater contamination, the key features of a typical aquifer capture zone, and SPGIT, a tool that groups contaminated wells into four-kilometer hexagon-shaped areas on a map, combines prioritizing factors, calculates the results, and ranks drinking water well areas throughout California by order of contamination to help prioritize mitigation efforts.

## **12. Low Cost Monitoring Equipment**

**Presenter:** Andrea Polidori, Ph.D., Atmospheric Measurements Manager, SCAQMD

Andrea Polidori, Ph.D., Atmospheric Measurements Manager, SCAQMD, provided an overview, accompanied by a slide presentation, of the results from three years of field and laboratory testing of “low-cost” sensors for measuring gaseous and particle air pollutants; the background, goals, and objectives of the Air Quality Sensor Performance Evaluation Center (AQ-SPEC); sensor selection criteria and applications; and current SCAQMD activities. He stated AQ-SPEC determines how well the optical, electrochemical, or metal oxide sensors perform against an EPA-approved method. AQ-SPEC has a state-of-the-art laboratory testing chamber designed to test local sensors and can recreate every type of environmental condition by

varying the temperature and relative humidity conditions in the chamber. Detailed information about sensor technology is available on the AQ-SPEC website. He announced the SCAQMD will be hosting the “Making Sense of Sensors” networking conference on September 27<sup>th</sup> and 28<sup>th</sup> in Diamond Bar, California.

### **13. Closing Remarks**

Ms. Mascareñas thanked the presenters and invited participants to reach out to presenters directly with questions and feedback.

Ms. Lee summarized her perspective on the DTSC’s efforts in the cumulative impacts and community vulnerability arena. She stated there are opportunities to change the lens through which central questions to improving and protecting lives in communities are approached. The DTSC is helping find ways to make meaningful information and better decisions out of the vast amount of data that is now available. She invited participants to join in this effort.

### **14. Adjournment**

There being no further business, the symposium adjourned at 4:13 p.m.