AIR QUALITY

2024 Annual Report

San Diego County
Air Pollution Control District

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A message from the Air Pollution Control Officer

SDAPCD Governing Board Members, Stakeholders and San Diego County residents,

It is my pleasure to present you with the 2024 Annual Air Quality Report for the San Diego County Air Pollution Control District (SDAPCD). Led by our 2024 Governing Board Chair Jack Shu, SDAPCD continued to work towards its goals of Air Quality, Public Health, Environmental Justice and Equity, Public Engagement and Transparency, and Operational Excellence.

We continued our day-to-day work of monitoring air quality, planning and developing rules to reduce emissions from stationary sources, as well as issuing permits and ensuring ongoing compliance from those sources. At the same time, we responded to the odor crisis in the Tijuana River Valley by standing up entirely new programs – monitoring and providing real-time public updates for hydrogen sulfide levels and providing air purifiers for affected local residents.

In this report, we provide an overview of the incredible work done in 2024 by our 178 employees – dedicated professionals who work every day to improve air quality, public health, and the quality of life for all San Diego County residents. We are proud of what we accomplished in the last year in pursuit of our vision of **Clean Air for All**.

Respectfully,

Paula Forbis

Governing Board

The SDAPCD Governing Board is comprised of eight elected officials from the County Board of Supervisors and cities within San Diego County as well as three appointed public members. Our current governing board members include:

CHAIR

Marcus Bush, Councilmember
City of National City
District 1 Representative

VICE CHAIR

Anne Marie Birkbeck-Garcia
Health Professional

MEMBERS

Todd Gloria, Mayor
City of San Diego
Member At-Large

Terra Lawson-Remer, Supervisor
San Diego County Board of Supervisors
District 3 Representative

Laura Koval, Councilmember
City of Santee
District 2 Representative

John Duncan, Mayor
City of Coronado
District 3 Representative

Jennifer Campbell, Councilmember
City of San Diego
District 4 Representative

Judy Fitzgerald, Councilmember
City of Escondido
District 5 Representative

Georgette Gomez
Environmental Justice

Paula Stigler Granados
Technical Expert

Vacant, Supervisor
San Diego County
Board of Supervisors
District 1
Representative

About the District

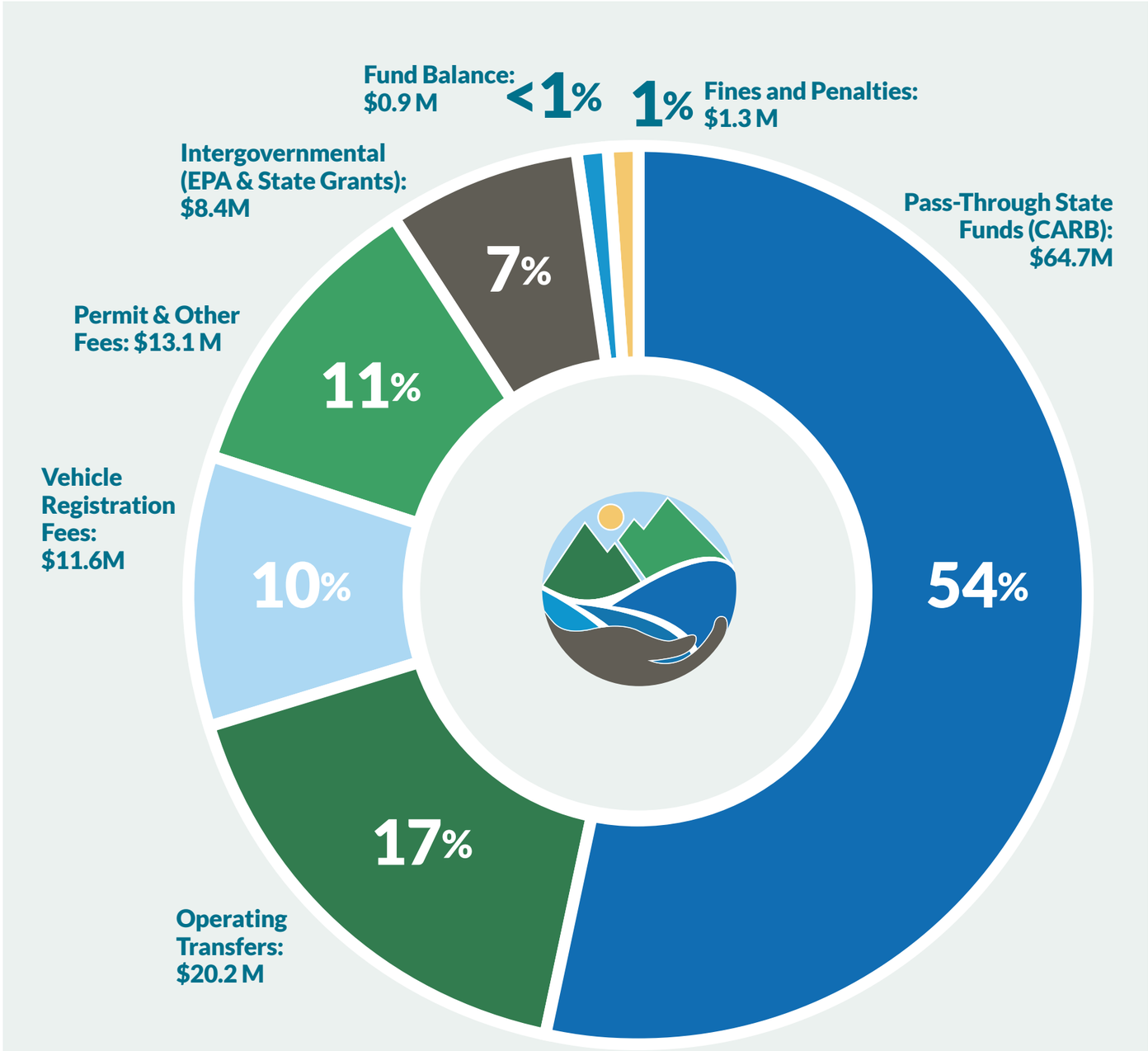
The San Diego County Air Pollution Control District (SDAPCD) is a local government agency responsible for regulating and improving air quality in San Diego County. Its mission is to protect public health and the environment by enforcing air pollution laws, monitoring air quality, and working with businesses and communities to reduce emissions. The district implements federal, state, and local regulations and provides public education on air quality issues to promote cleaner, healthier air for everyone in the region.

