



2018 ANNUAL REPORT

ACCELERATING
SOLUTIONS



BAY AREA AIR DISTRICT MONITORING SITES





LETTER FROM THE EXECUTIVE OFFICER

The devastating wildfires this past year have served to highlight the very real effects of climate change on the air we breathe. The Butte County Camp Fire in November created an unprecedented air quality crisis in the Bay Area as we experienced widespread smoke impacts for nearly two weeks and the highest levels of particulate pollution ever recorded.

Climate change impacts are becoming more apparent every year with increasing temperatures, drought and severity of wildfires. The Air District is facing the challenge head on with our **Climate Protection** and **Climate Tech Finance** programs that provide incentives to municipalities and industries to adopt the most climate protective technologies. Through development of our **Wildfire Air Quality Response Program** we seek to implement strategies to better prepare, prevent and respond to future wildfires.

In conjunction with the governor's Global Climate Action Summit, the Air District sponsored two very successful events – **"United Against GHGs" Diesel Free by '33** and **Climate Tech Marketplace**.

Our continued rulemaking efforts in the coming period will help to mitigate methane, one of the most climate forcing pollutants. Our incentives program expands infrastructure and accessibility to zero-emission transportation, including funding for a hydrogen-powered ferry, the first of its kind in the nation. Our compliance and enforcement program continues to aid and enforce air quality regulations to ensure compliance. The Air District oversees more than **10,000 air quality permits** throughout the region creating a level playing field for all businesses while ensuring air quality limits are met.

Through persistence and partnerships on the front lines of climate-protective innovation, we hold optimism for a future Bay Area with clean air for all.

JACK P. BROADBENT

Executive Officer

Air Pollution Control Officer



PROTECTING OUR COMMUNITY

— Key projects and the results from the Air District’s health-protective work over the past year.

REFINERY COMMUNITY PROTECTION

The Air District held four workshops in refinery communities to discuss air monitoring near refineries as part of the implementation process for the recently adopted Regulation 12, Rule 15: Petroleum Refining Emissions Tracking. The goal of Rule 12-15 is to characterize emissions from all refineries to determine if additional rulemaking is required to further reduce emissions; track crude slate changes to assess whether those changes result in increased emissions; and improve real-time monitoring of emissions at fencelines to address public concerns about localized health impacts and to validate emissions inventories.



REDUCING AIR TOXINS

Regulation 11, Rule 18: Reduction of Risk from Air Toxic Emissions at Existing Facilities is considered the most health-protective toxic air pollution measure in the nation and will reduce hazardous air pollutants with cancer-causing potential and other serious health effects from hundreds of stationary air pollution sources throughout the Bay Area.

PROTECTING HIGHLY-IMPACTED COMMUNITIES

The Air District hosted a series of community workshops to begin implementation of state law AB 617, which requires local air districts to continue to reduce air pollution exposure in the most impacted communities. The Air District held four workshops to discuss community-level monitoring and planning in highly impacted Bay Area neighborhoods.



— *The Air District holds community meetings throughout the Bay Area to inform rule development efforts.*

STRENGTHENING PARTICULATE POLLUTION REGULATIONS

The Air District adopted new rules and amendments as part of Regulation 6 to further reduce particulate matter pollution from industrial sources. Particulate matter is very fine air pollution not visible to the human eye. Fine particle pollution is hazardous when breathed as it can bypass the respiratory system and move into the blood stream.

METHANE REDUCTIONS

The Air District hosted a series of workshops on a set of proposed rules under Regulation 3 that would regulate methane emissions – a potent greenhouse gas – which is a significant contributor to climate change.



SPARE THE AIR PROGRAM

The Spare the Air Program continued to educate Bay Area residents on clean commute options like carpooling, transit, biking, walking, and telecommuting.



— The Spare the Air Employer Program added 52 new member companies in 2018 and launched a refreshed website offering tools and resources by county. The Program hosted networking events for Santa Clara County employers and facilitated Carpool Now events for Palo Alto and Richmond employers. The 1,905 companies who are members of the Spare the Air Employer Program help influence the commutes of approximately 850,000 Bay Area employees.

WILDFIRE AIR QUALITY RESPONSE PROGRAM

Wildfires are increasingly devastating for our communities and the environment as we experienced during the November 2018 Camp Fire in Butte County that caused over 2 weeks of heavy smoke impacts throughout the region. The Air District is committed to developing a comprehensive program that can help protect Bay Area residents from significant air quality impacts in the region.

- The Wildfire Air Quality Response Program is intended to prepare, prevent and respond to future wildfires, and to ensure health-protective measures and strategies are in place during air pollution emergencies like the 2017 Napa fires and 2018 Camp Fire that impacted air quality in the entire Bay Area. Program components include the promotion of clean air centers across the Bay Area, targeted rule development, and enhanced information access through the development of wildfire smoke health guidance and communications plan.

