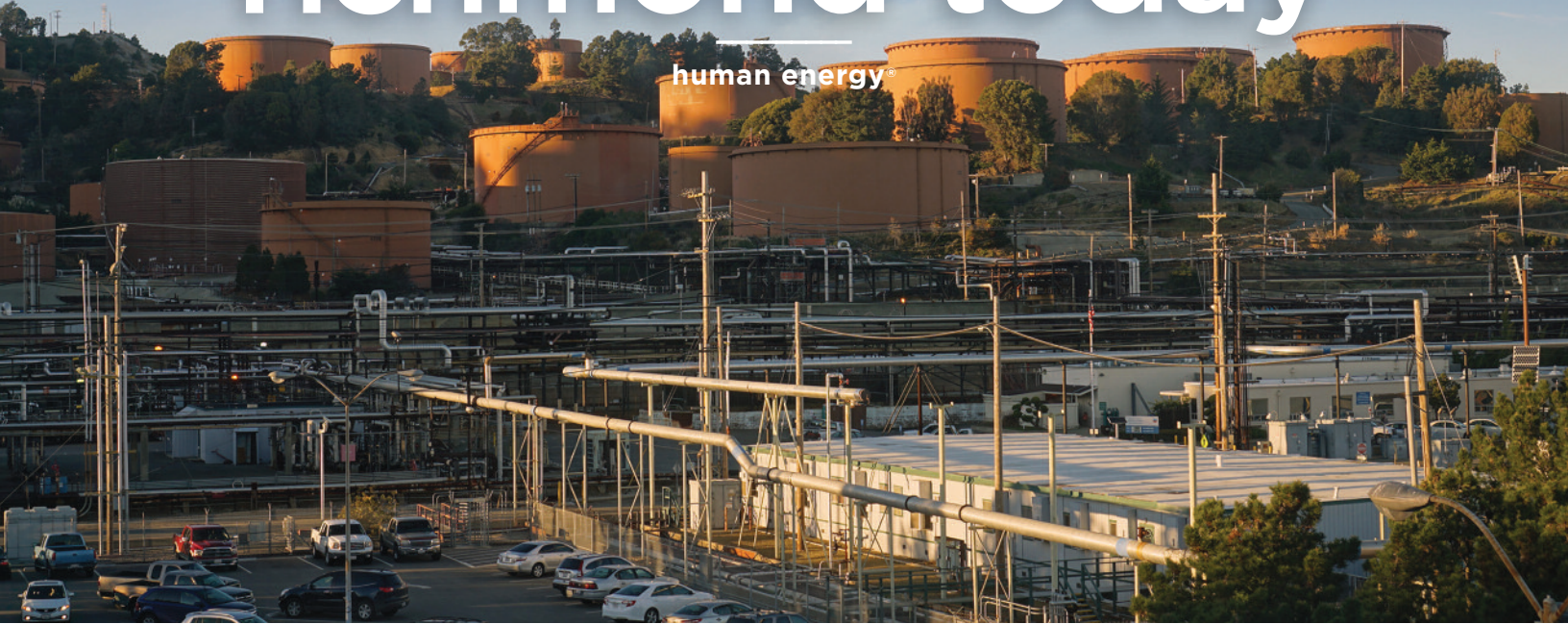




richmond refinery newsletter october 2019

richmond today

human energy®



protecting air quality

By Todd Osterberg



California has some of the nation's most stringent regulations to control emissions and protect public health. We work with more than 30 federal, state, and local regulatory agencies to ensure that the refinery fully complies with all environmental standards for air, water, and waste.

Air monitoring is one of the tools we use to understand neighborhood air emissions. Since 2014, the refinery has funded a community air monitoring program. The program collects data from three systems along the refinery's fence line and three neighborhood stations – North Richmond, Atchison Village and Point Richmond.

Based upon Bay Area Air Quality Management District measurement of criteria pollutants the Richmond/San Pablo area has some of the best air quality in the entire Bay Area. Chevron has reduced our criteria air emissions by more than 85% since the late 1970's and we continue to work on further lowering our emissions.

We are excited to share details about the program in this month's newsletter. We want the Bay Area community to know that we always strive to keep our neighbors informed and safe.

