Using the STAR Community Rating System to Evaluate and Advance Sustainability in Los Angeles

UCLA Environmental Science Practicum 2017-18

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Abstract

The City of Los Angeles, in their Sustainable City pLAn, has committed to becoming a 5-STAR city through the STAR Community Rating System, which rates cities based on their sustainability. Out team utilized STAR's framework, to analyze overall environmental sustainability in Los Angeles. We then made recommendations to the City of LA on which environmental categories they could improve upon. Towards this goal, we intensely researched the city's environmental actions and progress to see which of STAR's requirements were met or not met. We also evaluated STAR itself, to assess the effectiveness of the rating system as a method of determining a city's total sustainability. Interviews with other cities (both certified and non-certified) were conducted to learn more about general opinions of STAR at the municipal level. Based on our research, the team concluded that Los Angeles would likely receive a 4-STAR rating (taking into account only objectives related to environmental sustainability). From our assessment of STAR, we found that the process of certification was labor-intensive and burdensome, affecting cities' ability to certify. The system encompasses a large breadth and is very detailed, which allows cities to get credit for a wide variety of programs, although the depth of programs is less accounted for. Overall, we recommend that the City of LA continue with the goal to achieve a STAR rating, given the benefits certification could provide in identifying policy gaps to further improve the cities programs, and the likelihood that the city can achieve a 4 STAR rating.

Introduction and Background

The Office of Los Angeles Mayor Eric Garcetti initiated the Sustainable City pLAn in 2015. In hopes of tackling various social, environmental, and economic issues, the Sustainable City pLAn sets up a roadmap of short-term (by 2017) and long-term (by 2025 and 2035) goals for the City. Part of the Sustainable City pLAn is to have to have the city be rated as a 4-STAR Community by 2017 and 5-STAR Community by 2025 through the STAR Community Rating System. The STAR Community Rating System is an independent, third-party, non-profit organization that evaluates a city's or community's policies and progress in addressing social, environmental, and economic issues.

While Los Angeles fell behind the initial goal of being rated as a 4-STAR Community in 2017, the Mayor's Office has begun data collection for STAR Community certification. As a part of the collective effort of the City of Los Angeles and Global Green (an environmental non-governmental organization) this Practicum team looked into environmental objectives of the STAR Community guidelines, specifically: Natural Systems, Climate and Energy, Built Environment, and Equity and Empowerment. Natural Systems evaluates a city's commitment to outdoor air quality, natural resource protection, and green infrastructure. The Climate and Energy objective focuses on a city's green profile, climate adaptation, energy supply efficiency, and waste management. Within the Built Environment objective, we looked at the development of water-related infrastructure within the community. Equity and Empowerment looks into the city's attempts in resolving environmental justice issues, promoting civil and human rights, and empowering equality. The team researched the city's current programs and policies in these areas

to determine whether criteria within the STAR Communities rating system were satisfied. The overall goal of this research was to help Los Angeles determine its current rating in the STAR Community rubric. Additionally, the team aimed to point out areas where points were not attained, as a tool to identify policy gaps within the City.

Based off of these gaps, we made suggestions on how the city can improve its sustainability and STAR score. An analysis of LA's policies and current standing, as well as sustainability goals laid out in the pLAn, allowed us to evaluate whether the STAR Community Rating System is an accurate measure of sustainability within LA. In an evaluation of the STAR Community Rating System, we attempted to identify any biases within the system that would place the city of Los Angeles at a disadvantage in achieving a high rating. To obtain the perspective of other cities on STAR as a rating system, we conducted interviews asking for opinions on the strengths and weaknesses of STAR from both rated and unrated cities.

Overall, this research is aimed at both providing the City of Los Angeles with an estimate of their STAR rating in regards to environmental sustainability goals, and providing an in depth analysis of whether STAR certification itself is of value for the city.

Methods

Crosswalk System

The STAR Communities Technical Guide Version 2 was used to explain where points were allocated based on the STAR rating system. Following the descriptions laid out for each Action and Outcome within the guide, information on policies and data specific to Los Angeles was collected through internet research and occasionally reaching out to City employees or other

community members with knowledge on the topics addressed. Following data collection, we entered data and an explanation of how each intent was met using the STAR Crosswalk system. This system of Excel Spreadsheets allowed the collection and justification of data under each of the STAR Actions and Outcomes addressed by our team. Following the uploading of the information, an advisor at the city reviewed our inputs then assigned potential points to estimate LA's progress towards an individual score. For our research report, we have estimated the score for all sustainability objectives of STAR based on the outcomes and actions that were assigned to us by the Mayor's Office, following point allocation procedures outlined in the technical guide.