Budget

For the 2024-25 Fiscal Year (July 1st – June 30th), SDAPCD had an adopted budget of $120.2 million.

The largest source of SDAPCD's funding consists of state and federal grants from the California Air Resources Board (CARB) and U.S. Environmental Protection Agency (EPA), most of which is used for pass-through grants for projects to improve air quality.

Other funding sources include permits and other fees from stationary sources regulated by SDAPCD and Department of Motor Vehicles (DMV) registration fees.



Tijuana River Valley Odor Crisis

Assessing air quality can be very complex because it involves monitoring of various types of pollutants that can be undetectable without the use of specialized equipment. Some pollutants can negatively impact the community, even at very low levels.

In 2024 levels of one pollutant, hydrogen sulfide, or H2S, increased dramatically and produced odors that negatively impacted South Bay communities. The odors were caused by a longstanding issue that unfortunately South Bay communities know all too well– the untreated wastewater running through the Tijuana River Valley that has polluted South Bay beaches for many years.

Most recently, the long-term infrastructure and water quality issue has evolved into an air quality issue. In July 2024, SDAPCD received a surge of odor complaints from South Bay residents reporting extremely bothersome odors. After conducting an investigation, it was determined that the odors were being caused by hydrogen sulfide (H2S), a colorless gas that with a pungent odor that resembles a “rotten egg” smell, and can cause nausea, headaches, dizziness, and other irritable health effects.

Investigation Findings

SDAPCD investigations conducted in the summer of 2024 documented the odors were primarily attributed to outdated infrastructure and inadequate maintenance at the South Bay International Wastewater Treatment Plant (SBIWTP) and associated equipment (pump stations and collectors), which are the responsibility of the United States International Boundary and Water Commission (USIBWC) and its contractor.

SDAPCD issued Notices of Violation (NOV) to the USIBWC and its contractor, alleging violations of SDAPCD Rule 51 and state law. Violations of this nature typically result in monetary penalties, reflecting the severity of the infraction or litigation. Factors such as the extent of harm, the nature and persistence of the violation, the duration of the violation, and efforts to correct the issue will all influence the determination of penalties.

During the course of this ongoing investigation, SDAPCD has also determined that the odors and resulting public nuisance are not solely attributable to domestic infrastructure. Infrastructure across the border is also contributing to the problem, further complicating resolution efforts.

Hydrogen Sulfide Monitoring

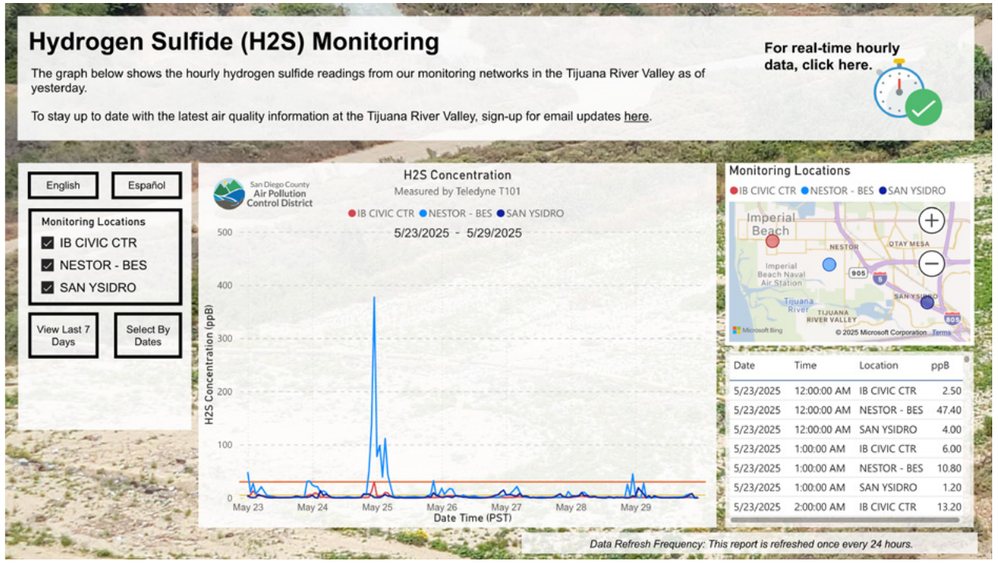
Hydrogen sulfide is a gas that is produced in sewage through the absence of oxygen and increased bacteria levels. It's commonly present in wastewater treatment plants due to their process operations of removing pollutants from sewage water. Increased levels of wastewater and sewage in the Tijuana River Valley have caused elevated levels of H2S that have affected the quality of life of surrounding communities.

SDAPCD is responsible for monitoring the ambient air quality in San Diego County and has now installed three highly accurate hydrogen sulfide analyzers in the City of San Diego communities of San Ysidro and Nestor, and in the City of Imperial Beach. The monitors' data is published on our online Hydrogen Sulfide Monitoring Dashboard that is updated daily. In addition, odor updates and advisories are sent through our email distribution list when H2S levels are above 30 parts per billion (ppB). This threshold was chosen to align with the California Air Resources Board (CARB) H2S threshold of 30 ppB to prevent health impacts connected with foul odor.

