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CLIMATE CHANGE AND
THE ENVIRONMENT

UCLA Institute of the Environment
and Sustainability



VISION2021LA

A Model Environmental Sustainability
Agenda for Los Angeles' Next Mayor
and City Council

DECEMBER 2012

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INTRODUCTION

Los Angeles has taken great strides over the past several decades to become a greener and more livable community. Improvements in air quality, public transit, clean energy, solid waste recycling, greenhouse gas emissions, water quality, and in other areas have meant a better quality of life for many. But there is still a tremendous amount of work to be done to transform Los Angeles into an environmentally sustainable and healthful place to live for all of its residents.



Population growth; constrained water supply resources; persistent air, soil, and water quality problems; sea level rise; rising temperatures; an evolving economy; aging infrastructure; and tighter federal, state, and local budgets are all putting pressure on America's great cities. As the second largest metropolis in the United States, serviced by the nation's largest

municipally-owned utility, and with its history of pioneering innovative environmental solutions, Los Angeles is uniquely positioned to emerge over the coming decade as a national and world model of urban sustainability. Los Angeles can confront these challenges and serve as a role model, while improving its neighborhoods and attracting new businesses to remain a prosperous, healthy city.

WHAT IS ENVIRONMENTAL SUSTAINABILITY?

Sustainability is often described as the product of the “triple bottom line”— the economic, environmental, and social impacts of development and decision-making. Sustainability is rooted in the concept that human well-being depends on our natural environment. **Environmental sustainability** acknowledges that natural systems, resource availability, and the generation of externalized goods and harms affect our collective ability to thrive in the future.

Sustainable development describes development that optimally meets the needs of our present generation without compromising the needs of future generations. In recent decades, sustainability has come to play a larger role in urban public policy as cities have recognized that past urban development decisions have resulted in unintended long-term economic, environmental, and social costs. **Urban sustainability** requires us to think of our city as an interconnected system and to recognize that our decisions about natural resource use today can impact future generations.¹



ENVIRONMENTAL SUSTAINABILITY IN LOS ANGELES

The City of Los Angeles recognizes its environmental challenges and the opportunities they provide. In response, City agencies, community-based organizations, research institutions, large and small businesses, service providers, and even private citizens have initiated plans and programs to surmount the City's environmental challenges and achieve sustainability objectives.

Despite producing a variety of highly focused plans and programs, the City has never developed a comprehensive **environmental sustainability plan**. Such a plan, like those adopted by other major U.S. cities (including New York City, Seattle, Philadelphia, and Portland), lays out a unified vision for achieving a community's sustainability goals, accompanied by specific targets, metrics, and timetables for implementing that vision.

THIS DOCUMENT

In 2013, Los Angeles will have highly competitive mayoral and city council races, and the environment is sure to be a critical issue for voters. Recognizing that the next Mayor of Los Angeles will have the power to shape the City's environmental future, environmental faculty and researchers at the UCLA School of Law and UCLA Institute of the Environment and Sustainability, with input from local stakeholders and other environmental experts, developed **Vision 2021 LA: A Model Environmental Sustainability Agenda for Los Angeles' Next Mayor and City Council**. Vision 2021 LA is an ambitious plan that sets realistic sustainability goals that the City can

achieve over the next two mayoral terms (eight years), along with clearly defined target actions and measurable indicators to gauge the City's progress. These actions will set the stage for the challenging but necessary long-term reconfiguration of Los Angeles as a sustainable city far into the 21st century.

Vision 2021 LA gathers, distills, and expands upon existing sustainability research and planning. The result is a unified, clear, and measurable sustainability platform ready for adoption by the incoming Administration. Vision 2021 LA sets forth a bold agenda to reduce natural resource consumption through maximized efficiency, dramatically move toward a green infrastructure predominantly reliant on carbon-free energy and pursue an integrated approach to increase local water supplies and reduce water pollution and flood

SOME ENVIRONMENTAL PLANS AND PROGRAMS FOCUSED ON LOS ANGELES:

- CLIMATE LA
- GOOD FOOD FOR ALL AGENDA
- GREEN LA
- INTEGRATED RESOURCES PLAN
- LONG RANGE TRANSPORTATION PLAN
- LOS ANGELES WORLD AIRPORTS SUSTAINABILITY REPORT
- Million Trees LA
- RENEW LA
- SAN PEDRO BAY PORTS CLEAN AIR ACTION PLAN
- URBAN WATER MANAGEMENT PLAN
- VISION FOR CLEAN AIR
- VISION LOS ANGELES
- WATER QUALITY COMPLIANCE MASTER PLAN

risk. This plan includes actions to mitigate and adapt to climate change impacts, protect public health from exposure to harmful contaminants, move towards a zero waste integrated waste management, and expand the access of all Angelenos to socio-environmental benefits like green space and low-emission public transportation. In short, Vision 2021 LA is a proposal to put Los Angeles on the path to becoming **the greenest big city in America**.

Vision 2021 LA calls upon the city's next generation of leaders to commit to achieving realistic targets in eleven goal areas:

- 1) **ENERGY & CLIMATE**
- 2) **CLIMATE CHANGE PREPAREDNESS**
- 3) **GREEN BUILDINGS**
- 4) **TRANSPORTATION**
- 5) **AIR QUALITY**
- 6) **ENVIRONMENTAL JUSTICE**
- 7) **WASTE**
- 8) **WATER**
- 9) **OPEN SPACE & URBAN GREENING**
- 10) **GREEN ECONOMY**
- 11) **FOOD SYSTEM**

SEIZING THE OPPORTUNITY

The time is ripe for the Mayor and City Council to decisively move Los Angeles toward a green, renewable energy infrastructure that is both efficient and resilient. Los Angeles' future energy system should incorporate electrified transportation, maximum integration of renewable energy resources, and smart grid technology to reduce harmful air emissions and the city's contribution to climate change. Decarbonization should be the goal. Now is also the time to bolster

the city's climate preparedness through bolstering our water supplies, developing a regional climate preparedness strategy, and rethinking our built environment paradigms.

Furthermore, making sustainability a City priority is key to securing Los Angeles' long-term economic viability. Investing in environmental outcomes will help Los Angeles stay economically competitive with other urban innovation centers by attracting the next generation of entrepreneurs and green industries. In addition, near-term environmental investments can avoid the need to address far more costly climate change impacts down the road. Investing in the transformation of 20th century gray infrastructure into modern green infrastructure will spark new growth for Los Angeles' economy. Los Angeles can show the world that the environmental challenges we face can be solved through determined local efforts. Our city can be a model for greening other economies, both in the United States and abroad.

*"The success of our efforts to create a sustainable Los Angeles will be measured by our children. It is with them in mind that we must act today. Together we will transform Los Angeles into the **cleanest and greenest big city in America.**"*

Los Angeles Mayor Antonio R. Villaraigosa
GREEN LA, 2007

SPARKING A DIALOGUE

Refocusing America's second largest city is a long-term effort that cannot be fully achieved by one Mayor; but we must start now to pave the way for the future and avoid repeating the mistakes of the past. This document demonstrates how, over the course of two mayoral terms from 2013 to 2021, the next Mayor and City Council can set and achieve targeted goals that will transform Los Angeles into a measurably more sustainable city and set the stage for further transformation throughout the rest of the 21st century.

Although Vision 2021 LA primarily focuses on the **environmental** aspects of sustainability, we recognize the significant economic and social challenges that face Los Angeles in the coming decade. We hope our document will encourage others who care about and are stakeholders in Los Angeles' future to develop parallel agendas that focus on other aspects of sustainability for the next Mayor and City Council. Clear, measurable, publically available, and realistic near-term goals and targets can help Los Angeles residents monitor our City's progress and hold our elected officials accountable for new public policy goals.

We see this proposal as a first step toward realizing real change in the environmental sustainability of Los Angeles. We hope Vision 2021 LA will spark a dialogue between mayoral and city council candidates, media, and voters about the candidates' environmental visions for Los Angeles in 2021.

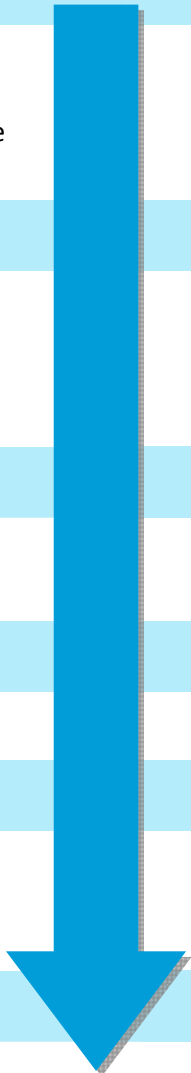
A CALL TO ACTION

Vision 2021 LA seeks answers to the following questions from each of Los Angeles' 2013 mayoral and city council candidates.

- ▶ Do you share the **VISION2021LA** goals for our City?
- ▶ Will you incorporate the **VISION2021LA** targets into your platform?
- ▶ Will you pledge, if elected, to adopt by 2014 a sustainability plan for the City of Los Angeles that includes goals, targets, measurable indicators, implementation measures, and an implementation timeline, and requires annual reports?
- ▶ Will you pledge, if elected, to assign implementation of the sustainability initiative to an office reporting to the Mayor that has access to resources to direct and implement policy initiatives that promote sustainability?
- ▶ Will you pledge, if elected, to build the City's capacity for data collection, analysis, and monitoring of sustainability issues?

HOW TO READ THIS DOCUMENT

	<i>Example</i>
<ul style="list-style-type: none"> ● Goal Areas <p>Topic categories for the purpose of organization. Goal areas are interrelated, and targets within one goal area can advance the goals of another goal area. (For example, meeting local water use targets furthers both Water and Climate Change Preparedness goals.)</p>	TRANSPORTATION
<ul style="list-style-type: none"> ● Goals <p>Broadly supported visionary statements to guide the City’s policy decisions over the next eight years.</p>	Ensure all Los Angeles residents access to sustainable transportation options through integrated planning and investments in public infrastructure.
<ul style="list-style-type: none"> ● Targets <p>Measurable steps necessary to achieve broader sustainability goals.</p>	Increase public transit trips from 11.3% to 20% of all transportation trips.
<ul style="list-style-type: none"> ● Indicators <p>Metrics linked to each target, so that the City’s progress can be measured.</p>	Public transit trips as a percentage of total trips
<ul style="list-style-type: none"> ● Implementation Measures <p>Suggested actions, policies, plans, and funding sources that would support achievement of targets.</p>	Invest in transit stops with high boarding rates by providing benches, shade, restrooms, and real-time arrival data.
<ul style="list-style-type: none"> ● Lead Agencies <p>Key local entities to be held accountable for the achievement of targets and goals.</p>	Department of Transportation



- ***Italicized terms* are defined in the Glossary at the end of the document.**
- **Endnotes refer to References at the end of the document.**

VISION2021LA SUMMARY: SUSTAINABILITY GOALS FOR LOS ANGELES TO ACHIEVE BY 2021

ENERGY & CLIMATE	<ol style="list-style-type: none"> 1. Reduce Los Angeles' contribution to climate change. 2. Modify LADWP's electricity resource mix to eliminate coal, and maximize renewables, energy efficiency, and demand-side management. 3. Aggressively promote <i>zero emission</i> vehicles as a first priority, and promote other <i>alternative fuel</i> vehicles as a second priority.
CLIMATE CHANGE PREPAREDNESS	<ol style="list-style-type: none"> 1. Protect the health and welfare of Los Angeles residents from impacts of climate change, including increased temperatures, sea level rise, increased wildfire risk, and changes in precipitation. 2. Adapt to climate change impacts through comprehensive preparedness planning, implementation of preparedness measures, and continuous research and monitoring of climate impacts.
GREEN BUILDINGS	<ol style="list-style-type: none"> 1. Significantly increase energy conservation and efficiency in buildings. 2. Diminish the environmental impacts of Los Angeles' built environment through continual improvement and implementation of green building practices.
TRANSPORTATION	<ol style="list-style-type: none"> 1. Ensure all Los Angeles residents access to <i>sustainable transportation</i> options through integrated planning and investments in public infrastructure. 2. Upgrade Los Angeles streets to meet the multi-modal needs of the city's residents.
AIR QUALITY	<ol style="list-style-type: none"> 1. Protect public health by eliminating residents' exposure to air contaminants at levels that pose a significant health risk. 2. Draft a plan by 2015 to implement a "zero emission container movement system" to fully deploy <i>zero emission</i> trucks and rail to and from the Port of Los Angeles by 2035.
ENVIRONMENTAL JUSTICE	<ol style="list-style-type: none"> 1. Reduce adverse cumulative <i>environmental health</i> impacts in overburdened communities through improvements in zoning, land use planning, monitoring and enforcement, and mitigating hazardous land uses and mobile emissions. 2. Continue and expand stakeholder engagement and participation in environmental decision-making.

WASTE	<ol style="list-style-type: none"> 1. Divert 87%+ of waste from landfills by reducing the amount of waste generated, increasing the amount of reused and recycled material, and developing and implementing <i>alternative waste</i> technologies. 2. Improve environmental and public health by decreasing improper disposal of household hazardous waste.
WATER	<ol style="list-style-type: none"> 1. Obtain 32% of water supply from local sources through increased capture of stormwater, increased use of recycled water, and increased use of local groundwater. 2. Decrease water consumption to 100 gallons per capita per day. 3. Achieve clean lakes, rivers, and coastal waters that meet all water quality standard deadlines and are clean enough to support beneficial uses.
OPEN SPACE & URBAN GREENING	<ol style="list-style-type: none"> 1. Create an urban environment in which all residents are within ½ mile of <i>open space</i>. 2. Create an <i>open space</i> master plan for Los Angeles with an emphasis on increasing <i>open space</i> access for underserved and/or high density communities. 3. Develop and sustain sufficient <i>open space</i> to support diverse uses throughout the city such as natural functions/wildlife habitat to conserve and enhance biodiversity, active and passive recreation, and stormwater control.
GREEN ECONOMY	<ol style="list-style-type: none"> 1. Establish Los Angeles as national leader for clean technologies and <i>green jobs</i>. 2. Incorporate sustainability into city government procurement decision-making.
FOOD SYSTEM	<ol style="list-style-type: none"> 1. Encourage the city's major institutions to commit to the Los Angeles Food Policy Council's "Good Food Purchasing Guidelines." 2. Foster healthy neighborhoods by expanding access to <i>healthy food retailers</i>.

VISION2021LA SUMMARY: KEY TARGETS TO ACHIEVE SUSTAINABILITY GOALS IN LOS ANGELES BY 2021

Energy & Climate

- ▶ Generate 0% of Los Angeles' electricity from coal and 40% from renewable resources.
- ▶ Reduce greenhouse gas emissions associated with city government activities, including LADWP's electricity generation, to 60% below 1990 levels.
- ▶ Introduce a vehicle sharing program that allows city residents access to a *zero emission* vehicle for local trips.

Climate Change Preparedness

- ▶ Create a regional climate preparedness strategy to protect Los Angeles residents, City infrastructure, and other property from the impacts of climate change, with milestones, deadlines, and implementation measures.
- ▶ Increase square footage of *cool roofs* to 4 million ft² and significantly increase square miles of *cool paving*.

Green Buildings

- ▶ Create an annual Energy Star benchmarking and disclosure program and require all buildings subject to benchmarking to achieve Energy Star score of 75 by 2018, and all City-owned buildings to achieve Energy Star score of 75 by 2016.
- ▶ All new City-owned buildings are LEED Gold rated (or equivalent) starting 2018, and all existing City-owned buildings are LEED Existing Buildings: Operation and Maintenance certified (or equivalent) by 2021.

Transportation

- ▶ Increase walking, biking, and public transit trips to 30% of all transportation trips.
- ▶ Increase percentage of people living within ¼ mile of regular public transit to 60%.

Air Quality

- ▶ Meet National Ambient Air Quality Standards for ozone and particulate matter.
- ▶ Fully implement the SAN PEDRO BAY PORTS CLEAN AIR ACTION PLAN.

Environmental Justice

- ▶ Establish pilot "Green Zones" in Pacoima, Boyle Heights, and Wilmington to attract new green businesses, safeguard sensitive land uses, and apply standards to new and expanded commercial and industrial uses.

Waste

- ▶ Achieve diversion rate from landfills for all materials from all sectors of 87%+.
- ▶ Significantly increase the percentage of recycled or composted material that is reused locally.

Water

- ▶ Obtain 32% of water from local sources, such as stormwater, recycled water, and groundwater.
- ▶ Management, treatment, or beneficial use of 42% of dry weather runoff and 47% of wet weather runoff.

Open Space & Urban Greening

- ▶ Significantly increase percentage of people, particularly in underserved communities, that live within ¼ or ½ mile of *open space*.
- ▶ Significantly increase funding for maintenance and operation of existing and planned parks and *open spaces*, particularly in underserved and/or high density communities.

Green Economy

- ▶ Create 100,000 new *green jobs* in Los Angeles.
- ▶ Provide demonstration opportunities for locally developed clean technologies to become commercially viable, and create incentives to attract 50 new clean technology businesses to Los Angeles.

Food System

- ▶ All major hospitals and college campuses commit to following the Los Angeles Food Policy Council's "Good Food Purchasing Guidelines."
- ▶ At least 1 *healthy food retailer* for every 3 fast food or convenience stores in low- and moderate-income areas of the city.

Vision 2021 LA lays out key sustainability goals that the City can achieve over the next eight years, along with clearly defined target actions and measurable indicators to gauge the City's progress.

1. ENERGY & CLIMATE

Los Angeles' future as a sustainable city is inextricably linked to its energy policies. Energy generation and fuel combustion are prime sources of both traditional air pollutants and the greenhouse gases responsible for climate change. Reducing the city's energy needs through energy efficiency programs, and switching to less carbon-intensive sources, like solar energy, wind, and alternative fuels, will reduce the city's contribution to climate change, improve air quality, and establish Los Angeles as a national leader in greening its energy supply. Improving energy efficiency will also help Los Angeles avoid some of the worst local impacts of a changing climate, discussed in more detail in the Climate Preparedness goal area below.

Los Angeles has recognized the need for progress in energy and climate. In 2007, the City adopted an innovative climate action plan, CLIMATE LA, which calls for shifts in the *municipal vehicle fleet*, energy efficiency programs, and improved land use planning. The CLIMATE LA measures put Los Angeles on track to reduce greenhouse gas (GHG) emissions from city activities to 35 percent below 1990 levels by 2020.² The L.A. Department of Water and Power (LADWP) already has reduced its GHG emissions 21 percent below 1990 levels,³ far ahead of the scheduled statewide requirements in Assembly Bill 32, the law that requires the state to reduce GHG emissions.⁴ The City's per capita GHG emissions have also fallen over the past decade.⁵

Despite these positive steps, Los Angeles continues to emit more GHGs than many small countries. And although the proposed short-term targets are within reach and will provide concrete improvement in these areas, they are only the first steps to position our City to achieve core climate and energy goals for 2050 and beyond.⁶ The City is well situated to lead the charge on energy transformation, energy efficiency, and GHG mitigation. City government operations account for one-third of Los Angeles' overall GHG emissions.⁷ As the largest municipally-owned utility in the nation, LADWP has the power to critically influence Los Angeles' electricity generation and consumption.

LADWP has committed to reducing fossil fuel usage, increasing use of *renewable energy sources* like solar and wind, and promoting efficiency.⁸ One essential change LADWP can make in the next eight years is eliminating coal, Los Angeles' dirtiest and most GHG-intensive energy source, from the energy mix. As the City transitions from coal, however, it must be mindful of the dangers of locking in long-term reliance on other fossil fuels and the need for a reliable energy supply.

We also call upon LADWP to generate 40 percent of its electricity from *renewable energy sources*. To achieve this target, and to help meet Governor Brown's statewide objective of 12,000 MW of California solar, the City can install solar projects on City property,

encourage smart meters, and promote feed-in-tariff mechanisms and solar incentive programs. To ensure that renewables can be incorporated into the electricity grid effectively, LADWP also should invest in distributed energy storage solutions, beginning with demonstration projects and installations on existing substations.

Decarbonizing Los Angeles' transportation system (which is further addressed in the Transportation and Air Quality goal areas below) is integral to reducing our contribution to climate change. The City should aggressively promote *zero emission* vehicles, which do not directly emit criteria pollutants like nitrogen oxides or particulate matter, as a first priority. Examples of *zero emission* vehicles are vehicles powered by an electric battery or fuel cell. Where it is unfeasible to replace conventional fleet vehicles with *zero emission* vehicles over the next eight years, the City should transition to other *alternative fuel* vehicles, such as hybrid-electric vehicles or vehicles powered by propane, natural gas, and/or biofuels that exceed the California Low Carbon Fuel Standard by at least a factor of two. Overall, the City's ultimate goal should be to move Los Angeles toward a *zero emission* fleet. The Mayor can set a powerful example by personally driving only a *zero emission* vehicle. The City can encourage other residents to commit to *zero emission* vehicles, too, by introducing a vehicle-sharing program that will allow residents access to a *zero emission* vehicle for local trips.

While focusing on innovative technologies, it is important to keep in mind the state of our existing infrastructure. LADWP should accelerate and deepen programs to ensure that its existing energy infrastructure can meet the challenges of the future. Beginning now to address Los Angeles' long-term energy and climate challenges is essential to securing the City's prosperous future; but the vision we lay out for Los Angeles is not without costs. Thus, we support increasing LADWP rates as necessary to meet the renewable energy and other targets advocated here.

GOALS:

1. Reduce Los Angeles' contribution to climate change.
2. Modify LADWP's electricity resource mix to eliminate coal, and maximize renewables, energy efficiency, and demand-side management.
3. Aggressively promote *zero emission* vehicles as a first priority, and promote other *alternative fuel* vehicles as a second priority.

INDICATORS	TARGETS	IMPLEMENTATION MEASURES
Climate Change Mitigation		<u>Lead Agency:</u> Los Angeles Dept. of Water & Power (LADWP)
Los Angeles GHG emissions (MMTCO ₂ e/year)	Reduce Los Angeles' GHG emissions to 30% below 1990 levels.⁹	<p>Eliminate coal from Los Angeles' mix of energy sources.</p> <p>Implement CLIMATE LA measures, such as increasing the efficiency of natural gas-fired power plants.</p> <p>Ensure all Los Angeles residents access to <i>sustainable transportation</i> options.</p>
GHG emissions associated with City government activities, including LADWP's electricity generation (MMTCO ₂ e/year)	Reduce GHG emissions associated with City government activities, including LADWP's electricity generation, to 60% below 1990 levels.¹⁰	<p>Eliminate coal from Los Angeles' mix of energy sources.</p> <p>Implement CLIMATE LA measures like reducing energy use in City buildings, installing pilot solar lighting systems, and replacing HVAC equipment with more efficient units.</p>
Electricity Resource Mix		<u>Lead Agencies:</u> LADWP, DPW
Annual total electricity consumption compared to a moving baseline of projected annual power use established in 2010 (GWh)	Reduce Los Angeles' annual electricity consumption by 15%.¹¹	<p>Maintain the energy efficiency program budget at or above \$140 million per year, and continually review and revise programs to ensure maximum efficiency improvements are achieved.</p> <p>Work with experienced third-party provider(s) to offer behavioral-based conservation programs to customers.</p> <p>Develop and implement a formal demand response program that incentivizes homeowners and businesses to curtail electricity use at times of peak demand.</p> <p>Convert all appropriate streetlights to more energy efficient LED bulbs.</p> <p>Incentivize conservation and efficiency by increasing the unit cost of electricity for high-volume users.</p> <p>Install solar reflective <i>cool roofs</i> to reduce City buildings' cooling energy needs.</p> <p>Target commercial and industrial users with education programs and information about their facilities' energy use.</p> <p>Develop and implement smart grid technologies.</p>

INDICATORS	TARGETS	IMPLEMENTATION MEASURES
		Utilize revenue from cap-and-trade allowances to benefit ratepayers through aggressive investments in energy efficiency.
Percentage of homes and businesses with smart meters	Install smart meters in all homes and businesses.	Mayor aggressively promotes smart meters to the public. Explore LADWP energy efficiency grants as a potential funding source for smart meter installation programs.
Percentage of LADWP electricity generation from coal	Reduce percentage of Los Angeles' electricity from coal from 40% to 0%.¹²	Accelerate LADWP's plans to replace coal generation from the Intermountain Power Project.
Percentage of LADWP electricity generation from <i>renewable energy sources</i>	Generate 40% of Los Angeles' electricity from <i>renewable energy sources</i>.¹³	<p>Work with the California Energy Commission and Southern California Public Power Authority to invest in grid integration technologies to ensure renewable energy projects can connect seamlessly to the existing electricity grid.¹⁴</p> <p>Phase out the Green Power program and replace it with a Sun Shares program to allow city residents to receive a credit on their monthly electricity bill for supporting a local solar project.¹⁵ Further enhance the program by connecting customers via fieldtrips with real-life solar projects in the city.</p> <p>Implement Virtual Net Metering, which would enable the generation from a common facility (e.g., a solar project on a residential apartment building) to be credited by LADWP to the bills of the individual units.</p> <p>Accelerate interconnections with Southern California Edison and self-generators to allow addition of more small distributed wind and solar capacity to the system.</p>
<p>Capacity of new distributed solar energy projects in the LADWP service area (MW)</p> <p>Capacity of energy projects in the feed-in-tariff program (MW)</p>	Install 1200 MW of local distributed solar energy projects, including 600 MW via the feed-in-tariff mechanism, to meet Los Angeles' fair share of Governor Brown's 12,000 MW state goal.¹⁶	<p>Incorporate local renewable energy targets into overlay maps, siting criteria, and planning documents.¹⁷</p> <p>Streamline the permitting process for rooftop solar panel installation.</p> <p>Expand LADWP solar incentive programs, which offer city residents cash back for installing solar on their property.¹⁸</p>

INDICATORS	TARGETS	IMPLEMENTATION MEASURES
		<p>Amend LADWP policies to allow third-party power purchase agreements for distributed solar energy projects.</p> <p>Ensure that IOUs and POUs apply the state’s Loading Order,¹⁹ which fills electricity needs with renewables (after efficiency) before planning new fossil fuel resources, during long- and short-term electricity planning and implementation.</p>
Solar energy projects installed on City property (MW)	Install 400 MW of solar energy projects on City property.²⁰	Identify priority properties for solar installation.
Number of energy storage demonstration projects per council district	Develop 2 energy storage demonstration projects per Council district.	<p>Identify priority properties for energy storage installation.</p> <p>Revise LADWP procurement process to reward energy storage projects for cost savings.</p>
Percentage of LADWP substations with energy storage component	Install distributed energy storage components at all LADWP substations.	Prioritize funding for energy storage components.
Existing Infrastructure		<u>Lead Agency:</u> LADWP
<p>Funds allocated annually to rebuilding infrastructure and proactive maintenance (\$/year)</p> <p>System average interruption frequency index</p> <p>System average interruption duration index</p> <p>Number of circuits that have failed components</p> <p>Number of poles replaced and reinforced</p> <p>Underground transmission cables replaced (miles)</p>	Accelerate and enhance LADWP’s Power Reliability Program to upgrade existing energy infrastructure.²¹	Prioritize funding for LADWP’s Power Reliability Program.

