



Deer Park Community Advisory Council

Monday, August 26, 2024

Air Monitoring: Routine and During Major Industrial Events

Steve Smith, Chairman of the Technical Advisory Committee of Houston Regional Monitoring (HRM), presented an Air Quality Update to the Deer Park Community Advisory Council. Houston has the most extensive air monitoring network in the country. Numerous agencies, including the Texas Commission on Environmental Quality (TCEQ), City of Houston, HRM, Harris County, and independent monitors, operate air quality monitoring stations throughout the Houston area. For over 40 years, HRM has managed ten monitoring sites, measuring ozone, nitrogen oxides (NO_x), carbon monoxide (CO), and particulate matter (PM). Ambient air analyzers are capable of measuring CO, NO_x, ozone (O₃), and sulfur dioxide (SO₂). Additionally, VOC canister samplers collect air samples over a set time period (1-24 hours), and PAMS gas chromatographs take hourly samples. These air analyzers are very expensive. There are affordable air monitoring sensors for public use which cost between \$200 and \$5,000. These smaller sensors are compact, easy to mount, user-friendly, and require no calibration. Sensors designed for the public are useful for individuals like coaches or band directors to assess outdoor air quality before activities, or for people with asthma or COPD. EPA has published "The Enhanced Air Sensor Guidebook," which includes information about interpreting sensor data, best practices, and recommendations on sensors. The guidebook can be found at <https://www.epa.gov/air-sensor-toolbox/how-use-air-sensors-air-sensor-guidebook>.

Matt Van Vleck, Air Monitoring Section Manager at Harris County Pollution Control Services (PCS), provided an overview of the Community Air Monitoring Program (CAMP). PCS operates 22 stationary Sensit[®] SPODS units across Harris County, primarily concentrated in the southeastern region and along the ship channel, where most industrial facilities are located. These sensors are easy to relocate in the event of a hurricane, can be repaired in-house, and provide near real-time data to the public. PCS also operates 12 ozone monitors to supplement the TCEQ's ozone monitoring network. For mobile monitoring, PCS uses the Rapid Ambient Air Monitoring (RAAM) system, which is deployed for investigating odor complaints, emergency responses, severe weather events, and background surveys in Harris County. The PCS Emergency Response Section also conducts air monitoring with handheld devices during hazmat incidents, severe weather events, and investigations, providing faster results than truck-mounted analyzers. Data from these monitoring sites and activities is publicly available through the PCS website at <https://pcs-harriscounty.hub.arcgis.com>.

Visitors are invited to attend DPCAC's meeting on September 23rd, where we will review the Annual Report on DPCAC Emissions. For an invitation, contact info@deerparkcac.org.

Read about DPCAC meetings and see summaries of our most recent presentations at www.deerparkcac.org.