What is ppB?

A part per billion (ppB) is a way of measuring the amount of hydrogen sulfide or other things in the air and is smaller than a part per million (ppM). For reference, 1 ppB is equivalent to a single drop of water in a 10,000-gallon pool or 1 penny in a stack of pennies 932 miles high.

The 30ppB threshold was also used when developing the Community Hydrogen Sulfide Guidance document, a guide for residents and visitors about what to expect and recommended actions when H2S is elevated. The guidance was developed in partnership with the County of San Diego, and in consultation with the California Department of Public Health (CDPH), U.S. Agency for Toxic Substances and Disease Registry (ATSDR), and the U.S. Environmental Protection Agency (EPA), to help interpret hydrogen sulfide (H2S) threshold levels.



Air Improvement Relief Effort

SDAPCD launched a free air purifier distribution program for households most affected by the odors to help improve indoor air quality.

Although it is not a permanent solution to this complex issue, the air purifiers contain potassium permanganate, a compound that filters hydrogen sulfide, to provide some relief to those affected by the odors. Eligible households can apply online and have an air purifier shipped to their home.

SDAPCD will continue to work within its jurisdiction to help address the Tijuana River Valley crisis in partnership with other local, state, and federal agencies. To learn more about how SDAPCD is working to help address this crisis and receive the latest updates, visit our webpage dedicated to this issue, sdapcd.org/TJRiver.

Community

SDAPCD continues to provide updates to keep the public informed of its actions and how it works to help improve air quality. SDAPCD understands that it's important to meet people where they are (for example, schools, community events, at community-based organizations, etc.) to share information about the San Diego Air Pollution Control District, air quality, and the impact of air pollution to human and environmental health.

Outreach and Education to Environmental Justice Communities

One of the priorities has been increased Science, Technology, Engineering, Art and Math (STEM) related hands-on activities and education. These education materials highlight helping community members understand and apply Air Quality Index information. SDAPCD took these resources to the community and connected in-person with approximately 3,000 individuals while participating in 26 community events in environmental justice communities throughout San Diego County. Subject matter experts, such as air quality specialists, engineers, and chemists at SDAPCD participated in these event opportunities to connect directly with community members and provide first-hand air quality related STEM information for youth.

Community Air Protection Program (CAPP or AB 617)

The communities of Portside (Sherman Heights, Logan Heights, Barrio Logan, and West National City) and International Border (San Ysidro and Otay Mesa East) have been nominated and approved by the California Air Resources Board (CARB) to participate in the CAPP. Through this community-led program, established by AB 617, SDAPCD is working with these communities to identify and support actions to reduce air pollution and establish a comprehensive air quality monitoring network.

This year, SDAPCD continued implementing the International Border Community Emissions Reduction Program (CERP) and the Portside CERP by engaging and supporting partner agencies to carry out strategies prioritized by the Community Steering Committees (CSC). In one notable advancement of the Portside CERP, the Port of San Diego has been awarded a nearly $59 million grant from the United States Environmental Protection Agency (EPA) for the Port's San Diego Clean Cargo Project (CCP), which will further electrify operations at the Port's two maritime cargo terminals and support Zero Emissions (ZE) freight movement. An additional $28 million in match funding provided collectively by the Port of San Diego, SDAPCD, Dole, PASHA, Skycharger, and SSA Marine brings the total project cost to $86 million.

Additionally, both the International Border and Portside Community Steering Committees adopted and began implementing a participatory budgeting framework to inform incentive funding outreach. The Portside CSC developed a "Portside Lease and Projects Expectations" document to help determine when projects and lease agreements are in alignment with the goals in the CERP.

The International Border CSC also sponsored a theatrical performance, *Somos Aire*, that takes place in a steam punk futuristic setting. *Somos Aire* uplifted the experiences of encountering air pollution in San Ysidro, the importance of air quality monitoring being essential truth tellers, and how community solutions hold the key to a future where all have access to clean air.

Lastly, SDAPCD was recognized by the San Diego Chapter of the American Planning Association for their work on the International Border CERP by receiving an award for best resilience and sustainability plan.

Environmental Justice Partnership

The Environmental Justice Partnership (EJP) is a collaborative effort between SDAPCD's Office of Environmental Justice, California Air Resources Board (CARB), the County of San Diego Office of Sustainability and Environmental Justice, community-based organizations (CBOs), and individual community members to reduce air pollution and improve air quality in some of the communities that are most impacted by air pollution.

The EJP is an educational program to demonstrate air pollution's connection to community health, public agencies that regulate air pollution, and actions community members can take to improve air quality. Additionally, the EJP program in partnership with eight CBOs throughout the region, successfully recruited 120 community participants across 10 communities disproportionately burdened by air pollution (Barrio Logan, National City, City Heights, El Cajon, Escondido, Vista, Linda Vista, San Ysidro, Southeast San Diego, and Spring Valley) to participate in educational workshops.