INDICATORS	TARGETS	IMPLEMENTATION MEASURES
<i>Zero Emissions and Alternative Fuel Vehicles</i>		<u>Lead Agencies:</u> General Services Dept. (GSD), City Council, Metro, Proprietaries, LADWP, SCAQMD
<p>Collaboration between LADWP and Southern California Edison to expand electric vehicle charging infrastructure at workplaces and multi-unit dwellings</p> <p>Number of workplaces and multi-unit dwellings with newly installed electric vehicle charging infrastructure</p>	<p>Establish a partnership between LADWP and Southern California Edison to collaborate on expanding electric vehicle charging infrastructure at workplaces and multi-unit dwellings by 2015.</p>	<p>Streamline permitting and installation of electric vehicle charging systems in multi-unit dwellings.²²</p> <p>Require new construction to incorporate electric vehicle rapid charging systems with Level 2 charging capability.</p>
<p>Percentage of total <i>municipal vehicle fleet</i> that are <i>zero emission</i> or <i>alternative fuel</i> vehicles</p> <p>Percentage of solid waste collection vehicles that are <i>zero emission</i> or <i>alternative fuel</i> vehicles</p>	<p>Transition 85% of the <i>municipal vehicle fleet</i> to <i>zero emission</i> or <i>alternative fuel</i> vehicles, including 100% of solid waste collection vehicles.²³</p>	<p>Increase funding for the GSD Vehicle Replacement Program.</p> <p>Explore new transportation fees, taxes, and public-private partnerships to raise funds for vehicle purchases.</p> <p>Continue to construct additional alternative refueling infrastructure.</p> <p>Implement an exclusive franchise waste hauling system in Los Angeles, including contracts that require <i>alternative fuel</i> solid waste collection vehicles.²⁴</p>
<p>Percentage of natural gas used by the <i>municipal vehicle fleet</i> fuel that is <i>renewable natural gas</i></p>	<p>30% of any natural gas used as transportation fuel by the <i>municipal vehicle fleet</i> is <i>renewable natural gas</i>.</p>	<p>Support policies at the state level that responsibly spur development of <i>renewable natural gas</i>.</p>
<p><i>Zero emission</i> vehicle sales as a percentage of all new car sales in Los Angeles</p>	<p>Increase <i>zero emission</i> vehicle adoption from 9% to 13% of new car sales in Los Angeles.²⁵</p>	<p>Conduct consumer awareness campaigns.</p> <p>Streamline permitting and installation of electric vehicle charging systems in multi-unit dwellings.²⁶</p> <p>Require new construction to incorporate electric vehicle rapid charging systems with Level 2 charging capability.</p>
<p><i>Zero emission</i> vehicle-sharing program</p>	<p>Introduce a <i>zero emission</i> vehicle sharing program that allows city residents access to a <i>zero emission</i> vehicle for local trips without the cost of owning a private vehicle.</p>	<p>Explore the possibility of including electric motorcycles, bicycles, and three-wheelers as well as traditional sedans in city vehicle-sharing programs.</p>

INDICATORS	TARGETS	IMPLEMENTATION MEASURES
Mayor drives a <i>zero emission</i> vehicle	The Mayor drives a <i>zero emission</i> vehicle starting in 2014.	The Mayor can allow other leaders and media representatives to drive the electric vehicle, and promote the vehicle by driving it to public events.

2. CLIMATE CHANGE PREPAREDNESS

In the coming years, climate change will bring dramatic changes to Los Angeles, with wide-ranging effects on the health and welfare of its residents. By midcentury, the number of extreme temperature days above 95 degrees is predicted to triple in downtown Los Angeles, quadruple in parts of the San Fernando Valley, and jump five times in other parts of Los Angeles County.²⁷ Higher temperatures will worsen air pollution, increase risks of asthma and other diseases, threaten vulnerable populations like children and the elderly, and place new and growing demands on our energy and water supply systems. Climate change also brings other threats to the city, including increased wildfire risks, and flooding risks in coastal neighborhoods.

To prepare for these profound local impacts, Los Angeles must both *mitigate* its impact on the environment by taking measures to reduce greenhouse gas emissions outlined in other sections of this plan, and *adapt* to changes that are already underway that threaten the well-being of its people. Los Angeles has begun to create a preparedness strategy through the Mayor's AdaptLA climate change planning process. In partnership with UCLA, the Los Angeles Regional Collaborative (LARC), USC Sea Grant, and the International Council for Local Environmental Initiatives (ICLEI), forecasts of climate change impacts on the Los Angeles region are in the works. The collaboration

has already released a midcentury temperature forecast and is scheduled to complete studies on the effects of climate change on sea level rise, precipitation, cloud cover, wind, and hydrology.²⁸ The current Mayor's office is committed to using these studies to develop a regional climate preparedness strategy, originally scheduled for release by Spring 2013.

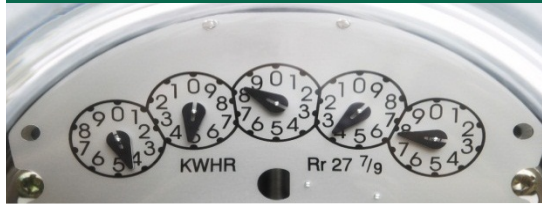
Going forward, Los Angeles must incorporate climate change forecasts into all aspects of city planning, and perform ongoing research to ensure that decisions are based on the most current data.

GOALS:

1. Protect the health and welfare of Los Angeles residents from impacts of climate change, including increased temperatures, sea level rise, increased wildfire risk, and changes in precipitation.
2. Adapt to climate change impacts through comprehensive preparedness planning, implementation of preparedness measures, and continuous research and monitoring of climate impacts.

INDICATORS	TARGETS	KEY IMPLEMENTATION MEASURES
Preparedness Planning		<u>Lead Agencies:</u> Mayor's Office, AdaptLA
A regional climate preparedness strategy	Draft and implement a regional climate preparedness strategy, with milestones, deadlines, and implementation measures, by Spring 2014. ²⁹	<p>Building on AdaptLA's vulnerability assessment efforts, create a regional climate preparedness strategy to adapt Los Angeles to the impacts of climate change, with milestones, deadlines, and implementation measures.</p> <p>Submit annual progress reports on the implementation of the regional climate preparedness strategy.</p> <p>Collaborate with City of Los Angeles departments to include in the climate preparedness strategy a plan for protecting climate sensitive habitats and ecosystems, the most vulnerable city infrastructure, and other property.</p>
Percentage of existing city plans that integrate climate change considerations	Integrate climate change considerations into all existing city and agency plans (e.g., drought plans, natural disaster risk plans, coastal storm plans, etc.).	Through the Mayor's office, coordinate an effort to include climate change preparedness considerations in all existing City plans, including considerations of coastal planning and wildfire risk.
Ongoing research panel to assess climate change impacts on Los Angeles	Create a panel to conduct ongoing research and modeling of climate change impacts, and monitoring and reporting on the progress of the climate preparedness strategy by 2014.	<p>Building on the partnership with LARC, develop a panel modeled on the Intergovernmental Panel on Climate Change Working Groups to continually generate, compile, update, and analyze data on Los Angeles' vulnerability to climate change and preparedness capacity, and to develop monitoring, modeling, and other decision-making tools that generate and make publicly-available local climate change projections and climate vulnerability data.</p> <p>Take advantage of existing relationships, including with C40, a global group of cities working to address climate change, as sources of research and climate preparedness ideas.</p>
Preparedness Measures		<u>Lead Agencies:</u> Mayor's Office, AdaptLA, LARC, LADWP
Square footage of solar reflective <i>cool roofs</i>	Increase square footage of solar reflective cool roofs by 4 million ft². ³⁰	Create widespread use of cool roofs by increasing public awareness and education, adjusting the building code, offering rebates, and streamlining the permitting process. ³¹

INDICATORS	TARGETS	KEY IMPLEMENTATION MEASURES
<p>Miles of streets and alleys with <i>cool paving</i>³²</p> <p>Square footage of parking lots with <i>cool paving</i></p>	<p>Significantly increase miles of streets and alleys with <i>cool paving</i>, and square footage of parking lots with <i>cool paving</i>.</p>	<p>In hotter areas, require <i>cool paving</i> with Solar Reflectance Index of 35 or higher in all municipal parking lots and all new private parking lots 1,000 square feet or larger.</p> <p>Require cool coatings and/or lighter aggregate and/or specific materials for street, sidewalk, and other parking lot surfaces.</p>
<p>Square footage of concrete and other surfaces that retain and radiate heat on city property</p>	<p>Significantly reduce square footage of surface materials that retain and radiate heat on city property.</p>	<p>Replace surfaces with vegetation that do not increase irrigation use.</p>
<p>Tree canopy coverage</p>	<p>Increase canopy coverage in neighborhoods where trees would mitigate the heat island effect and would be adequately funded, without increasing irrigation use.³³</p>	<p>Identify neighborhoods where increasing tree canopy would mitigate the heat island effect.</p> <p>Increase tree canopy if there is sufficient funding for tree maintenance, using trees that do not significantly increase irrigation use.</p>
<p>Percentage of city neighborhoods with a cooling center</p>	<p>Establish cooling centers to help residents deal with extreme heat in the hottest areas of the city by 2015, and other neighborhoods as needed.³⁴</p>	<p>Identify neighborhoods most in need of cooling centers, and prioritize the creation of cooling centers accordingly.</p>
<p>Participation by residents in energy and water conservation programs</p>	<p>Significantly increase participation in distributed electricity generation, energy efficiency, and water conservation programs.</p>	<p>Promote solar rooftop installations by incorporating local renewable energy targets into planning documents, streamlining the permitting process, expanding LADWP solar incentive programs, and allowing third-party power purchase agreements for distributed solar energy projects.</p> <p>Provide customer rebates for energy efficiency.</p> <p>Promote and incentivize water conservation.</p>



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3. GREEN BUILDINGS

In Los Angeles, buildings consume a significant portion of our natural resources. Buildings are responsible for up to two-thirds of the city's electricity load, and nearly one-third of the city's annual carbon dioxide emissions.³⁵ Green building practices focus on developing high-performing facilities that efficiently use energy, water, and other resources, while protecting occupant health. Increasing implementation of these practices will help Los Angeles meet the targets in many other parts of this report.

The City has led the way in constructing more sustainable municipal buildings. The total square footage of municipal buildings certified to meet the U.S. Green Building Council's Energy and Design (LEED) standards has grown from just 9,000 in 2004 to nearly 1.8 million in 2010. Currently, the Los Angeles Green Code requires all municipal projects to attain LEED Silver. In addition, Los Angeles has continually ranked as the city with the greatest number of EPA-rated Energy Star certified buildings in the nation.³⁶ A combination of using green building standards and reducing energy use will help transform gray infrastructure into green infrastructure.

Los Angeles must seize the opportunity to continue to lead by example. Committing to higher green building standards and energy efficiency for municipal buildings, and encouraging the private sector to do the same, will help Los Angeles meet its GHG reduction goals, reduce the impact of the built environment, and create more sustainable and enjoyable buildings for its residents.

GOALS:

1. Significantly increase energy conservation and efficiency in buildings.
2. Diminish the environmental impacts of Los Angeles' built environment through continual improvement and implementation of green building practices.

INDICATORS	TARGETS	IMPLEMENTATION MEASURES
Energy Efficiency and Conservation		<u>Lead Agencies:</u> City Council, Bureau of Engineering (BOE), LADWP
Energy use intensity of City-owned buildings (BTU/ ft ²)	100% of new City-owned buildings achieve energy use intensity of 50 BTU/ft² or less.	BOE pursues energy conservation and efficiency measures.
Percentage of City-owned buildings that have an Energy Star score of 75 or higher	100% of City-owned buildings that qualify have an Energy Star score of 75 by 2016.³⁷	BOE pursues energy conservation and efficiency measures.
Annual Energy Star Benchmarking and Disclosure Program	Create and implement an Energy Star Benchmarking and Disclosure program for buildings greater than 50,000 ft² starting June 1, 2013, buildings greater than 10,000 ft² starting June 1, 2014, and buildings greater than 5,000 ft² starting June 1, 2015.³⁸	City Council passes an ordinance that establishes an Energy Star Benchmarking and Disclosure program, administered through the Department of Building and Safety.
Percentage of buildings subject to the Energy Star benchmarking and disclosure program that achieve an Energy Star score of 75 or higher	100% of buildings subject to the Energy Star benchmarking and disclosure program achieve an Energy Star score of 75 by 2018.	LADWP offers incentives to achieve an Energy Star score of 75 prior to 2018. Conduct audits to ensure achievement of an Energy Star score of 75.
Participation in Energy Efficiency Retrofits programs annually (% of buildings)	Increase participation in LADWP’s Energy Efficiency Retrofits programs annually to achieve 100% participation by 2021.³⁹	LADWP offers incentives to participate, which could include performing numerous free or discounted energy audits, and establishing “on bill financing” to help fund retrofits that residents can pay back later on the power bill. ⁴⁰
Insulation and energy efficiency upgrade requirements for buildings at point of sale and time of major renovation	Require insulation and energy efficiency upgrades for 100% of commercial and residential buildings sold and transferred, 100% of commercial and residential properties undergoing renovations of \$50,000 or more, and 100% of commercial properties that have additions to the building area of 10% or more.	LADWP establishes a list of required insulation and energy efficiency upgrades. Perform audits to ensure compliance.
Building energy use per capita	Decrease per capita building energy use by 3% annually.	LADWP and Mayor’s office engage in outreach to help individuals make behavioral changes to conserve

INDICATORS	TARGETS	IMPLEMENTATION MEASURES
(MMBTU/capita)		<p>energy, such as by tracking and comparing energy use.</p> <p>Work with experienced third-party provider(s) to offer behavioral-based conservation programs to customers.</p>
Green Building		<u>Lead Agencies:</u> City Council, BOE, LADWP
Green building standards tailored to Los Angeles	Create a set of green building standards, modeled after U.S. Green Building Council’s LEED, with tailored standards appropriate for Los Angeles, including an emphasis on water conservation.	<p>Develop a tailored green building standard and program for Los Angeles.</p> <p>Empower City inspectors to issue certifications as an alternative way to meet the LEED requirements specified below.</p>
Percentage of new City-owned buildings that are LEED Gold (or equivalent)	100% of new City-owned buildings are LEED Gold rated (or equivalent) or higher starting Jan. 1, 2018.⁴¹	City Council passes an ordinance requiring all new City-owned buildings to have LEED Gold rating (or equivalent) or higher starting Jan. 1, 2018.
Percentage of existing City-owned buildings that are LEED-EBOM (or equivalent)	100% of existing City-owned buildings are LEED-EBOM (Existing Buildings: Operation and Maintenance) certified (or equivalent) by 2021.	BOE pursues retrofit efforts to achieve LEED EBOM certification (or equivalent) for all existing City-owned buildings.
Percentage of new private buildings that are LEED certified (or equivalent) or higher	100% of new private buildings greater than 50,000 ft² are LEED certified (or equivalent) starting June 1, 2013, and LEED Silver rated starting Jan. 1, 2018.⁴²	City Council passes an ordinance requiring all new private buildings greater than 50,000 ft ² to be LEED certified (or equivalent) starting June 1, 2013, and LEED Silver rated (or equivalent) starting Jan. 1, 2018.
Percentage of existing private buildings that are LEED EBOM certified (or equivalent)	20% of existing private buildings are LEED EBOM certified (or equivalent) by 2021.	LADWP creates incentives to encourage water and energy conservation and efficiency.
Sustainable building requirements for new buildings	Establish sustainable building requirements for new buildings to achieve water and energy savings.	City Council passes ordinance that establishes sustainable building requirements, including <i>LID</i> , solar-ready roof equipment, and <i>zero emission</i>

INDICATORS	TARGETS	IMPLEMENTATION MEASURES
		vehicle-ready garages.



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4. TRANSPORTATION

Over the past few decades, the City and County have spent billions of dollars on transportation infrastructure in an attempt to refocus Los Angeles on efficiently and sustainably moving people instead of cars.⁴³ Bus and rail service has expanded throughout the city, the City has installed miles of *bikeways*, and CicLAvia events, which temporarily close portions of the city to car traffic, draw attention to the need to make streets safer for *active transportation* and recreation. Still, the vast majority of the city's 1.4 million commuting residents still rely on personal automobiles.⁴⁴ Vehicle use and traffic congestion contribute to climate change, consume fossil fuels, and disproportionately burden communities located near freeways with harmful air emissions.

Los Angeles can do more to make *sustainable transportation* modes, including public transit, car- and ride-shares, carpooling, biking, and walking, accessible and desirable to its residents. For instance, the City can coordinate with local and regional entities to distribute discounted EZ transit passes, expand Bus Rapid Transit (BRT) lines with dedicated bus lanes, install bicycle parking structures, promote vehicle-sharing programs, and upgrade bus stops and stations.

In general, the City's transportation resources should be used to invest in buses, rail, bike lanes, and other transit alternatives; any resources spent on new highways should be limited to projects that create dedicated lanes for buses and maintenance. And of course,

prioritization and expansion of transit operation must complement any new investments. The next Mayor and City Council must commit to expanding and protecting existing transit operations and maintenance, and advocate at the state and federal levels for transit operation funds in addition to capital for expansion.

Additionally, the City needs greater commitment to an integrated land use and transportation planning process that focuses on achieving communities within which public transit works. Currently, fewer than half of Angelenos live within one-quarter mile of regular transit.⁴⁵ The next Mayor and City Council can support policies and programs that link residents, workplaces, and transit to discourage single-passenger vehicle trips.⁴⁶ Importantly, the City must ensure that newly transit-oriented neighborhoods retain the same neighborhoods and do not displace existing residents. Likewise, improvements in *sustainable transportation* access should equally benefit residents across income levels. When thinking about *sustainable transportation* improvements, no neighborhoods should be off the table both low- and high-income communities must be included.

Increased investment in streets to meet the multi-modal needs of the City's residents must also be a priority. Our streets should be safe corridors for bicyclists and pedestrians as well as cars. Los Angeles' commitment to promoting bikeable and walkable communities will

have positive benefits for both the environment and quality of life for all Angelenos. We also call upon mayoral appointees to the Metro Board to commit to our transportation goals.

GOALS:

1. Ensure all Los Angeles residents access to *sustainable transportation* options through integrated planning and investments in public infrastructure.
2. Upgrade Los Angeles streets to meet the multi-modal needs of the city's residents.

INDICATORS	TARGETS	IMPLEMENTATION MEASURES
Sustainable Transportation		<u>Lead Agencies:</u> Dept. of Transportation (DOT), Metro
Shared ride trips as a percentage of total trips	Increase shared ride trips from 10.5% to 20% of all transportation trips. ⁴⁷	<p>Limit funding for highways to projects that create dedicated lanes for buses and maintenance.</p> <p>Work with Los Angeles event venues and event planners to ensure that all city events have an easy-to-use ridesharing tool, including a widget on event websites and email confirmations.</p> <p>Work with vehicle-share providers to provide premium city parking, especially in crowded commercial districts. Pass a city council ordinance outlining vehicle-share parking requirements.⁴⁸</p> <p>Explore point-to-point and peer-to-peer vehicle rental programs.⁴⁹</p>
<i>Active transportation</i> trips as a percentage of total trips	Increase <i>active transportation</i> trips (walking and biking) from 4.4% to 10% of all transportation trips. ⁵⁰	<p>Install secure bicycle parking structures coupled with strategically placed repair service and supply shops to encourage cycling.</p> <p>Fully implement the 2010 BICYCLE PLAN, which directs the City to add 200 miles of <i>bikeways</i> every five years.⁵¹</p> <p>Develop city demonstration facilities of workplace changing room and shower facilities for bicycle commuters, and transit station bike storage and repair facilities.</p> <p>Develop a citywide bike share program.</p>

INDICATORS	TARGETS	IMPLEMENTATION MEASURES
<p>Public transit trips as a percentage of total trips</p>	<p>Increase public transit trips from 11.3% to 20% of all transportation trips.⁵³</p>	<p>Promote and increase the number and scope of CicLAvia events, which temporarily close portions of the city to car traffic to make streets safer for <i>active transportation</i> and recreation.⁵²</p> <p>Transition from an automobile-centric method of transportation impact analysis to a multimodal or mode-agnostic method, under which bus-only lanes on high-volume transit corridors become an effective mitigation measure rather than a generator of significant impacts under California Environmental Quality Act (CEQA).⁵⁴</p> <p>Ensure that mayoral appointees to the Metro Board commit to protecting bus riders and making civil rights and environmental justice protection a key part of Metro’s transportation mission.</p> <p>Commit to expanding and protecting existing transit operation and maintenance. Advocate at the state and federal levels for transit operation funds. Through Metro, identify new local sources of operations funding by protecting unrestricted Proposition A and C funds for operations.</p> <p>Support implementation of the near-term transportation strategies outlined in VISION LOS ANGELES, a 30-year consensus action plan to improve mobility in Los Angeles.⁵⁵</p> <p>Raise funds for public transit through real estate transfer taxes, benefit assessment districts, and tax-increment financing.</p> <p>Following Metro’s “30/10 Initiative,” use long-term revenue from the Measure R sales tax as collateral for bonds and a federal loan to construct key transit projects in 10 years, rather than 30.⁵⁶</p> <p>Invest in transit stops with high boarding rates by providing benches, shade, restrooms, and real-time arrival data.</p> <p>Ensure that all Measure R transit projects include bicycle and pedestrian planning from the outset so that bicycle and pedestrian access is integrated into all new stations and stops.</p> <p>Advocate for expedited financing for local railway projects at the state and federal levels.</p> <p>Increase bus frequency, reduce transit time, and improve the on-time</p>

INDICATORS	TARGETS	IMPLEMENTATION MEASURES
		<p>performance of buses.</p> <p>Work with Southern California Association of Governments (SCAG) to ensure that federal transportation funds have public transit as a first priority.</p> <p>Focus on “last mile” transit improvements, such as bike trails, bike storage facilities, van shuttles, and park-and-ride/kiss-and-ride lots, as the usefulness of trunk transit lines fails without a local link to residences. Improve public transit links to open spaces (e.g., shuttles between Expo/Crenshaw lines and Baldwin Hills recreational area).</p> <p>Work with L.A. County Metro to support transit projects identified in Metro’s 2009 LONG RANGE TRANSPORTATION PLAN as top priority projects.⁵⁷</p> <p>Market discounted monthly and/or quarterly Metro transit passes.</p>
<p>Number of new Bus Rapid Transit lines with an ITDP score of silver or better</p>	<p>Create 20 new Bus Rapid Transit lines with a score of silver or better according to the Institute for Transportation & Development Policy (ITDP) “BRT Standard Scorecard.”</p>	<p>Focus investments on improvements prioritized by ITDP’s “BRT Standard Scorecard,” such as expanded hours of operation, multi-corridor networks, segregated rights-of-way, passing lanes at stations, minimizing emissions, pavement quality, platform-level boarding, integration with other transit, and pedestrian access.⁵⁸</p>
<p>Number of SCAG meetings Mayor and City Council members attend per year</p>	<p>Mayor and City Council members attend at least four SCAG meetings per year in their ex officio capacity.</p>	<p>Mayor and City Council members publically announce their joint commitment to attend at least four SCAG meetings to advocate for policies and programs that help achieve Los Angeles’ <i>sustainable transportation</i> goals.</p>
<p>Percentage of Los Angeles resident and employee population with a monthly EZ transit pass</p>	<p>25% of all Los Angeles residents and employees have EZ transit passes, which are monthly passes for local travel on 24 different public transit carriers throughout the Los Angeles region.⁵⁹</p>	<p>Work with employers and Neighborhood Councils to offer a deep discount on EZ transit passes if a large proportion of employees or group members sign up for a monthly pass (e.g., if 100% of members sign up, a group could receive the passes at an 85% discount).</p> <p>Encourage transit ridership by making discounted monthly passes available to as many residents and workers as possible.</p> <p>City Planning, DOT, and Metro collaborate to negotiate a standard agreement for transit passes for Los Angeles residents and employees that can be implemented as a traffic mitigation measure during CEQA review.</p>

INDICATORS	TARGETS	IMPLEMENTATION MEASURES
Land Use Planning		<u>Lead Agencies:</u> City Council, Southern California Assoc. of Governments (SCAG)
Percentage of population living within ¼ mile of transit that runs at least every 15 minutes during weekday daytime	Increase percentage of population that lives within ¼ mile of transit that runs at least every 15 minutes during weekday daytime from 46% to 60%.⁶⁰	<p>Ensure that new housing and commercial units being built in the City are focused around existing and planned transit corridors. Target funding to existing communities.⁶¹</p> <p>Establish target job and housing densities for station areas, transit stops, and corridors to help ensure sufficient transit ridership and discourage opposition.</p>
Number of households with incomes below the Los Angeles County median that are located within ½ mile of rail or Bus Rapid Transit stations	Significantly increase the number of low-income households within ½ mile of rail or Bus Rapid Transit stations.⁶²	<p>Adopt an ordinance requiring “No Net Loss” of affordable housing within ½ mile of rail or Bus Rapid Transit stations.</p> <p>Renew any locally subsidized housing contracts in station areas that are set to expire in 2014-2021. For the 30,000 federally subsidized units currently located in station areas, promote renewal of any contracts that are set to expire in 2014-2021.⁶³</p> <p>Enable existing tenants to stay using developer impact fees, and enforce and expand tenant protections.</p> <p>Incentivize construction of additional affordable housing units in station areas, and include affordable housing in <i>transit-oriented development</i> planning.</p> <p>Limit the number of parking spaces for <i>transit-oriented developments</i> by removing parking minimums, imposing parking maximums, and unbundling parking.</p> <p>Work with non-profits, land trusts, housing co-ops, and other community organizations to track and target affordable housing units in station areas for removal from the open market.⁶⁴</p>
Upgrading Streets		<u>Lead Agency:</u> Dept. of Public Works (DPW)
Number of intersections with computer-based traffic signal control systems installed.	Install computer-based traffic signal control systems at all intersections.	Expedite CLIMATE LA measures to install Automated Traffic Surveillance and Control Systems (ATSAC) or Adaptive Traffic Control Systems (ATCS) at city intersections. ⁶⁵

INDICATORS	TARGETS	IMPLEMENTATION MEASURES
New miles of <i>bikeways</i> .	Add 500 miles of new <i>bikeways</i>.	<p>Raise funds for <i>bikeways</i> through dynamically priced parking meters, whose prices change over the course of a day according to demand for parking.</p> <p>Fast track the first Five-Year Implementation Plan for the 2010 BICYCLE PLAN, which directs the city to add 200 miles of <i>bikeways</i> every five years.⁶⁶</p> <p>Complete the Los Angeles River Bikeway Network.</p>
Percentage of population within ¼ mile of dedicated <i>bikeways</i> .	Increase percentage of population that lives within ¼ mile of <i>bikeways</i> from 35% to 50%.⁶⁷	<p>Prioritize the development of new <i>bikeways</i> in communities that disproportionately lack them.</p> <p>Develop bike lanes and paths to connect Central Los Angeles and the San Fernando Valley.</p>
<p>Number of bicycle collisions with vehicles per 1,000 cyclists as compared to 2010 levels</p> <p>Number of pedestrian collisions with vehicles per 1,000 pedestrians as compared to 2010 levels</p>	Decrease pedestrian and bicycle collisions with vehicles by 50%.⁶⁸	<p>Establish safe bicycle and pedestrian “safety corridors” in areas with the poorest safety records to target improvements.</p> <p>Install bicycle and pedestrian accommodations at busy intersections, including crosswalks, pedestrian push buttons, countdown signals, sidewalk bulb-outs, island refuges, and bike boxes.</p> <p>Complete pedestrian travel networks by connecting discontinuous sidewalks.</p>



5. AIR QUALITY

Although Los Angeles has made great strides in improving air quality over the past several decades, it is still ranked as one of the most polluted cities in the country for ozone smog and particulate pollution.⁶⁹ Additionally, there is more work to be done to reduce emissions of toxic and carcinogenic chemicals within the city.

