



ROADMAP TO RESILIENCE

PART OF THE CARE PROJECT

EXECUTIVE SUMMARY

CARE stands for Climate Adaptation and Resilience Enhancement. CBE began this project in 2013 and, since then, we have worked to engage our members around climate change and the potential impacts in the environmental justice communities of Richmond and Wilmington, CA. As we experience greater impacts from climate change, the need to adapt to these changes becomes greater. These communities are similar in that they are on the frontlines of impacts from climate change and pollution. CBE recognizes that our work in creating policies to reduce greenhouse gases and lessen our reliance on fossil fuel continues to be crucial; we also realize it is inevitable that climate change will significantly impact our lives. These impacts are far more severe for low-income communities of color, as has been well documented by a number of research studies, and by the recent experience with hurricanes Katrina and Sandy.

Since impacts from climate change intensify existing vulnerabilities, we take into account the sources of pollution in these communities that continuously place a strain on residents. For Richmond and Wilmington, refineries and the transport of fossil fuel are an everyday threat to health of residents. Climate change can increase this risk, especially when a population is more vulnerable due to ongoing pollution and lack of services. Not only do these emissions impact health, greenhouse gases and volatile organic compounds can lead to greater impacts from climate change. With input from residents through workshops and advisory board meetings, CBE has created the Roadmap to Resilience to highlight issue areas that need to be addressed and initial steps. We highlight 4 main issue areas:



SEA-LEVEL RISE | EXTREME HEAT EVENTS | HEALTHCARE SERVICES | RENEWABLE ENERGY

This Executive Summary provides a preview of all the information our Roadmap to Resilience offers.

CITY OF RICHMOND

The City of Richmond has a council manager system of government.

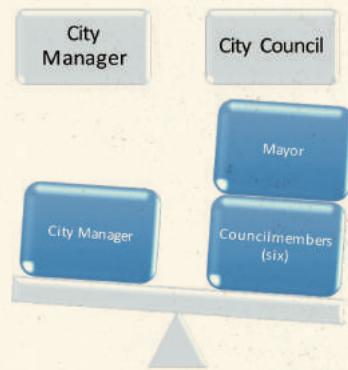
The City Council

The Mayor forms part of the City Council. The City Council appoints a City Manager that carries out the policies passed. The Mayor and other City Councilmembers are all elected at-large, meaning that the entire City of Richmond votes to elect these positions. The City Council is comprised of the Mayor and six at-large councilmembers.

The City Manager

The City Manager is appointed by the Councilmembers and is tasked with carrying out the policies they pass. The City Manager is to do the following:

- Implement City Council policy
- Direct departments and administrative functions
- Provide leadership in policy development and implementation
- Assure an efficient and equitable delivery of City Services
- Initiate and develop short and long-term special projects
- Oversee the annual budget process
- Manage inter-governmental relations and public information
- Direct major economic development projects



Richmond Environmental Justice Coalition (REJC)

- ACCE – Alliance of Californians for Community Empowerment
- APEN – Asian Pacific Environmental Network
- CBE – Communities for a Better Environment
- CNA – California Nurses Association
- RPA – Richmond Progressive Alliance
- SEIU 1021 – General employees from the City of Richmond
- Urban Tilth

Other Richmond Stakeholders:

- Chevron
- Chamber of Commerce
- Richmond Council of Industries
- Richmond Police Officers Association
- Richmond Firefighters Association
- BAPAC (Black American Political Action Committee)
- BWOPA (Black Women Organized for Political Access)
- Contra Costa Central Labor Council
- Contra Costa Building Trades Council
- Contra Costa Democratic Central Committee