Monitoring Air Quality

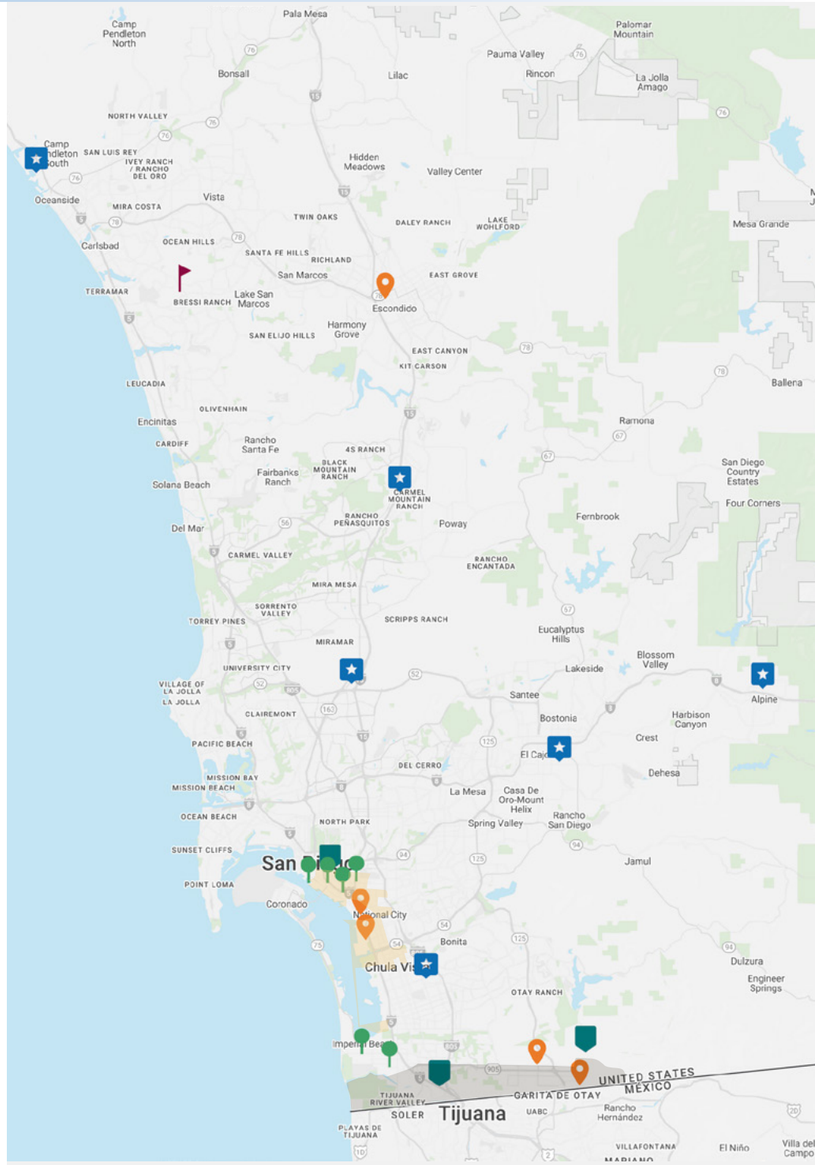
SDAPCD's Regional Air Monitoring network is strategically located between the coast and the mountain foothills. The dispersed regional air monitoring network covers the diverse range of topography, meteorology, emissions and air quality in San Diego County, while adequately representing the large population centers.

This regional air monitoring network plays a critical role in assessing San Diego County's clean air progress and determines pollutant exposures through the County.

SDACD also has a Community Air Monitoring network that was created in response to California Assembly Bill (AB) 617. The purpose of this program is to measure pollution exposure in communities that have been disproportionately burdened by air pollution. Two areas in San Diego County have been accepted into the AB617 program are the Portside Community and the International Border Community.

Ambient concentration data are collected for a wide variety of pollutants. While not all pollutants are measured at each monitoring site, all sites (except three) measure multiple pollutants, including:

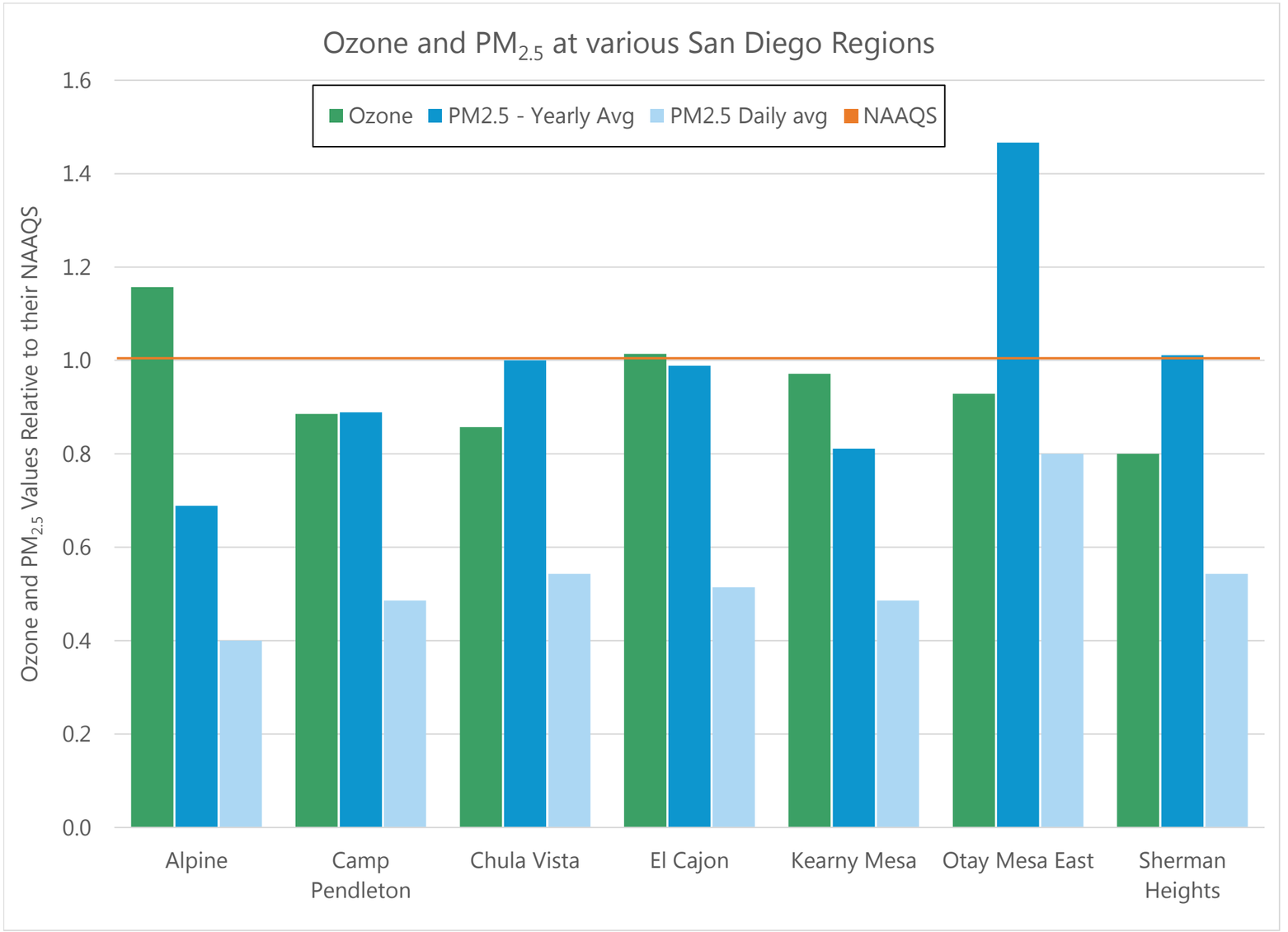
Regional Pollutants	Community Pollutants
Ozone	Hydrogen Sulfide
Particulate Matter	Black Carbon
Nitrogen Dioxide	Volatile Organic Compounds
Carbon Monoxide	Metals
Sulfur Dioxide	
Lead	