Todd Osterberg is an Environmental Specialist – Air at the Richmond Refinery.

proteger la calidad del aire

Por Todd Osterberg

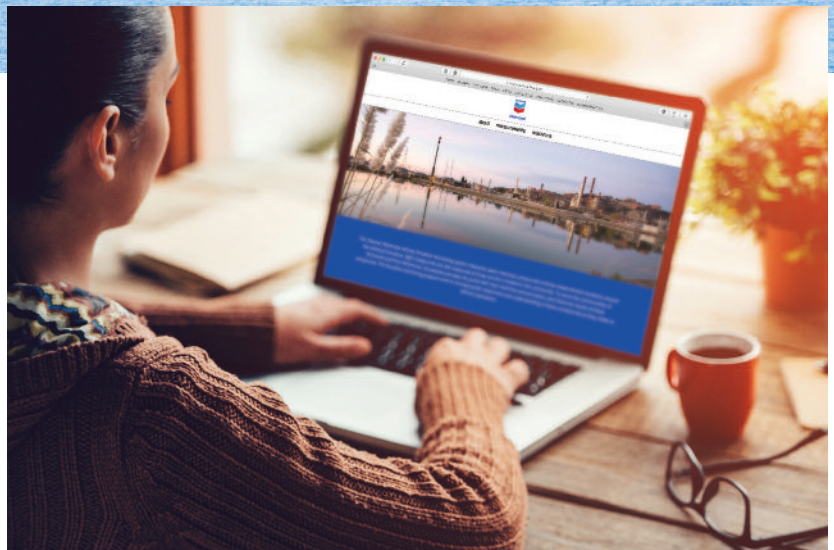
California tiene unos de los reglamentos más estrictos del país para controlar las emisiones y proteger la salud del público. Trabajamos con más de 30 agencias reglamentarias federales, estatales y locales para asegurar que la refinera opere de manera segura y cumpla cabalmente con todas las normas del medio ambiente con respecto al aire, agua y desechos.

La vigilancia del aire es una de las herramientas que utilizamos para entender las emisiones del aire del barrio. Desde 2014, la refinera ha financiado un programa de vigilancia del aire de la comunidad. El programa recopila datos de tres sistemas a lo largo de la cerca de la refinera y tres estaciones vecinas en North Richmond, Atchison Village y Point Richmond.

Con base en la medición de los criterios de contaminantes del Distrito de administración de la calidad de aire del Área de la Bahía, el área de Richmond/San Pablo es una de las áreas con mejor calidad de aire de todo el Área de la Bahía. Chevron ha reducido las emisiones del aire de los criterios más del 85% desde finales de la década del 70 y seguimos trabajando para reducir aún más nuestras emisiones.

Nos da mucho gusto compartir los detalles del programa en el boletín de este mes. Queremos que la comunidad del Área de la Bahía sepa que siempre nos esforzamos por mantener a nuestros vecinos informados y seguros.

Todd Osterberg es un especialista en aire del medio ambiente de la Refinería de Richmond.



