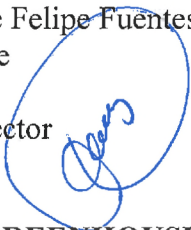


CITY OF LOS ANGELES
INTER-DEPARTMENTAL CORRESPONDENCE

DATE: February 18, 2016

TO: Honorable City Council
c/o City Clerk, Room 395
Attention: Honorable Bob Blumenfield, Chair. Trade, Commerce, and
Technology Committee

Honorable Felipe Fuentes, Chair. Energy and Environment
Committee

FROM: Enrique C. Zaldivar, Director
LA Sanitation 

SUBJECT: CARBON DIOXIDE/GREENHOUSE GAS EMISSIONS/REDUCTIONS –
LA SANITATION ACTIONS TO REDUCE GREENHOUSE GAS
EMISSIONS BY 2050 AND STATUS UPDATE CITY OF LOS ANGELES
COMMUNITY GREENHOUSE GAS INVENTORY (CF#14-0907)

SUMMARY

The City of Los Angeles is committed to reducing greenhouse gas emissions. L.A. Sanitation (LASAN) as well as other City Departments have been instructed to report back to the Council on actions they can take to reduce the City's carbon dioxide and other greenhouse gas emissions.

RECOMMENDATION

That the City Council receive and file this report.

DISCUSSION

LASAN has long held the primary responsibility to collect, clean, and recycle solid and liquid waste generated by residential, commercial, and industrial customers in the City and contract cities in the Los Angeles region. In executing these responsibilities LASAN generates greenhouse gases and is taking action to reduce the amount of emissions in our region by 2050.

This report outlines the various ways in which LA Sanitation contributes to the City's overall efforts to reduce emissions.

LASAN is recognized as a national leader in providing environmental services that address issues such as brownfields, solid resources management, water resources management and watershed protection. LASAN is also tasked with responsibilities related to climate change mitigation and adaptation and greenhouse gas emission (GHG) monitoring and reporting.

We will continue to develop the Community-wide and Municipal GHG Inventories in conjunction with the Mayor's office and will share lessons learned and address obstacles identified in standardizing the municipal inventories with other cities in the U.S. via the Mayor's National Climate Action Agenda.

In 2015 we adopted a Strategic Plan that sets high goals for our utility which contribute to and build upon an overarching program of environmental sustainability. These efforts include the development of a sustainable local water supply which will reduce the demand for imported water, the deployment of clean trucks and vehicles and a reduction in the miles travelled to reduce air pollution and congestion, implementation of renewable energy projects to reduce the demand for fossil fuel energy, and increase the rate of recycling solid resources to conserve resources, reduce generation of GHG emissions and improve sustainability.

The 2015 Sustainable City pLAN identified high-impact measures to reduce greenhouse gas emissions over the long-term. LASAN partnered with the Mayor's office in developing these strategies many of which we have been implementing over the past ten years as we continue to reduce the utility's carbon footprint. This year we adopted the 2017 and 2025 Sustainability pLAN goals which serve as the blueprint of climate actions to reduce GHG emissions.

Key strategies for reducing GHG emissions include:

1. Reuse and capture more wastewater and stormwater to create a sustainable water supply and reduce reliance on imported water;
2. Deploy more clean trucks, cars and infrastructure including zero emission electric;
3. Reduce transportation emissions more by using smarter logistics decreasing vehicle miles travelled and trips and reducing congestion;
4. Implement more renewable energy projects to replace fossil fuel generated electricity for our wastewater treatment processes; and
5. Reduce, re-use and recycle more solid and organic waste to cut methane and other non-CO2 GHG emissions.

1. Develop Sustainable Local Water Supply

The City gets half of its water supply from imported water resources. Rising energy costs to move this water to Los Angeles is one of the reasons wholesale water rates have risen 75% in recent years. Increasingly this imported water is requiring higher levels of treatment to meet water quality expectations. The literature indicates that it takes more than twice the power to move water from Northern California than to recycle local wastewater using advanced water purification processes. LASAN is recycling water for reuse and has plans to significantly increase this production to augment local water supply thereby reducing the costs and the carbon emission generation related to the import of water. These efforts include the development of more stormwater capture.

