LA SANITATION & ENVIRONMENT

ADVANCING CLIMATE ACTION

CITY OF LOS ANGELES FOUNDED 1781

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CITY OF LOS ANGELES

Climate change is a global challenge that requires local action, and the City of Los Angeles is taking aggressive measures to combat further climate impacts. LA Sanitation & Environment (LASAN), recognized as a national leader in environmental services and programs, is a critical partner in the City's climate response and in advancing the path towards carbon neutrality. For nearly a decade, Los Angeles has measured its City wide and government operations' greenhouse gas emissions to inform strategies needed to meet our target of reducing emissions 80 percent from 1990 levels by 2050. This data has become more essential than ever as Mayor Eric Garcetti has committed to an ambitious effort to make Los Angeles carbon-neutral.

Climate action isn't new to us at LASAN. We have led the effort in preparing greenhouse gas inventories since 2010. With the adoption of the Sustainable City pLAn, we now complete these inventories on an annual basis, giving us more information to take the right actions. In recent years, our Climate Action Program has evolved to better assist City departments by conducting special studies to understand the impact our programs have on the climate, building institutional knowledge in climate mitigation and adaptation, and collaborating with other departments and outside agencies to exchange ideas and build off of our collective experiences.

There are steep challenges in taking action to achieving carbon neutrality, but we are committed to meeting these challenges in the execution of our mission to protect public health and the environment. We will continue to collaborate with City officials, departments, and Angelenos to ensure that our city is successful in this climate action. While there is much more work ahead in pursuit of our ambitious and necessary goals, we have already made significant strides on this pathway to becoming carbon-neutral. Together, we can make Los Angeles a healthy, clean, and safe community for each of us and for the generations to come.

Enrique C. Zaldivar, P.E.,
Director and General Manager
LA Sanitation & Environment

CALL FOR ACTION

For years, the City of Los Angeles has recognized climate change as a serious threat. The City faces the serious impacts of climate change on several fronts: a future of increased extreme heat, more severe droughts, longer fire seasons, and increased flooding and inundation in low-lying neighborhoods from rising sea levels. We need to act decisively to implement data-driven policies and programs that will provide the greatest reduction in greenhouse gas (GHG) emissions.

In fact, the City took early steps to reduce GHG emissions through programs such as the Department of Public Works' LED streetlight conversion and tree planting programs. However, there is more to be done. The USDA Forest Service estimated that over 129 million drought-stressed trees have died in California since 2010, and six of the ten most destructive wildfires in California's history have burned in 2017 and 2018 alone.

Prompted by this need for action, Mayor Eric Garcetti committed to a goal of carbon neutrality in Los Angeles. This aggressive target is a major step forward in developing and implementing plans to ensure future generations can continue to enjoy a city that is environmentally healthy, economically prosperous, and equitable in opportunity. Our efforts today will not only reduce the likelihood of increased fires, droughts, extreme storms, and flooding, but will also provide clean air and water, protect ecosystems, and ensure healthy and safe communities for future generations.

A HEALTHY FUTURE

Achieving our climate goals will be a significant challenge. There is no simple solution. LASAN is committed to proactively addressing climate change and supporting climate action in line with our mission to protect public health and the environment.

Building on nearly a decade of experience, LASAN's Climate Action Program supports the City's path towards carbon neutrality as outlined by the Sustainable City pLAn. Housed within the Regulatory Affairs Division of LASAN, this program collaborates with City departments, policymakers, and outside agencies on climate-related reports and activities.

LASAN has three main areas of focus in our approach towards successful climate action: accounting, mitigation, and resilience. By providing a comprehensive account of GHG emissions and their sources, reducing GHG emissions, and adapting to a future climate, significant strides can be made to realize our climate goals.

ACCOUNTING: Understand GHG emissions, drivers, and trends through inventories and studies to build a holistic understanding of our contribution to climate change.

MITIGATION: Implement policies and programs to reduce GHG emissions into our atmosphere and prevent further damage to our climate.

RESILIENCE: Adapt our operations and procedures to a changing climate to maintain resiliency and reliability of our services.

UNDERSTANDING OUR CONTRIBUTION: GREENHOUSE GAS INVENTORIES & STUDIES

LASAN's Climate Action Program conducts municipal, or government operations, GHG inventories on an annual basis to quantify the emissions from all City operations, such as its landfills, water reclamation plants, and power generation facilities, among other sources. The inventory is based on a standardized set of guidelines known as the Local Government Operations Protocol (LGOP), which is used by municipalities across the country to track emissions in a consistent, accurate, and transparent manner.