Regional | Regional, Community | Community | Source | Future

This map displays the air monitoring locations for both the Regional Air Monitoring Network and the Community Air Monitoring Network. The gray area at the border shows the AB617 communities. The yellow area depicts Portside communities.

The two dominant pollutants that affect the regional air quality are ozone and particulate matter smaller than 2.5 micrometers in diameter, called PM2.5. These pollutants have health-based standards, national ambient air quality standards (NAAQS), that are set to protect public health. The San Diego County attainment status is based on the highest measurement value amongst the monitoring stations. However, not all regions within San Diego County are affected equally by these pollutants. The graph displays the relative ozone and PM2.5 values relative to their NAAQS at various San Diego communities.



State of the Air

SDAPCD is responsible for tracking criteria pollutants to ensure air quality in San Diego County meets federal and state standards. For each criteria pollutant, the region is designated as being in attainment, meaning standards are being met, or nonattainment, meaning the standards are not being met.

Sources of Emissions

Nitrogen Oxides

In San Diego County, 93% of nitrogen oxides (NOx) are emitted from mobile sources (on-road and off-road), 5% were emitted from stationary sources, and 2% were from areawide sources. Some of the top sources of NOx emissions include ocean-going vessels (e.g. cargo/ container ships), off-road equipment, heavy duty/medium-duty diesel trucks, aircraft, and commercial harbor craft (e.g. tugboats, towboats, passenger, and commercial fishing boats).

Volatile Organic Compounds

In San Diego County, 40% of volatile organic compounds (VOCs) were emitted from mobile sources (on-road and off-road), 26% were emitted from stationary sources, and 34% were from areawide sources. Some of the top sources of VOC emissions in San Diego County include consumer products (e.g. deodorants, hair spray, cleaning products, insecticides, etc.), off-road equipment, recreational boats, architectural coatings (such as paints, varnishes, and other household finishes), and other miscellaneous coatings/ related solvents.

Particulate Matter

In San Diego County, 23% of fine particulate matter (PM2.5) were emitted from mobile sources (on-road and off-road), 15% were emitted from stationary sources, and 62% were from areawide sources. Some of the top sources of PM2.5 emissions in San Diego County include residential fuel combustion (i.e. water heating/furnaces), construction and demolition, cooking, aircraft, and dust from paved roads.

San Diego County's federal and state designations for each of the criteria pollutants

Criteria Pollutant	Federal Designation	State Designation
Ozone (8-hour)	Nonattainment	Nonattainment
Ozone (1-hour)	Attainment	Nonattainment
Carbon Monoxide	Attainment	Attainment
PM10	Unclassifiable	Nonattainment
PM2.5	Attainment	Nonattainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	No Federal Standard	Attainment
Hydrogen Sulfate	No Federal Standard	Unclassified
Visability	No Federal Standard	Unclassified

Air Quality Improvement in Action

Rules

Rules are developed to help meet federal and state health air quality standards and protect public health. Rules are reviewed and amended periodically to ensure businesses are using the most up-to-date equipment and methods to reduce air pollution.

During 2024, the SDAPCD amended the following rules or regulations:

- Rule 40: Permit and Other Fees
- Regulation X: Standards of Performance for New Stationary Sources
- Rule 69.6: Natural Gas-Fired Fan-Type Central Furnaces

Notable Rule Adoption: Rule 69.6 (Natural Gas-Fired Fan-Type Central Furnaces)

- Furnaces found in residential and commercial locations combust natural gas and produce pollutants, including but not limited to, oxides of nitrogen (NOx), as a byproduct of combustion.