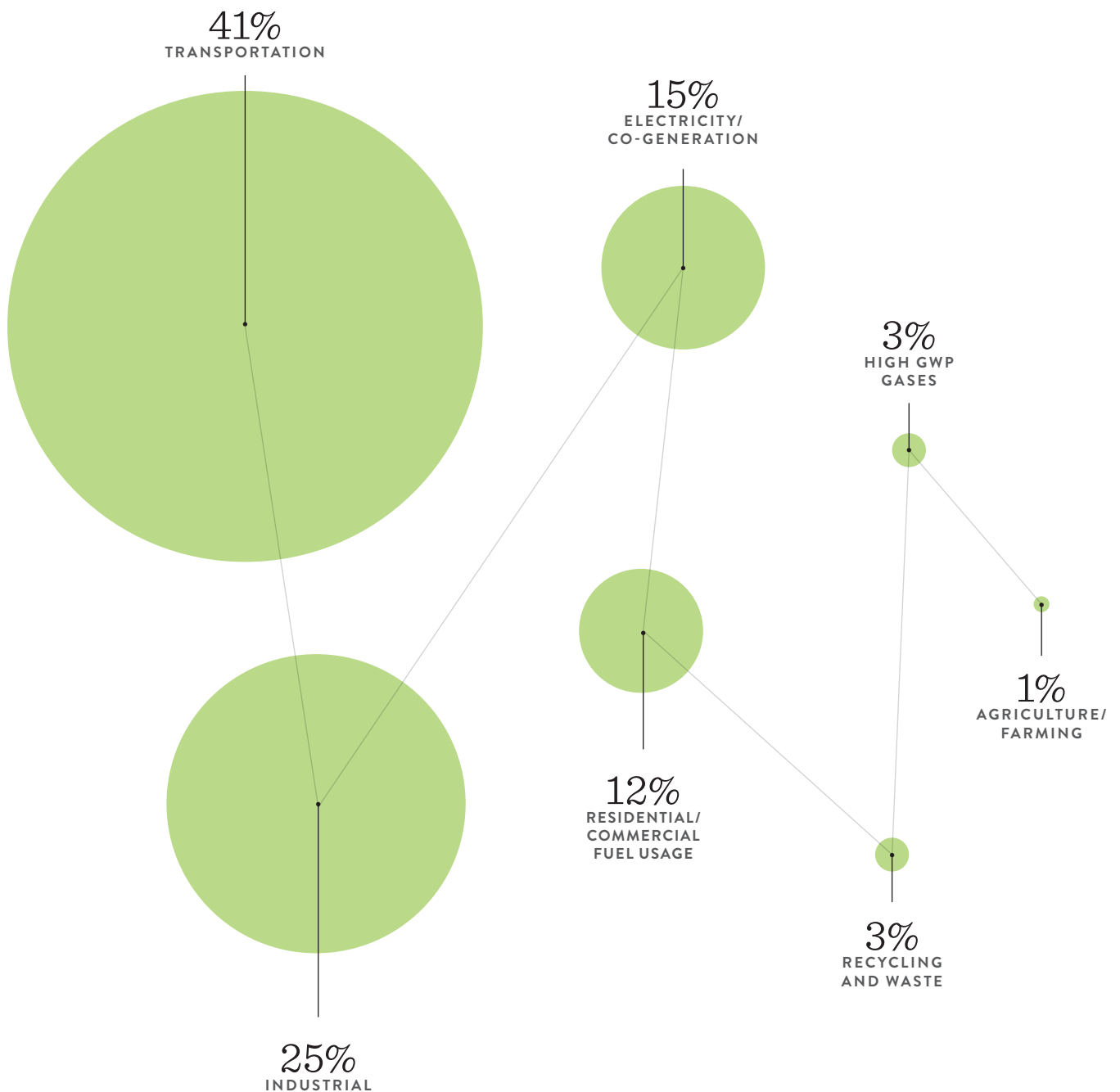


*Smoke plume from November
2018 Camp Fire*

SOURCES OF BAY AREA POLLUTION

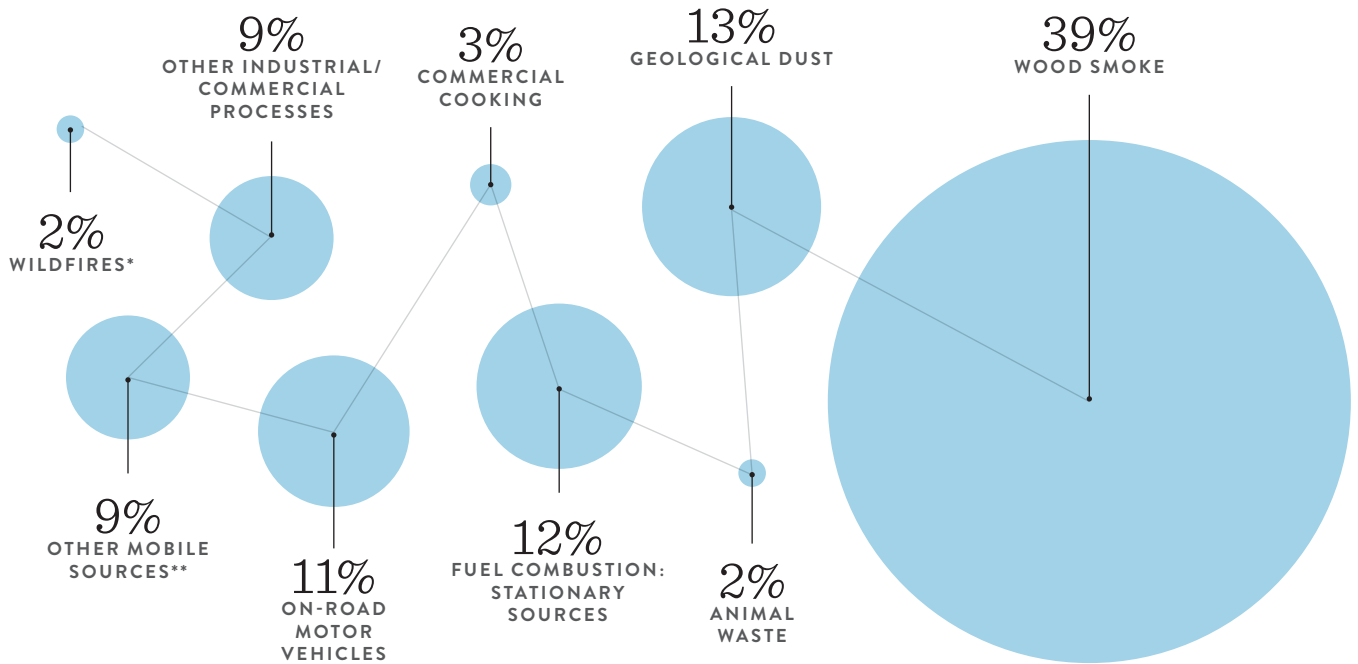
— The largest source of greenhouse gas (GHG) emissions and ozone pollution in the Bay Area is traffic. During the winter months, shifting weather patterns and colder temperatures cause wood smoke to become the largest source of air pollution.