In California, harmful air pollutants are responsible for an estimated 19,000 annual premature deaths, 280,000 annual cases of asthma symptoms, 1.9 million annual lost work days, and more than 1 million respiratory-related school absences every year.⁷⁰ Los Angeles has the highest estimated rate of air quality related premature death in the state, representing nearly ten percent of all premature deaths.⁷¹ No resident of Los Angeles should be exposed to air contaminants at levels that pose a significant health risk. The city must move more quickly toward attainment of National Ambient Air Quality Standards.⁷²

Mobile sources (including trucks, ships, aircrafts, and personal vehicles) emit 90 percent of the region's air pollutants, and freight vehicles are responsible for most of these emissions. The Port of Los Angeles (POLA) and stationary sources like refineries and power plants contribute significantly to poor air quality in their surrounding, disproportionately low-income communities. The City of Los Angeles must ensure that the SAN PEDRO BAY PORTS CLEAN AIR ACTION PLAN⁷³ is

successfully implemented to reduce Port-related pollution. Moreover, the City must make significant progress toward a “zero emission container movement system” (ZECMS) for the Port that uses *zero emission* technologies like battery-electric or fuel cell-powered vehicles. *Zero emission* technologies must be the long-term goal of the Port, as they have significant toxic air pollutant and carbon benefits over *alternative fuel* technologies. Near-term components of such a system, like *zero emission* short distance drayage trucks and truck trips to and from the ports, should be implemented immediately.

GOALS:

1. Protect public health by eliminating residents' exposure to air contaminants at levels that pose a significant health risk.
2. Draft a plan by 2015 to implement a “zero emission container movement system” to fully deploy *zero emission* trucks and rail to and from the Port of Los Angeles by 2035.

INDICATORS	TARGETS	KEY IMPLEMENTATION MEASURES
Air Pollutants in Los Angeles		<u>Lead Agency:</u> Mayor’s Office, South Coast Air Quality Management District (SCAQMD)
<p>Number of asthma-related hospital admissions or emergency room visits per year</p> <p>Annual premature deaths due to air pollution</p> <p>Annual cases of asthma</p> <p>Annual respiratory-related lost work days</p> <p>Annual respiratory-related school absences</p>	<p>Significantly decrease number of asthma-related hospital admissions or emergency room visits per year, annual premature deaths due to air pollution, annual cases of asthma, annual respiratory-related lost work days, and annual respiratory-related school absences.</p>	<p>Task the Mayor’s appointee to the SCAQMD with committing to the air-related targets in this document.</p> <p>Increase <i>zero emission</i> and <i>alternative fuel</i> truck trips to and from the Port of Los Angeles and the Los Angeles World Airports.</p> <p>Increase walking, biking, and public transit trips.</p> <p>Create new Bus Rapid Transit lines and dedicated bus lanes.</p> <p>Increase <i>zero emission</i> vehicle adoption in Los Angeles.</p> <p>Reduce cumulative <i>environmental health</i> impacts in overburdened communities through use of “Green Zones,” preventing siting of sensitive land uses near toxic emissions sources, and mitigating the impact for sensitive land uses currently near toxic emission sources.</p>
Number of days per year ozone exceeds the National Ambient Air Quality 8-hour standard (ppm volume air concentration)	<p>Significantly reduce the number of days per year ozone exceeds the National Ambient Air Quality 8-hour standard (2008 standard of 0.075 ppm volume air concentration, or most recent standard).⁷⁴</p>	<p>Implement measures listed above to reduce air pollution-related health impacts.</p> <p>SCAQMD’s 2012 plan would bring the South Coast Basin into attainment with the 8-hour ozone standard by 2023.⁷⁵</p>
24-hour average PM10 concentration ($\mu\text{g}/\text{m}^3$ average mean over 3 years)	<p>Maintain attainment of National Ambient Air Quality standards for 24-hour average concentration of PM10 ($150 \mu\text{g}/\text{m}^3$).⁷⁶</p>	<p>Implement measures listed above to reduce air pollution-related health impacts.</p>
Annual average PM2.5 concentration ($\mu\text{g}/\text{m}^3$ annual mean over 3 years)	<p>Meet National Ambient Air Quality standards for annual average concentration of PM 2.5 ($15 \mu\text{g}/\text{m}^3$) by 2014.⁷⁷</p>	<p>Implement measures listed above to reduce air pollution-related health impacts.</p>

INDICATORS	TARGETS	KEY IMPLEMENTATION MEASURES
24-hour average PM2.5 concentration ($\mu\text{g}/\text{m}^3$, averaged over 3 years)	Meet National Ambient Air Quality standards for 24-hour average concentration of PM 2.5 ($35 \mu\text{g}/\text{m}^3$) by 2014.	Implement measures listed above to reduce air pollution-related health impacts. SCAQMD's 2012 plan would bring the Basin into attainment with the 24-hour PM2.5 standard by 2014, with a possible 5-year extension. ⁷⁸
Carcinogenic risk from air toxics (number of additional cancers in a population of one million individuals, exposed over a 70-year lifetime)	Significantly reduce carcinogenic risk from air toxics, focusing on the mostly heavily impacted, high-density communities. ⁷⁹	Implement measures listed above to reduce air pollution-related health impacts.
Air Pollutants from the Port of Los Angeles		<u>Lead Agency:</u> POLA
A plan by 2015 to implement a ZECMS	Draft a plan by 2015 to implement a “zero emission container movement system” (ZECMS) that fully deploys zero emission trucks and rail to and from the Port of Los Angeles by 2035.	Building on the SAN PEDRO PORTS CLEAN AIR ACTION PLAN ⁸⁰ and the ZERO EMISSIONS ROADMAP TECHNICAL REPORTS ⁸¹ , evaluate the feasibility of zero emission technologies, provide demonstration opportunities for zero emission technologies, and draft a plan with milestones, deadlines, and implementation measures.
Percentage of truck trips to and from the Port of Los Angeles that are zero emission truck trips	Increase zero emission truck trips to and from the Port of Los Angeles to 60% by 2021, including 100% of the truck trips to and from near dock rail yards by 2017.	Implement the portion of the Port of Los Angeles Board of Harbor Commissioners' STRATEGIC PLAN FOR 2012 TO 2017 that calls for an action plan to be completed by 2014 to increase natural gas and electric truck trips. ⁸² Include a zero emission component in every new project at POLA.
Annual PM, NOx, and SOx emissions from oceangoing vessels, cargo-handling vehicles, and heavy-duty vehicles (tons/year)	Fully implement the SAN PEDRO BAY PORTS CLEAN AIR ACTION PLAN as updated in 2010 to keep the Port of Los Angeles on track to reduce annual emissions of DPM by 77%, NOX by 59%, and SOX by 93% by 2023 (relative to 2005 levels).	Implement the measures outlined in the SAN PEDRO BAY PORTS CLEAN AIR ACTION PLAN, including imposing control measures on ocean-going vessels, heavy duty vehicles, locomotives, and cargo-handling equipment; establishing a forum for research and development of emissions strategies; and expanding emissions monitoring.

INDICATORS	TARGETS	KEY IMPLEMENTATION MEASURES
Update the CLEAN AIR ACTION PLAN with measures to address the overall sustainability of the Port	Update the CLEAN AIR ACTION PLAN to improve the sustainability of the Port, with measures to increase energy efficiency, increase the use of renewable energy, decrease greenhouse gas emissions, and incorporate a <i>zero emission</i> component in all new port-related projects.	Build upon the SAN PEDRO BAY PORTS CLEAN AIR ACTION PLAN. ⁸³
Cancer risk from Port-related PM emissions	Significantly reduce cancer risk from Port-related PM emissions in communities located in and proximate to the Port region.	Implement the measures outlined in the SAN PEDRO BAY PORTS CLEAN AIR ACTION PLAN. ⁸⁴
Health risks from rail-related emissions	Reduce incompatible land uses that locate new port terminals or rail yards in close proximity to homes, schools, or other sensitive receptors.	<p>Prioritize on-dock rail in Port expansion planning, if more rail capacity is needed by the Port.</p> <p>Build or expand on-dock rail capacity and do not build or expand rail yards located in adversely impacted communities.</p>
Plan to ensure that ocean-going vessels meet ECA requirements	Accelerate the implementation of the North American Emission Control Area (ECA) by developing a plan to ensure that ocean-going vessels calling at the Port have access to the fuels and services necessary to meet ECA requirements.	Incorporate in the plan fuels and services such as inexpensive services to clean scrubbers, purchase area for selective catalytic reduction, and access to liquefied natural gas for those vessels that have converted to natural gas.
Air Pollutants from the Los Angeles World Airports (Los Angeles International Airport, LA/Ontario International Airport, Van Nuys Airport)		<u>Lead Agency:</u> Los Angeles World Airports (LAWA)
Percentage of LAWA fleet vehicles, airport shuttles, and taxis that are <i>zero emission</i> or <i>alternative fuel</i> vehicles	<p>Significantly increase percentage of LAWA fleet vehicles that are <i>zero emission</i> by 2021.</p> <p>Increase percentage of LAWA fleet vehicles that are <i>alternative fuel</i> vehicles or comparable to 100% by 2015, increase percentage of airport shuttles that are <i>alternative fuel</i> vehicles or comparable to 50% by 2015, and increase percentage of taxis that are <i>alternative fuel</i> vehicles or comparable to 10% by</p>	<p>Establish and implement a <i>zero emission</i> target for LAWA fleet vehicles for 2021, set target date to achieve a 100% <i>zero emission</i> date.</p> <p>Achieve the targets in the LOS ANGELES WORLD AIRPORTS SUSTAINABILITY REPORT JUNE 2011.⁸⁵</p> <p>Only allow <i>alternative fuel</i> taxis to serve passengers, and then only allow <i>zero emission</i> taxis to serve passengers.</p>

INDICATORS	TARGETS	KEY IMPLEMENTATION MEASURES
	2015.	
Increase percentage of ground service equipment powered by electricity	Convert 100% of diesel ground service equipment to electrical equipment or to the cleanest technology available by 2015.	Achieve the targets in the LOS ANGELES WORLD AIRPORTS SUSTAINABILITY REPORT JUNE 2011. ⁸⁶
Reduce VOC emissions from the airport as compared to 2010 levels	Reduce volatile organic compound (VOC) emissions from the airport by 10% from 2010 levels by 2015.	Achieve the targets in the LOS ANGELES WORLD AIRPORTS SUSTAINABILITY REPORT JUNE 2011 by following California Air Resources Board standards for using low-VOC products, including solvents, and limiting idling time of off-road diesel vehicles to 5 minutes. ⁸⁷
Collaborative between LAWA, the U.S. Military, research universities, and the aerospace industry to expand the use of advanced biofuels and other emerging technologies in and around the airport complexes	Establish a collaborative between LAWA, the U.S. Military, research universities, and the aerospace industry to expand the use of advanced biofuels and other emerging technologies in and around the airport complexes.	Mayor's office takes the lead to establish the collaboration.

6. ENVIRONMENTAL JUSTICE

The effort to transform Los Angeles into a more healthy and livable city must contain steps to eliminate *environmental health* disparities between communities. In Los Angeles, hazardous facilities and corridors for goods movement are located primarily in low-income, minority communities, such as Boyle Heights, the Figueroa Corridor, Pacoima, Watts, and Wilmington, burdening these communities with a disproportionate share of our environmental pollution. Residents of these vulnerable “toxic hotspot” communities are exposed to particulate matter and air toxics, which aggravate asthma and contribute to heart attacks, cancer, lung disease, premature death, and pre-term births.⁸⁸ These same communities contain a large number of sensitive land uses, such as homes, childcare centers, hospitals and schools, and harbor populations most vulnerable to the adverse health effects of air pollution, like children and the elderly.

Los Angeles needs to address the cumulative impacts of the combined emissions and discharges from all sources in toxic hotspot communities. Municipal government has a number of powerful tools at its disposal. Improvements in land use planning and zoning controls, increased enforcement capacity, and targeted economic development can ensure that all neighborhoods in Los Angeles have a healthy future.

Los Angeles has begun to take steps in this direction. The General Plan for the City contains a policy to ensure “the fair treatment of all

people of all races, cultures, incomes and education levels with respect to the development, implementation and enforcement of environmental laws, regulations, and policies.”⁸⁹ In addition, the City Council is considering a Clean Up Green Up (CUGU) policy to create, on a pilot basis, overlay districts or “Green Zones” in three overburdened communities: Pacoima, Wilmington, and Boyle Heights. The CUGU policy elements target funding and other incentives to encourage local businesses to clean up and green up, and to attract new green businesses to the Green Zones; assure improved and more coordinated enforcement of current regulations; apply a set of specific conditions to new and expanded commercial and industrial uses; safeguard against the introduction of sensitive uses into industrial districts; and put in place a management system to assure the effective functioning of the policy within the Zones. Los Angeles’ next Mayor must ensure full and adequate funding for the CUGU pilot policy as a means to test this model and thoroughly evaluate its effectiveness as a step prior to considering a broader effort to address the problem of cumulative environmental impacts in LA.⁹⁰

It is important to note that *environmental justice* is highlighted here as an individual goal area because of its importance in our community. It is also important to note that *environmental justice* must be a factor in all City environmental and land use decision-

making. Achieving the targets outlined in other Vision 2021 LA categories, including Air Quality, Transportation, Open Space & Urban Greening, Waste, and Green Economy, will contribute to *environmental justice* in Los Angeles.

GOALS:

1. Reduce adverse cumulative *environmental health* impacts in overburdened communities through improvements in zoning, land use planning, monitoring and enforcement, and mitigating hazardous land uses and mobile emissions.
2. Continue and expand stakeholder engagement and participation in environmental decision-making.

INDICATORS	TARGETS	IMPLEMENTATION MEASURES
Cumulative Impacts		<u>Lead Agencies:</u> City Council, Mayor’s Office
Publication of a database measuring toxic releases and identifying <i>environmental health</i> risks in Los Angeles at the neighborhood level.	Develop a public database measuring toxic releases and identifying <i>environmental health</i> exposures and risks in Los Angeles at the neighborhood level. ⁹¹	Draw upon existing screening and mapping tools. ⁹² Call upon local research universities to help the city develop, adopt and implement the data collection and analytical tools needed to ensure that Los Angeles is making progress in <i>environmental justice</i> . Incorporate stakeholders and engage in public outreach.
Environmental Health and Justice element in the General Plan	Incorporate an Environmental Health and Justice element into the City’s General Plan.	Coordinate with the Planning Department.
Clean Up, Green Up (CUGU) Pilot Policy		<u>Lead Agencies:</u> City Council, Mayor’s Office
Pacoima, Boyle Heights, and Wilmington are designated as pilot “Green Zones” by 2013 Development of relevant performance standards for application in the “Green Zones” for: 1) new and expanded	Enact the CUGU pilot policy by 2013 to create “Green Zones” in the vulnerable communities of Pacoima, Boyle Heights, and Wilmington through overlay districts or similar mechanisms. The “Green Zones” elements: encourage local businesses to clean up; attract new green businesses; improve enforcement of current regulations; apply standards to new and expanded commercial and industrial	Direct the City Attorney’s Office to review an ordinance for City Council action on CUGU. Through the City Council, enact and designate funding for the CUGU policy and programmatic elements. ⁹⁴ Through the Mayor’s Office, endorse a City Council action on the CUGU policy and programmatic

INDICATORS	TARGETS	IMPLEMENTATION MEASURES
<p>commercial and industrial uses and 2) safeguarding the introduction of sensitive uses into industrial districts</p> <p>Development of a program and protocols for improved and more coordinated enforcement of current regulations in the “Green Zones”</p> <p>Establishment of an Ombudsperson Office to coordinate economic development and implementation of emissions compliance strategies in Los Angeles’ toxic hotspot communities</p>	<p>uses; safeguard against the introduction of sensitive uses into industrial districts; and put in place a management system to assure the effective functioning of the policy. ⁹³</p>	<p>elements.</p> <p>Broaden the city’s partnerships with the U.S. Environmental Protection Agency, California Dept. of Toxic Substances Control, and SCAQMD, and explore roles for LADWP, POLA, and the L.A. Community Development Dept. in funding programs and improvements to businesses and communities in Green Zones that improve business operations, reduce cumulative adverse environmental impacts, and better the physical and economic environment in these communities.</p> <p>Organize outreach and education campaigns to make businesses aware of available financial assistance programs from federal, state, and/or local agencies to upgrade technology towards achieving emissions standards compliance.</p>
<p>Publication of a final evaluation report with recommendations regarding the Citywide strategy to address cumulative impacts by 2017</p> <p>If the CUGU pilot program evaluation is favorable, broader implementation of the CUGU program by 2021</p>	<p>Develop and implement a formal evaluation of the CUGU pilot effort over a three-year period following adoption of the implementing ordinance. If the evaluation of the CUGU pilot is favorable, implement the program in a broader set of neighborhoods across the city by 2021.</p>	<p>Evaluate the CUGU pilot initiative as the first step in formulating a broader, citywide strategy to address the problem of cumulative impacts.</p> <p>Mayor’s Office secures funding and oversees the evaluation of the CUGU initiative.</p>
Brownfields		<u>Lead Agency:</u> Bureau of Sanitation (BoS)
<p>Number of brownfield sites identified, tracked, and monitored by Cal/EPA’s Department of Toxic Substances Control and/or the Regional Water Quality Control Board</p>	<p>Collaborate with state and federal entities to increase the number of brownfield sites identified, tracked, and monitored by Cal/EPA’s Department of Toxic Substances Control and/or the Regional Water Quality Control Board.</p>	<p>Seek pilot project funding from U.S. Environmental Protection Agency.</p> <p>Collaborate with U.S. Environmental Protection Agency Region 9, Cal/EPA’s Department of Toxic Substances Control, and the Regional Water Quality Control Board.</p> <p>Expand the City’s provision of engineering services to</p>

INDICATORS	TARGETS	IMPLEMENTATION MEASURES
		brownfield assessment processes.
Acres of brownfields remediated	Help ensure the most polluted brownfields sites are remediated.	<p>Explore state and federal grant opportunities to fund assessment and remediate brownfield sites.</p> <p>Assist property owners and community-based organizations in navigating brownfield remediation regulations and redevelopment options.</p>



7. WASTE

Both the State of California and City of Los Angeles are already pursuing aggressive goals to better manage waste and minimize the amount going to landfills. While properly managed landfills can be valuable alternative energy sources, improperly managed landfills can release global warming gases and toxic leachates into the environment. Locally, urban landfills are reaching capacity, and it is not anticipated that any more will be sited within Los Angeles County.⁹⁵ Further, much of currently landfilled material can be recycled, reused, or composted. Recovering these materials from the waste stream and reusing them locally would decrease our need for non-renewables and other diminishing resources as well as provide opportunities for local *green jobs*.

California State Assembly Bill 341 requires a 75 percent reduction in statewide solid waste landfilled by 2020.⁹⁶ Los Angeles has already achieved a diversion rate of 65 percent through better management of recyclables, construction and demolition waste, and organics.⁹⁷ Los Angeles adopted the RENEW LA plan, which aims to achieve zero waste by 2025. RENEW LA defines zero waste as “reduc[ing], reus[ing], recycl[ing], or convert[ing] the resources now going to disposal so as to achieve an overall diversion level of 90 percent or more by 2025, and to dispose of only inert residual.”⁹⁸ It is also critical to ensure that any of the materials recovered from the waste stream that can be reused locally, are used locally.

Increasing waste diversion rates will increase the need for related infrastructure, such as mixed recycling facilities and alternative waste technology facilities.⁹⁹ It is important to ensure that communities already burdened with high concentrations of industrial activities do not also host the majority of these new facilities. A new waste strategy should make certain that both the costs and the benefits of any new infrastructure needed to achieve a zero waste goal are equally spread across all city communities.

We endorse the plans outlined in RENEW LA that call for 87 percent waste diversion by 2020 and 90 percent or more waste diversion by 2025. Los Angeles can achieve these increased diversion rates under the hierarchy of priorities set out in the California Integrated Waste Management Act (A.B. 939): source reduction; recycling and composting; environmentally safe transformation¹⁰⁰ and land disposal.¹⁰¹ Further, we support the implementation of the exclusive franchise system for waste collection from multi-family and commercial properties in Los Angeles that was proposed by the Bureau of Sanitation and recently supported by the City Council.¹⁰²

GOALS:

1. Divert 87%+ of waste from landfills by reducing the amount of waste generated, increasing the amount of reused and recycled material, and developing and implementing *alternative waste technologies*.
2. Improve environmental and public health by decreasing improper disposal of household hazardous waste.