- Rule 69.6 has regulated NOx emissions from natural gas-fired furnaces sold in San Diego County since 1998. It is a point-of-sale rule, meaning when a unit reaches the end of its useful life and is replaced, a new unit being installed must comply with specified emission limits found in the rule.
- On November 14, 2024, the Governing Board amended Rule 69.6 to reduce NOx emissions from most furnaces sold in San Diego County (i.e. 40 to 14 ng NOx/J), as well as set an emission limit for furnaces used in mobile/manufactured homes for the first time (40 ng NOx/J).
- Upon full implementation, amended Rule 69.6 is estimated to reduce NOx emissions countywide by approximately 256 tons per year. Using the EPA's COBRA Screening Tool, this equates to avoiding as many as 617 cases of negative health endpoints and/or lost work or minor restricted activity days on an annual basis, which will contribute as much as $13.1 million to the economy annually from avoided health care costs and lost productivity.

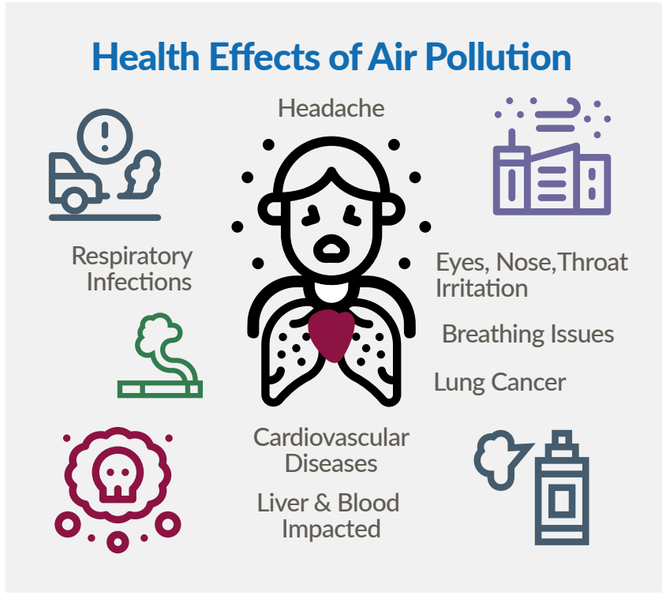
Regulating Stationary Sources of Air Pollution

SDAPCD is responsible for evaluating and permitting stationary sources of air pollution to ensure compliance with local, State, and Federal air quality regulations. These entities are subject to permitting requirements prior to operating new or modified equipment that emits air pollutants. Engineers conduct analyses, and issue permits to establish operational conditions to protect public health by minimizing emissions.

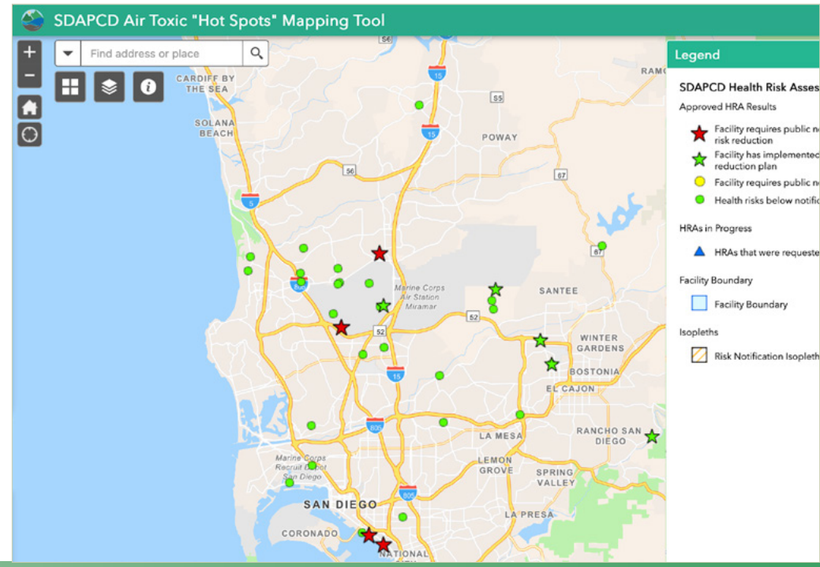
- In 2024, SDAPCD issued 365 Authorities to Construct and 384 Permits to Operate, with requirements for ongoing compliance with air quality regulations.

The Air Toxics "Hot Spots" Program assesses toxic air contaminant (TAC) emissions, evaluates associated health risks, and requires public notification and health risk reduction measures when necessary. Through these measures, the program helps safeguard public health by requiring reductions of TAC emissions that would otherwise pose an elevated risk to public health.

- In 2024, SDAPCD approved three risk reduction plans that will reduce TAC emissions from sand and aggregate plants, and landfills. Since the 2021 revision to Rule 1210, potential health risks have been reduced for 2,157 residences, 78 businesses, and one community park, significantly lowering potential cancer risks and other health hazards for affected communities.



- **Enhancements to the Hot Spots mapping tool:** SDAPCD increased public transparency on air toxics health risks by providing detailed visualization of the sources that can create elevated health risks and communities potentially impacted by those risks. The tool now clearly illustrates elevated health risks within designated impact zones, allowing for greater public awareness, informed decision-making, and stronger protection against air pollution risks.
- **Enhanced the Emission Inventory System:** This effort was critical to improve compatibility with the California Air Resources Board (CARB) California's Emission Inventory Development and Reporting System (CEIDARS) database and the U.S. EPA National Emissions Inventory (NEI). These improvements support more accurate and efficient emissions reporting, strengthening state and federal regulatory programs and providing essential data for air quality modeling.
- In 2024, SDAPCD reviewed 140 emission inventories and processed 160 emissions data requests to quantify air emissions and estimate associated health risks. The emission inventory program plays a vital role in identifying emissions from regulated sources and help assess potential health and environmental impacts at the local, state, and federal levels.
- **SDAPCD's CEQA Program:** SDAPCD adopted CEQA guidelines to enhance transparency by providing clearer guidance on environmental review processes and improving public access to information on air quality impacts. These efforts reinforce public trust and accountability in our decision-making.