BAY AREA SOURCES OF GREENHOUSE GAS EMISSIONS



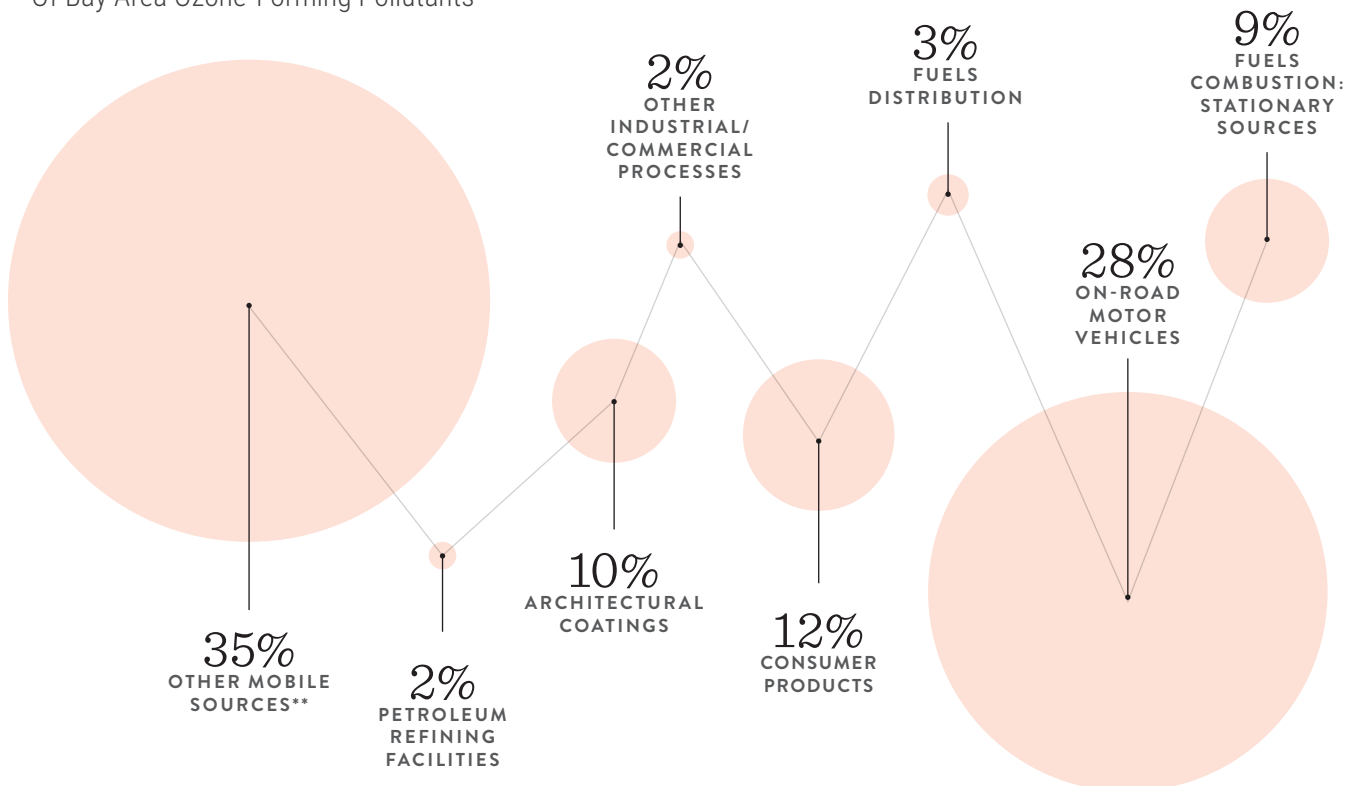
WINTER SOURCES

Of Bay Area Fine Particulate Pollution



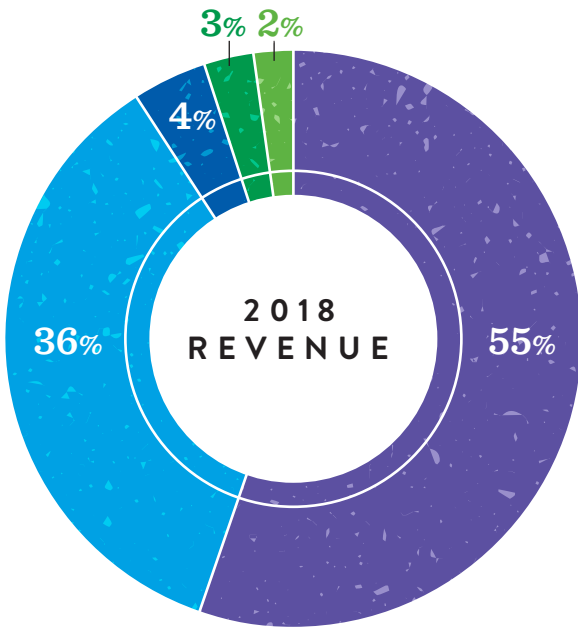
SUMMER SOURCES

Of Bay Area Ozone-Forming Pollutants

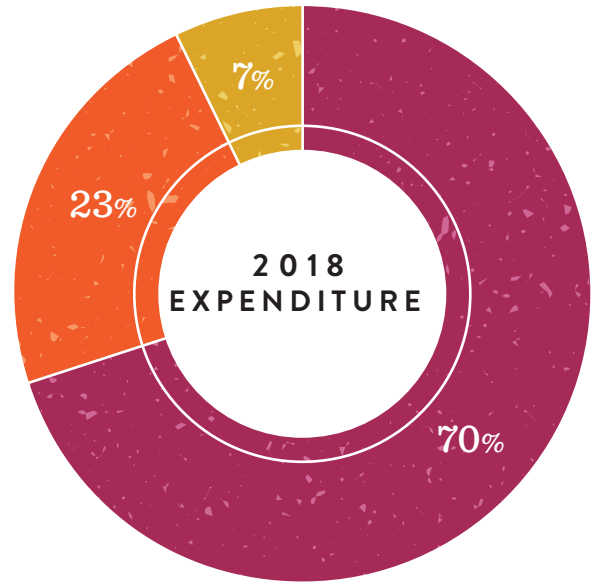


* These emissions estimates do not include the Camp Fire of November 2018.