Projects:

- Terminal Island Advanced Water Purification Facility Expansion. This project will expand and upgrade the Terminal Island Water Reclamation Plant to produce 10,000

acre-feet annually. By increasing capacity, this expansion project will provide enough water to supply the Dominguez Gap Barrier and replenish the water lost from evaporation at Machado Lake and provide various Harbor-area industrial users with recycled water.

- Donald C. Tillman Advanced Water Purification Facility. This project will construct full advanced water treatment and install infrastructure to get the water to Hansen and Pacoima spreading grounds. The project is designed to produce up to 30,000 acre-feet per year of recycled water for groundwater replenishment.
- Machado Lake Wetlands and Water Multi-use Facility. This project will capture, clean and use stormwater and recycle water using the wetlands and a bio-filter system. The water will be used for irrigation at the park and lake and other beneficial uses next to the lake. The project will increase water supply, improve water quality, and enhance habitat and the environment for healthy communities and neighborhoods. The project is designed to capture up to 10,000 acre-feet annually.

2. Deploy more Clean Trucks and Cars and Infrastructure

Use of clean fuels will slow the atmospheric buildup of carbon dioxide, a “greenhouse gas” that contributes to the potential for global warming. Clean fuels have a number of inherent properties that make them cleaner than conventional gasoline. In general, these fuels emit less hydrocarbons, and the hydrocarbons they do emit are less reactive (slower to form ozone) and less toxic. Clean fuels have benefits that reach beyond their air quality advantages. Employing a diversified fleet mix of clean fuels vehicles provides the advantage of ensuring reliable daily services and decreases dependence on imported oil.

Clean Fuel Program

LASAN continues to advance its clean fuel program to operate one of the largest municipal clean fuel solid resources collection fleets in the country with more than 700 heavy duty collection vehicles in service. LASAN has a goal to convert 100% of our solid resources collection fleet to clean fuel by 2017. In 2015, LASAN completed construction of a new clean natural gas fueling station at the West Los Angeles district yard.

Electric Vehicle Charging Stations

Plans are underway with the General Services Department to install 10 on-plant electric vehicle charging stations at the Hyperion Water Reclamation Plant. By creating more convenient charging station locations, we hope to further promote electric vehicle usage, thereby reducing emissions from fossil fueled cars. Other LASAN locations are being identified and assessed for these installations.

3. Reduce Vehicle Miles Travelled and Trips

LASAN employs two low carbon logistics strategies that also reduce congestion on our roadways. These low carbon logistics strategies use GPS fleet routing to improve fuel efficiency and reduce idle time which then lowers fuel usage and expenses. By optimizing route efficiencies, this program reduces miles traveled, engine hours and the number of trips which help to reduce costs. Reduced miles and hours also lowers maintenance and repairs and

minimizes vehicle downtime and replacement. Fewer miles driven, reduced idling time, and regularly scheduled maintenance extend the life of fleet vehicles.

San Star

This program utilizes a Global Positioning Satellite routing system for our collection truck drivers to map, guide and record their daily routes on a mobile application. This system inputs field requests from the 311 hotline to clear alleys, pick up bulky items, e-waste, and trash and automates route generation for the solid resource collection trucks. This system is an efficient method to address point-to-point and continuous routing solutions. This program is designed to reduce fuel and vehicle miles, GHG emissions, administrative costs, travel time, and increase customer satisfaction. SAN STAR is the first program to earn the Mayor's Civic Innovation Award.