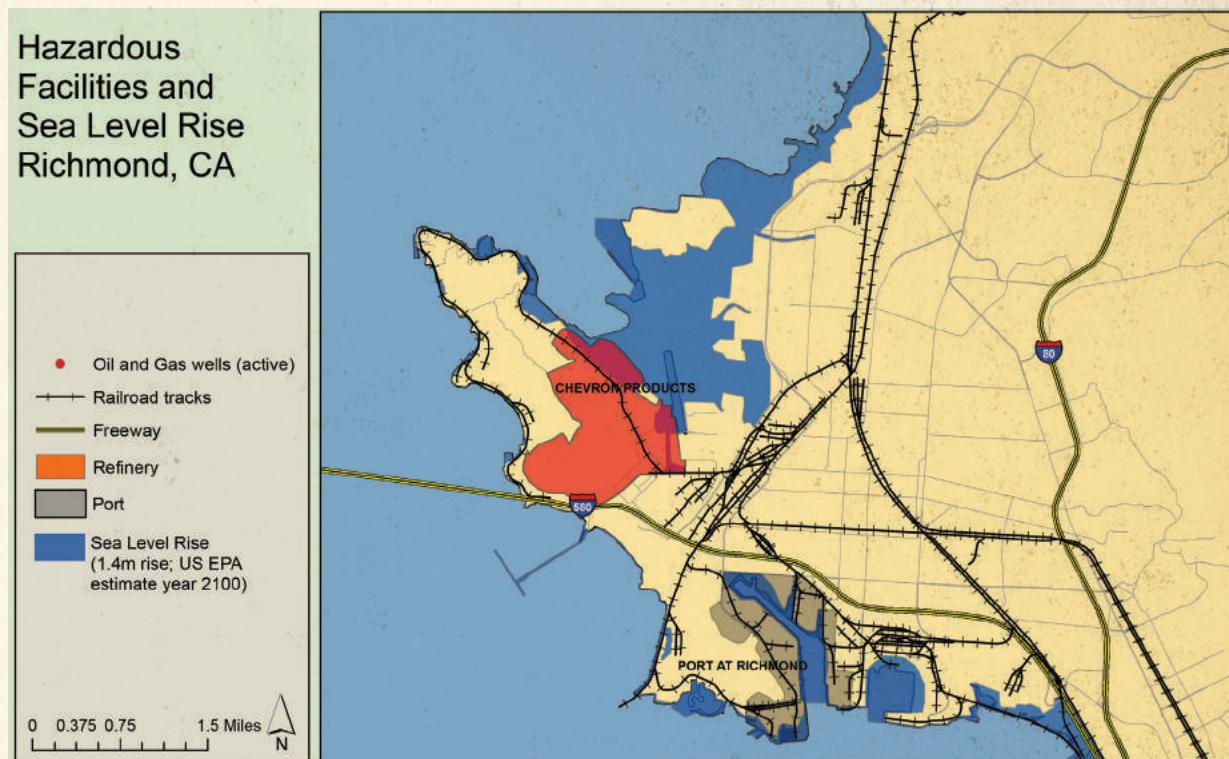


Photo Credit: Lorenz Angelo

SEA-LEVEL RISE

Sea-Level Rise in Industrial areas

The Chevron refinery, the Port of Richmond, and rail lines are under threat of impacts of sea-level rise and flooding. The impacts of sea-level rise on these areas includes property damage, disruption of services, and flooding of sites with hazardous materials. The flooding of sites with hazardous materials, such as pharmaceuticals, petroleum products, cleaners and pesticides, can have long-lasting impacts on water quality and the surrounding natural habitats of the Bay. A main concern is the potential release of these hazardous chemicals into rising groundwater. Pipelines, which carry varying petrochemicals, could release into the environment, harming natural habitats and species.



This map shows the projected sea level rise of 1.4 meters over the port, rail lines, and refineries. This projection is not completely accurate and only shows areas of potential vulnerability.

EXTREME HEAT EVENTS

What makes Richmond Vulnerable to Extreme Heat Events?

Although the occurrence of heatwaves is not likely to increase over the coming years in Richmond, residents are vulnerable to extreme heat because of poverty, vulnerable populations and the lacking infrastructure for cooling.¹