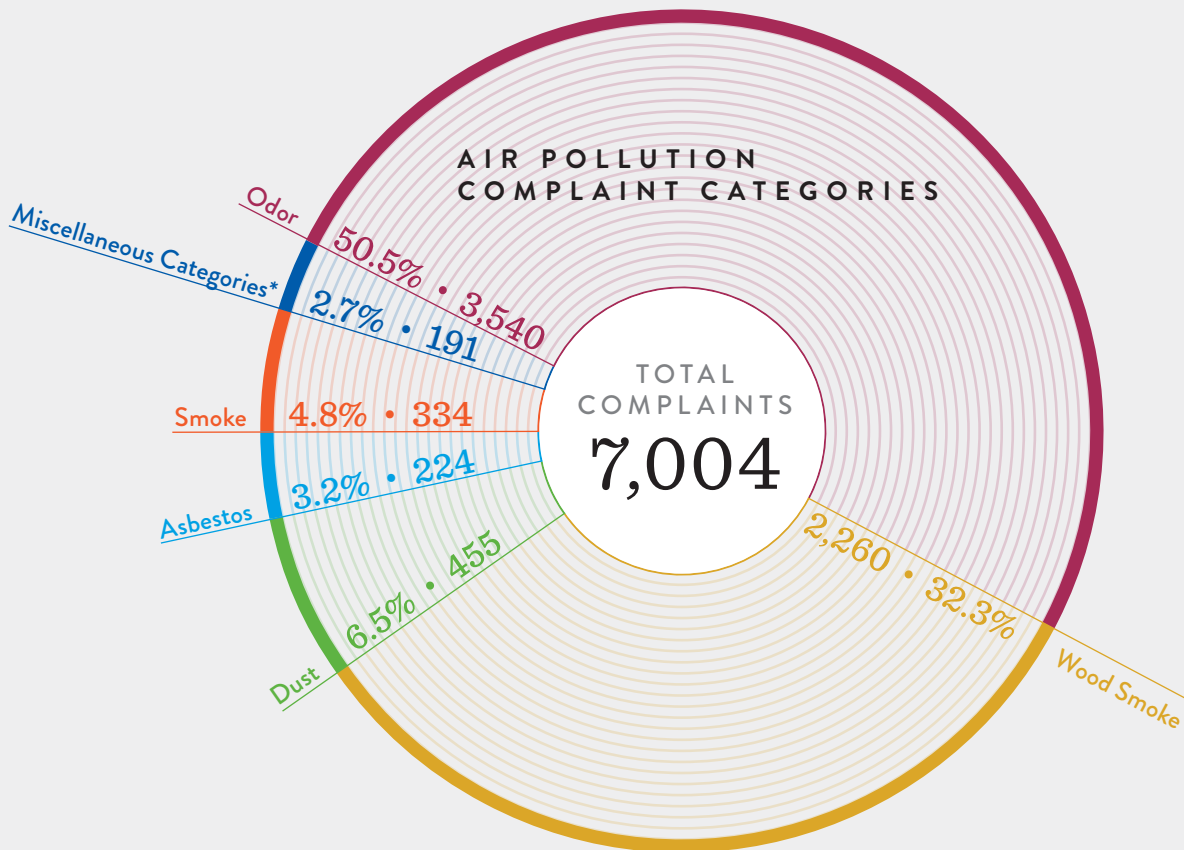
** Includes aircraft, ships, trains, construction equipment and other off-road equipment



Permit-Related Revenue 55%
 County Property Tax 36%
 Federal Grants 4%
 State and Other Grants 3%
 Other Revenues 2%



Personnel 70%
 Services and Supplies 23%
 Capital Outlay 7%



* Includes illegal burning, idling and gas stations

RULEMAKING ACTIVITY

2018 RULES ADOPTED OR AMENDED

JUNE 6, 2018

Regulation 3: Fees – amendments adopted

AUGUST 1, 2018

PM Rules: (new Reg 6, amendments to 6-1, and new Rule 6-6)

DECEMBER 19, 2018

AB 617 Expedited BARCT Implementation Schedule (new)

Rule 8-5: Organic Liquid Storage Tanks

Rule 8-8: Rule Petroleum Wastewater Treating

Rule 9-13: Portland Cement Manufacturing

Rule 6-5: Particulate Matter Emissions from Refinery Fluid Catalytic Cracking Units

Rule 8-18: Refinery Heavy Liquids Leaks

Rule 9-14: Petroleum Coke Calcining Operations

Refinery Rules (amendments)

Regulation 6, Rule 5: Particulate Matter – Particulate Matter Emissions from Refinery Fluid Catalytic Cracking Units

Regulation 11, Rule 10: Hazardous Pollutants – Hexavalent Chromium Emissions from All Cooling Towers and Total Hydrocarbon Emissions from Petroleum Refinery Cooling Towers

Regulation 12, Rule 15: Miscellaneous Standards of Performance – Petroleum Refinery Emissions Tracking

PERMITTING ACTIVITY

BAY AREA PERMITTED FACILITIES

Refineries	5
Major Facilities (Excludes Refineries)	80
Gasoline Dispensing Facilities	2,319
All Other Facilities	8,452
TOTAL	10,856

PERMITTED DEVICES AND OPERATIONS 24,347

NEW PERMIT APPLICATIONS

Major Source Review (Title V)	63
New Source Review (NSR)	1,053
TOTAL	1,116

HEALTH RISK SCREENING ANALYSES

Diesel Engines	156
Gasoline Dispensing Facilities	24
Other Commercial/Industrial Facilities	50
TOTAL	230

2018 CIVIL PENALTIES AND VIOLATIONS

Civil Penalties	\$3,700,475
Violations Resolved with Penalties	800

2018 EXCEEDANCES OF AIR QUALITY STANDARDS

OZONE

Days over National 8-Hour Standard	3
Days over California 1-Hour Standard	2
Days over California 8-Hour Standard	3

PARTICULATE MATTER

Days over National 24-Hour PM ₁₀ Standard	0
Days over California 24-Hour PM ₁₀ Standard	0
Days over National 24-Hour PM _{2.5} Standard	20

COMPLIANCE AND ENFORCEMENT ACTIVITY

2018 COMPLIANCE INSPECTIONS

Source Inspections	6,662
Air Pollution Complaints (Excludes Smoking Vehicles)	7,004
Gasoline Dispensing Facility Inspections	1,111
Asbestos Inspections	1,690
Reportable Compliance Activities	356
Diesel Compliance and Grant Inspections	1,139
TOTAL	17,962

LABORATORY

2018 SAMPLES ANALYZED IN THE LAB

Provides information about emissions in ambient air. Helps to identify area for further reductions.