Commercial Hauling Franchise

In 2014, the City established the Zero Waste L.A. Commercial and Multifamily Franchise System, which is scheduled to start 2017. LASAN identified eleven exclusive franchise zones. The Zero Waste L.A. Franchise System manages solid resources for the privately-serviced commercial and large multifamily customers in the City, and is designed to obtain a number of environmental goals. This program is designed to increase recycling, use clean fuel collection vehicles and employ efficient routing to reduce greenhouse gas emissions and enhance customer service.

4. Implement more renewable energy projects

The environmental and economic benefits of using renewable biogas energy include: generating electrical energy that produces no greenhouse gas emissions from fossil fuels and reduces some types of air pollution, transforms a waste product into a renewable resource; reduces amount of purchased electricity, reduces the demand on the electrical grid, and provides our facilities with the ability to continue operation in the event of local and regional power failures.

Hyperion Water Reclamation Plant - Self-Sustaining and Self-reliant.

The Digester Gas Utilization Project (DGUP) is a renewable biogas-to-energy project that is under construction with the goal of making this facility self-sufficient and sustaining in energy. For many years this facility has transformed wastes to be beneficially used as reclaimed water and biosolids for soil augmentation, and now it will use biogas as a renewable fuel to generate electricity and steam on-site. This project will install and operate a digester gas/natural gas-fueled combined cycle cogeneration system.

Additional environmental benefits of the DGUP project include: minimizing the use of flares as a methane disposal method, using a renewable fuel to reduce demand for fossil fuel electricity generation and reduce electrical demand on the local power grid.

This project implements several elements of the California Air Pollution Control Officer's Association statewide GHG mitigation strategies:

- Establish onsite renewable or carbon-neutral energy systems
- Utilize a combined heat and power system
- Establish methane recovery in wastewater treatment plants

5. Reduce, re-use and recycle solid and organic waste

Reducing the quantity of waste that is generated in the City will cut methane generation. In 2006, the City Council adopted the RENEW LA Plan which is the original blueprint to achieving zero waste in the City of Los Angeles by 2025. It has been amended several times to include additional stakeholder input. As a result of implementing this plan, a 2013 independent report concluded that Los Angeles diverts over 76% of waste from landfills making it a US leader. In April 2015, Mayor Garcetti released his Sustainable City pLAN which calls for implementing a waste franchise system to increase commercial recycling rates and expand commercial organics collection.

Currently, the City of Los Angeles is transitioning to the new waste and recycling system for all businesses and large apartment complexes. This franchise hauler program called Zero Waste LA is designed to increase the amount of material recycled, reduce street impacts, reduce air pollution and provide superior customer service at fair customer rates. Some of the program elements include: providing a blue bin at every customer site, building on existing organic waste separation and recycling programs; a phase-in of the City-wide organic diversion program; offering green waste collection to all multi-family customers; and includes landfill disposal reduction targets.

Community Greenhouse Gas Inventory Status

The City of Los Angeles updates its Community Wide GHG inventory on a recurrent basis. The most recently completed Community GHG inventory provides a snapshot of the sources and magnitude of emissions from the City of Los Angeles for the year 2013. This inventory identified the sectors, sources, and activities within the City that are contributing GHG emissions to establish a basis for developing an action plan. It is an established practice that the City makes periodic updates to the inventory to include the availability of new data and emission factors as well as changes in inventory methodology and guidance from International Council for Local Environmental Initiatives or other sources. This inventory is an accounting of GHGs emitted to or removed from the atmosphere over a period of time. Policy makers may use these inventories to track emission trends, develop mitigation strategies and policies, and assess progress in reducing the carbon footprint.

Conduct Greenhouse Gas Inventory Audit and Verification

The City has employed a third-party audit to assure the environmental integrity of these reports. This third-party verification of reported GHG emissions will assess conformance and completeness of reported data and review of the methodologies.

The verification review of the Los Angeles 1990 community-wide baseline inventory data has been completed using the Global Protocol for Community-Scale Greenhouse Gas Emissions Inventories (GPC). The GPC was released in 2014, and is an internationally recognized GHG accounting and reporting standard for cities (and is a required standard for signatories to the Compact of Mayors to use).