LASAN will now conduct community, or City-wide, inventories that quantify all emissions outside of municipal control that occur within City limits. These community inventories follow the Global Protocol of Community-Scale Greenhouse Gas Emissions (GPC), which is used by communities throughout the world to quantify their emissions.

These annual inventories are critical for the City's understanding of its climate impacts and allow the City to identify areas of opportunity, implement action plans, and track progress towards its climate goals. By conducting these inventories annually, LASAN provides reliable and reproducible data for policymakers and departments to reference as they address the City's carbon footprint and push towards carbon neutrality.

IMPLEMENTING REDUCTION STRATEGIES: LEADING BY EXAMPLE

In order to realize our climate ambitions of carbon neutrality, there are four core areas that require focused action: decarbonizing electricity, optimizing energy efficiency, upgrading to next-generation vehicle fleets, and improving waste management. Progress in these areas is necessary to achieve our climate goals.

LASAN has an array of projects in place that address each of these key areas. With each of the following projects, we are doing our part to reduce the City's carbon footprint by focusing on new technologies, renewable energy, and energy efficiency.

DECARBONIZING ELECTRICITY

Power generation accounts for over 90% of the City's municipal emissions. Reductions can be made by divesting from coal-powered electricity, investing in renewable energy, and increasing energy efficiency.

Digester Gas Utilization Project

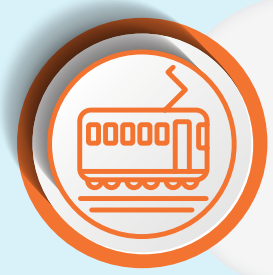
At Hyperion Water Reclamation Plant, the Digester Gas Utilization Project converts about 7 million cubic feet of digester gas per day into carbon-neutral electricity and steam. The digester gas is used to meet the plant's power and heating demands, moving the plant towards a renewable future.

OPTIMIZING ENERGY EFFICIENCY

The built environment is the single greatest source of GHG emissions in Los Angeles. Building energy usage accounts for 80% of our total energy demand, presenting an opportunity to significantly reduce emissions.

Better Plants Program

The U.S. Department of Energy's Better Plants Program recognized Hyperion Water Reclamation Plant for its innovative, industry-leading energy efficiency work that led to reducing the plant's energy intensity by 37% in just two years.



NEXT-GENERATION VEHICLE FLEETS

Transportation is the largest source of GHG emissions in California. By implementing the next generation of transportation technologies and services, we can not only reduce GHG emissions, but improve air quality and congestion as well.

Solid Resources Fleet

Since 2014, LASAN's natural gas-powered solid resources fleet has been primarily fuelled with renewable natural gas (RNG). LASAN will soon acquire electric vehicles to be added to the solid resources fleet.