PM	2,380
Toxics	726
Source-Oriented Analyses	89
Interagency Projects	15
TOTAL	3,210

SOURCE TEST ACTIVITY

2018 NUMBER OF SOURCE TESTS

Refinery Source Tests	6	Compliance Rate	100%
Title V Source Tests (Excludes Refineries)	33	Compliance Rate	97%
GCT (Gasoline Cargo Tanks)	292	Compliance Rate	97.6%
GDF (Gasoline Dispensing Facilities)	119	Compliance Rate	57.1%
Other Misc. Source Tests	16,180	Compliance Rate	99.9%
TOTAL SOURCE TESTS	16,630		
TOTAL VIOLATIONS	55		
COMPLIANCE RATE	99.7%		



INVESTING IN A CLEAN AIR FUTURE

— Innovative Air District initiatives that lay the groundwork for a clean air future.

EXPANDING ZERO-EMISSION VEHICLES

- | | |
|---|--|
| <p>01 Over \$6 million for the installation of over 2,000 publicly accessible EV charging stations.</p> | <p>02 Deployment of three shared autonomous vehicles for testing in Contra Costa and Alameda counties, and one electric drayage truck at the Port of Oakland with 12 more anticipated in 2019.</p> |
| <p>03 Deployment of 11 BYD electric trucks and supporting infrastructure in Goodwill’s fleet in San Francisco, San Mateo, and Marin counties.</p> | <p>04 Funded deployment of 10 hydrogen fuel cell electric buses in AC Transit’s fleet.</p> |

NEW PROGRAM

\$7
MILLION

\$7 million for innovative, cost-effective first- and last-mile solutions through the new Pilot Trip Reduction Program to be awarded in 2019.

2018 PROGRAMS

\$487
THOUSAND

\$487K to support the deployment or installation of:



1

Electric Heavy-Duty Truck



5

Electric Forklifts



1

Electric Bulk Conveyor



43

Level 2 EV Chargers

CLIMATE TECH FINANCE

In partnership with California Infrastructure and Economic Development Bank (IBank), the Air District launched a finance program to provide loans for facilities to implement emerging climate technologies.

WOOD SMOKE REDUCTION

The Air District provided funding to help Bay Area residents replace or decommission 254 wood-burning fireplaces.



CLEAN CARS FOR ALL PROGRAM

The Air District established a program offering up to \$11,500 for low-income residents to access clean transportation, including hybrids, plug-in hybrids, and electric vehicles.

CALTRAIN ELECTRIFICATION

In 2018, the Air District allocated \$3 million to support the electrification of the Caltrain corridor between San Francisco and San Jose as part of its commitment to award \$20 million towards the project over a five-year period beginning in 2015.

EXPANDING BICYCLE INFRASTRUCTURE

The Air District awarded approximately \$1.3 million in grant funding to support the construction of nearly 10 miles of new bikeways and installation of 102 new secure bike parking spaces.

HYDROGEN-POWERED FERRY

Through a \$3 million grant from the California Air Resources Board (ARB) supported by the California Climate Investments Initiative, the Air District funded a zero-emission hydrogen fuel cell ferry demonstration project, the first of its kind in the nation. The 70-foot catamaran is being built by Bay Ship & Yacht Co. of Alameda and will showcase the advantages of hydrogen fuel cells for the commercial maritime industry, with construction expected to be complete by September 2019.



GRANT AND INCENTIVE PROGRAMS

TFCA REGIONAL FUND GRANTS 2018

Total Funds Awarded **\$10.78M**
 Number of Projects/Programs Awarded Grants **60**

ESTIMATED LIFETIME EMISSIONS REDUCTION FOR THE PROJECTS FUNDED (TONS)

Oxides of Nitrogen (NO_x) 13.85
 Reactive Organic Gases (ROG) 17.68
 Particulate Matter (PM₁₀) 13.55
TOTAL **45.08**
 Carbon Dioxide (CO₂) 37,037

CARL MOYER PROGRAM / MOBILE SOURCE INCENTIVE FUND (MSIF), COMMUNITY HEALTH PROTECTION PROGRAM, FARMER, DERA - 2018

Total Funds Awarded **\$53.1M**
 Number of Engines Covered by Grant Projects. **394**

ESTIMATED LIFETIME EMISSIONS REDUCTION FOR THE PROJECTS FUNDED (TONS)

ROG 57
 NO_x 953
 PM₁₀ 30
TOTAL **1,040**

VEHICLE BUY BACK PROGRAM 2018

Total Funds Awarded \$4.9 M
 Number of Vehicles Scrapped in 2018 4,587

ESTIMATED LIFETIME EMISSIONS REDUCTION FOR THE PROJECTS FUNDED (TONS)