INDICATORS	TARGETS	IMPLEMENTATION MEASURES
Solid Resources		<u>Lead Agencies:</u> Department of Public Works – Bureau of Sanitation (DPW-BoS), Mayor’s Office, City Council
<p>Amount of waste diverted (measured by recycled, composted, etc.) from city-collected waste (residential up to 4 units)</p> <p>Amount of waste diverted (measured by recycled, composted, etc.) from privately collected waste (residential greater than 4 units and commercial)</p> <p>Amount of solid waste landfilled</p> <p>Amount of solid waste disposed per capita¹⁰³</p> <p>Amount of commercial and industrial waste recovered and reused</p>	<p>Achieve diversion rate from landfills for all materials from all sectors of 87%+.¹⁰⁴</p>	<p>Follow Zero Waste and the SOLID WASTE INTEGRATED RESOURCES PLAN to achieve a diversion rate of 87%+.¹⁰⁵</p> <p>Implement the exclusive franchise system for waste collection from multi-family and commercial properties in Los Angeles.¹⁰⁶</p> <p>Implement and expand upon policies outlined in the RENEW LA plan.</p> <p>Direct flow of construction and demolition waste through Building and Safety project permit requirements to maximize material recovery.¹⁰⁷</p> <p>Obtain a waste collection fee increase to fund projects to increase diversion rates.</p> <p>Target high waste areas for programs to reduce the volumes of waste generated.</p>

INDICATORS	TARGETS	IMPLEMENTATION MEASURES
Number of <i>alternative waste</i> technology facilities	Implement at least one <i>alternative waste</i> technology facility by 2021.	<p>Build at least one <i>alternative waste</i> technology facility and evaluate whether more facilities are needed. If more than one facility is built, an analysis should be completed on the waste streams to make sure appropriate technology is used. There should be a limit of one facility per watershed (seven total), sited in a manner that will not add to the disproportionate impacts in communities adjacent to the facility. Particular focus should be placed on facilities for processing organic waste (e.g., composting or anaerobic digestion). Further, these facilities must comply with the most stringent local, state, and federal environmental standards.</p> <p>Study the efficacy of waste conversion at each facility.</p> <p>Ensure that these facilities are only used for materials that cannot be reused or recycled.</p>
Number of establishments using single-use paper and plastic bags or expanded polystyrene food packaging	Ban single-use paper and plastic bags, blown polystyrene food packaging, and expanded or extended foams such as Styrofoam at retail establishments by 2017.	<p>Expand the ban on polystyrene foam from City facilities¹⁰⁸ to citywide, and include expanded polystyrene food packaging by 2017.</p> <p>Implement a plastic bag ban by mid-2013.</p>
Annual funding for litter and debris clean-up in communities underserved by litter clean-up programs (\$/year)	Significantly increase litter and debris clean-up in streets, alleys, catch basins, and vacant lots in communities underserved by litter clean-up programs.	<p>Explore avenues to increase funding for litter and debris-cleanup in communities underserved by litter clean-up programs.</p> <p>Work with other community and professional organizations to increase volunteer clean-up programs in these areas.</p>
Composting & Green Waste		<u>Lead Agency:</u> DPW-BoS
<p>Amount of waste composted</p> <p>Number of compostable and green waste drop-off sites</p> <p>Number of restaurants and grocery stores with access to composting bins</p> <p>Percentage of Los Angeles restaurants</p>	Increase composting and green waste collection to achieve overall diversion rate from landfills for all materials from all sectors of 87%+.	<p>Establish a fund to pay for composting through Sunshine Canyon Host fees.¹⁰⁹</p> <p>Include compostables and green waste where appropriate in diversion requirements to franchise haulers within Los Angeles.</p> <p>Implement a citywide composting program at businesses that generate a high percentage of compostables such as grocery stores and restaurants.</p>

INDICATORS	TARGETS	IMPLEMENTATION MEASURES
participating in composting program		Create a program to allow consumers to drop off compostables at businesses such as farmers' markets or grocery stores.
Amount of compostable waste locally processed into products	Significantly increase amount of compostable waste converted to products such as energy and fertilizer and used locally.	<p>Increase the infrastructure and locally available opportunities to process compostable and green waste into products.</p> <p>Explore public-private partnerships or other avenues to encourage the processing of compostable and green waste.</p>
Number of city compost and mulch giveaway sites	Increase the number of city compost and mulch giveaway sites to one per city council district.	Explore new funding avenues to expand current City program that composts waste and provides mulch free to gardeners. ¹¹⁰
Recycling		<u>Lead Agency:</u> DPW-BoS
<p>Amount of material recycled</p> <p>Number of pick-up and drop-off opportunities for California Redemption Value (CRV) and non-CRV items</p> <p>Number of multi-family units participating in recycling program</p> <p>Number of commercial units participating in recycling program</p> <p>Increase in commercial materials recycled</p>	Increase recycling to achieve overall diversion rate from landfills for all materials from all sectors of 87%+.	<p>Include recyclables in diversion requirements to franchise haulers within Los Angeles.</p> <p>Haulers pay A.B. 939 compliance fees that fund some multi-family recycling pick-up.</p> <p>Enforce mandatory recycling requirements for multi-family and commercial sectors.¹¹¹ Require reporting of amounts by wasteshed.</p> <p>Increase source-separation for all sectors (multi-family, commercial, and single-family). Require reporting by wasteshed of amounts.</p> <p>Study the recycling stream to understand opportunities for recycling infrastructure development. Make and implement recommendations.</p> <p>Target certain recyclables, like plastics, paper, and compost for recycling manufacturing.</p>
Percentage of materials recycled or reused locally	Significantly increase the percentage of materials recycled or reused locally.	Increase implementation of CalRecycle's Recycling Market Development Zone efforts to develop recycling infrastructure for reprocessing of recyclable materials in California. ¹¹²

INDICATORS	TARGETS	IMPLEMENTATION MEASURES
Household Hazardous Waste (HHW)		<u>Lead Agency:</u> DPW-BoS
Percentage of households using city hazardous waste collection facilities	Significantly increase percentage of households using HHW drop-off sites.	Explore the possibility of funding education programs on correct HHW disposal procedures and location of drop-off sites through charging environmental disposal fees at time of purchase of household hazardous materials.
Number of HHW collection areas	Significantly increase HHW collection events, particularly in high-density neighborhoods.	<p>Develop and implement a plan to increase HHW collection events and increase community access to these events, particularly in high-density areas (either through increasing the number of static locations or mobile round-ups).</p> <p>Explore the possibility of implementing a program requiring retailers and/or manufacturers to take back leftover household hazardous materials and empty containers.</p>
Number of education programs on household hazardous materials	Significantly decrease the amount of household hazardous materials sold within Los Angeles by increasing public education programs.	Conduct citywide education programs to inform residents about the dangers of these products and the array of green chemistry alternatives to these products.

8. WATER

Los Angeles is located in a semi-arid region that is prone to drought, and climate change models indicate that droughts are likely to increase in both duration and intensity over the coming decades. Additionally, the changing climate will put pressure on Los Angeles' imported water supplies. The City imported an average of 88% of its water from 2005-2010.¹¹³ As imported sources are increasingly challenged, it is critical for Los Angeles to develop its local water supplies and decrease its overall water demand to ensure a reliable supply of water. In order to meet ambitious water goals, the City must aggressively implement its award winning INTEGRATED RESOURCES PLAN which calls for a "One Water" approach to managing drinking water, wastewater, recycled water, conservation, and stormwater.

LADWP's 2008 report, SECURING L.A.'S WATER SUPPLY TOMORROW,¹¹⁴ and its 2010 URBAN WATER MANAGEMENT PLAN (UWMP) outline projects to increase local water supply, including water recycling, groundwater recharge through infiltration of stormwater and snowmelt, and increased groundwater pumping and treatment. The UWMP sets forth a goal of satisfying 37 percent of the City's water demand with local water supplies by 2035. We propose a goal of 32 percent by 2021. This goal is in line with a recent resolution by the LADWP Board to conduct a study analyzing the possibility of accelerating the goals outlined in the UWMP.¹¹⁵ Further, we propose a separate water conservation goal of 100 gallons per capita per day (which Long Beach

has already achieved). Every gallon conserved represents one less gallon that needs to be imported from Metropolitan Water District (MWD) and thus helps decrease Los Angeles' dependency on non-local water sources.

Los Angeles must guarantee plentiful and clean drinking water for its citizens. Currently, contamination of Los Angeles' groundwater supplies prevents the city from fully utilizing its groundwater resources.¹¹⁶ Enhancing well-head treatment capabilities will increase the amount of clean drinking water that can be obtained from Los Angeles's groundwater as basin-wide clean-up efforts continue.

In addition, Los Angeles must provide sufficiently clean and healthy waters for recreation and habitat. Many water bodies in Los Angeles do not consistently meet federal or state water quality standards.¹¹⁷ Another major goal of this plan is to attain nearly all water quality standards for impaired water bodies in Los Angeles by 2021.

Two strategies that can be applied to achieve these goals are increasing the amount of permeable surface area and increasing the use of *low impact development (LID)* techniques in Los Angeles; both improve water quality (through decreasing volumes and pollutant loads that reach environmental waters) and water supply (through increasing infiltration to groundwater). Multiple use *LID* projects

improve water quality, augment water supply, enhance flood control, and increase *open space* and habitat. Los Angeles has already successfully piloted several *green streets* projects which apply *LID* techniques, and *green streets* should be increasingly implemented throughout the city as part of this plan. *Open space* protection and development, discussed in the following section, is another important vehicle to improve local water supply through capture, treatment, storage, and use of wet and dry weather runoff.

GOALS:

1. Obtain 32 percent of water supply from local sources through increased capture of stormwater, increased use of recycled water, and increased use of local groundwater.¹¹⁸
2. Decrease water consumption to 100 gallons per capita per day.
3. Achieve clean lakes, rivers, and coastal waters that meet all water quality standard deadlines and are clean enough to support beneficial uses.

INDICATORS	TARGETS	IMPLEMENTATION MEASURES
Integrated Water Management		<u>Lead Agencies:</u> Mayor’s Office, City Council, LADPW, DPW
Funding for construction, operation, and maintenance of infrastructure to further local water supply goals (\$/year)	Significantly increase funding available for the construction, operation, and maintenance of infrastructure to further local water supply goals.	<p>All funding measures in this Integrated Water Management section are applicable throughout the water section.</p> <p>Increase LADWP water rates to pay for water recycling facility upgrades (e.g., microfiltration and reverse osmosis), improved recycled water infrastructure, and rainwater capture for water supply efforts.</p> <p>Ensure that mayoral appointees to MWD strongly support the goals, targets, and implementation measures in Vision 2021 LA. Further, appointees must successfully advocate for greater MWD financial support for conservation and stormwater capture and use.</p> <p>Ensure that operations and maintenance are funded for these projects as well as construction.</p> <p>LADWP staff completes a detailed study of resources, costs, and future water rates that will result from</p>

INDICATORS	TARGETS	IMPLEMENTATION MEASURES
		accelerating time frame of goals in 2010 UWMP as directed by LADWP Commission. ¹¹⁹
Los Angeles County Clean Beaches Clean Water	Pass Los Angeles County Clean Beaches Clean Water initiative in Spring 2013. ¹²⁰	Aggressively support this measure, which will provide up to \$270 million county-wide annually to reduce runoff pollution while enhancing local water supplies, flood control, habitat, and open space.
Stormwater and flood control exempt from Proposition 218	Modify Proposition 218 to exempt stormwater and flood control.	Work with state legislators and the Governor towards modifying Proposition 218 with a state constitutional amendment to exempt stormwater and flood control from the proposition. As a result, cities could increase flood control and stormwater pollution fees without a supermajority vote of the public.
Cost-effective investments in local water supplies	Maximize the water supply benefits in cost-effective local water supply sources, including conservation, water recycling, groundwater and stormwater capture.	Evaluate the cost-effectiveness of all local sources, particularly in comparison with the likely future cost of imported water from increasingly expensive sources such as the Bay-Delta. Include, in this analysis, the benefit of improved water quality compliance. Develop a local water supply investment plan that reflects a “loading order” approach, maximizing investments in the most cost-effective sources (e.g., water conservation).
Amount of water lost to non-revenue uses	Significantly decrease amount of water lost to non-revenue uses. ¹²¹	Locate and repair pipe leaks and breaks. Establish a budget for a program to reduce the amount of water lost to non-revenue uses.
Water Recycling		<u>Lead Agencies:</u> LADWP, DPW-BoS
Wastewater effluent reuse, measured two ways: Non-potable reuse (AFY) Groundwater replenishment (AFY)	Increase wastewater effluent reuse to 73,000 AFY. ¹²²	Pursue funding through the already approved sewer service charge. ¹²³ Accelerate implementation of projects laid out in Los ANGELES RECYCLED WATER MASTER PLAN to achieve 59,000 AFY while designing new projects. ¹²⁴

INDICATORS	TARGETS	IMPLEMENTATION MEASURES
		<p>Require dual plumbing at locations along the Los Angeles River near recycled water distribution systems.¹²⁵</p> <p>Incorporate the 73,000 AFY goal by 2021 into the LADWP study on accelerating the timeframe of the 2010 UWMP goals.</p>
Groundwater/Stormwater Management		<u>Lead Agencies:</u> LADWP, DPW-BoS
Capacity of recharge basins (acre feet) Volume of winter and early spring runoff from snow melt captured (AFY) ¹²⁶	Increasing trend in amount of water captured and infiltrated.	<p>Infiltrate snowmelt in Antelope Valley on LAWA land.</p> <p>Plan for a reduction in average Bay-Delta diversions and a shift to wet year diversions and reduced dry year diversions.</p>
Volume of water (maximum sustainable yield) withdrawn from groundwater (AFY)	Increase groundwater withdrawal to 94,000 AFY.	<p>Increase well-head treatment systems to clean up groundwater at the pumps.</p> <p>Complete the LOS ANGELES GROUNDWATER SYSTEM IMPROVEMENT STUDY to develop clean-up plan for contaminated groundwater.¹²⁷</p> <p>Increase recharge to allow for increased withdrawal.</p> <p>Incorporate the 94,000 AFY goal into a LADWP study on accelerating the timeframe of the 2010 UWMP goals.</p>
Volume of stormwater captured (AFY)	Increase stormwater capture to 50,000 AFY.	<p>Accelerate implementation of plans and improvements set out in UMWP and IRP.</p> <p>Incorporate the 50,000 AFY target into the STORMWATER CAPTURE MASTER PLAN currently being drafted.¹²⁸</p> <p>Incorporate the 50,000 AFY goal into a LADWP study on accelerating the timeframe of the 2010 UWMP goals.</p>
Percentage of dry weather runoff managed	Management, treatment, or beneficial use of 42% of dry weather runoff. ¹²⁹	<p>Follow plans and projects outlined in the IRP and UWMP such as increasing permeable surface area and implementing dry weather diversions.¹³⁰</p> <p>Increase the volume managed through multiple-use</p>

INDICATORS	TARGETS	IMPLEMENTATION MEASURES
		projects such as parks or <i>open spaces</i> .
Percentage of volume of wet weather runoff managed	Management, treatment or beneficial use of 47% of wet weather runoff from ½" storm citywide. ¹³¹	Follow the plans and projects outlined in the IRP and UWMP such as identifying properties within the city for onsite percolation and including stormwater Best Management Practices in all new parks. ¹³²
Water Quality		<u>Lead Agencies:</u> DPW-BoS, LADWP
<p>Number of days/year beach posted with health warning or closed, measured during 3 time periods:</p> <p>Dry weather, April 1-October 31</p> <p>Dry weather, November 1 – March 31</p> <p>Wet weather, November 1 – March 31</p>	<p>Dry weather, April-October: zero water quality standards (WQS) exceedances.</p> <p>Dry weather, November-March: 3 WQS exceedances.</p> <p>Wet weather November-March: 17 WQS exceedances.¹³³</p>	Increase management of dry and wet weather runoff.
Relevant parameters for water quality compliance per water body (e.g., nutrients, bacteria, trash, metals, etc.)	Attain compliance with Total Maximum Daily Loads (TMDLs) in Ballona Creek (metals, trash, bacteria, toxicity); Los Angeles River (metals, trash, nutrients); Santa Monica Bay (bacteria, toxics); Machado Lake (nutrients, trash); Los Angeles Harbor – Inner Cabrillo Beach (bacteria); and Echo Park Lake. ¹³⁴	Continue implementing projects under way to achieve current compliance deadlines. ¹³⁵
Number of sewer spills per year	Maintain or reduce the level of annual sewer spills (160 per year, 5-year average from 2006-2011). ¹³⁶	Funded by the already approved sewer service charge. ¹³⁷
Percentage of city land that is permeable	Significantly increase the percentage of permeable land in Los Angeles.	<p>Aggressively advertise <i>green streets</i> standard plans developed and published by City.¹³⁸</p> <p>Pass an ordinance requiring that all alley and street improvements over \$1,000,000 must be <i>green streets</i> that infiltrate or treat the 85th percentile storm (¾").</p> <p>Follow the plans and projects outlined in the IRP such as integrating porous pavements into sidewalks or maximizing unpaved <i>open space</i> in City-owned properties.¹³⁹</p> <p>Develop similar pre-approved standard plans for green</p>

INDICATORS	TARGETS	IMPLEMENTATION MEASURES
		<p>alleys, as alleys also provide a good opportunity for increasing permeability.¹⁴⁰</p> <p>Expand on the Living Streets initiatives currently being demonstrated in Highland Park and El Sereno by Green LA coalition.¹⁴¹</p>
Number of properties with <i>LID</i> practices	<p>Require all city construction projects over \$1,000,000 to use <i>LID</i> practices.</p> <p>Increasing trend in <i>LID</i> retrofits of privately owned properties.</p>	<p>Develop incentives program to encourage private property owners to retrofit existing buildings using <i>LID</i> practices.</p> <p>Effectively implement City <i>LID</i> ordinance.</p>
Number of cooling power plants with once-through cooling	Eliminate once-through cooling power plants at Haynes (Units 5 and 6) and Scattergood (Unit 3) LADWP.	LADWP eliminates use of once-through cooling power plants at Haynes (Units 5 and 6) and Scattergood (Unit 3) in order to reduce impacts on marine life.
Positive trend in Los Angeles River water quality	Modify LOS ANGELES RIVER REVITALIZATION MASTER PLAN (LARRMP) and implementation programs for the Master Plan to ensure beneficial uses are protected as required under TMDLs.	Apply for funding from Congress through U.S. Army Corps of Engineers (USACE) restoration funds and other federal, state, and local sources.
Water Conservation		<u>Lead Agency:</u> LADWP
Total wastewater generated (MGD)	Significantly decrease wastewater generated from the 2010 level of 364 MGD.¹⁴²	<p>Require indoor/outdoor water meter installation programs in new developments and major remodels.</p> <p>Expand conservation programs such as education and incentives to buy ultra-low-flow appliances and fixtures.</p> <p>Incentivize water conservation and efficiency by converting the city's sewerage rate structure so that flat-fee customers are converted to volumetric rates and the unit cost of wastewater treatment increases for high-volume water users.¹⁴³</p>
Annual average per capita water use (gallons per capita per day)	Reduce per capita water use from 120 gallon/day to 100 gallons/day.¹⁴⁴	<p>Expand conservation programs such as education and incentives to buy low-flow appliances.</p> <p>Increase enforcement of existing rules for water use.</p>

INDICATORS	TARGETS	IMPLEMENTATION MEASURES
		<p>Expand the landscape incentive program that pays for turf replacement with low water use plants, permeable landscapes, etc.¹⁴⁵ Develop and pass a landscape ordinance for new and redevelopments.</p> <p>Incorporate the 100 gallons per capita per day goal into the LADWP study on accelerating the timeframe of the 2010 UWMP goals. Also incorporate this goal into the Water Conservation Potential Study that is scheduled to be developed.</p> <p>Incentivize conservation and efficiency by creating additional tiers within DWP's water rate structure so that the unit cost of water increases substantially for high-volume users.</p> <p>Implement an intensive public education campaign, which may require lifting the current ban on contracts with outside firms to accomplish.</p>

9. OPEN SPACE & URBAN GREENING

Increasing *open space* in an urban environment provides many benefits, including fostering active and passive recreation and encouraging the use of *active transportation*. More greenery in a city can decrease the urban heat island effect. *Open space* areas also benefit water quality by increasing permeable ground for rainwater infiltration, which slows down and cleans up urban runoff to local water bodies. Managing *open spaces* with an eye for water quality and planned infrastructure enhancement can also open up new funding sources for the greening, maintenance, and operations of these spaces.

Ecosystem, habitat, and biodiversity enhancement and protection are other important benefits of preserving and increasing *open space*. Los Angeles *open space* is home to extraordinary habitat diversity, ranging from the Santa Monica Mountains to riparian habitats, coastal wetlands, and Santa Monica and San Pedro Bay. These ecosystems support numerous endangered and threatened species. Carefully planning the placement of and habitat within *open spaces* can create habitat corridors and enhance the well-being of these species.

The City of Los Angeles already manages an extensive system of 15,000 acres of parklands and an urban forest of 700,000 street trees, which have been planted in part through the Million Trees LA

program.¹⁴⁶ Current access to parkland is inequitable, however, because parkland is more concentrated in western Los Angeles.¹⁴⁷ Currently, only 40 percent of the Los Angeles population lives within ¼ mile of parkland.¹⁴⁸ In order to ensure access to recreational spaces for all residents, it is important to critically consider the types of *open spaces* (e.g., shared-use spaces, repurposed vacant lots, reclaimed excess street right-of-way, repurposed city-owned remnant parcels, etc.) that can most easily be incorporated into the fabric of our densely developed city.¹⁴⁹ The Los Angeles River Corridor provides one potential option for increasing public access to *open space*. Mayor Villaraigosa recently announced a “50 Parks Initiative” to place parks in communities with the greatest need for *open space* (including South Los Angeles and the San Fernando Valley).¹⁵⁰

The citywide recreation and parks master plan, which is currently being designed,¹⁵¹ should expand upon the 50 Parks Initiative to ensure a significant increase in the percentage of residents, particularly in underserved and/or high-density communities, that are within ½ mile of *open space*. Different types and sizes of *open spaces* should be incorporated into the plan. Although creating a network of many smaller parks could improve access, it also could impose a greater maintenance burden on Los Angeles Recreation and Parks than would a smaller number of larger parks. Therefore, the plan needs to clearly provide for funding the operations and maintenance,

as well as the creation, of parks and trees to ensure the burden does not fall on local communities.¹⁵²

GOALS:

1. Create an urban environment in which all residents are within ½ mile of *open space*.
2. Create an *open space* master plan for Los Angeles with an emphasis on increasing *open space* access for underserved and/or high-density communities.
3. Develop and sustain sufficient *open space* to support diverse uses throughout the city such as natural functions /wildlife habitat to conserve and enhance biodiversity, passive and active recreation, and stormwater control.

INDICATORS	TARGETS	IMPLEMENTATION MEASURES
Open Space Access		<u>Lead Agencies:</u> L.A. City Dept. of Recreation and Parks (L.A. Parks); Dept. of City Planning; L.A. Unified School Dist. (LAUSD)
Recreation and Parks Master Plan Five-year capital improvement plan	Develop a Recreation and Parks Master Plan, including indicators, metrics, and funding, as well as a five-year capital improvement plan.	<p>Follow the plan format proposed in L.A. Parks’ 2009 CITYWIDE NEEDS ASSESSMENT.</p> <p>Conduct a literature review of the status of parks, <i>open spaces</i>, and demographics in Los Angeles to guide the plan.</p> <p>Increase observation at <i>open spaces</i>, either through patrols or community groups, to increase <i>open space</i> safety and use. Further, include the presence of safe routes for access by foot and bike traffic.</p> <p>Identify potential <i>open space</i> resources such as vacated railroad lines, drainage channels, utility rights-of-way, or pedestrian-oriented streets.¹⁵³</p>

INDICATORS	TARGETS	IMPLEMENTATION MEASURES
<p>Annual funding for parks and <i>open spaces</i> maintenance and operation (\$/year)</p>	<p>Significantly increase funding for maintenance and operation of existing and planned parks and <i>open spaces</i>, particularly in underserved and/or high density communities.</p>	<p>Conduct an annual park inventory to assess value and assign 3-4% of that value for maintenance of existing parks.¹⁵⁴</p> <p>Seek funding linkages with other requirements such as flood control, air quality mandates, or groundwater recharge.¹⁵⁵</p> <p>Focus increased funding efforts on maintaining and creating <i>open space</i> in underserved and/or high-density communities.</p> <p>Explore mechanisms to afford easier use of Quimby and Finn Fees and other sources of revenue set aside for parks and <i>open space</i>.</p>
<p>Percentage of population, particularly in underserved or high density communities within ¼ mile of an <i>open space</i></p> <p>Percentage of population, particularly in underserved or high density communities within ½ mile of an <i>open space</i></p>	<p>Significantly increase the percentage of people, particularly in underserved or high density communities, that live within ¼ and ½ mile of an <i>open space</i>.</p>	<p>Expand the 50 Parks LA Initiative to obtain and transform more properties to <i>open space</i> in underserved communities.¹⁵⁶</p> <p>Collaborate with community groups, non-profit organizations, and other groups to increase <i>open space</i> developments and to help manage, operate, or maintain parks and <i>open spaces</i> in the city.</p> <p>Increase <i>open spaces</i> in communities that currently disproportionately lack them.</p> <p>Obtain and compile surplus property lists from every City agency and department (LAUSD, DWP, etc.) and publish them for easy access by the public, community groups, and NGOs.</p> <p>Increase the number of multiple use parks and <i>open spaces</i> through combining with the LARRMP and regional <i>LID</i> project efforts.</p> <p>Explore repositioning other City-owned parcels or portions of such parcels (such as libraries, maintenance yards, and free-standing public buildings) to add passive or active recreation space.</p>
<p>Percentage of people within ¼ mile of an <i>open space</i> in each council district</p> <p>Percentage of people within ½ mile of an <i>open space</i> in each council district</p>	<p>Trend towards an equal percentage of people within ¼ and ½ mile of <i>open space</i> across council districts.</p>	<p>Incorporate equitable access to <i>open space</i> requirement into a recreation and parks or <i>open space</i> master plan.</p>

INDICATORS	TARGETS	IMPLEMENTATION MEASURES
Number of joint-use facilities	Significantly increase the number of joint-use facilities in underserved communities that provide <i>open space</i> access.	Create a citywide program (including safety measures to protect the property and the public, and to increase use) to facilitate the creation of joint-use facilities. Potential collaborators are schools or churches that could open their grounds for public access. ¹⁵⁷
Number of unused or vacant lots reclaimed for <i>open space</i>	Significantly increase the number of unused or vacant lots reclaimed for <i>open space</i>.	Identify and publicize the location of vacant and unused lots that can be reclaimed for <i>open space</i> .
Los Angeles River Bikeway Network completed with increased implementation of <i>LID</i> practices	Complete the Los Angeles River Bikeway Network as described in the TIGER grant application with additional incorporation of <i>LID</i> techniques throughout the network. ¹⁵⁸	Lead agencies include Department of Transportation, Department of City Planning, DPW, BOE, LADWP, and USACE. Potential funding includes federal, state, regional, and local transportation; water quality; and greening/ <i>open space</i> resources.
<p>Percentage of population within ¼ mile of a community garden</p> <p>Percentage of population within ½ mile of a community garden</p> <p>Number of unused or vacant lots reclaimed for community gardens</p>	Significantly increase the percentage of people within ¼ and ½ mile of a community garden.	<p>Facilitate access to vacant and surplus City land for community gardens by developing a uniform lease and streamlined process for any necessary permitting.¹⁵⁹</p> <p>Map available vacant City-owned land and post regularly updated user-friendly maps on City website, along with instructions and process for applying to use vacant land for community gardens.¹⁶⁰</p> <p>Where possible, provide use of appropriate City-owned lands at no cost or low-cost for community gardens.</p>
Habitat Protection and Enhancement		<u>Lead Agencies:</u> Mayor's Office, City Council, DPW-BoS, L.A. Parks
Percentage of new and redevelopment projects within 100 feet of soft-bottom riparian habitat that protect riparian habitat	100% of new and redevelopment projects within 100 feet of soft-bottom riparian habitat must comply with criteria to protect riparian habitat by the end of 2013.	City Council and DPW-BoS create a stream protection ordinance or policy that protects riparian habitat from development, onsite wastewater treatment facilities, pollution discharges, sedimentation, and erosion by the end of 2013. This ordinance or policy would apply to all new and redevelopment within 100 feet of soft-bottom riparian habitat.
Restoration of Ballona Wetlands	Ballona Wetlands is restored.	Work with the Santa Monica Bay Restoration Committee, the Coastal Conservancy, California Department of Fish and Game, and other critical

INDICATORS	TARGETS	IMPLEMENTATION MEASURES
<p>Proposition O projects completed</p> <p>Assessment of effectiveness of Proposition O projects</p>	<p>Complete the Proposition O projects¹⁶¹ and assess their effectiveness at enhancing the ecological health of the water bodies.</p>	<p>agencies to ensure that Ballona Wetlands is restored.</p> <p>Complete Proposition O Projects such as Machado Lake, Echo Park Lake, and Hansen Dam. Study their effectiveness and make recommendations for future projects.</p>
<p>Quality and quantity of habitat available in Los Angeles</p>	<p>Significantly improve the quality and quantity of habitat available in Los Angeles.</p>	<p>Implement projects in LARRMP along the Los Angeles River and its tributaries that improve existing habitat and provide habitat corridors.</p> <p>Continue restoration efforts at the El Segundo Dunes adjacent to LAWA.</p> <p>Improve habitat management and maintenance in City parks such as Griffith, Elysian, Sepulveda Basin, Elephant Hill, and Peck.</p> <p>Strengthen partnership efforts with local conservancies to increase habitat acreage and enhance ecosystem protection.</p> <p>Meet water quality standards in lakes, rivers, and coastal waters.</p> <p>Purchase land for and place habitat within parks and <i>open spaces</i> that enhance habitat quality and provide habitat corridors.</p>



10. GREEN ECONOMY

Los Angeles can become a national model of a green economy, with a growing clean technology industry,¹⁶² *green jobs*, and policies that promote green business practices and job training. California already has the nation's largest share of *green jobs*.¹⁶³ Southern California has around 40 percent of all *green jobs* and nearly half of all green economy firms in the state.¹⁶⁴ *Green jobs* include jobs in renewable energy, recycling, energy efficiency, environmental education and consulting, manufacturing natural and sustainable products, *LID*, water conservation, and green building.¹⁶⁵

In Los Angeles, abundant sunshine has already fueled several fast-growing renewable energy companies.¹⁶⁶ Achieving the goals in this document, including installing 1200 MW of local distributed solar, improving energy efficiency in buildings, and facilitating the development of clean technology companies, will grow *green jobs* and green economy firms in the City.