richmond air monitoring program

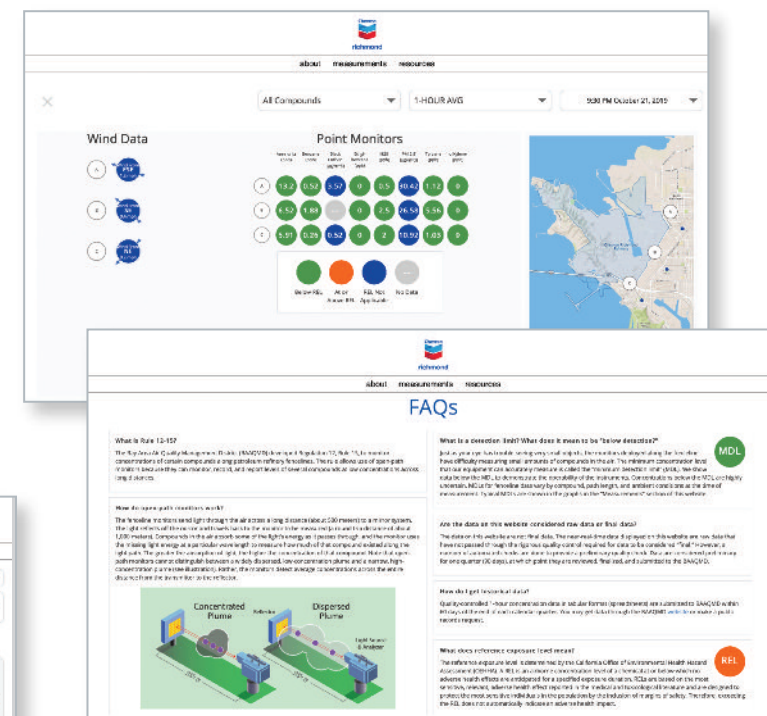
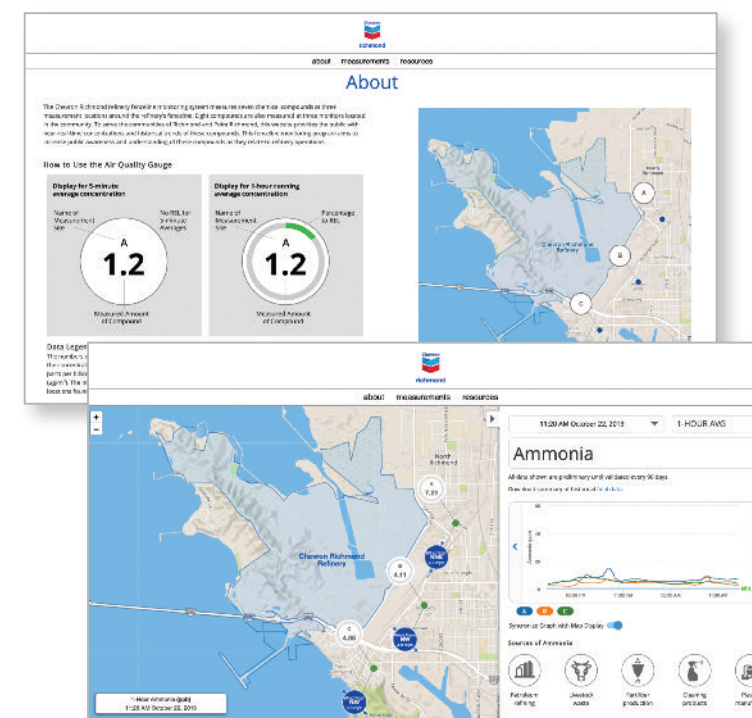
The Richmond Air Monitoring Program is funded by Chevron and managed by an independent contractor. The refinery fenceline monitoring systems measure seven chemical compounds at three measurement locations. Seventeen compounds are also measured at three monitoring stations located in Point Richmond, Atchison Village and North Richmond.

The program website has been updated to improve user experience. It provides the public with near-real-time concentrations and historical trends of these compounds. The monitoring program aims to increase public awareness and understanding of these compounds as they relate to refinery operations.

We encourage the community to visit the website to learn more about this program.

new and improved website

Get near-real-time data and detailed reports 24/7 at www.richmondairmonitoring.org



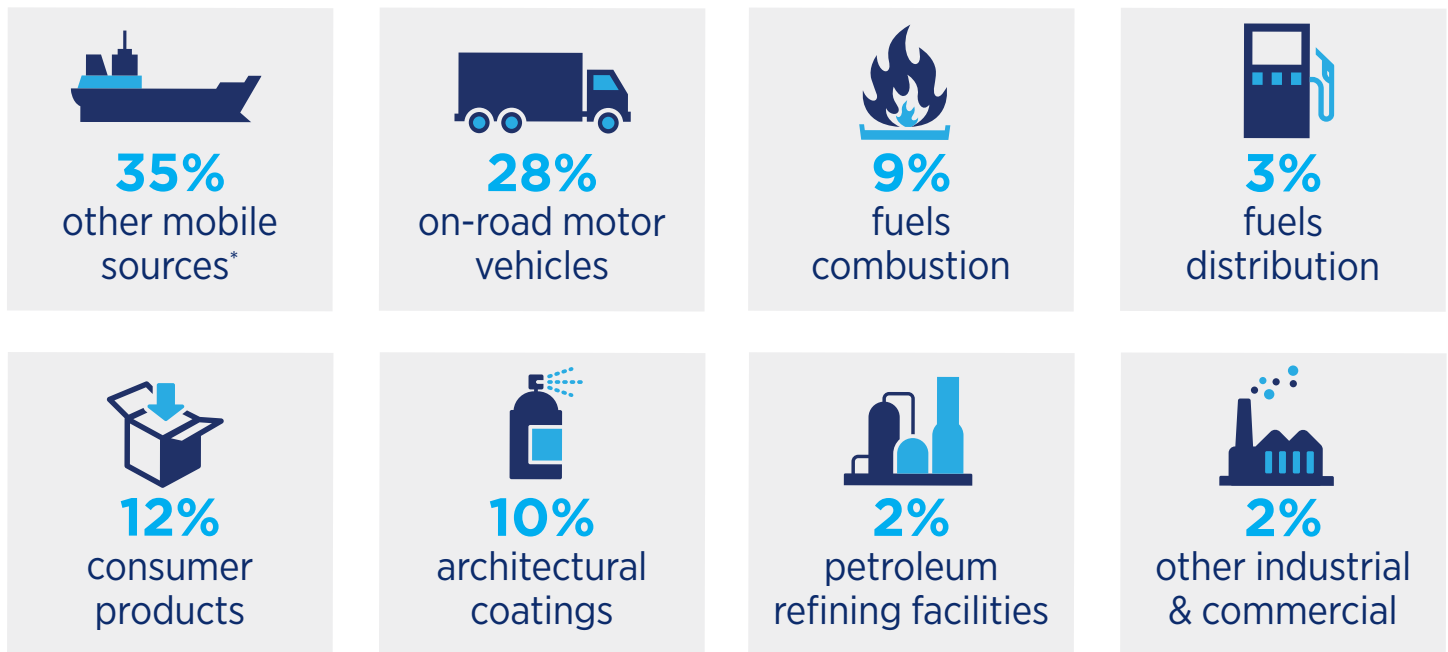
Measurements and Frequently Asked Questions