Ensuring Compliance

Ongoing compliance is a key element in reducing air pollution and protecting public health. Inspectors routinely verify that sources of air pollution (including permitted operations) are meeting air quality regulations. When violations are identified, appropriate enforcement actions are taken, often including civil penalties intended to deter future violations and promote accountability.

In addition to enforcement, SDAPCD conducts outreach and educational efforts to help facilities understand regulatory requirements and implement best practices for reducing emissions.

Supplemental Environmental Project (SEP)

When violations occur, SDAPCD believes it is important to invest in community-based environmental improvement projects as part of their penalty resolution through the Supplemental Environmental Project (SEP) Program. This program helps mitigate environmental harm while providing tangible benefits to impacted communities.

In 2024 the SEP program contributed to the Expansion of Urban Forestry Efforts for Cleaner Air. Over half a million dollars were invested, resulting in the planting of 966 trees across underserved communities. This included:

- 95 trees in Barrio Logan, Logan Heights, Sherman Heights, Grant Hill, and Stockton
- 121 trees in San Ysidro; and 750 trees in Mt. Hope, Mountain View, Shelltown, and Southcrest

These trees contributed to an estimated 3,843 Metric tons of carbon dioxide equivalent (MTCO□e) reduction this fiscal year – improving both air quality and community well-being.

Enforcement Actions

In 2024 SDAPCD conducted 16,250 field inspections, issued 1,200 Notices of Violation, and collected over $600,000 in civil penalties – ensuring accountability and reinforcing our commitment to clean air enforcement.

- **Enhanced Field Operations for More Efficient Investigations:** SDAPCD upgraded the Complaint Inspector Field App, enhancing mapping accuracy, streamlining inspection reports, and improving real-time data collection. These improvements increase efficiency in investigations, allowing our team to respond more effectively to community concerns.

Grants and Incentives

SDAPCD provides grant and incentive funding for projects that implement cleaner-than-required technology to help improve air quality. Projects include replacing or repowering pollution-generating equipment with lower-emission or zero-emission alternatives, building infrastructure such as electric vehicle charging stations, and more.

The funding provided helps remove older, dirtier vehicles and equipment from operation, which reduces air pollution at the source, preventing harmful emissions from ever entering the air. These projects also support local businesses, schools, public agencies, and more by enabling them to upgrade vehicle fleets and equipment.

SDAPCD invested approximately $31 million in clean air projects in 2024. These grants led to over 329 tons of emissions reductions from harmful pollution like oxides of nitrogen (NOx), reactive organic gases, and particulate matter.

Project Highlights

ELECTRIC CRANE INFRASTRUCTURE

In 2024, SDAPCD and the Port of San Diego successfully implemented a project to construct electric charging stations that power two new electric cranes operating at the Port of San Diego. The electric cranes replaced a diesel-powered crane, an important step toward electrifying operations at the Port and improving air quality in the surrounding area. In addition, this is the first electric crane in North America, making it an impactful milestone for the San Diego County region.