Los Angeles is also poised to become a leading center for clean technology.¹⁶⁷ The City recently created a center for clean technology research and development and manufacturing. The CleanTech Corridor stretches four miles along downtown Los Angeles, and includes the Los Angeles La Kretz Innovation Campus, which will open in summer 2013 to provide 60,000 square feet of facilities for clean technology. The LA CleanTech Incubator provides resources to launch

new companies, and the CleanTech Manufacturing Center will provide a state-of-the-art industrial complex for sustainable manufacturing of clean technologies and products.

Another opportunity for greening the economy is to ensure that municipal operations, particularly procurement policies, minimize impacts on the environment. The City of Los Angeles spent over \$23.4 million dollars on green products in fiscal year 2010/11.¹⁶⁸ By following environmentally preferable purchasing practices, Los Angeles can use goods and services that perform as well as or better than their traditional counterparts, and in some cases also save money for the city. For the private sector, Los Angeles' Certified Green Business Program gives all businesses an incentive to implement environmentally-friendly policies by providing information to consumers about which businesses are "certified green."

GOALS:

1. Establish Los Angeles as a national leader for clean technologies and *green jobs*.
2. Incorporate sustainability into city government procurement decision-making.

INDICATORS	TARGETS	KEY AGENCY & IMPLEMENTATION MEASURES
<i>Green Jobs</i>		<u>Lead Agencies:</u> City Council, BOE, BoS, DOT, LADWP
Number of new <i>green jobs</i> ¹⁶⁹	Create 100,000 new <i>green jobs</i> at living wages in Los Angeles by 2021. ¹⁷⁰	<p>Install 400 MW of solar energy on City property and 1200 MW of local distributed solar energy projects.</p> <p>Achieve Energy Star rating of 75 or higher on City-owned properties and private properties subject to a City Energy Star Benchmarking and Reporting program.</p> <p>Maintain the energy efficiency program budget at or above \$140 million per year.</p> <p>Develop clean technology and energy storage demonstration projects.</p> <p>Install computer-based traffic signal control systems at all intersections.</p> <p>Add 500 miles of new <i>bikeways</i>.</p> <p>Implement <i>LID</i> requirements for new and redevelopment and for <i>green streets</i>, regional rainwater capture projects, and water recycling projects.</p> <p>Develop incentives program to encourage private property owners to retrofit existing buildings using <i>LID</i> practices.</p> <p>Require indoor/outdoor water meter installation programs in new developments and major remodels.</p> <p>Install smart meters in all homes and businesses.</p> <p>Build at least one <i>alternative waste</i> technology facility.</p>
Number of businesses certified under the City of Los Angeles Green Business Program	Significantly increase the number of businesses certified under the City of Los Angeles Green Business Program, which requires certified businesses to implement measures to conserve resources and reduce waste. ¹⁷¹	<p>Increase outreach to businesses to become certified.</p> <p>In addition to the existing general standards and specific criteria for restaurants, auto repair, and office/retail businesses, create criteria for other business sectors.</p> <p>Create a search engine to allow residents to find and</p>

INDICATORS	TARGETS	KEY AGENCY & IMPLEMENTATION MEASURES
		choose certified green businesses.
Cumulative local venture capital investment in creating <i>green jobs</i> (\$/year)	Significantly increase local venture capital invested in creating <i>green jobs</i>.	Implement measures discussed in this document to create <i>green jobs</i> and clean technologies.
Number of residents trained to perform <i>green jobs</i> annually (persons trained/year)	Significantly increase the number of residents trained to perform <i>green jobs</i> every year.¹⁷²	Collaborate with community colleges, universities, and community entities to create job training programs and facilitate employment. ¹⁷³
Clean Technology		<u>Lead Agency:</u> Mayor's Office
Plan to bring clean technology businesses to Los Angeles	Draft plan by 2014 to use legislation, regulation, incentives, and partnerships with industry groups, local universities, and community groups to bring clean technology businesses to Los Angeles.	<p>Assign an agency and a senior staff member in the Mayor's office to be in charge of these efforts.</p> <p>LADWP, POLA, LAWA, DPW, and Metro each draft plans to use local new technology to meet their environmental goals.</p> <p>Strengthen the City's relationship with CleanTech LA by appointing a dedicated staff person on clean technology.</p> <p>Increase the leadership role of the Mayor's office in attracting clean technology companies, private sector support for clean technologies, grants, and other opportunities.</p>
Number of clean technology businesses forming, locating, or expanding in Los Angeles	50 new clean technology businesses forming, locating, or expanding in Los Angeles by 2017; 100 new clean technology businesses forming, locating or expanding in Los Angeles by 2021.	Implement business-friendly policies to attract clean technology companies and venture capital, including tax breaks, hiring tax credits, and real estate upgrades.
Number of clean technology demonstration projects	Create demonstration opportunities for local clean technologies.	LADWP, POLA, LAWA, and Metro develop policies to provide demonstration opportunities to help locally developed clean technologies become commercially viable.

INDICATORS	TARGETS	KEY AGENCY & IMPLEMENTATION MEASURES
Green Procurement		<u>Lead Agencies:</u> GSD, BoS, LADWP
Percentage of City proprietary departments with EPP programs	100% of the City's proprietary departments have Environmentally Preferable Purchasing (EPP) programs by Spring 2014. ¹⁷⁴	Following POLA and LAWA's lead, LADWP and those City agencies that have not created and fully implemented an EPP program in accordance with the Los Angeles EPP Ordinance shall do so by 2014.
Proportion of procurement budget spent by City on green products annually (\$/year) Amount spent by City on green products annually (\$/year)	Significantly increase the proportion of the procurement budget and the amount of money spent by the City annually under the EPP program. ¹⁷⁵	Educate City departments on how to incorporate more EPP products into their purchases, while ensuring that new EPP spending fits within budget constraints.
Volume of hazardous and toxic material purchased by City annually (lbs/year) Toxicity of hazardous material purchased by City annually	Significantly decrease the volume of hazardous material purchased by the City per year. Significantly decrease the toxicity of materials purchased by the City per year.	Identify hazardous materials purchased by the government and measure their toxicity. Develop a strategy to transition to non-toxic or less toxic alternatives.
Proportion of procurement budget spent by City annually on green products manufactured within the City (\$/year) Amount spent by City annually on green products manufactured within the City(\$/year)	Significantly increase the proportion of the procurement budget and the amount of money spent by the City annually on green products manufactured within the City.	Include place of manufacture in procurement decision-making to incentivize the purchase of products manufactured within the City. Identify green products manufactured in the City and, where feasible, replace products manufactured elsewhere with local products.



11. FOOD SYSTEM

Los Angeles' food system touches every city resident and accounts for a significant share of the city's economy. Agriculture, processing plants, and food transportation affect our local environment in a variety of ways, from water consumption to pesticide use to vehicle emissions. And access to healthy food contributes to the health of the city's residents.

Over the past several years, the Los Angeles Food Policy Council has worked to advance a "Good Food for All" Agenda for the city. According to the Food Policy Council, *Good Food* is food that is healthy, affordable, fair, and sustainable.¹⁷⁶ To complement Los Angeles' Green Economy procurement goals, the city should ensure that all of its departments adhere to the Los Angeles Food Policy Council's "Good Food Purchasing Guidelines." The Guidelines primarily emphasize five values:

1. **Local Economies** – Support small and mid-sized agricultural and food processing operations within the local area or region.
2. **Environmental Sustainability** – Source from producers that employ sustainable production systems that reduce or eliminate synthetic pesticides and fertilizers; avoid the use of hormones, antibiotics, and genetic engineering; conserve soil and water; protect and enhance wildlife habitat and biodiversity; and reduce on-farm energy consumption and greenhouse gas emissions.

3. **Valued Workforce** – Provide safe and healthy working conditions and fair compensation for all food chain workers and producers from production to consumption.
4. **Animal Welfare** – Provide healthy and humane care for livestock.
5. **Nutrition** – Promote health and well-being by offering generous portions of vegetables, fruit, and whole grains; reducing salt, added sugars, fats, and oils; and eliminating artificial additives.¹⁷⁷

The City can also encourage other major institutions, including Los Angeles hospitals and college campuses, to take the "Good Food Purchasing Pledge."

The next Mayor should continue to advance the work of the California FreshWorks Fund, a \$264 million public-private partnership loan fund created to finance new and upgraded food retailers for California's underserved communities.¹⁷⁸ The City can do more over the next eight years to ensure that all Angelenos, including residents of predominantly low-income and minority communities, have access to *healthy food retailers*. *Healthy food retailers* include any farmers' markets and any supermarket or corner store that meets the eligibility requirements and program guidelines for the California FreshWorks Fund.¹⁷⁹

In addition to encouraging produce markets in critical need areas, the next mayoral administration can foster healthy food neighborhoods by ensuring farmers' markets accept benefit cards (including CalFresh, Women, Infants and Children (WIC), and Universal Electronic Benefit Transfer (EBT) cards), and ensuring that *transit-oriented development* plans prioritize *healthy food retail* options.

GOALS:

1. Encourage the city's major institutions to commit to the Los Angeles Food Policy Council's "Good Food Purchasing Guidelines."
2. Foster healthy neighborhoods by expanding access to *healthy food retailers*.

INDICATORS	TARGETS	IMPLEMENTATION MEASURES
Food Access		<u>Lead Agencies:</u> Economic Development Dept. (forthcoming), Community Development Dept., Food Policy Council, Good Food Office
Number of full service grocers per 10,000 households	At least 3.5 full service grocers for every 10,000 Los Angeles households. ¹⁸⁰	Expand food retailer incentive programs and public-private partnerships to provide financing to developers or operators who open or renovate grocery stores in critical need areas.
Ratio of fast food or convenience stores to <i>healthy food retailers</i> (number of fast food + convenience stores / number of <i>healthy food retailers</i>) in low- and moderate-income areas of the city	At least 1 <i>healthy food retailer</i> for every 3 fast food or convenience stores in low- and moderate-income areas of the city. ¹⁸¹	<p>Employ restrictive zoning to limit development of fast food in oversaturated areas.</p> <p>Create a neighborhood market incentives policy to provide a regulatory pathway for small markets to provide healthy foods.</p> <p>Expand the Community Market Conversion Program, a program that combines the transformation of corner stores into produce markets with community outreach and nutrition education.¹⁸²</p> <p>Establish a home within the city government and a funding stream for the Community Market</p>

INDICATORS	TARGETS	IMPLEMENTATION MEASURES
<p>Percentage of <i>healthy food retailers</i> within ½ mile of public transit</p> <p>Number of policy and planning documents that prioritize healthy food neighborhood development</p>	<p>All transit-oriented development plans prioritize expanding and/or improving <i>healthy food retail</i> options in impacted neighborhoods.</p>	<p>Conversion program.</p> <p>Prioritize food-related development in <i>transit-oriented development</i> proposals.</p> <p>Prioritize transit accessibility in new major food retail development proposals.</p> <p>Incorporate <i>healthy food retail</i> goals into development policies, land use zoning, and general and community plan updates.</p> <p>Create a health & wellness element of the city’s General Plan that supports the production and equitable distribution of healthy, affordable, and sustainably produced food.</p>
<p>Number of farmers’ markets per council district</p> <p>Percentage of households within ½ mile of a farmers’ market</p>	<p>Significantly increase the number of farmers’ markets across council districts.¹⁸³</p>	<p>Expand access to micro-loans and incentive programs for local food ventures and processors.</p> <p>Provide vacant facility location assistance to those looking to establish farmers markets.</p>
<p>Percentage of farmers’ markets in city that accept EBT and WIC</p>	<p>All farmers’ markets in Los Angeles participate in EBT and WIC programs.¹⁸⁴</p>	<p>Educate farmers’ markets about available federal funding for EBT devices.</p>
<p>Food Procurement</p>		<p><u>Lead Agency:</u> Food Policy Council</p>
<p>Percentage of City departments that adhere to the “Good Food Purchasing Guidelines”</p>	<p>100% of food-purchasing City departments adhere to the Los Angeles Food Policy Council’s “Good Food Purchasing Guidelines” by 2017.¹⁸⁵</p>	<p>Work with the Los Angeles Food Policy Council to establish department-specific procurement criteria.</p>
<p>Percentage of hospitals and college campuses in Los Angeles that adhere to the Los Angeles Food Policy Council’s “Good Food Purchasing Pledge” and implement the “Good Food Purchasing Guidelines”</p>	<p>All hospitals and college campuses in Los Angeles adhere to the “Good Food Purchasing Pledge” and to implement the Los Angeles Food Policy Council’s “Good Food Purchasing Guidelines.”¹⁸⁶</p>	<p>Engage in public outreach.</p> <p>Host events to highlight the “Good Food Purchasing Guidelines” and the institutions that adhere to them.</p> <p>Integrate the Los Angeles Food Policy Council’s “Good Food Purchasing Guidelines” into local</p>

INDICATORS	TARGETS	IMPLEMENTATION MEASURES
Progress compliance report is received and reviewed each year from 2013 to 2021	Annually receive and review a report on the progress of compliance with the Los Angeles Food Policy Council’s “Good Food Purchasing Guidelines” and promote compliance with the “Good Food Purchasing Pledge” and Guidelines.	green business certification programs. Conduct advertising campaigns to build public support for the “Good Food Purchasing Pledge” and its guidelines.

NEXT STEPS

By building upon prior research, compiling existing plans, and drawing additional conclusions, **Vision 2021 LA** presents a roadmap for how, over the scope of two mayoral terms from 2013 to 2021, the next Mayor and City Council can set and achieve targeted goals that will transform Los Angeles into a more environmentally sustainable city.

Vision 2021 LA is intended first to be a springboard for a community discussion about our collective environmental sustainability vision. We hope to inspire a citywide discourse about what environmental sustainability would look like in Los Angeles, and what elements should be a part of a Los Angeles sustainable city plan.

We also hope Vision 2021 LA will ignite a dialogue between the 2013 mayoral and city council candidates, media, and voters about the candidates' environmental visions for Los Angeles. We recommend that the mayoral and council candidates use Vision 2021 LA as a framework for their environmental platforms, during the debates, throughout the election process, and during their elected term.

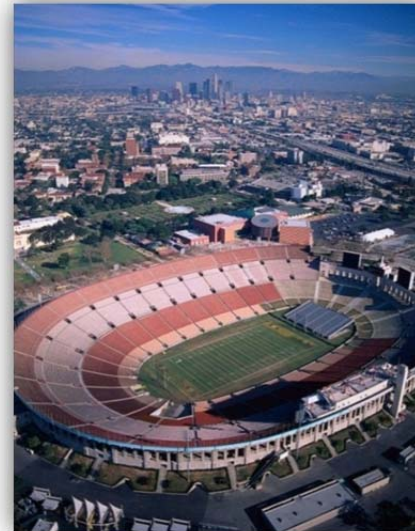
Following the 2013 election, City staff, environmental organizations, and community leaders should work with the Mayor and the City Council to develop an urban sustainability vision for Los Angeles. Based upon that vision, the City should adopt a detailed sustainable city plan for Los Angeles by 2014. Vision 2021 LA provides a strong

foundation for a comprehensive, environment-focused plan. Economic and social sustainability experts should collaborate with City agencies to create complementary sustainable city plan components that expand upon and enhance Vision 2021 LA.

Once Los Angeles has adopted its sustainable city plan, the City must establish a mechanism for independent, biennial assessment of the City's progress toward achievement of the goals and targets in the plan. The City should publish the results of its assessments in print

and online for easy public access.

Assessments should include estimates of cost requirements and identify funding sources for full plan implementation. In addition, the assessments should recommend new and updated implementation strategies as needed to realize success.



GLOSSARY

Active transportation — Transportation via biking and/or walking.

Alternative fuel — Describing a vehicle that is hybrid-electric or powered by propane, hydrogen, methane, and/or biofuels that exceed the California Low Carbon Fuel Standard¹⁸⁷ by at least a factor of two.

Alternative waste — Conversion technologies that include biochemical conversion (e.g., composting, aerobic digestion, and anaerobic fermentation), thermochemical conversion (gasification and pyrolysis), and physiochemical conversion (e.g., biodiesel from waste fats, oils, and grease).

Bikeway — A category including bike paths, bike lanes, and bike routes.

Cool roofs — Roofing surfaces that reflect rather than absorb sunlight to keep buildings and neighborhoods cooler than traditional roofing materials.

Cool paving — Paving materials that have high solar reflectance and high thermal emittance to reflect sunlight and radiate less heat into the air above the pavement.

Environmental health — According to the World Health Organization, “Environmental health addresses all the physical, chemical, and biological factors external to a person, and all the related factors impacting behaviours. It encompasses the assessment and control of those environmental factors that can potentially affect health. It is targeted towards preventing disease and creating health-supportive environments. This definition excludes behaviour not related to environment, as well as behaviour related to the social and cultural environment, and genetics.”¹⁸⁸

Environmental justice — According to CAL. GOVT. CODE § 65040.12(e), “the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies.”

Good food — According to the L.A. Food Policy Council, food that is 1) healthy: meets the USDA Dietary Guidelines for Americans, and is delicious, safe, and aesthetically pleasing; 2) affordable: people of all income levels are able to purchase it; 3) fair: all participants in the food supply chain receive fair compensation and fair treatment, free from exploitation, and high quality food is equitably, physically, and culturally accessible to all; and 4) sustainable: produced, processed, distributed and recycled locally using the principles of environmental stewardship (including best practices in water, soil, and pesticide management). Additional details are included in the L.A. Food Policy Task Force’s THE GOOD FOOD FOR ALL AGENDA and the Food Policy Council’s GOOD FOOD PURCHASING GUIDELINES FOR FOOD SERVICE INSTITUTIONS.¹⁸⁹

Green job — According to the California Employment Development Department’s Labor Market Information Division, a job “whose activities: 1) generate and store renewable energy; 2) collect and/or process recyclable materials; 3) manufacture, distribute, construct, installation, and maintain energy efficient products; 4) foster education, environmental consulting, regulatory compliance, and awareness; or 5) manufacture natural and sustainable products.”¹⁹⁰ Green Jobs also includes jobs in *LID*, water conservation, and green building design, construction, and maintenance.

Green streets — Streets designed to capture runoff and infiltrate it through vegetated or other permeable areas with the intent of capturing, cleaning, and storing stormwater. LID techniques are applied to these projects. Los Angeles has piloted several green streets projects and released a set of standardized design plans in order to encourage developers to incorporate green streets into new and redevelopment.

Healthy food retail(er) — Any of the following: 1) a supermarket, grocer, community market, food distributor, non-profit, corner store, or other establishment that meets the eligibility requirements and program guidelines¹⁹¹ for the California FreshWorks Fund, which finances new and upgraded grocers in California’s underserved communities;¹⁹² or 2) a farmers’ market.

Low impact development (LID) — A stormwater management strategy that includes site design measures to maximize on-site capture and treatment of stormwater, such as permeable pavement, bioswales, rain barrels, and bioretention facilities. Implementation of LID principles and practices can facilitate water management in a way that “reduces the impact of built areas and promotes the natural movement of water within an ecosystem or watershed.”¹⁹³

Municipal vehicle fleet — All city-owned passenger sedan vehicles with the exception of emergency response vehicles. The term includes: the city’s sedan fleet, all LAWA vehicles, POLA non-emergency vehicles (including both passenger and heavy-duty vehicles), and LADWP passenger sedans.¹⁹⁴

Open space — As defined by the State Legislature, “both publicly- and privately-owned properties that are unimproved and used for the preservation of natural resources, managed production of resources, outdoor recreation, and protection of life and property due to natural hazards.”¹⁹⁵ Potential open space resources within the city could include vacated railroad lines, drainage channels, utility rights-of-way, abandoned / foreclosed properties, Green Streets, and pedestrian-oriented streets.

Renewable energy source — Biomass energy, geothermal energy, small hydropower, solar energy, waste-to-energy, or wind energy; excluding nuclear energy and large hydropower.

Renewable natural gas — According to the American Gas Association, “methane that is produced and released naturally from the decomposition of organic materials found in places like swamps, manure bins and landfills, among others. Once purified and upgraded, renewable natural gas can be distributed using the existing gas pipeline system, and used in the same way as the traditional gas we rely upon” Renewable natural gas also is commonly referred to as “biogas.”¹⁹⁶

Sustainable transportation — Any mode of transportation other than a single-person vehicle, including public transit, car- & ride-shares, carpooling, biking, and walking.

Transit-oriented development — A higher density, mixed-use residential and business community located near public transportation.

Zero emission — Technologies that emit no tailpipe pollutants harmful to health and the environment, including carbon dioxide and other greenhouse gasses, hydrocarbons, carbon monoxide, ozone, lead, nitrogen oxides (NOx), sulfur dioxide (SOx), and particulate matter (PM). Zero emission vehicles include vehicles powered by an electric battery or fuel cell.

REFERENCES

- ¹ See generally *Sustainability Basic Information*, U.S. ENVTL. PROT. AGENCY, <http://www.epa.gov/sustainability/basicinfo.htm>; *What is Sustainable Development?*, INT’L INST. FOR SUSTAINABLE DEV., <http://www.iisd.org/sd/>; *FAQs, UCLA Sustainability*, UCLA SUSTAINABILITY, <http://www.sustain.ucla.edu/handbook/article.asp?parentid=3467>.
- ² CITY OF L.A., *CLIMATE LA: MUNICIPAL PROGRAM IMPLEMENTING THE GREENLA CLIMATE ACTION PLAN* (2008), available at <http://www.environmentla.org/pdf/ClimateLA%20Program%20document%2012-08.pdf>.
- ³ Current LADWP annual emissions are 14.1 MMTCO₂, or 21% below 1990 levels. L.A. DEP’T WATER & POWER, CITY OF L.A. [hereinafter LADWP], 2012 POWER DRAFT INTEGRATED RESOURCE PLAN ES-13 (2012), available at https://www.ladwp.com/cs/idcplg?IdcService=GET_FILE&dDocName=OPLADWP028831&RevisionSelectionMethod=LatestReleased.
- ⁴ *Assembly Bill 32: Global Warming Solutions Act*, CAL. AIR RESOURCES BD., <http://www.arb.ca.gov/cc/ab32/ab32.htm>.
- ⁵ MAYOR’S OFFICE, CITY OF L.A., *GREEN LA: AN ACTION PLAN TO LEAD THE NATION IN FIGHTING GLOBAL WARMING 15* (2007), available at http://www.environmentla.org/pdf/GreenLA_CAP_2007.pdf (“In 1990–2004, the population of Los Angeles grew by nearly 400,000. Per capita CO₂ emissions declined during that period from 15.5 metric tons to 13.5 metric tons, a 13% decrease.”).
- ⁶ See Exec. Order No. S-3-05 (Cal. 2005), available at <http://www.dot.ca.gov/hq/energy/ExecOrderS-3-05.htm> (“[T]he following greenhouse gas emission reduction targets are hereby established for California: . . . by 2050, reduce GHG emissions to 80 percent below 1990 levels . . .”).
- ⁷ MAYOR’S OFFICE, CITY OF L.A., *GREEN LA: AN ACTION PLAN TO LEAD THE NATION IN FIGHTING GLOBAL WARMING 3* (2007), available at http://www.environmentla.org/pdf/GreenLA_CAP_2007.pdf.
- ⁸ LADWP, 2012 POWER DRAFT INTEGRATED RESOURCE PLAN (2012), available at https://www.ladwp.com/cs/idcplg?IdcService=GET_FILE&dDocName=OPLADWP028831&RevisionSelectionMethod=LatestReleased.
- ⁹ In 2004, Los Angeles’ annual GHG emissions were an estimated 51.6 MMTCO₂, or 5% below the city’s 1990 emissions of 54.1 MMTCO₂. MAYOR’S OFFICE, CITY OF L.A., *GREEN LA: AN ACTION PLAN TO LEAD THE NATION IN FIGHTING GLOBAL WARMING 3*, fig.1 (2007), available at http://www.environmentla.org/pdf/GreenLA_CAP_2007.pdf. LADWP’s 2004 emissions were 16.9 MMTCO₂, accounting for approximately one-third of the city’s overall emissions. If LADWP divests of the coal-fired Navajo Generating Station in 2015 as planned and also divests of the coal-fired Intermountain Power Project in 2020 as this report recommends, LADWP’s 2021 emissions will be approximately 7.41 MMTCO₂. LADWP, 2012 POWER DRAFT INTEGRATED RESOURCE PLAN ES-14, fig.ES-2 (2012), available at https://www.ladwp.com/cs/idcplg?IdcService=GET_FILE&dDocName=OPLADWP028831&RevisionSelectionMethod=LatestReleased. Conservatively assuming that all other emissions in Los Angeles stay at 2004 levels in 2021, the emissions reductions associated with eliminating coal alone would bring Los Angeles’ overall emissions in 2021 to 22% below 1990 levels (i.e., approximately 42.1 MMTCO₂).
- ¹⁰ LADWP’s emissions are the principal driver of the municipal emissions rate. CITY OF L.A., *COPY OF 2009 GHG INVENTORY* (2012) (draft, on file with authors) (reporting that in 2009, emissions associated with city government operations excluding LADWP’s electricity generation were only estimated at 762,663 MTCO₂). LADWP’s 2012 emissions rate is 14.1 MMTCO₂/year, or 21% below its 1990 emissions rate of 17.9 MMTCO₂/year. If LADWP divests of the coal-fired Navajo Generating Station in 2015 as planned and also divests of the coal-fired Intermountain Power Project in 2020 as this report recommends, LADWP’s 2021 emissions will be approximately 7.41 MMTCO₂, or 58% below 1990 levels. LADWP, 2012 POWER DRAFT INTEGRATED RESOURCE PLAN, ES-14, fig.ES-2 (2012), available at https://www.ladwp.com/cs/idcplg?IdcService=GET_FILE&dDocName=OPLADWP028831&RevisionSelectionMethod=LatestReleased.