View Data by Compound

sources of bay area pollution

summer sources of ozone forming pollutants

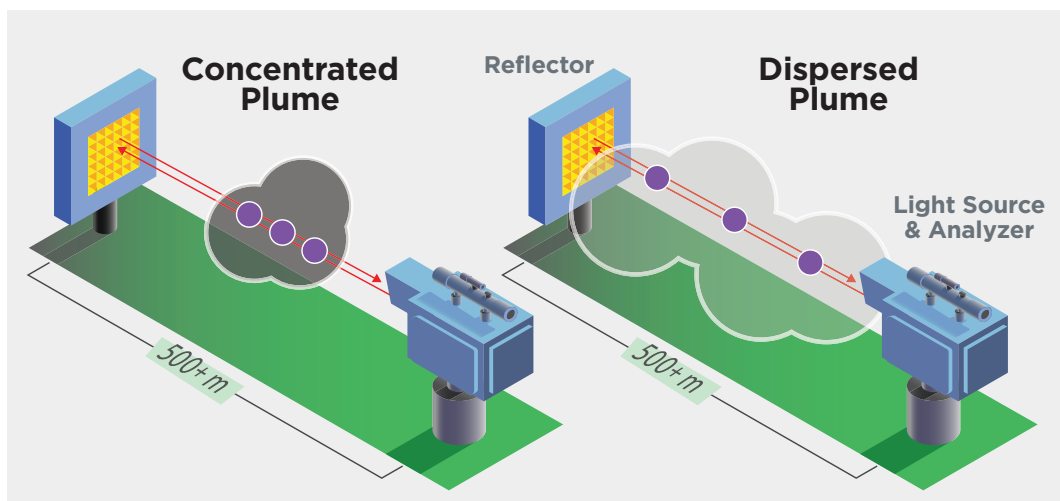
There are many different sources of emissions that contribute to air quality in the Bay Area. The Air District has identified emissions from inefficient cars, trucks and other mobile sources, as the primary cause of concern for Richmond. The following chart shows the most common sources found during the summer months.



*Includes ships, aircraft, trains, construction equipment and other off road equipment. Source for table = Bay Area Air Quality Management District, Annual Report 2018, Page 10

how do open-path monitors work?

The fenceline monitors send light through the air across a long distance (about 500 meters/1,640 feet) to a mirror system. The light reflects off the mirror and travels back to the monitor to be measured (a round trip distance of about 1,000 meters/3,280 feet). Compounds in the air absorb some of the light's energy as it passes through, and the monitor uses the missing light energy at a particular wavelength to measure how much of that compound existed along the light path. The greater the absorption of light, the higher the concentration of that compound. The monitors detect average concentrations across the entire distance from the transmitter to the reflector (see illustration).



* Please note, in some cases both the community and fenceline systems monitor for the same compound.

Q & A

Q What's the mission of Groundwork Richmond?

We were founded in 2010 as the 20th local “trust” affiliate of the Groundwork USA network, a partnership program of the U.S. Environmental Protection Agency and the National Park Service that identified the City of Richmond and Rosie the Riveter World War II Home Front National Historical Park as suitable hosts for our trust. Our programs are designed to create better leaders for a better tomorrow while helping local communities to care for the environment. In Richmond that really starts with investing in these neighborhoods by selecting projects that the community wants and using those projects to create educational and job opportunities.



a conversation with Matt Holmes Executive Director Groundwork Richmond

Q What are your main focus areas?