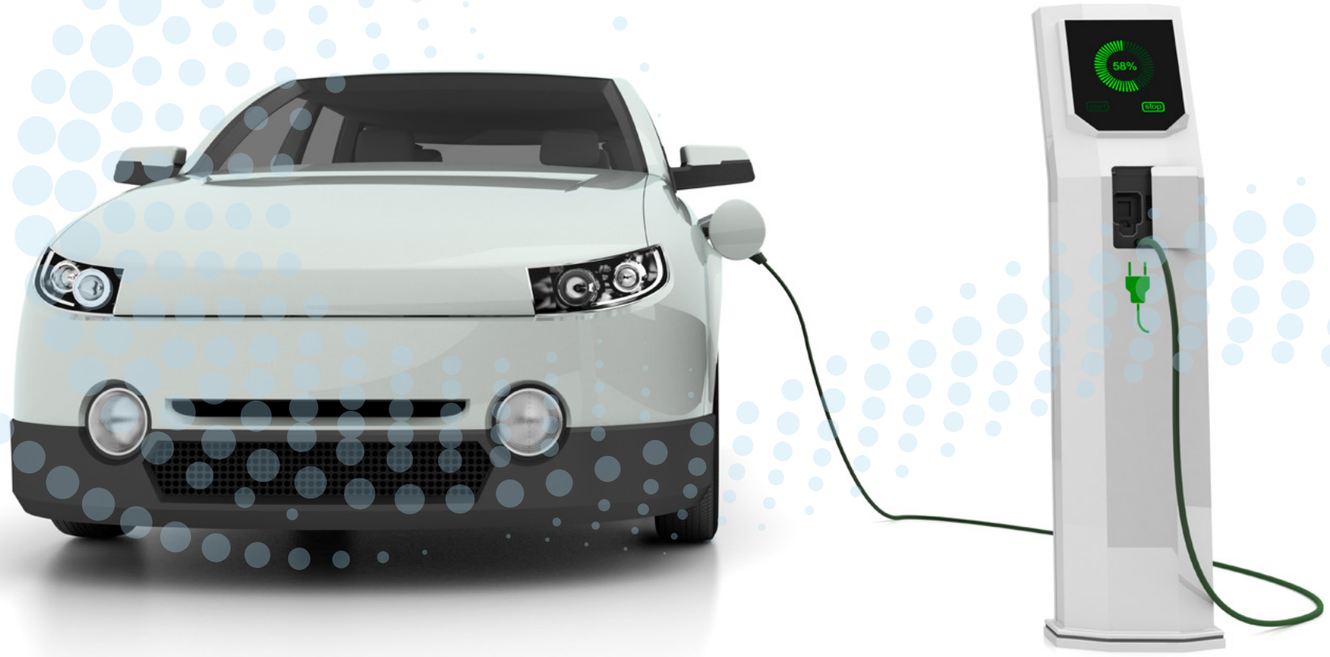
ELECTRIC LANDSCAPE EQUIPMENT ASSISTANCE FUNDING (ELEAF) PROGRAM

The Electric Landscape Equipment Assistance Funding (ELEAF) program provided over four million dollars in incentives to local small business landscaping companies to scrap their gas-powered landscaping equipment and receive an incentive to purchase the comparable electric version of the equipment. There were fifteen local equipment dealers across San Diego County who participated in the program which provided incentives to purchase electric chainsaws, edgers, trimmers, leaf blowers and push and ride-on mowers. Altogether, over 4,000 gas powered pieces of equipment were scrapped, and their comparable electric equipment was purchased through the program. Incentive amounts were from $700 for handheld pieces of equipment to $15,000 for ride-on mowers. The program was well liked and quickly exhausted available funds.

CLEAN CARS 4 ALL (CC4A) PROGRAM

The Clean Cars 4 All (CC4A) program provides up to $12,000 to income-eligible San Diego residents to trade in (scrap) their old vehicle (2009 or older) and purchase or lease an electric vehicle, plug-in electric hybrid vehicle, or get a pre-paid card for public transit and/or an e-bike. Eligible vehicles are model year 2009 or older – the most polluting vehicles on our roads. Program participants can choose from sixteen local car dealers to purchase or lease their newer cleaner vehicle.

The CC4A program is currently only operating in San Diego zip codes which contain a disadvantaged community census tract, to provide ample opportunity for applicants most in need of the incentive to purchase or lease a newer cleaner vehicle. Over 125 older vehicles were removed from San Diego roadways in 2024 under this program and replaced with newer cleaner vehicles.



Report Air Quality Concerns

Our mobile app allows you to report air quality concerns such as:

- Asbestos
- Dust
- Gasoline Dispense Facility
- Idling
- Open Burn
- Smoke
- Unpermitted/Non-Compliant Equipment/ Operations

We investigate each concern submitted to verify compliance with air quality regulations in our jurisdiction within 48 hours or less.

You may also report air quality concerns by phone at (858) 586-2650 or email at apcdcomp@sdapcd.org. For after-hours concerns, please call (858) 586-2650 and select option 2.

DOWNLOAD OUR MOBILE APP:

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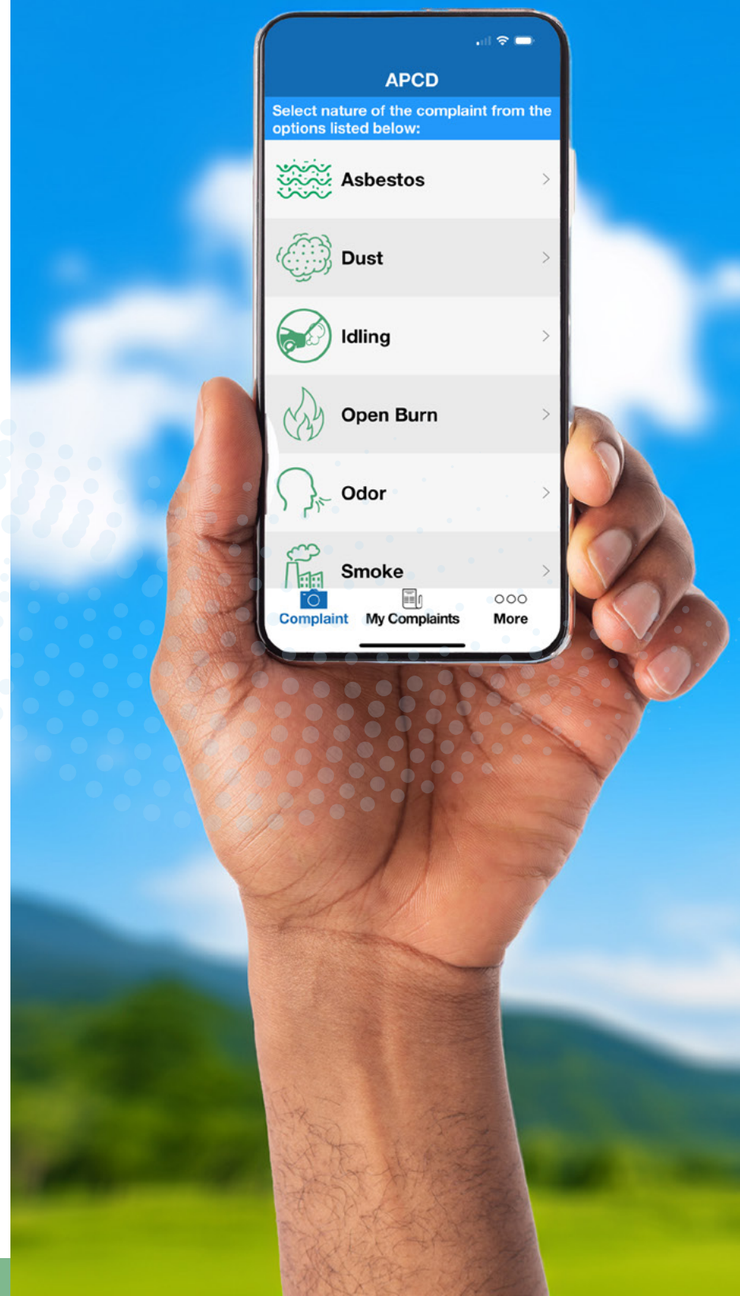

Contact Us

If you have any questions, need further information, please feel free to contact us. We look forward to hearing from you and exploring how we can work together.

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Clean Air For All