¹¹ LADWP already plans to service 10% of its projected load with energy efficiency by 2020. LADWP, 2012 Power DRAFT Integrated Resource Plan, “Executive Summary,” ES-28 (2012), available at https://www.ladwp.com/cs/idcplg?IdcService=GET_FILE&dDocName=OPLADWP028831&RevisionSelectionMethod=LatestReleased. Environmental groups including the Sierra Club and NRDC have called for a further reduction in Los Angeles’ annual electricity consumption by 15%. See Kristin Eberhard & Evan Gillespie, “How LADWP can do right by Angelenos,” DAILY NEWS (Sept. 11, 2012), available at http://www.dailynews.com/ci_21485369/kristin-eberhard-and-evan-gillespie-how-ladwp-can?source=most_email. See also LADWP, Press Release, “Guiding Principles Adopted by the Board of Water and Power Commissioners” (Aug. 22, 2012), available at <http://www.ladwpnews.com/go/doc/1475/1521155/Guiding-Principles-for-the-Local-Water-Supply-Program-and-Energy-Efficiency-Portfolio> (reporting that one of LADWP’s guiding principles, adopted by the Board of Water and Power Commissioners in August 2012, is to “aggressively promote and achieve energy efficiency across all customer segments and energy end uses as a key part of LADWP’s long-term, supply-side energy procurement strategy”).

¹² Mayor Villaraigosa has previously committed to eliminating LADWP’s reliance on coal by 2020. David Zahniser, *DWP quietly scales back Villaraigosa’s ambitious renewable energy goal*, L.A. TIMES, Dec. 6, 2010, <http://articles.latimes.com/2010/dec/06/local/la-me-dwp-dysfunction-20101206/2>. See also Kristin Eberhard & Evan Gillespie, *How LADWP can do right by Angelenos*, DAILY NEWS, Sept. 11, 2012, http://www.dailynews.com/ci_21485369/kristin-eberhard-and-evan-gillespie-how-ladwp-can?source=most_email (“In spite of the progress made toward clean energy during the past decade, Los Angeles still imports 40 percent of its power from two aging and filthy out-of-state coal plants.”).

¹³ LADWP’s projections show that it already intends to generate 33% of its electricity from renewables in 2020. LADWP, 2012 POWER DRAFT INTEGRATED RESOURCE PLAN, ES-28, fig.ES-11 (2012), available at https://www.ladwp.com/cs/idcplg?IdcService=GET_FILE&dDocName=OPLADWP028831&RevisionSelectionMethod=LatestReleased. LADWP currently generates about 20% of its electricity from renewable sources. LADWP’s renewable portfolio standard (RPS) is set at 25% by 2016, and 33% by 2020. LADWP is currently short of 2016 compliance until the Navajo Generating Station divestiture in 2015 and until utility-scale solar projects come online in 2015. LADWP, Update on Status of RPS Compliance and Plans – Board Presentation (Sept. 18, 2012). Mayor Villaraigosa previously committed to a renewable generation target of 40% by 2020, but subsequently reduced that goal to 35%. David Zahniser, *DWP quietly scales back Villaraigosa’s ambitious renewable energy goal*, L.A. TIMES, Dec. 6, 2010, available at <http://articles.latimes.com/2010/dec/06/local/la-me-dwp-dysfunction-20101206>.

¹⁴ See JEFFREY RUSSELL & STEVEN WEISSMAN, CALIFORNIA’S TRANSITION TO LOCAL RENEWABLE ENERGY: 12,000 MEGAWATTS BY 2020: A REPORT ON THE GOVERNOR’S CONFERENCE ON LOCAL RENEWABLE ENERGY V (2012), available at http://www.law.berkeley.edu/files/ccelp/CA_Transition_to_Local_Renewable_Energy.pdf.

¹⁵ See LADWP, COMPREHENSIVE SOLAR PLAN FACT SHEET, available at http://www.ladwpneighborhoodnews.com/external/content/document/1643/255005/1/Comprehensive_Solar_Plan_Fact_Sheet.pdf.

¹⁶ The California Energy Commission’s INTEGRATED ENERGY POLICY REPORT provides preliminary targets for distributed generation, with localized estimates for different areas of the state to meet Governor Brown’s 2020 goal of 12,000 MW of distributed generation, including 4,000 MW for the City and County of LA. CAL. ENERGY COMM’N, INTEGRATED ENERGY POLICY REPORT 33, tbl.3 (2012), available at http://www.energy.ca.gov/2011_energypolicy/. Installing 600 MW of local distributed solar energy projects is the stated long-term goal of Mayor Villaraigosa’s Clean LA Solar Feed-In Tariff Program. Press Release, L.A. Business Council, More Than 12,000 Acres Atop LA City Rooftops Provide Huge Opportunity for Solar Development (Apr. 26, 2012), available at http://www.labusinesscouncil.org/online_documents/2012/12000-Acres-of-Rooftop-Solar-Potential-in-LA-20120426.pdf. The program is currently authorized for 150 MW, but only extends through 2016. *Los Angeles Approves Solar Feed-In Program*, SUSTAINABLEBUSINESS.COM (Apr. 4, 2012), <http://www.sustainablebusiness.com/index.cfm/go/news.display/id/23572>. Notably, LADWP projects new distributed solar installations to total only 337 MW from 2012 to 2020. LADWP, 2012 POWER DRAFT INTEGRATED RESOURCE PLAN, ES-27, fig.ES-5 (2012), available at https://www.ladwp.com/cs/idcplg?IdcService=GET_FILE&dDocName=OPLADWP028831&RevisionSelectionMethod=LatestReleased. Since LADWP is about 10 percent of state consumption, 1200 MW of local distributed solar energy projects, or 10 percent of 12,000 MW, is a reasonable goal for the City of Los Angeles.

¹⁷ See JEFFREY RUSSELL & STEVEN WEISSMAN, CALIFORNIA’S TRANSITION TO LOCAL RENEWABLE ENERGY: 12,000 MEGAWATTS BY 2020: A REPORT ON THE GOVERNOR’S CONFERENCE ON LOCAL RENEWABLE ENERGY V (2012), available at http://www.law.berkeley.edu/files/ccelp/CA_Transition_to_Local_Renewable_Energy.pdf.

¹⁸ See *Solar Workshop Briefing Memo*, SIERRA CLUB, <http://angeles.sierraclub.org/environmental/energy/Sierra%20Club%20Solar%20Briefing%20Memo.pdf>.

¹⁹ California's ENERGY ACTION PLAN establishes the electricity resource priority list, or loading order, that defines how California's energy needs are to be met and guides strategic energy planning in California. The loading order is summarized as follows: 1) energy efficiency, including onsite renewable generation, and demand response; 2) renewable energy; 3) combined heat and power; 4) utility-scale natural gas-fired generation; and 5) transmission (as needed to support other elements). CAL. ENERGY COMM'N & CAL. PUBLIC UTILITIES COMM'N, ENERGY ACTION PLAN (2003), available at http://www.energy.ca.gov/energy_action_plan/2003-05-08_ACTION_PLAN.PDF.

²⁰ Installing 400 MW of solar energy on city property was the goal of narrowly defeated 2009 "Measure B," the "Green Energy and Good Jobs for Los Angeles Program," which had an implementation deadline of 2014. Prop. B (Cal. Mar. 2009), available at <http://thepolicyreport.files.wordpress.com/2009/01/prop-b-language.pdf>.

²¹ *Power Reliability Program*, LADWP, <http://prp.ladwp.com/Default.aspx>.

²² JEFFREY DUBIN ET AL., REALIZING THE POTENTIAL OF THE LOS ANGELES ELECTRIC VEHICLE MARKET 7 (2011), available at <http://luskin.ucla.edu/sites/default/files/LA%20EV%20Final%20Report%20-%20Formatted%20-%20Final%20-%20High%20Quality%20for%20printing.pdf> (citing these recommendations to advance EV penetration). Note that 54% of LA residents live in multi-unit dwellings. JUDITH BALMIN, GREG BONETT, & MEGAN KIRKEBY, INCREASING ELECTRIC VEHICLE CHARGING ACCESS IN MULTI-UNIT DWELLINGS IN LOS ANGELES 5 (2011), available at <http://luskin.ucla.edu/sites/default/files/EV%20Charging%20in%20LA%20MUDs.pdf>.

²³ CLIMATE LA commits the city to switching 85% of the municipal fleet to hybrid/alternative fuel vehicles by 2030. As of the drafting of CLIMATE LA, the City reported that alternative/hybrid vehicles account for: 78% of GSD passenger sedans, 63% of LAWA's fleet, 68% of the Port fleet, and 66% of LADWP sedans. CITY OF L.A., CLIMATE LA: MUNICIPAL PROGRAM IMPLEMENTING THE GREENLA CLIMATE ACTION PLAN 62-64 (2008), available at <http://www.environmentla.org/pdf/ClimateLA%20Program%20document%2012-08.pdf>.

²⁴ Bureau of Sanitation has submitted a request to the Mayor's office requesting the authority to implement an exclusive franchising system in the City of Los Angeles. BUREAU OF SANITATION, CITY OF L.A., AUTHORITY TO IMPLEMENT AN EXCLUSIVE FRANCHISE WASTE HAULING SYSTEM IN THE CITY OF LOS ANGELES, BD. RPT. NO. 1, 13-14 (Feb. 13, 2012) (adopted), available at http://www.lacitysan.org/solid_resources/pdfs/2012/Adopted_Board_Report_2-13-12.pdf.

²⁵ Electric vehicle sales are currently projected to compose 9% of total car sales in 2015 and 11.7% in 2020. JEFFREY DUBIN ET AL., REALIZING THE POTENTIAL OF THE LOS ANGELES ELECTRIC VEHICLE MARKET 3 (2011), available at <http://luskin.ucla.edu/sites/default/files/LA%20EV%20Final%20Report%20-%20Formatted%20-%20Final%20-%20High%20Quality%20for%20printing.pdf>. *Id.* at 7 ("By alleviating this [access to charging in MUDs] constraint, the City could increase EV adoption to more than 13% of new car sales by 2020.").

²⁶ JEFFREY DUBIN ET AL., REALIZING THE POTENTIAL OF THE LOS ANGELES ELECTRIC VEHICLE MARKET 7 (2011), available at <http://luskin.ucla.edu/sites/default/files/LA%20EV%20Final%20Report%20-%20Formatted%20-%20Final%20-%20High%20Quality%20for%20printing.pdf> (citing these recommendations to advance EV penetration). Note that 54% of LA residents live in multi-unit dwellings. JUDITH BALMIN, GREG BONETT, & MEGAN KIRKEBY, INCREASING ELECTRIC VEHICLE CHARGING ACCESS IN MULTI-UNIT DWELLINGS IN LOS ANGELES 5 (2011), available at <http://luskin.ucla.edu/sites/default/files/EV%20Charging%20in%20LA%20MUDs.pdf>.

²⁷ ALEX HALL, ET AL., MID-CENTURY WARMING IN THE LOS ANGELES REGION 45 (2012), available at <http://c-change.la/pdf/LARC-web.pdf>. See also Louis Sahagun, *Study predicts more hot spells in Southern California*, L.A. TIMES, June 21, 2012, available at <http://articles.latimes.com/2012/jun/21/local/la-me-heat-20120621>.

²⁸ ALEX HALL, ET AL., MID-CENTURY WARMING IN THE LOS ANGELES REGION (2012), available at <http://c-change.la/pdf/LARC-web.pdf>.

²⁹ The current Mayor's AdaptLA plan proposes to help Angelenos adapt to climate change and has four components: evaluation, assessment, partnership, and public engagement. The plan originally committed to a Spring 2013 date to develop a regional Climate Adaptation Strategy in coordination with City departments and the LARC. OFFICE OF THE MAYOR, CITY OF L.A., ADAPT LA – PREPARING FOR CLIMATE CHANGE FACT SHEET, available at <http://c-change.la/pdf/AdaptLA%20Fact%20Sheet.pdf>.

³⁰ The LADWP cool roof rebate program from October 2010 to October 2011 funded 200,000 square feet of cool roofs. Cara Horowitz, *Bright roofs, big city: Keeping L.A. cool through an aggressive cool-roof program*, PRITZKER POLICY BRIEF No. 2, 6 (Oct. 2011).

³¹ Cool roofs are roofing surfaces that reflect rather than absorb sunlight to keep buildings and neighborhoods cooler than traditional roofing materials. Los Angeles is one of the best places in the country to utilize cool roofs. If widely adopted, Los Angeles residents can save \$30 million per year on reduced electricity cost alone. Additionally, cool roofs would reduce the city's impact on global climate change by cooling the atmosphere enough to create a one-time offset of the warming caused by nearly 80% of the city's total greenhouse gas emissions per year. Cara Horowitz, *Bright roofs, big city: Keeping L.A. cool through an aggressive cool-roof program*, PRITZKER POLICY BRIEF No. 2, 1 (Oct. 2011).

³² Cool paving is using paving materials that have high solar reflectance (SR) and high thermal emittance to reflect sunlight and radiate less heat into the air above the pavement. Los Angeles has approximately 6,500 centerline miles of streets, and 800 centerline miles of alleys and square miles of parking lots. CLIMATE RESOLVE, COOL ROOFS AND COOL PAVING POLICIES FOR THE CITY OF LOS ANGELES TO ADOPT (2012) (on file with authors). An increase of just 0.1 in solar reflectance index (SRI) will decrease surface temperatures by 7 degrees Fahrenheit. *Id.*

³³ Currently, average tree canopy is 21%. City of L.A., *Tree Canopy Analysis*, MILLION TREES LA, <http://www.milliontreesla.org/mtabout3.htm>.

³⁴ For a current list of cooling centers, see Emergency Mgmt. Dep't, City of L.A., *Los Angeles County Community Cooling Centers*, http://emergency.lacity.org/stellent/groups/departments/@emd_contributor/documents/contributor_web_content/lacityp_015439.pdf.

³⁵ See DEP'T OF CITY PLANNING, CITY OF L.A., BUILDING A GREEN LOS ANGELES (2008), available at http://cityplanning.lacity.org/code_studies/GreenLa/Brochure.pdf.

³⁶ U.S. ENVTL. PROT. AGENCY, TOP CITIES WITH THE MOST ENERGY STAR CERTIFIED BUILDINGS IN 2011, available at http://www.energystar.gov/ia/business/downloads/2011_Top_Cities_chart.pdf (showing that Los Angeles had the largest number of ENERGY STAR Certified Buildings from 2008 through 2011).

³⁷ The EPA's Energy Star energy performance scale measures energy efficiency of a building compared to others nationwide. The scale is one to 100 points. 50 is the average score; a building that scores 50 performs at an average level. A building that scores 75 is more efficient than 75% of that type of building nationwide. U.S. ENVTL. PROT. AGENCY, UNDERSTANDING EPA'S ENERGY STAR ENERGY PERFORMANCE SCALE 1, available at http://www.energystar.gov/ia/business/evaluate_performance/The_ENERGY_STAR_Energy_Performance_Scale_3.28.11_abbrev.pdf?518c-b35a.

³⁸ Energy Star benchmarking and disclosure requirements exist in many cities, including San Francisco and New York. They typically require annual reporting and benchmarking of each building's Energy Star Portfolio Management Score. Currently, A.B. 1103 (2007) requires this score to be disclosed for all buildings at the time of sale. ASSEMBLY BILL No. 1103, available at http://www.energy.ca.gov/ab1103/documents/ab_1103_bill_20071012_chaptered.pdf. An Energy Star score is based on a building's utility bill, the size of the building, and the climate zone. For example, the calculator for residences can be found here: https://www.energystar.gov/index.cfm?fuseaction=home_energy_yardstick.showgetstarted.

³⁹ Here, participation in LADWP's retrofit programs means participation in at least one program. Examples of retrofit programs can be found here: LADWP, ENERGY EFFICIENCY PROGRAMS FOR LOS ANGELES: CREATING A SUSTAINABLE FUTURE (2012) http://www.labusinesscouncil.org/online_documents/2012/LADWP-EE-Programs-Presentation.pdf.

⁴⁰ In 2008, 80 nonprofits received free audits. Press Release, LADWP, Mayor Villaraigosa Announces \$2 Million Energy and Water Efficiency Audits and Retrofits for Nonprofit Organizations (Dec. 21, 2010), available at <http://www.ladwpnews.com/go/doc/1475/974971/Mayor-Villaraigosa-Announces-2-Million-LADWP-Energy-and-Water-Efficiency-Audits-and-Retrofits-for-Nonprofit-Organizations>.

⁴¹ In 2002, City Council adopted LEED certified for any city-funded new projects 7,500 ft² or larger. In 2009, City Council adopted LEED Silver for all city-funded projects, which went into effect on Jan. 1, 2010. DEBORAH WEINTRAUB, L.A. BUREAU OF ENGINEERING, LEEDING THE WAY 3 (2012) (on file with authors).

⁴² Currently, there are no requirements that any privately funded projects meet LEED. However, the City of LA 2008 Green Building program required all projects greater than 6 stories or 50,000 square feet meet the LEED certified level, and offered incentives for projects that meet LEED Silver. CITY OF L.A., CLIMATE LA: MUNICIPAL PROGRAM IMPLEMENTING THE GREENLA CLIMATE ACTION PLAN (2008), available at <http://www.environmentla.org/pdf/ClimateLA%20Program%20document%2012-08.pdf>. The program was repealed with LA's adoption of the Cal Green Code in 2010. L.A., Cal., Ordinance 181480 (Dec. 15, 2010), available at http://ladbs.org/LADBSWeb/LADBS_Forms/Publications/LAGreenBuildingCodeOrdinance.pdf. An example of a city with higher standards for private buildings is San Francisco. San Francisco requires new large commercial buildings (25,000 ft² or larger) to meet LEED Silver starting 2011, and LEED Gold starting 2012. CITY OF S.F., IMPLEMENTATION OF GREEN BUILDING REGULATIONS, app. A (2012), available at <http://sfdbi.org/Modules/ShowDocument.aspx?documentid=308>.

⁴³ See CITY OF L.A., CLIMATE LA: MUNICIPAL PROGRAM IMPLEMENTING THE GREENLA CLIMATE ACTION PLAN 61 (2008), available at <http://www.environmentla.org/pdf/ClimateLA%20Program%20document%2012-08.pdf> (setting as a citywide transportation goal to “[f]ocus on mobility for people, not cars”).

⁴⁴ The U.S. Census' American Community Survey data showed that 67.1% of Los Angeles trips in 2009 were made in single-passenger vehicles. Yonah Freemark, *Transit Mode Share Trends Looking Steady; Rail Appears to Encourage Non-Automobile Commutes*, THE TRANSPORT POLITIC (OCT. 13, 2010), <http://www.thetransportpolitic.com/2010/10/13/transit-mode-share-trends-looking-steady-rail-appears-to-encourage-non-automobile-commutes/>.

⁴⁵ Currently, 46% of Angelenos live within ¼ mile of transit that runs at least every 15 minutes during weekday daytime. RENEW LA ET AL., PERFORMANCE METRICS FOR THE CITY OF LOS ANGELES 10 (2012), available at http://164.67.121.27/files/Lewis_Center/CompleteStreetsInitiative/UCLAPerformanceMetrics.pdf.

⁴⁶ See CITY OF L.A., GREEN LA: AN ACTION PLAN TO LEAD THE NATION IN FIGHTING GLOBAL WARMING 23 (2010) (committing to promoting and implementing “well-designed, higher density, mixed-use residential and business communities created near transit stations” to “discourage [residents from] using personal vehicles.”). See generally ETHAN ELKIND, REMOVING ROADBLOCKS: HOW TO MAKE SUSTAINABLE DEVELOPMENT HAPPEN NOW (2009), available at http://cdn.law.ucla.edu/SiteCollectionDocuments/Environmental%20Law/Removing_the_Roadblocks.pdf.

⁴⁷ According to the U.S. Census' American Community Survey, 10.5% of all trips in Los Angeles in 2009 were shared ride (carpooling) trips. Yonah Freemark, *Transit Mode Share Trends Looking Steady; Rail Appears to Encourage Non-Automobile Commutes*, THE TRANSPORT POLITIC (OCT. 13, 2010), <http://www.thetransportpolitic.com/2010/10/13/transit-mode-share-trends-looking-steady-rail-appears-to-encourage-non-automobile-commutes/>.

⁴⁸ See, e.g., SAN DIEGO, CAL., CODE § 86.23 (outlining car-share program parking requirements).

⁴⁹ See CAL. VEH. CODE § 22507.1 (allowing a local authority to designate portions of streets for car- or ride-share vehicle parking programs, and establish criteria for such programs).

⁵⁰ According to the U.S. Census' American Community Survey, 2009 trips in Los Angeles break down into the following shares: 1% biking and 3.4% walking. Notably, over the period from 2000-2009, the share of non-auto trips increased by 10%. Yonah Freemark, *Transit Mode Share Trends Looking Steady; Rail Appears to Encourage Non-Automobile Commutes*, THE TRANSPORT POLITIC (OCT. 13, 2010), <http://www.thetransportpolitic.com/2010/10/13/transit-mode-share-trends-looking-steady-rail-appears-to-encourage-non-automobile-commutes/>.

⁵¹ As of 2011, Los Angeles had only one bikeway mile for every 20 roadway miles. DEP'T OF CITY PLANNING, CITY OF L.A., 2010 BICYCLE PLAN 44 (2011), available at <http://planning.lacity.org/cwd/gnlpln/transelt/NewBikePlan/Txt/LA%20CITY%20BICYCLE%20PLAN.pdf>. The first Five-Year Implementation Plan for the 2010 Bicycle Plan directs

the city to add 200 miles of bikeways every five years, keeping the City on track to achieve the 2010 Bicycle Plan objective of 1680 bikeways by 2035. DEP'T OF CITY PLANNING & DEP'T OF TRANSP., 2010 BICYCLE PLAN: FIVE-YEAR IMPLEMENTATION STRATEGY (2011), available at http://clkrep.lacity.org/onlinedocs/2010/10-2385-S1_RPT_DOT_01-12-11.pdf. Cycling advocates have called for the 2010 Bicycle Plan to be fast-tracked. See Lizzeth Henao, *Los Angeles Bike Summit: A Dialogue Between Mayor Villaraigosa and Bicycle Advocates*, SWITCHBOARD (Aug. 18, 2010), http://switchboard.nrdc.org/blogs/lhenao/los_angeles_bike_summit_a_dial.html.

⁵² See *Introduction to CicLAvia*, CicLAVIA, <http://www.ciclaviala.org/about/>.

⁵³ According to the U.S. Census' American Community Survey, public transit trips accounted for 11.3% of all 2009 transportation trips in Los Angeles. Yonah Freemark, *Transit Mode Share Trends Looking Steady; Rail Appears to Encourage Non-Automobile Commutes*, THE TRANSPORT POLITIC (Oct. 13, 2010), <http://www.thetransportpolitic.com/2010/10/13/transit-mode-share-trends-looking-steady-rail-appears-to-encourage-non-automobile-commutes/>.

⁵⁴ DOT can alter its methodology without a city council ordinance provided that it continues to use the legacy method for intersections monitored under L.A. County's Congestion Management Program. For more discussion of the process of transitioning from an automobile-centric method of transportation impact analysis to a multimodal or mode-agnostic method, see Jason Henderson, *Level of Service: The Politics of Reconfiguring Urban Streets In San Francisco, CA*, 19 J. TRANSP. GEOGRAPHY 1138 (2011), available at <http://www.sciencedirect.com/science/article/pii/S0966692311000676>.

⁵⁵ VISION LOS ANGELES (2011), available at http://www.visionlosangeles.org/pdf/VisionLA_Report.pdf.

⁵⁶ L.A. Metro, *30/10 Initiative*, METRO.NET, <http://www.metro.net/projects/30-10/>.

⁵⁷ L.A. METRO, 2009 LONG RANGE TRANSPORTATION PLAN (2009), available at http://www.metro.net/projects_studies/images/final-2009-LRTP.pdf.

⁵⁸ See INST. FOR TRANSP. & DEV. POL'Y, THE BRT STANDARD: VERSION 1.0 (2012), available at http://www.itdp.org/documents/BRT_English_REVISED2_FINAL_LR.pdf.

⁵⁹ L.A. Metro, *EZ Transit Pass Overview*, METRO.NET, <http://www.metro.net/riding/fares/ez-transit-pass>.