Over the past decade, we've been focused on improving the Richmond Greenway (in partnership with Friends of the Richmond Greenway) part of the city's urban core that has been disproportionately impacted by air pollution, crime and poverty. We also work on behalf of the City of Richmond to restore the city's urban forest by planting and maintaining trees.

Q Tell us about your work with youth?

Our Green Team is one of our programs to engage 15-18 year olds in community service-learning opportunities including environmental stewardship projects, professional development, STEAM (Science, Technology, Engineering, Art and Math) education and career awareness programs. The National Parks Service supports this program to help encourage young people to consider parks as a career pathway. We also receive funding from companies like Chevron.

Q How did that lead to an interest in air quality?

Our urban forestry work got us really educated on all the benefits of trees, which do a lot more than just suck up carbon. They also slow down storm water runoff, they beautify neighborhoods and increase home values. They also cool streets and reduce the urban heat island effect. But probably more than anything in the realm of environmental benefits, they knock down air particulates (PM and diesel) from the air. The more we got involved in this area, the more we became interested in learning the specific sources of emissions and that is what led us to air monitoring.

Q How did you get involved in air monitoring?

We applied for a grant from the California Air Resources Board to install 50 remote air sensors which would give Richmond a citywide air monitoring network. That helps provide the community more accurate data about air quality. After we got started down this path, we discovered that the Bay Area Air Quality Management District had designated the Richmond-San Pablo area a study area for future emission reductions. And so it seemed natural given our emerging work on air quality and monitoring to participate in this community-led process by joining the Community Steering Committee.

Q Based on your work to date, what are the air quality issues you are seeing in Richmond?

Some of the areas that have the worst health outcomes in terms of air quality are located in the area where Interstate 580 and 80 meet. The tailpipe emissions that occur every day come over into the community, it's not floating into a neighborhood with a well-developed tree canopy. It's just floating over a hot concrete pancake. And so that particulate matter is traveling thousands of feet further than it does in other parts of the Bay Area. And as a result, pollution is impacting those neighborhoods disproportionately.

Q What are some of the challenges you've faced?

In the Environmental Justice sector to partner with industry is seen by some as a negative. I don't want to hold rallies at the gates of industry. I want to work with people in industry. The people that I've met at places like Chevron have shown themselves to be kind and hardworking people that want to do the right thing.

Q Is there anything else you would like to add?

We live in the wealthiest region in all of human history and our community should be protected by the most state-of-the-art equipment possible, and with the most skilled workforce possible. I want to see us move together in the right direction towards justice and equity and a healthy future.



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richmond-san pablo community air monitoring plan

The Bay Area Air Quality Management District is leading an effort to monitor air quality in the Richmond, North Richmond and San Pablo communities. This new program is part of the California Community Air Protection Program, as authorized by Assembly Bill 617 in 2017. The effort aims to enhance community air monitoring in neighborhoods most disproportionately impacted by air pollution. Data collected from this air monitoring will inform future community-based emissions reduction plans. A Community Air Monitoring Plan Steering Committee that includes 35 members representing community, education, government, industry/business and neighborhoods has been holding monthly meetings to develop a plan for the Richmond area. The meetings are open to the public. Details can be found by visiting bit.ly/richmond-sanpablo-communityhealth.

plan de vigilancia del aire de la comunidad de richmond-san pablo

El Distrito de administración de la calidad del aire del Área de la Bahía lidera un esfuerzo para monitorear la calidad del aire en las comunidades de Richmond, North Richmond y San Pablo. Este nuevo programa es parte del Programa de protección del aire de la comunidad de California, autorizado por ley 617 de la Asamblea en 2017. La iniciativa se enfoca en mejorar vigilancia del aire de la comunidad en los barrios afectados más desproporcionalmente por la contaminación del aire. Los datos recopilados de esta vigilancia informarán los planes futuros de reducción de emisiones basados en la comunidad.

Un Comité guía del plan de vigilancia del aire de la comunidad, que incluye 35 miembros que representan a la comunidad, la educación, el gobierno, industrias/negocios y barrios, ha llevado a cabo reuniones mensuales para desarrollar un plan para el área de Richmond. Las reuniones están abiertas al público. Puede encontrar detalles visitando bit.ly/richmond-sanpablo-communityhealth.

community meeting
Saturday, November 2
10 am - 1:30 pm, Richmond
Memorial Auditorium
RSVP at bit.ly/richmond-sanpablo-communitysummit

**reunión de la
comunidad**
Sábado 2 de noviembre
de 10 a.m. a 1:30 p.m.
Richmond Memorial
Auditorium
Confirme su asistencia en
bit.ly/richmond-sanpablo-communitysummit