Supporting community-engaged environmental monitoring projects is one way in which the California Environmental Health Tracking Program (CEHTP) works to improve the availability and utility of data for public health. Along with Comite Civico del Valle and other partners, we recently celebrated the launch of a website that displays data from a community air monitoring network in Imperial County.

Community Air Monitoring Website Launched at the Border

In Imperial County, where particulate pollution often exceeds state standards for more than six months at a time and children have among the highest rates of asthma-related emergency room visits and hospitalizations in the state, the availability of local air quality information can be a life or death issue. On September 30th, community members and research partners in California’s Imperial County launched IVAN Air Monitoring, a community air monitoring website that puts real-time air quality information in residents’ hands.

IVAN Air Monitoring was developed as part of a 4-year, NIH-funded project conducted by the California Environmental Health Tracking Program in collaboration with local organization Comite Civico del Valle, the University of Washington, and others. Bringing together scientists, community advocates, and local residents, this project aims to collect air quality data for research while providing information that is immediately and directly useful to residents. It established a community air monitoring network that allows parents and other residents to access data that they can use to make immediate decisions about the health of their families.
Information for action

The project enhanced an existing community environmental monitoring website called IVAN (Identifying Violations Affecting Neighborhoods) to display current particulate pollution levels at each monitor within the community network. IVAN Air Monitoring was publicly launched at a celebration held at Heber Elementary School, home to one of the community air monitors. The event highlighted the importance of the community air monitoring network in generating data that schools can use, in conjunction with regulatory monitoring data, to determine if the local air pollution risk is too high for students to play or exercise outdoors.

Heber Elementary School’s Principal Patty Marcial says, "The air monitors help us to be alerted that students with asthma or breathing conditions may be affected. Knowing that the air quality is in a poor state helps us decide when to keep students indoors."

In addition to Heber Elementary, 13 other public schools in the county so far have agreed to host air monitors. The first community air monitor was launched last May at Brawley Union High School, and since then, the project team has installed 35 of 40 monitors, aiming to complete the network by the end of the month. The number of monitors sited at schools reflects the project’s unique effort to incorporate both scientific and community priorities into deciding where to put the monitors.

Community and scientific priorities

"The network wasn't created by just setting up monitors in the homes of whoever volunteered, nor did we site monitors based solely on technical requirements at the expense of community needs," states Dr. Edmund Seto, a research professor at University of Washington who oversees the technical aspects of the project.
Instead, the project team undertook a deliberate process to engage community residents to identify, collect data on and prioritize locations for the first 20 monitors. Data from these monitors were then analyzed using land use regression to determine where to place the remaining monitors, such that the data produced by the network are still useful for characterizing air pollution trends and hotspots throughout the county.

For Luis Olmedo, Executive Director of Comite Civico del Valle, the scientific rigor was an essential aspect to the project. "As members of this community, we have a personal interest in the quality of the data produced," says Olmedo. Not only does the network generate data that can be used immediately by residents to understand current air quality, the careful planning and collaboration with researchers means that the community network's data are more likely to be able to inform other local and regional public health efforts.

**Community-generated data to support regional change**

The Obama administration recently announced federal funding to mitigate the deterioration of the Salton Sea, while Governor Brown has set aside $80.5 million in his 2016-2017 budget for Salton Sea restoration and dust suppression. The community air monitoring network, which has monitors located around the Salton Sea to better understand air quality coming from the lake, may prove to be a useful resource for guiding and evaluating these efforts.
"There are environmental public health issues, like the Salton Sea, that we've been aware of locally for a long time. Having state and federal resources devoted to addressing them are critical, but we also want to know that these investments actually make a positive difference for our community and our environment," says Olmedo. "Our network is ready to help."

**Next steps**

After the remaining monitors are deployed, the project team will analyze the air monitoring data and create detailed maps of air quality throughout the county to identify trends and hot spots. The results will inform the development of a community-driven public health action plan for reducing exposures and improving health.

To learn more about this project, contact the California Environmental Health Tracking Program by email or at (510) 620-3038.

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