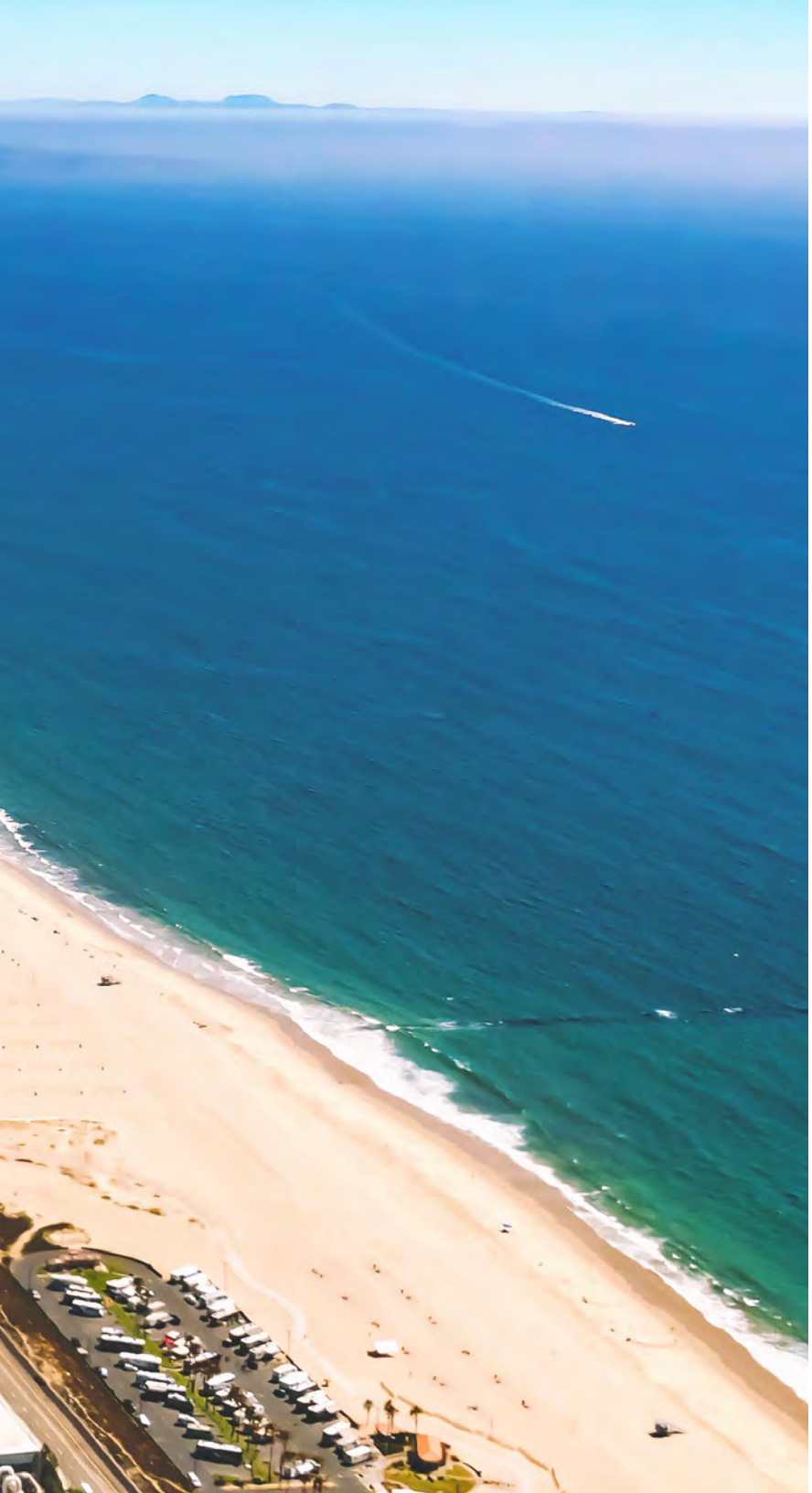
IMPROVING WASTE MANAGEMENT

Methane, a GHG produced by landfill waste decomposition, is an extremely potent GHG with 72 times the short-term (20-year) global warming potential of carbon dioxide. By streamlining the collections process and diverting waste from landfills, we can reduce the total waste emissions in Los Angeles.

recycLA

recycLA, a public-private partnership launched by LASAN in 2017, will ensure that all commercial and industrial businesses, institutions, and large multifamily buildings within the City have recycling services available to them.

ADAPTING TO A CHANGING CLIMATE: ADDRESSING CLIMATE RISK



While it is essential to mitigate sources of GHG emissions, it is also important to adapt to the impacts of a changing climate. Even with reduced GHG emissions, Los Angeles has started experiencing the initial impacts of climate change. Below are just some of the impacts Los Angeles is expected to face, as identified in California's Fourth Climate Change Assessment Region Report.

SEA LEVEL RISE: Sea levels are predicted to rise along the Los Angeles coast between 2-8 ft. over the next 100 years. This could cause significant flooding and erosion of hundreds of miles of coastline, greatly impacting homes, agricultural lands, and low-lying cities.

TEMPERATURE: The average maximum temperature in Los Angeles is projected to increase between 5-8 °F by the end of 2100. With higher temperatures, we can expect more frequent and longer heat waves, and drier summers. Smog forms more easily in warm weather, which creates a health hazard for people, especially infants, children, and the elderly.

WILDFIRES: Projections indicate that wildfires may increase in Southern California by up to 50% by 2100. Not only are wildfires a threat to homes, businesses, and communities, but increased smoke and other pollutants can worsen air quality in the region.

LASAN maintains critical City infrastructure and operations, and any disruption of our operations could have serious impacts on public health and the environment. In the face of these increasing climate risks and disasters, LASAN must build resiliency to ensure we can maintain essential operations in the event of a climate-related disaster.

In order to maintain this level of reliability, LASAN conducted a resiliency evaluation in coordination with United States Environmental Protection Agency (USEPA) to identify potential climate risks and engineer site-specific resilience improvements. A cost-benefit analysis determined that implementing these improvements could save LASAN $430 million in potential climate-related damages over the next 25 years. LASAN is now moving forward with implementing resiliency improvement projects.

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For additional information, please contact:

Climate Action Program, Regulatory Affairs Division
san.climateaction@lacity.org
(213) 485-3640
Or visit us at: lacitysan.org/climateaction

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