⁶⁰ Currently, 46% of Angelenos live within ¼ mile of transit that runs at least every 15 minutes during weekday daytime. RENEW LA ET AL., PERFORMANCE METRICS FOR THE CITY OF LOS ANGELES 10 (2012), available at http://164.67.121.27/files/Lewis_Center/CompleteStreetsInitiative/UCLAPerformanceMetrics.pdf.

⁶¹ See L.A. BUS. COUNCIL INST., BUILDING LIVABLE COMMUNITIES (2012).

⁶² WILL DOMINIE, IS JUST GROWTH SMART GROWTH? 74 (2012), available at http://www.thestrategycenter.org/sites/www.thestrategycenter.org/files/Dominie_Is_Just_Growth_Smarter_Growth_6-2-2012.pdf ("In addition to formally subsidized units, station areas are home to 370,000 households, most of which have incomes well below the county median.").

⁶³ Approximately 30,000 federally-subsided units are located currently within ½ mile of a rail or Bus Rapid Transit station, but contracts on 82% of transit-accessible affordable housing will expire in 2014. WILL DOMINIE, IS JUST GROWTH SMART GROWTH? 74 (2012), available at http://www.thestrategycenter.org/sites/www.thestrategycenter.org/files/Dominie_Is_Just_Growth_Smarter_Growth_6-2-2012.pdf. Gentrification is negatively correlated with transit ridership, so preserving affordable housing for those earning \$40,000k will help prevent decreases in ridership. *Id.* Most Metro riders are from households earning \$35,000 or less. *Id.* at 27.

⁶⁴ WILL DOMINIE, IS JUST GROWTH SMART GROWTH? 74 (2012), available at http://www.thestrategycenter.org/sites/www.thestrategycenter.org/files/Dominie_Is_Just_Growth_Smarter_Growth_6-2-2012.pdf.

⁶⁵ ATSAC program implementation began in 1984. CLIMATE LA reports that as of 2007, ATSAC or ATCS (a newer version) had been installed at 3242 intersections and was scheduled to be installed at 1175 additional intersections. CLIMATE LA has a goal of completing ATSAC/ATCS installation by 2030, but the plan does not include a schedule and is very uncertain about funding. CITY OF L.A., CLIMATE LA: MUNICIPAL PROGRAM IMPLEMENTING THE GREENLA CLIMATE ACTION PLAN 73 (2008), available at <http://www.environmentla.org/pdf/ClimateLA%20Program%20document%2012-08.pdf>.

⁶⁶ As of 2011, Los Angeles had only one bikeway mile for every 20 roadway miles. DEP'T OF CITY PLANNING, CITY OF L.A., 2010 BICYCLE PLAN 44 (2011), available at <http://planning.lacity.org/cwd/gnlpln/transelt/NewBikePlan/Txt/LA%20CITY%20BICYCLE%20PLAN.pdf>. The first Five-Year Implementation Plan for the 2010 Bicycle Plan directs the city to add 200 miles of bikeways every five years, keeping the City on track to achieve the 2010 Bicycle Plan objective of 1680 bikeways by 2035. DEP'T OF CITY PLANNING & DEP'T OF TRANSP., CITY OF L.A., 2010 BICYCLE PLAN: FIVE-YEAR IMPLEMENTATION STRATEGY (2011), available at http://clkrep.lacity.org/onlinedocs/2010/10-2385-S1_RPT_DOT_01-12-11.pdf. Cycling advocates have called for the 2010 Bicycle Plan to be fast-tracked. See Lizzeth Henao, *Los Angeles Bike Summit: A Dialogue Between Mayor Villaraigosa and Bicycle Advocates*, SWITCHBOARD (Aug. 18, 2010), http://switchboard.nrdc.org/blogs/lhenao/los_angeles_bike_summit_a_dial.html.

⁶⁷ Currently, only 35% of Angelenos live within ¼ mile of a dedicated bikeway. RENEW LA ET AL., PERFORMANCE METRICS FOR THE CITY OF LOS ANGELES 9 (2012), available at http://164.67.121.27/files/Lewis_Center/CompleteStreetsInitiative/UCLAPerformanceMetrics.pdf.

⁶⁸ From 1994 to 2000, Los Angeles averaged 3193 pedestrian collisions and 78 pedestrian fatalities per year. DEP'T OF TRANSP., CITY OF L.A., PEDESTRIAN COLLISIONS IN LOS ANGELES: 1994 THROUGH 2000 iv (2006), available at <http://ladot.lacity.org/pdf/PDF221.pdf>. In 2010, 2681 pedestrians and 2040 bicyclists were killed or injured in vehicle collisions in Los Angeles. Cal. Office of Traffic Safety, *2010 OTS Rankings*, OTS.CA.GOV http://www.ots.ca.gov/Media_and_Research/Rankings/default.asp.

⁶⁹ AM. LUNG ASSOC., STATE OF THE AIR REPORT 2012: SOUTHERN CALIFORNIA REGION (2012), available at <http://www.lung.org/associations/states/california/assets/pdfs/sota-2012/sota-2012-south-coast-fact.pdf>; AMERICAN LUNG ASSOC., STATE OF THE AIR REPORT 2012: CALIFORNIA CITIES AMONG THE MOST POLLUTED IN AMERICA (2012), available at <http://www.lung.org/associations/states/california/assets/pdfs/sota-2012/sota-2012-ca-dirtiest-cities.pdf>.

⁷⁰ L.A. COLLABORATIVE FOR ENVTL. HEALTH & JUSTICE, HIDDEN HAZARDS 7 (2010), available at <http://www.libertyhill.org/document.doc?id=202>.

⁷¹ Bernice Yeung, *Southern Californians at risk of death from air pollution, EPA says*, CAL. WATCH (Feb. 13, 2012), available at <http://californiawatch.org/dailyreport/southern-californians-risk-death-air-pollution-epa-says-14843> (“Among the most populated areas of the country, Los Angeles had the highest estimated rate of deaths attributable to air pollution, at nearly 10 percent; San Jose had the lowest at 3.5 percent.”).

⁷² U.S. Env'tl. Prot. Agency, *National Ambient Air Quality Standards (NAAQS)*, EPA.GOV, <http://www.epa.gov/air/criteria.html>.

⁷³ PORT OF L.A. & PORT OF LONG BEACH, 2010 UPDATE: SAN PEDRO BAY PORTS CLEAN AIR ACTION PLAN (2010), available at <http://www.cleanairactionplan.org/civica/filebank/blobdload.asp?BlobID=2485>.

⁷⁴ In 2011, the 8-hour ozone concentration in the South Coast Basin was 0.136 ppm. SCAQMD, DRAFT FINAL 2012 AIR QUALITY MANAGEMENT PLAN 6-15 (2012) available at <http://www.aqmd.gov/aqmp/2012aqmp/DraftFinal/Ch6.pdf>.

⁷⁵ SCAQMD, REVISED DRAFT 2012 AIR QUALITY MANAGEMENT PLAN (2012), available at <http://www.aqmd.gov/aqmp/2012aqmp/RevisedDraft/RevisedDraft2012AQMP-Main-clean.pdf>.

⁷⁶ In 2011, the annual PM10 average concentration in the South Coast Basin was 41 µg/m³. SCAQMD, DRAFT FINAL 2012 AIR QUALITY MANAGEMENT PLAN 6-15 (2012) available at <http://www.aqmd.gov/aqmp/2012aqmp/DraftFinal/DraftFinal-clean.pdf>. SCAQMD has met PM10 24-hour NAAQS (average concentration of 150 µg/m³) and is requesting re-designation to attainment. *Id.* at ES-5.

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- ⁷⁷ In 2011, the annual PM_{2.5} average concentration in the South Coast Basin was 15.3 µg/m³. SCAQMD, DRAFT FINAL 2012 AIR QUALITY MANAGEMENT PLAN 6-15 (2012) available at <http://www.aqmd.gov/aqmp/2012aqmp/DraftFinal/Ch6.pdf>.
- ⁷⁸ SCAQMD, REVISED DRAFT 2012 AIR QUALITY MANAGEMENT PLAN (2012), available at <http://www.aqmd.gov/aqmp/2012aqmp/RevisedDraft/RevisedDraft2012AQMP-Main-clean.pdf>.
- ⁷⁹ The baseline carcinogenic risk from air toxics in the SCAQMD Basin is about 1,200 per million in 2008. SCAQMD, MULTIPLE AIR TOXICS EXPOSURE STUDY IN THE SOUTH COAST AIR BASIN FINAL REPORT ES-2, ES-3 (2008), available at <http://www.aqmd.gov/prdas/matesIII/MATESIIIFinalReportSept2008.html>. SCAQMD estimates that about 94% of the risk is attributable to emissions from mobile sources, and about 6% of the risk is attributable to toxics emitted from stationary sources (including industries, dry cleaners, chrome plating operations). *Id.* Diesel exhaust is the major contributor to air toxics risks, accounting for 84% of the total. *Id.* Carcinogenic risks in the SCAQMD air basin decreased by 8% from the MATES II study (1998-1999) to the MATES III study (2005). *Id.* However, carcinogenic risk did not improve during this period in areas directly downwind of the ports and in areas heavily impacted by activities from the goods movement, which saw an increase in risk of more than 800 per million during that same time period. *Id.* at ES-4.
- ⁸⁰ PORT OF L.A. & PORT OF LONG BEACH, 2010 UPDATE: SAN PEDRO BAY PORTS CLEAN AIR ACTION PLAN (2010), available at <http://www.cleanairactionplan.org/civica/filebank/blobdload.asp?BlobID=2485>.
- ⁸¹ PORT OF LOS ANGELES AND PORT OF LONG BEACH, ROADMAP FOR MOVING FORWARD WITH ZERO EMISSION TECHNOLOGIES AT THE PORTS OF LONG BEACH AND LOS ANGELES (2011), available at <http://www.cleanairactionplan.org/reports/default.asp>.
- ⁸² PORT OF L.A., STRATEGIC PLAN FOR 2012 TO 2017 8 (2012), available at http://www.portoflosangeles.org/pdf/2012-2017_Strategic_Plan_Final.pdf (setting forth an objective to “[i]ncrease zero emission truck trips to and from the Port to 50%, including 100% of the trucks to and from the near dock rail yards through the development of an action plan to be completed by 2014.”)
- ⁸³ PORT OF L.A. & PORT OF LONG BEACH, 2010 UPDATE: SAN PEDRO BAY PORTS CLEAN AIR ACTION PLAN (2010), available at <http://www.cleanairactionplan.org/civica/filebank/blobdload.asp?BlobID=2485>.
- ⁸⁴ PORT OF L.A. & PORT OF LONG BEACH, 2010 UPDATE: SAN PEDRO BAY PORTS CLEAN AIR ACTION PLAN (2010), available at <http://www.cleanairactionplan.org/civica/filebank/blobdload.asp?BlobID=2485>.
- ⁸⁵ L.A. WORLD AIRPORTS, LOS ANGELES WORLD AIRPORTS SUSTAINABILITY REPORT 18 (2011), available at <http://www.lawa.org/uploadedFiles/LAWA/pdf/2010%20Sustainability%20Report.pdf>.
- ⁸⁶ L.A. WORLD AIRPORTS, LOS ANGELES WORLD AIRPORTS SUSTAINABILITY REPORT 18 (2011), available at <http://www.lawa.org/uploadedFiles/LAWA/pdf/2010%20Sustainability%20Report.pdf>.
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- ⁸⁸ L.A. COLLABORATIVE FOR ENVTL. HEALTH & JUSTICE, HIDDEN HAZARDS (2010), available at <http://www.libertyhill.org/document.doc?id=202>.
- ⁸⁹ L.A. COLLABORATIVE FOR ENVTL. HEALTH & JUSTICE, HIDDEN HAZARDS 6 (2010), available at <http://www.libertyhill.org/document.doc?id=202> (citing Section 3.1.9 of the General Plan).
- ⁹⁰ See *Clean Up, Green Up*, <http://cleanupgreenupla.org/>; Cmities. for a Better Env’t, *Green Zones*, <http://www.cbecal.org/issues/green-zones/>.

⁹¹ L.A. COLLABORATIVE FOR ENVTL. HEALTH & JUSTICE, HIDDEN HAZARDS 5 (2010), available at <http://www.libertyhill.org/document.doc?id=202>.

⁹² See, e.g., U. S. Cal. Prog. for Env'tl. & Regional Equality, *Cumulative Impacts Screening Method*, http://dornsife.usc.edu/pere/projects/cumulative_impacts.cfm.

⁹³ See L.A. COLLABORATIVE FOR ENVTL. HEALTH & JUSTICE, HIDDEN HAZARDS 25 (2010), available at <http://www.libertyhill.org/document.doc?id=202>; *Clean Up, Green Up*, <http://cleanupgreenupla.org/>; Cmities. for a Better Env't, *Green Zones*, <http://www.cbecal.org/issues/green-zones/>.

⁹⁴ See *Clean Up, Green Up*, <http://cleanupgreenupla.org/>; Cmities. for a Better Env't, *Green Zones*, <http://www.cbecal.org/issues/green-zones/>.

⁹⁵ See DEP'T PUB. WORKS, CITY OF L.A., ZERO WASTE PLAN FACT SHEET: ALTERNATIVE TECHNOLOGIES (2009), available at http://www.lacitysan.org/srssd/swirp/files/info/fact_sheet/SWIRPaltTechFactSheet_032009.pdf.

⁹⁶ ASSEMBLY BILL 341, 2011-2012 Leg., Reg. Sess. (Cal. 2011), available at http://www.leginfo.ca.gov/pub/11-12/bill/asm/ab_0301-0350/ab_0341_bill_20111006_chaptered.pdf.

⁹⁷ For current statistics on waste diversion rates, see Mayor's Office of Econ. & Bus. Pol'y, City of L.A., *Los Angeles Clean Technology*, LOS ANGELES WORKS, <http://www.losangelesworks.org/whylaworks/clean-technology.cfm>.

⁹⁸ GREIG SMITH, RENEW LA SYNOPSIS ii (2005), available at http://cd12.lacity.org/stellent/groups/electedofficials/@cd12_contributor/documents/contributor_web_content/lacityp_013244.pdf.

⁹⁹ Alternative Waste Conversion Technologies include biochemical conversion (e.g., composting, aerobic digestion, and anaerobic fermentation), thermochemical conversion (gasification and pyrolysis), and physiochemical conversion (e.g., biodiesel from waste fats, oils, and grease). See Cal. Dep't Resources Recycling & Recovery, *Technologies for Converting Organic Materials to Energy: Pathways and Processes*, CALRECYCLE, <http://www.calrecycle.ca.gov/Organics/Conversion/Pathways/>.

¹⁰⁰ A.B. 939 additionally caps the use of transformation at 10% to achieve its goal of 50% diversion.

¹⁰¹ SCAQMD, 2012 DRAFT AQMD PROGRAM EIR, SUBCHAPTER 3.8 – SOLID/HAZARDOUS WASTE 3 (2012), available at http://www.aqmd.gov/ceqa/documents/2012/aqmd/draftEA/2012AQMP/Chapter3/DPEIR_3_8_Solid_Hazardous_Waste.pdf (outlining the A.B. 939 hierarchy). See also Cal. Dep't Resources Recycling & Recovery, *Waste Prevention Terms and Definitions*, CALRECYCLE, <http://www.calrecycle.ca.gov/ReduceWaste/Define.htm#WasteManHi>.

¹⁰² Potential franchising is also mentioned in zero waste plan documents. See DEP'T PUB. WORKS & BUREAU OF SANITATION, CITY OF L.A., FACT SHEET: THE CITY'S SOLID WASTE POLICIES AND PROGRAMS (2009), available at http://www.zerowaste.lacity.org/files/info/fact_sheet/SWIRPPolicyNprogramsFactSheet_032009.pdf. Bureau of Sanitation has submitted a request to the Mayor's office requesting the authority to implement an exclusive franchising system in the City of Los Angeles. BUREAU OF SANITATION, CITY OF L.A., AUTHORITY TO IMPLEMENT AN EXCLUSIVE FRANCHISE WASTE HAULING SYSTEM IN THE CITY OF LOS ANGELES, BD. RPT. NO. 1, 13-14 (Feb. 13, 2012) (adopted), available at http://www.lacitysan.org/solid_resources/pdfs/2012/Adopted_Board_Report_2-13-12.pdf. The L.A. City Council voted to support the exclusive franchise proposal on November 14, 2012. Alice Walton, *LA City Council backs exclusive system for commercial trash haulers*, THE LATEST | 89.3 KPCC (Nov. 14, 2012, 3:13 PM) <http://www.scp.org/blogs/news>.

¹⁰³ S.B. 1016 resulted in a change from using diversion rates to determine compliance with diversion goals to using waste disposed per capita. This number is arrived at by dividing reported disposal tons by populations. Most jurisdictions will be using average of generation amounts from 2003-2006 as their baseline to determine goals. "50 percent per capita disposal target" is the amount of disposal that is approximately equivalent to the current 50 percent diversion requirement. Cal. Dep't Resources Recycling & Recovery, *Per Capita Disposal and Goal Measurement (2007 and Later)*, CALRECYCLE, <http://www.calrecycle.ca.gov/LGCentral/Basics/PerCapitaDsp.htm>.

¹⁰⁴ GREIG SMITH, RENEW LA SYNOPSIS iv (2005), *available at* http://cd12.lacity.org/stellent/groups/electedofficials/@cd12_contributor/documents/contributor_web_content/lacityp_013244.pdf.

¹⁰⁵ Currently, this plan is aiming for Zero Waste by 2025 based on implementation of RENEW LA plans. See DEP'T PUB. WORKS, CITY OF L.A., FACT SHEET: THE CITY'S SOLID WASTE POLICIES AND PROGRAMS, *available at* http://www.zerowaste.lacity.org/files/info/fact_sheet/SWIRPPolicyNprogramsFactSheet_032009.pdf.

¹⁰⁶ Potential franchising is also mentioned in zero waste plan documents. See DEP'T PUB. WORKS & BUREAU OF SANITATION, CITY OF L.A., FACT SHEET: THE CITY'S SOLID WASTE POLICIES AND PROGRAMS (2009), *available at* http://www.zerowaste.lacity.org/files/info/fact_sheet/SWIRPPolicyNprogramsFactSheet_032009.pdf. Bureau of Sanitation has submitted a request to the Mayor's office requesting the authority to implement an exclusive franchising system in the City of Los Angeles. BUREAU OF SANITATION, CITY OF L.A., AUTHORITY TO IMPLEMENT AN EXCLUSIVE FRANCHISE WASTE HAULING SYSTEM IN THE CITY OF LOS ANGELES, BD. RPT. No. 1, 13-14 (Feb. 13, 2012) (adopted), *available at* http://www.lacitysan.org/solid_resources/pdfs/2012/Adopted_Board_Report_2-13-12.pdf. The L.A. City Council voted to support the exclusive franchise proposal on November 14, 2012. Alice Walton, *LA City Council backs exclusive system for commercial trash haulers*, THE LATEST | 89.3 KPCC (Nov. 14, 2012, 3:13 PM) <http://www.scpr.org/blogs/news>.

¹⁰⁷ DEP'T PUB. WORKS & BUREAU OF SANITATION, CITY OF L.A., FACT SHEET: THE CITY'S SOLID WASTE POLICIES AND PROGRAMS 2 (2009), *available at* http://www.zerowaste.lacity.org/files/info/fact_sheet/SWIRPPolicyNprogramsFactSheet_032009.pdf.

¹⁰⁸ Los Angeles City Government facility expanded polystyrene ban, L.A., CAL. CODE ch. IV, art. 13, §§ 49.81-49.83.

¹⁰⁹ DEP'T PUB. WORKS & BUREAU OF SANITATION, CITY OF L.A., FACT SHEET: THE CITY'S SOLID WASTE POLICIES AND PROGRAMS 1 (2009), *available at* http://www.zerowaste.lacity.org/files/info/fact_sheet/SWIRPPolicyNprogramsFactSheet_032009.pdf.

¹¹⁰ *Accord* ELIZABETH BOWMAN, GROWING LOS ANGELES' URBAN AGRICULTURE POLICY 24 (2012), *available at* http://issuu.com/urbanagla/docs/growing_la_policy-uawg. See also Bureau of Sanitation, City of L.A., *Free Mulch Give-Away*, SOLID RESOURCES PROCESSING AND CONSTRUCTION DIV., http://www.lacitysan.org/srpcd/mulch_giveaway.htm (describing the existing mulch giveaway program).

¹¹¹ A.B. 341 mandates that multi-family dwellings with greater than 5 units and businesses or public entities that subscribe to a service of 4 cubic yards or more must recycle as of July 1, 2012. Bureau of Sanitation, *Mandatory Commercial Recycling Law Assembly Bill 341*, BUREAU OF SANITATION, http://www.ci.la.ca.us/san/solid_resources/recycling/AB341/AB341.htm.

¹¹² Cal. Dep't Resources Recycling & Recovery, *Recycling Market Development Zones (RMDZ)*, CALRECYCLE, <http://www.calrecycle.ca.gov/rmdz/> ("The Recycling Market Development Zone (RMDZ) program combines recycling with economic development to fuel new businesses, expand existing ones, create jobs, and divert waste from landfills. This program provides attractive loans, technical assistance, and free product marketing to businesses that use materials from the waste stream to manufacture their products and are located in a zone. The zones cover roughly 88,000 square miles of California from the Oregon border to San Diego. Assistance is provided by local zone administrators. Local government incentives may include relaxed building codes and zoning laws, streamlined local permit processes, reduced taxes and licensing, and increased and consistent secondary material feedstock supply. Local incentives vary from jurisdiction to jurisdiction. In addition to loans, CalRecycle offers free product marketing through the RecycleStore.").

¹¹³ The Los Angeles Aqueduct provided an average of 36% of water supplies from fiscal year 2005/06 to 2009/2010, and the Metropolitan Water District provided an average of 52% of water supplies from fiscal year 2005/06 to 2009/2010. LADWP, URBAN WATER MANAGEMENT PLAN 5-6 (2010), *available at* <http://media.scpr.org/documents/2011/05/06/ladwp014280.pdf>.

¹¹⁴ LADWP, SECURING L.A.'S WATER SUPPLY TOMORROW (2008), *available at* http://www.lacity.org/mayor/stellent/groups/electedofficials/@myr_ch_contributor/documents/contributor_web_content/lacity_004714.pdf (listing goals to be achieved by

2019, included the following: 1) meet all new water demand (around 100,000 AFY) through conservation and recycling, 2) increase water recycling to 6% of annual water demand or 50,000 acre feet per year (AFY), 3) achieve 20,000 AFY of groundwater recharge through stormwater capture, and 4) clean-up the San Fernando groundwater basin to increase local groundwater supply to 87,000 AFY).

¹¹⁵ BD. WATER & POWER COMM'NERS, LOS ANGELES DEPARTMENT OF WATER AND POWER (LADWP) GUIDING PRINCIPLES FOR THE DEVELOPMENT AND IMPLEMENTATION OF THE LOCAL WATER SUPPLY PROGRAM (Sept. 11, 2012) (on file with authors). See generally Press Release, LADWP, Guiding Principles Adopted by the Board of Water and Power Commissioners (Aug. 22, 2012), available at <http://www.ladwpnews.com/go/doc/1475/1521155/Guiding-Principles-for-the-Local-Water-Supply-Program-and-Energy-Efficiency-Portfolio> (describing that the LADWP Board, by resolution, has directed the LADWP staff to “analyze the feasibility, cost and rate implications of accelerating water conservation, water recycling, groundwater cleanup and stormwater capture goals to levels and dates of achievement that improve upon the goals currently established by UWMP”).

¹¹⁶ Groundwater supplies are contaminated with TCE, PCE, nitrates, perchlorate, hexavalent chromium, and emerging contaminants from historical uses. LADWP, SECURING L.A.'S WATER SUPPLY TOMORROW 29 (2008), available at http://www.lacity.org/mayor/stellent/groups/electedofficials/@myr_ch_contributor/documents/contributor_web_content/lacity_004714.pdf.

¹¹⁷ State Water Resources Control Bd., Cal. Env'tl. Prot. Agency, *Impaired Water Bodies*, CAL. WATER BOARDS, http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml (noting that the Los Angeles River is mainly impacted for bacteria, heavy metals (Cu, Zn, Pb), nutrients, trash, odors, pH, and scum/foam, while coastal waters occasionally exceed water quality standards for bacteria).

¹¹⁸ Los Angeles' total water demand was listed at 670,000 AFY in 2006/2007. LADWP, SECURING L.A.'S WATER SUPPLY TOMORROW 5 (2008), available at http://www.lacity.org/mayor/stellent/groups/electedofficials/@myr_ch_contributor/documents/contributor_web_content/lacity_004714.pdf. Using our goals of 73,000 AFY recycled water use, 50,000 AFY stormwater captured, and 94,000 AFY groundwater use gives a goal of 32% of our water demand through local means. Roughly 92,000 AFY (reduction from 120 gallons per capita per day to 100 gallons per capita per day for the 4.1 million people in the LADWP service area) will be saved by our conservation goal. If we include this 92,000 AFY as part of our local water supply calculation (which LA does in the Urban Water Management Plan) then we will effectively achieve 46%.

¹¹⁹ The LADWP Board, by resolution, has directed the LADWP staff to “analyze the feasibility, cost and rate implications of accelerating water conservation, water recycling, groundwater cleanup and stormwater capture goals to levels and dates of achievement that improve upon the goals currently established by UWMP.” Press Release, LADWP, Guiding Principles Adopted by the Board of Water and Power Commissioners (Aug. 22, 2012), available at: <http://www.ladwpnews.com/go/doc/1475/1521155/Guiding-Principles-for-the-Local-Water-Supply-Program-and-Energy-Efficiency-Portfolio>.

¹²⁰ The L.A. County Clean Beaches Clean Water Initiative is a clean water fee being proposed by Los Angeles County Flood Control District and cities that could generate up to \$270 million/year county-wide to help clean up water bodies polluted by untreated urban runoff. This fee could fund stormwater programs, operation, maintenance, and monitoring. Stormwater abatement projects could include projects at beaches to clean up stormwater, green development such as bioswales and permeable pavement, and neighborhood spreading grounds. The vote will be conducted among property owners. See L.A. Cnty. Flood Control Dist., *Clean Water, Clean Beaches Measure*, <http://www.lacountycleanwater.org/>.