Heat Island Effect

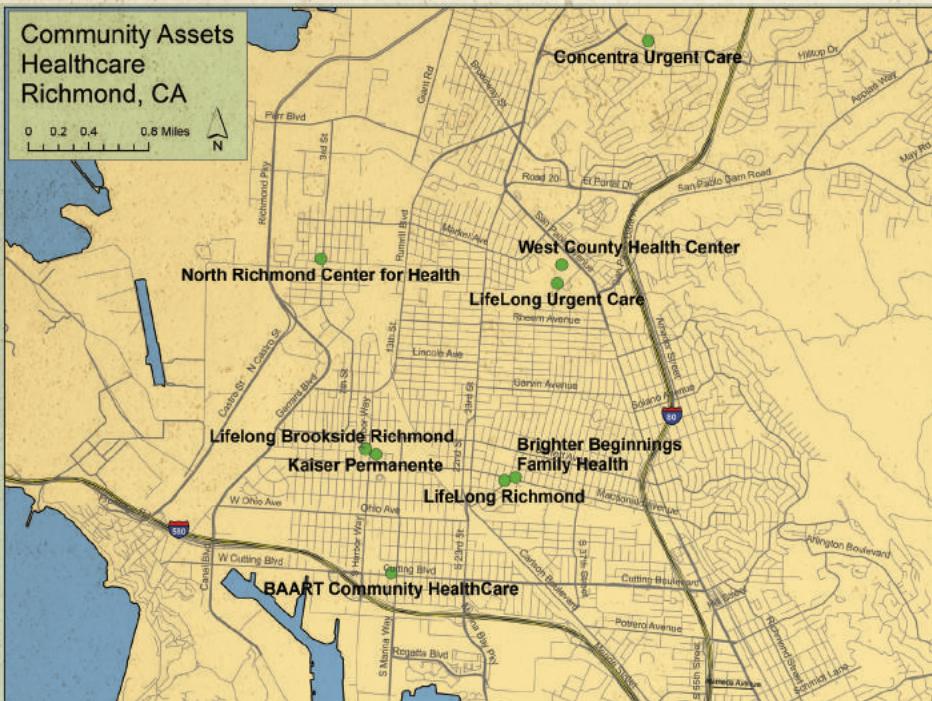
The Urban Heat Island keeps nighttime temperatures higher, which makes it harder for people to find relief during heatwaves.² Although Richmond is not likely to experience an increase in extreme heat events soon, the Urban Heat Island effect could still impact residents by raising temperatures.

The Urban Heat Island Effect is when asphalt and concrete absorb more heat compared to rural or suburban areas with more vegetation.

Coastal Community

Richmond is surrounded by the San Francisco Bay and has a cooler climate than the inland areas of Contra Costa County. Given the cooler climate in Richmond, air conditioning is not much of a necessity and, generally, people do not have air conditioning in their homes. Those that are mainly at risk to be impacted by heat-related illnesses are those with asthma, young children, the elderly, and the linguistically isolated.³

HEALTHCARE SERVICES



Richmond already faces disproportionate health inequities, which combined with the following additional vulnerabilities further affects access to health care services:

- Language Barrier
 - Medically Uninsured Populations
 - Access to Medicare/ Medi-Cal
 - Closure of Doctors' Medical
 - Time Sensitive Emergencies
 - Transportation
 - Car Ownership
 - Clinic Wait Times
 - Asthma Rates
 - Lack of Access to Emergency Services

RENEWABLE ENERGY

Climate change can increase vulnerabilities of the electrical grid due to increased temperature, wildfires, floods, winds and extreme weather.⁴ For example, power outage can occur due to high temperatures decreasing power plant efficiency, transmission line sagging, higher energy use during hot days from air conditioning, wildfires, and other climate-related grid vulnerabilities. In general, local, lower voltage electricity distribution lines have been the cause of most existing power outages (for example due to tree limbs falling during storms) even without climate change. But climate change can increase overall grid vulnerability, especially with a large sprawling grid.

ENDNOTES

1 • <http://cchealth.org/health-data/pdf/2015-climate-change.pdf>

2 • Preparing California for Extreme Heat, Heat Adaptation Workgroup, a subcommittee of the Public Health Workgroup, California Climate Action Team (CAT), October 2013

3 • http://www.climatechange.ca.gov/climate_action_team/reports/Preparing_California_for_Extreme_Heat.pdf

⁴ • For example, see Union of Concerned Scientists, Power Failure: How Climate Change Puts Our Electricity at Risk (2014), http://www.ucsusa.org/global_warming/science_and_impacts/impacts/effects-of-climate-change-risks-on-our-electricity-system.html#.WA69UegrK00