NO_x. 147
 ROG 236
 PM₁₀ 1.4
TOTAL **385**

TFCA COUNTY PROGRAM MANAGER FUND GRANTS FISCAL YEAR ENDING 2018

Total Funds Awarded **\$9.92M**
 Number of Projects/Programs Awarded Grants **46**

ESTIMATED LIFETIME EMISSIONS REDUCTION FOR THE PROJECTS FUNDED (TONS)

NO_x 41.86
 ROG 34.91
 PM₁₀ 38.22
TOTAL **114.99**
 CO₂. 68,179

GOODS MOVEMENT PROGRAM 2018

Total Funds Awarded **\$6.4M**
 Number of Engines Covered by Grant Projects. **3**

ESTIMATED LIFETIME EMISSIONS REDUCTION FOR THE PROJECTS FUNDED (TONS)

NO_x297
 PM₁₀ 9.7
TOTAL **306.7**



PARTNERING FOR PROGRESS

— Solving the problems of air pollution and the global climate depends on collaboration with partners and participation from the greater Bay Area community and beyond.

GLOBAL CLIMATE ACTION SUMMIT

The Air District hosted two events in conjunction with the Governor’s Climate Summit.



CLIMATE TECH MARKETPLACE

A networking expo that connected business and government customers with innovative climate technologies and highlighted the Air District’s role as an accelerator toward implementation of new climate technologies.



**“UNITED AGAINST GHGS”
DIESEL FREE BY ’33**

An event featuring city and county elected officials, and business leaders worldwide who signed a Statement of Purpose committing their municipality to go diesel free by the end of 2033.

CLIMATE PROTECTION GRANT PROGRAM

The Air District awarded \$4.5 million in grants for innovative climate protection projects. A \$400,000 grant went to the Bay Area Regional Energy Network to develop a regional program to replace traditional natural gas water heaters with electric heat pumps. The Alameda County Waste Management Authority was awarded \$263,000 to use automated sensor technology to help reduce contamination in compost, making the compost more marketable. Marin County, working along with other jurisdictions, was awarded \$206,000 to develop a model policy to require that low-carbon concrete be used in construction projects.

COP24 UNITED NATIONS CLIMATE CHANGE CONFERENCE

Executive Officer Jack Broadbent and Technology Implementation Officer Ranyee Chiang participated in the COP24 Conference in Katowice, Poland in December. The Air District was part of a delegation of state and local governments, businesses, and non-profits from the United States. The Air District highlighted Bay Area commitments and partnerships, a crucial counterweight to the federal government delegation's push for the continued use of fossil fuels.

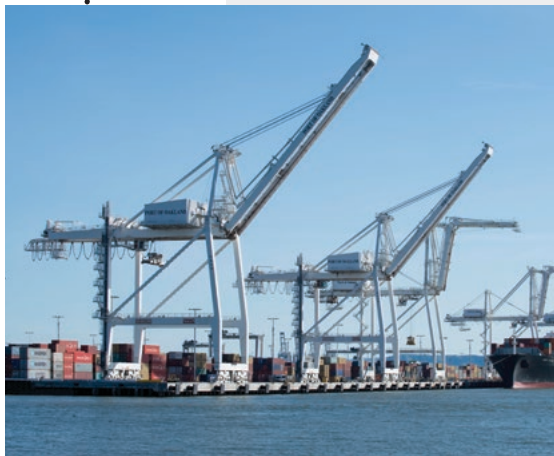
Technology Implementation Officer Ranyee Chiang speaking at COP24





2018 YOUTH FOR THE ENVIRONMENT AND SUSTAINABILITY (YES) CONFERENCE

Hundreds of local students came together to discuss clean commute alternatives, learn about paid internships and the latest climate science and technologies, and to participate in peer-led leadership workshops.



WEST OAKLAND STEERING COMMITTEE TO TARGET AIR POLLUTION

The Air District, in partnership with the West Oakland Environmental Indicators Project, held the first three steering committee meetings to begin the process of developing a Community Action Plan to improve air quality and reduce the public health burden in West Oakland. The Plan will build on existing work in West Oakland and identify air pollution sources and locations most susceptible to air pollution.

FROM THE STATE CAPITOL 2018 LEGISLATIVE SUMMARY

— The Air District’s primary legislative goal for 2018 was to **secure funding to implement AB 617**, which will employ strategies to improve community health by reducing exposure in neighborhoods most impacted by air pollution. The District supported a campaign spearheaded by Assembly member Tim Grayson that resulted in a **\$50 million statewide allocation for 2018** as part of the cap-and-trade expenditure plan. Legislature and staff expressed the need for the same level of funding to be allocated in 2019, although no formal allocation of funds could occur in advance.