¹²¹ Non-revenue water is the difference between total water use and billed water use. This includes water for firefighting, reservoir evaporation, mainline flushing, leakage from pipelines, meter error, and theft. LADWP, URBAN WATER MANAGEMENT PLAN 9 (2010), available at <http://media.scp.org/documents/2011/05/06/ladwp014280.pdf>.

¹²² This target stems from authors' estimates of the following volumes of recycled water available for use by 2021: 20 million gallons per day (MGD) from the Terminal Island Treatment Plant, 30 MGD from the Donald C. Tillman Water Reclamation Plant, 5 MGD from the Los Angeles/Glendale Water Reclamation Plant, and 70 MGD from Hyperion Treatment Plant, for a total of 125 MGD. Only 65 MGD of this 125 MGD could likely be used within the City of Los Angeles. Sixty-five MGD is equivalent to 73,000 AFY. Interview with Mark Gold, Assoc. Director, UCLA Inst. Env't & Sustainability (Oct. 30, 2012).

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- ¹²³ BUREAU OF SANITATION, CITY OF L.A., INFORMATION ABOUT YOUR SEWER SERVICE CHARGE 1-2 (2012), available at <http://www.lacitysan.org/fmd/pdf/SSCmailer.pdf>.
- ¹²⁴ LADWP & DEP'T PUB. WORKS, CITY OF L.A., GROUNDWATER REPLENISHMENT MASTER PLANNING REPORT (2012).
- ¹²⁵ See LADWP & DEP'T PUB. WORKS, CITY OF L.A., IRP 5-YEAR REPORT (2012), available at http://www.lacitysan.org/irp/documents/IRP5yr_Workshop_Presentation%202012.pdf.
- ¹²⁶ Historically, the Sierra snowpack has provided LA a natural water storage that has melted through spring and summer. However, climate change models indicate potential for earlier snow melts and more winter rains, so it is critical to put in infrastructure to capture and store this water resource as it melts. LADWP, URBAN WATER MANAGEMENT PLAN 23 (2010), available at <http://media.scpr.org/documents/2011/05/06/ladwp014280.pdf>.
- ¹²⁷ LADWP, URBAN WATER MANAGEMENT PLAN 16 (2010), available at <http://media.scpr.org/documents/2011/05/06/ladwp014280.pdf>.
- ¹²⁸ See LADWP, URBAN WATER MANAGEMENT PLAN (2010), available at <http://media.scpr.org/documents/2011/05/06/ladwp014280.pdf>.
- ¹²⁹ LADWP & DEP'T PUB. WORKS, CITY OF L.A., IRP 5-YEAR REPORT 8 (2012), available at http://www.lacitysan.org/irp/documents/IRP5yr_Workshop_Presentation%202012.pdf.
- ¹³⁰ LADWP & DEP'T PUB. WORKS, CITY OF L.A., IRP 5-YEAR REPORT 25-28 (2012), available at http://www.lacitysan.org/irp/documents/IRP5yr_Workshop_Presentation%202012.pdf.
- ¹³¹ LADWP & DEP'T PUB. WORKS, CITY OF L.A., IRP 5-YEAR REPORT 8 (2012), available at http://www.lacitysan.org/irp/documents/IRP5yr_Workshop_Presentation%202012.pdf.
- ¹³² LADWP & DEP'T PUB. WORKS, CITY OF L.A., IRP 5-YEAR REPORT 25-28 (2012), available at http://www.lacitysan.org/irp/documents/IRP5yr_Workshop_Presentation%202012.pdf.
- ¹³³ TECHNICAL STEERING COMM., CITY OF L.A. & L.A. CNTY., SANTA MONICA BAY BEACHES BACTERIAL TMDLS COORDINATED SHORELINE MONITORING PLAN 2-3, 2-4 (2004), available at http://www.waterboards.ca.gov/losangeles/board_decisions/basin_plan_amendments/technical_documents/2002-022/04_0407/SMBBB_TMDLs_CSMP.pdf.
- ¹³⁴ DEP'T PUB. WORKS, CITY OF L.A., PROPOSITION O: CLEAN WATER, OCEAN, RIVER, BEACH, BAY STORMWATER CLEANUP MEASURE – GENERAL OBLIGATIONS BOND ANNUAL REPORT 14-15 (2011) (on file with authors).
- ¹³⁵ DEP'T PUB. WORKS, CITY OF L.A., PROPOSITION O: CLEAN WATER, OCEAN, RIVER, BEACH, BAY STORMWATER CLEANUP MEASURE – GENERAL OBLIGATIONS BOND ANNUAL REPORT 14-15 (2011) (on file with authors).
- ¹³⁶ LADWP & DEP'T PUB. WORKS, CITY OF L.A., IRP 5-YEAR REPORT 47 (2012), available at http://www.lacitysan.org/irp/documents/IRP5yr_Workshop_Presentation%202012.pdf.
- ¹³⁷ BUREAU OF SANITATION, CITY OF L.A., INFORMATION ABOUT YOUR SEWER SERVICE CHARGE 1-2 (2012), available at <http://www.lacitysan.org/fmd/pdf/SSCmailer.pdf>.
- ¹³⁸ Los Angeles has published several plans for the construction of standardized green streets that include stormwater best management practices. These plans are pre-approved and so can generally help developers move faster through the permitting process. BUREAU OF ENGINEERING & L.A. GREEN STREETS, CITY OF L.A., FAQ CITY OF LOS ANGELES GREEN STREET STANDARD PLANS 1 (2010), available at http://eng.lacity.org/techdocs/stdplans/Pdfs/Green%20Street%20Standard%20Plans%20FAQ%20Sheet_091010.pdf.
- ¹³⁹ LADWP & DEP'T PUB. WORKS, CITY OF L.A., IRP 5-YEAR REPORT 41 (2012), available at http://www.lacitysan.org/irp/documents/IRP5yr_Workshop_Presentation%202012.pdf.
- ¹⁴⁰ See ARLY CASSIDY, JOSH NEWELL, & JENNIFER WOLCH, USC CTR. FOR SUSTAINABLE CITIES, TRANSFORMING ALLEYS INTO GREEN INFRASTRUCTURE FOR LOS ANGELES (2009), available at <http://www.chc-inc.org/downloads/CASLA%20Alleyway%20Report.pdf>.

¹⁴¹ See GREEN LA COAL., LIVING STREETS LA CASE STUDY (2012), available at http://issuu.com/livingstreetsla/docs/living_streets_la_case_study.

¹⁴² See LADWP, URBAN WATER MANAGEMENT PLAN (2010), available at <http://media.scpr.org/documents/2011/05/06/ladwp014280.pdf>.

¹⁴³ See NRDC, *Volumetric Wastewater Pricing*, NRDA.ORG, <http://www.nrdc.org/water/volumetric-pricing.asp>.

¹⁴⁴ Stephanie Pincetl & Tim Papandreou, *Los Angeles, the Improbable Sustainable City*, CAL. CTR. FOR SUSTAINABLE COMMUNITIES. AT UCLA BLOG (Sept. 14, 2011), <http://www.environment.ucla.edu/ucpe/blog/article.asp?parentid=12707>.

¹⁴⁵ LADWP & DEP'T PUB. WORKS, CITY OF L.A., IRP 5-YEAR REPORT 39 (2012), available at http://www.lacitysan.org/irp/documents/IRP5yr_Workshop_Presentation%202012.pdf.

¹⁴⁶ CITY OF L.A., ENVIRONMENTAL OVERVIEW OF THE CITY OF LOS ANGELES 5 (2009) (on file with authors).

¹⁴⁷ RENEW LA ET AL., PERFORMANCE METRICS FOR THE CITY OF LOS ANGELES 31 (2012), available at http://164.67.121.27/files/Lewis_Center/CompleteStreetsInitiative/UCLAPerformanceMetrics.pdf (noting that, for every one thousand people, there are 70.1 acres of green/recreational space (including large regional parks), compared to 1.2 acres in South Los Angeles).

¹⁴⁸ See RENEW LA ET AL., PERFORMANCE METRICS FOR THE CITY OF LOS ANGELES 31 (2012), available at http://164.67.121.27/files/Lewis_Center/CompleteStreetsInitiative/UCLAPerformanceMetrics.pdf (measuring the percentage of people within ¼ mile of park).

¹⁴⁹ Promising examples are one to two lot-sized parks, with some play structures, benches, and trees to provide shade, parklets, or partnerships with organizations with green space on their property such as schools and churches to open up these grounds to the community.

¹⁵⁰ As part of Mayor Villaraigosa's 50 Parks Initiative, 53 sites have been identified, 39 of which have been secured by the department; the other 14 are still in the process of being obtained. To address the lack of funding, these parks have been designed to be low-maintenance with BigBelly solar trash compactors, automatic time-lock gates, and LED lighting. Press Release, City of L.A., Mayor Villaraigosa Announces Details of 50 Parks Initiative (Aug. 13, 2012), available at http://mayor.lacity.org/PressRoom/LACITYP_021513.

¹⁵¹ Citywide community needs assessment is the first step of the needed master plan. DEP'T PUB. WORKS, CITY OF L.A., CITYWIDE COMMUNITY NEEDS ASSESSMENT 6 (2009), available at <http://www.laparks.org/planning/pdf/exeSum.pdf>. See also CITY OF L.A., ENVIRONMENTAL OVERVIEW OF THE CITY OF LOS ANGELES (2009) (on file with authors).

¹⁵² Park maintenance funding is currently provided through the City's General Fund. Other main sources of park funding are Proposition K and the Quimby Act, which do not provide much money for the maintenance of existing parks.

¹⁵³ See PLANNING COMM'N, CITY OF L.A., *Open Space and Conservation*, in THE CITYWIDE GENERAL PLAN FRAMEWORK AN ELEMENT OF THE CITY OF LOS ANGELES GENERAL PLAN, ch. 6, 3 (1995), available at <http://cityplanning.lacity.org/cwd/framwk/chapters/06/06.htm>.

¹⁵⁴ See DEP'T RECREATION & PARKS, CITY OF L.A., 2009 CITYWIDE COMMUNITY NEEDS ASSESSMENT EXECUTIVE SUMMARY (2009), available at <http://www.laparks.org/planning/pdf/exeSum.pdf>.

¹⁵⁵ See PLANNING COMM'N, CITY OF L.A., *Open Space and Conservation*, in THE CITYWIDE GENERAL PLAN FRAMEWORK AN ELEMENT OF THE CITY OF LOS ANGELES GENERAL PLAN, ch. 6, 7 (1995), available at <http://cityplanning.lacity.org/cwd/framwk/chapters/06/06.htm>.

¹⁵⁶ Explore the Red Fields to Green Fields study of available foreclosed or underperforming properties in park-poor neighborhoods in LA that could be transformed to open space for potential locations. DAKOTAH BERTSCH, MIKE BOUCHER, ERAN JAMES, & ABBY JONES, RED FIELDS TO GREEN FIELDS: LOS ANGELES (2011), available at <http://issuu.com/shady-grove/docs/book>.

¹⁵⁷ L.A. County implemented joint-use agreements with seven school districts with beneficial results. Robert Wood Johnson Found., *Joint Use: Being Active in Los Angeles*, NEW PUB. HEALTH (Oct. 29, 2012), <http://www.rwjf.org/en/blogs/new-public-health.html>. See also Pub. Health, L.A. Cnty., *Safe Recreation*, CHOOSE HEALTH LA.com, <http://www.choosehealthla.com/live-healthy/safe-recreation/>.

¹⁵⁸ BICYCLE SVS., DEP'T OF TRANSP., CITY OF L.A., TRANSPORTATION INVESTMENT GENERATING ECONOMIC RECOVERY (TIGER) DISCRETIONARY GRANT PROGRAM / LOS ANGELES RIVER BIKEWAY NETWORK PROJECT (2012) (on file with authors).

¹⁵⁹ These implementation measures align with recommendations in GROWING LOS ANGELES' URBAN AGRICULTURE POLICY. See ELIZABETH BOWMAN, GROWING LOS ANGELES' URBAN AGRICULTURE POLICY 22 (2012), available at http://issuu.com/urbanagla/docs/growing_la_policy-uawg.

¹⁶⁰ These implementation measures align with recommendations in GROWING LOS ANGELES' URBAN AGRICULTURE POLICY. See ELIZABETH BOWMAN, GROWING LOS ANGELES' URBAN AGRICULTURE POLICY 22 (2012), available at http://issuu.com/urbanagla/docs/growing_la_policy-uawg.

¹⁶¹ DEP'T PUB. WORKS, CITY OF L.A., PROPOSITION O: CLEAN WATER, OCEAN, RIVER, BEACH, BAY STORMWATER CLEANUP MEASURE – GENERAL OBLIGATIONS BOND ANNUAL REPORT (2011) (on file with authors).

¹⁶² There is no widely accepted definition of clean technology. In a report commissioned by the Los Angeles/Orange County Regional Consortium, clean technology is defined as firms and research institutions that are using technology to develop market-based solutions for our environmental challenges. BW RESEARCH, CLEAN TECHNOLOGY WORKFORCE CHALLENGES AND OPPORTUNITIES 4 (2008), available at http://www.lattc.edu/dept/lattc/acaaffairs/files/Clean_Technology_Report.pdf.

¹⁶³ California had 10.2% of the nation's *green jobs* in 2010. BUREAU OF LABOR STATISTICS, GREEN GOODS AND SERVICES (GGS) EMPLOYMENT DISTRIBUTION, 2010 ANNUAL AVERAGES 7, available at http://bls.gov/web/ggqcew/ggqcew_supple_2010.pdf. See also Press Release, Bureau of Labor Statistics, Employment in Green Goods and Services 1 (Mar. 22, 2010), available at <http://bls.gov/news.release/pdf/ggqcew.pdf> (“Among the states, California had the largest number of GGS jobs (338,400), accounting for 2.3 percent of employment in the state.”). The U.S. Bureau of Labor Statistics (BLS) defines *green jobs* as “A. Jobs in businesses that produce goods or provide services that benefit the environment or conserve natural resources. B. Jobs in which workers' duties involve making their establishment's production processes more environmentally friendly or use fewer natural resources.” For the expanded definition, see Bureau of Labor Statistics, *Measuring Green Jobs*, BLS.gov, <http://bls.gov/green/home.htm#frn>.

¹⁶⁴ CAL. EMPLOYMENT DEV. DEP'T, CALIFORNIA'S GREEN ECONOMY SUMMARY OF SURVEY RESULTS 16 (2010), available at http://www.energy.ca.gov/cleanenergyjobs/GrSurveyRpt_1115.pdf. EDD uses a slightly different definition of *green jobs* than the BLS; EDD's definition is in the glossary. For FS 2009-2010, EDD estimated 433,000 total *green jobs*, including 263,000 jobs that are full-time or where 50% or more of the working hours are spent on green activities. *Id.* at 7. In comparison, BLS counted 338,400 “green goods and services” jobs in 2010 for jobs where workers spend more than half their time involved in green technology and practices. Press Release, Bureau of Labor Statistics, Employment in Green Goods and Services 1 (Mar. 22, 2010), available at <http://bls.gov/news.release/pdf/ggqcew.pdf>.

¹⁶⁵ See PHILIP J. ROMERO, GREEN JOBS AND THE LOS ANGELES REGION 6 (2011), available at <http://cabrightspot.org/images/stories/GreenJobsintheLosAngelesRegionReport.pdf>. Full definition of *green jobs* can be found in the glossary.

¹⁶⁶ PHILIP J. ROMERO, GREEN JOBS AND THE LOS ANGELES REGION 12-13 (2011), available at <http://cabrightspot.org/images/stories/GreenJobsintheLosAngelesRegionReport.pdf>.

¹⁶⁷ See Bruce Upbin, *Why Los Angeles Is Emerging As The Next Silicon Valley*, FORBES, Aug. 28, 2012, available at <http://www.forbes.com/sites/ciocentral/2012/08/28/why-los-angeles-is-emerging-as-the-next-silicon-valley/>.

¹⁶⁸ BUREAU OF SANITATION, CITY OF L.A., ENVIRONMENTALLY PREFERABLE PURCHASING (EPP) ANNUAL REPORT FY 2010-11 4 (2012), available at http://www.environmentla.org/cgpb/pdf/12-0319_RPT_BPW_03-02-12.pdf.

¹⁶⁹ A “green job” defined by the California Employment Development Department’s Labor Market Information Division is “one whose activities: 1) generate and store renewable energy; 2) collect and/or process recyclable materials; 3) manufacture, distribute, construct, installation, and maintain energy efficient products; 4) foster education, environmental consulting, regulatory compliance, and awareness; or 5) manufacture natural and sustainable products.” CAL. EMPLOYMENT DEV. DEP’T, CALIFORNIA’S GREEN ECONOMY SUMMARY OF SURVEY RESULTS 7 (2010), available at http://www.energy.ca.gov/cleanenergyjobs/GrSurveyRpt_1115.pdf. The 2008 survey found that 7.9 percent of California businesses employ workers to produce green products or supply green services; this employment accounted for 3.4% of California’s total wage and salary employment for that time. 63 percent of California businesses used green business practices, most commonly recycling and using recycled products. *Id.*

¹⁷⁰ The California Employment Development Department (EDD) estimates that there are currently 432,840 *green jobs* in California, counting all full- and part-time jobs. CAL. EMPLOYMENT DEV. DEP’T, CALIFORNIA’S GREEN ECONOMY SUMMARY OF SURVEY RESULTS 7 (2010), available at http://www.energy.ca.gov/cleanenergyjobs/GrSurveyRpt_1115.pdf. As of 2010, the LA region had 178,550 *green jobs*, as defined by the EDD. PHILIP J. ROMERO, GREEN JOBS AND THE LOS ANGELES REGION 3 (2011), available at <http://cabrightspot.org/images/stories/GreenJobsintheLosAngelesRegionReport.pdf>. This report estimates a low of 207,200 and a high of 240,000 total green jobs in the LA region by 2020. *Id.* at 7. The author notes that his green job forecast is “deliberately quite conservative.” *Id.* at 9. Other studies forecast a maximum rate of growth of 6.9% increase in jobs every year, which results in 348,000 new jobs by 2020. *Id.* at 17.

¹⁷¹ See City of L.A., *City of LA Certified Green Business Program*, ENVIRONMENTLA, <http://www.environmentla.org/cgpb/learn.html>.

¹⁷² See CAL. EMPLOYMENT DEV. DEP’T, CALIFORNIA’S GREEN ECONOMY SUMMARY OF SURVEY RESULTS 25-26 (2010), available at http://www.energy.ca.gov/cleanenergyjobs/GrSurveyRpt_1115.pdf (containing a survey of training methods used by employers to prepare current workers for *green jobs*).

¹⁷³ In a report commissioned by the Los Angeles/Orange County Regional Consortium, over half of clean technology employers indicated they were interested in clean technology programs at the community college level, and over 40 percent indicated interest in on-site training programs provided by community colleges. BW RESEARCH, CLEAN TECHNOLOGY WORKFORCE CHALLENGES AND OPPORTUNITIES 4 (2008), available at http://www.lattc.edu/dept/lattc/acaaffairs/files/Clean_Technology_Report.pdf.

¹⁷⁴ Los Angeles’ Environmentally Preferable Purchasing program was established by ordinance in 2009. L.A., Cal., Ordinance 180751 (2009), available at http://www.environmentla.org/pdf/2010/EPP_Ordinance.pdf. Currently, LAWA and POLA have EPP programs. As of the time the first EPP Annual Report was written, LADWP was working on implementing an EPP program. BUREAU OF SANITATION, CITY OF L.A., ENVIRONMENTALLY PREFERABLE PURCHASING (EPP) ANNUAL REPORT FY 2010-11 9-10 (2012), available at http://www.environmentla.org/cgpb/pdf/12-0319_RPT_BPW_03-02-12.pdf.

¹⁷⁵ The first LA EPP annual report was released for FY 2010/2011. \$23.4 million was spent under the program in FY 2010/11. BUREAU OF SANITATION, CITY OF L.A., ENVIRONMENTALLY PREFERABLE PURCHASING (EPP) ANNUAL REPORT FY 2010-11 4 (2012), available at http://www.environmentla.org/cgpb/pdf/12-0319_RPT_BPW_03-02-12.pdf.

¹⁷⁶ L.A. FOOD POLICY TASK FORCE, THE GOOD FOOD FOR ALL AGENDA 8 (2010), available at http://goodfoodlosangeles.files.wordpress.com/2010/07/good-food-full-report-single_072010.pdf.

¹⁷⁷ L.A. FOOD POLICY COUNCIL, GOOD FOOD PURCHASING GUIDELINES FOR FOOD SERVICE INSTITUTIONS 6 (2012) (manuscript version on file with authors).

¹⁷⁸ CAL. FRESHWORKS FUND, HEALTHY FOOD, CLOSER TO HOME (2012), available at http://www.cafreshworks.com/pdfs/FreshWorks_Fund_Brochure.pdf. See generally CAL. FRESHWORKS FUND, <http://www.cafreshworks.com/>.

¹⁷⁹ See *Program Guidelines*, CAL. FRESHWORKS FUND, http://www.cafreshworks.com/pdfs/cafwf_program_guidelines_072511.pdf.

¹⁸⁰ See AMANDA SHAFFER, THE PERSISTENCE OF L.A.'S GROCERY GAP: THE NEED FOR A NEW FOOD POLICY AND APPROACH TO MARKET DEVELOPMENT 44 (2002), available at http://scholar.oxy.edu/cgi/viewcontent.cgi?article=1395&context=uep_faculty (In Los Angeles County zip codes where 10-20% of households are below the federal poverty line, there are 3.5 supermarkets/10,000 households; in zip codes where 50-60% of households are below the poverty line, there are only 1.2 supermarkets per 10,000 households. Additionally, in zip codes that are 0-10% white, there are 4.4 supermarkets per 10,000 households, versus 9.6 supermarkets in zip codes that are 80-90% white.). The following numbers of “full service grocers” exist per 10,000 households in vulnerable Los Angeles communities—Central City East: 0, Crenshaw: 1.6, Jefferson Park: 0, Leimert Park: 1.7, Hyde Park: 0.7, West Adams: 2.4, Watts: 1, Boyle Heights: 2.7, and Vernon Central: 1.1. SOCIAL COMPACT, INC., LOS ANGELES NEIGHBORHOOD MARKET DRILLDOWN 20 (2008), available at http://socialcompact.org/images/uploads/LA_DrillDown_Report_w_Snapshots.pdf.

¹⁸¹ See generally CAL. CTR. PUB. HEALTH ADVOCACY, SEARCHING FOR HEALTHY FOOD (2007), available at http://www.publichealthadvocacy.org/RFEI/presskit_RFEI.pdf (reporting that Los Angeles’ average Retail Food Environment Index (RFEI) (number of fast food + convenience stores / number of supermarkets + produce stores + farmers’ markets) was 4.24, versus San Francisco: 3.85, Santa Cruz: 1.84, and Fresno: 6.23).

¹⁸² Community Market Conversion Prog., *Community Market Conversion*, <http://communitymarketconversion.org/>.

¹⁸³ For comparison, 35% of San Francisco households are within ½ mile of a farmer’s market, and 88% of households are within ½ mile of a farmer’s market in San Francisco’s highest scoring neighborhood. Healthy Cmmties. Inst. & Hospital Council of N. & Cent. Cal., *Community Dashboard*, HEALTH MATTERS IN SAN FRANCISCO, <http://www.healthmattersinsf.org/modules.php?op=modload&name=NS-Indicator&file=indicator&iid=5867>.

¹⁸⁴ L.A. FOOD POLICY TASK FORCE, THE GOOD FOOD FOR ALL AGENDA 23 (2010), available at <http://goodfoodlosangeles.files.wordpress.com/2010/07/good-food-full-report-single-072010.pdf>.

¹⁸⁵ See GOOD FOOD OFFICE, CITY OF L.A., BUILDING A HEALTHY FOOD SYSTEM FOR LOS ANGELES: STRATEGIC PRIORITIES 2012-2013 24 (2012), available at http://goodfoodla.org/uploaded_content/Good%20Food%20Office%20Strategic%20Priorities%207-19-12%20255pm.pdf.

¹⁸⁶ L.A. Food Policy Council, *Good Food Procurement*, GOODFOODLA.ORG, <http://goodfoodla.org/connect.php?sectionID=11> (listing about 30 organizations as adherents to the “Good Food Procurement Guidelines”). Los Angeles’ Food Policy Goals for 2012-2013 include convincing five major institutions to adhere to the guidelines. GOOD FOOD OFFICE, CITY OF L.A., BUILDING A HEALTHY FOOD SYSTEM FOR LOS ANGELES: STRATEGIC PRIORITIES 2012-2013 21 (2012), available at http://goodfoodla.org/uploaded_content/Good%20Food%20Office%20Strategic%20Priorities%207-19-12%20255pm.pdf.

¹⁸⁷ See *Low Carbon Fuel Standard Program*, CAL. AIR RESOURCES BD., <http://www.arb.ca.gov/fuels/lcfs/lcfs.htm>.

¹⁸⁸ *Environmental Health*, WORLD HEALTH ORG., http://www.who.int/topics/environmental_health/en/.

¹⁸⁹ L.A. FOOD POLICY TASK FORCE, THE GOOD FOOD FOR ALL AGENDA 8 (2010), available at <http://goodfoodlosangeles.files.wordpress.com/2010/07/good-food-full-report-single-072010.pdf>.

¹⁹⁰ CAL. EMPLOYMENT DEV. DEP’T, CALIFORNIA’S GREEN ECONOMY SUMMARY OF SURVEY RESULTS 7 (2010), available at http://www.energy.ca.gov/cleanenergyjobs/GrSurveyRpt_1115.pdf.

¹⁹¹ *Program Guidelines*, CAL. FRESHWORKS FUND, http://www.cafreshworks.com/pdfs/cafwf_program_guidelines_072511.pdf.

¹⁹² CAL. FRESHWORKS FUND, *HEALTHY FOOD, CLOSER TO HOME* (2012), available at http://www.cafreshworks.com/pdfs/FreshWorks_Fund_Brochure.pdf. See generally CAL. FRESHWORKS FUND, <http://www.cafreshworks.com/>.

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