THE AIR DISTRICT SUPPORTED TWO BILLS WHICH WERE PASSED:

AB 2061 (FRAZIER): increases weight limits for electric, fuel cell, and natural gas trucks

AB 1796 (MURATSUCHI): prevents landlords of rent-controlled buildings from blocking installation of tenant-funded electric vehicle charging stations

BILLS THAT THE AIR DISTRICT SUPPORTED, BUT DID NOT ADVANCE:

AB 1975 (CHU): to establish South Bay Interagency Odor Taskforce

SB 1144 (DODD): to increase civil stationary source air penalty ceilings for serious violations at power plants, petrochemical facilities and refineries

AB 3059 (BLOOM): to authorize congestion pricing demonstration projects

SB 1427 (HILL): to improve enforcement of HOV and HOT lanes

AB 2008 (SALAS): to exclude Carl Moyer grants from taxable income

**EXECUTIVE
MANAGEMENT****JACK P. BROADBENT**

Executive Officer/Air Pollution
Control Officer

BRIAN C. BUNGER

District Counsel

WAYNE KINO**DAMIAN BREEN****GREG NUDD****JEFF MCKAY****REX SANDERS**

Deputy Air Pollution
Control Officers

VANESSA JOHNSON

Manager, Executive Operations

**DIVISION
DIRECTORS AND
OFFICERS****ALAN ABBS**

Legislative Officer

BLAIR ADAMS

My Air Online Program Officer

RANYEE CHIANG

Technology Implementation Officer

JOHN CHILADAKIS

Information Services

JUDITH CUTINO

Health Officer

LISA F. FASANO

Communications Officer

HENRY HILKEN

Planning and Climate Protection

JEFFREY GOVE

Compliance and Enforcement

PAMELA LEONG

Engineering

PHIL MARTIEN

Assessment, Inventory, and
Modeling

MARICELA MARTINEZ

Executive and Administrative
Resources

KAREN SCHKOLNICK

Strategic Incentives

ERIC STEVENSON

Measurements and Meteorology

ELIZABETH YURA

Community Protection Officer

**CURRENT BOARD
MEMBERS**

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PAULINE RUSSO CUTTER**SCOTT HAGGERTY****JOHN J. BAUTERS****NATE MILEY**

Contra Costa County

JOHN GIOIA**DAVID E. HUDSON****KAREN MITCHOFF****MARK ROSS**

Marin County

KATIE RICE, CHAIR

Napa County

BRAD WAGENKNECHT

San Francisco County

TYRONE JUE

(MAYOR'S APPOINTEE)

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San Mateo County

DAVID CANEPA**CAROLE GROOM****DOUG KIM**

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CINDY CHAVEZ, SECRETARY

LIZ KNISS

ROD G. SINKS, VICE-CHAIR

Solano County

LORI WILSON**JIM SPERING**

Sonoma County

TERESA BARRETT**SHIRLEE ZANE****CONTACT
INFORMATION**

Air Pollution Complaints

800.334.ODOR (6367)

Air Quality Info

800.HELP.AIR (435.7247)

Daily Air Quality Forecasts,

Spare the Air Alerts,

Agricultural Burn Days

Compliance Assistance

415.749.4999

Engineering Services

415.749.4990

General Business

415.749.5000

Public Information

415.749.4900

Report Smoking Vehicles

800.EXHAUST (394.2878)

Winter Spare the Air Alerts

877.4NO.BURN (466.2876)

Websites

baaqmd.gov

SpareTheAir.org

Social Media

twitter.com/@SpareTheAir

facebook.com/SpareTheAir

twitter.com/@AirDistrict

facebook.com/BayAreaAirDistrict

The Bay Area Air Quality Management District does not discriminate on the basis of race, national origin, ethnic group identification, ancestry, religion, age, sex, sexual orientation, gender identity, gender expression, color, genetic information, medical condition, mental or physical disability, or any other attribute or belief protected by law. It is the Air District's policy to provide fair and equal access to the benefits of a program or activity that we administer. The Air District will not tolerate discrimination against any person(s) seeking to participate in, or receive the benefits of, any program or activity offered or conducted by us. Members of the public who believe they or others were unlawfully denied full and equal access to an Air District program or activity may file a discrimination complaint with us under this policy. This non-discrimination policy also applies to other people or entities affiliated with the Air District, including contractors or grantees that we utilize to provide benefits and services to members of the public. Auxiliary aids and services including, for example, qualified interpreters and/or listening devices to individuals who are deaf or hard of hearing, and to other individuals as necessary to ensure effective communication or an equal opportunity to participate fully in the benefits, activities, programs and services will be provided by the Air District in a timely manner and in such a way as to protect the privacy and independence of the individual. Please contact the Non-Discrimination Coordinator identified below at least three days in advance of a meeting so that arrangements can be made accordingly. If you believe discrimination has occurred with respect to one of our programs or activities, you may contact the Non-Discrimination Coordinator identified below or visit our website at www.baaqmd.gov/accessibility to learn how and where to file a complaint of discrimination. Questions regarding this policy should be directed to the Air District Non-Discrimination Coordinator, Rex Sanders, at 415.749.4951 or by email at rsanders@baaqmd.gov.



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