Scoring Process

Each goal area in the STAR rubric is assigned a certain number of points. For example, the Natural Systems goal is worth 100 points. Each objective under each goal area is then assigned a certain number of the category points (i.e. the Green Infrastructure objective is worth 20 points). Points from outcomes can be up to 70% of the total objective score. In some cases, 100% of the outcome score can count for the objective score.

With the total outcome score, one can determine the percentage of points that can come from actions. For example, if the Green Infrastructure objective achieves 7.5/15 points from outcomes only, then 7.5 points can be assigned from outcomes to the final objective score. The action points available for the remaining score is then calculated by subtracting the percentage of outcome points achieved from the total score from 100%. The resulting percentage, 50%, is what the actions will contribute to in the overall score. For example, if the objective scored 15/20 action points, those points would be scaled to account for 50% of the remaining total score.

Action points can only count toward a maximum of 70% of the total objective score. The remaining score must include outcome points.

Results: Our Researched Environmental Sustainability Objectives

Our main body of results consists of evidence provided towards completion of the various STAR Outcomes and Actions we tackled relating to environmental sustainability. The team looked at a total of 16 objectives under four different goal areas, which totaled 250 points available. Out of 250 points, Los Angeles received 144.74 points.

To obtain a better understanding of how the city performed under the STAR rating system, the average percentage of achieved points in each objective was calculated. For example, CE2, the achievement percentage was 54.28%. In our final average achievement score, we only took into consideration 15/16 outcomes because we had researched more than 50% of the requirements and could confidently come to a conclusion on how many points the City of LA achieved. The objective Equity and Empowerment 4: Equitable Services and Access was excluded as the majority of the objective has not yet been researched and entered into the Crosswalk system. From the 15 objectives we looked at, we asserted that the city had achieved about 61.6% of the points available. We were then able to conclude that if the city continued to achieve a similar percentage of points in the remaining objectives, they could likely achieve a 4-STAR rating.

Climate and Energy 1: Climate Adaptation

Climate and Energy objective 1 focuses on a community's efforts to handle the possible effects of a changing climate. Although a community cannot foresee all of the future impacts of climate change, a few effects that Los Angeles is expected to face include increasing temperatures, rising sea levels for coastal communities, strained water supplies, and increasing rates of wildfire. STAR expects that communities focus on their most significant climate concern which is why their first action requires the city to conduct a local climate risk and vulnerability assessment. This action is in progress and expected to be completed by Global Green, along with Action 2 that involves creating a plan with specific strategies to address these concerns.

We were responsible for the following: Actions 3-10. We found data for all actions except Action 4 which requires cities to use the most up to date climate science when making internal decisions. The city does not currently do this. The city does, however, consider climate science in several policies and programs, awarding full points in the remaining categories. Action 3, adopt building codes or land use ordinances, is fulfilled by the City's Cool Roof Ordinance which requires new buildings to abide by a stringent thermal emittance and solar reflectance to address urban heat island effect. Action 5 is a regional interdisciplinary collaboration for understanding climate vulnerabilities and is fulfilled by the program "Path to Positive." This program is a partnership that combines leaders such as city officials, university researchers, and nonprofits to conduct research and raise awareness. Action 6 requires an education and outreach campaign and is satisfied by the Los Angeles Regional Collaborative for Climate Action and Sustainability which keeps the community informed and engaged with their

website, newsletter, and quarterly public meetings. Action 7 calls for a program provided by the city to address the most urgent climate adaptation needs. One Water LA aims to address the climate-vulnerable stormwater and wastewater infrastructure and need for secure infrastructure to localize water supply. One Water efforts include building new sewers, groundwater recharging areas, and improving stormwater and wastewater treatment plants. Action 8 requires measurement of the city's progress which the Mayor's sustainability pLAn tracks through short term and long term goals and provides updates in reports released annually. Action 9, incentives for shifting behavior to prepare for climate impacts, is fulfilled through several LADWP rebates that reduce costs for energy and water saving behavior. Action 10, improvements in infrastructure and facilities within the last five years have been satisfied by several accomplishments achieved in the pLAn including the addition of 10,000 new cool roofs and the installment of over 1,000 EV charging stations.

Table 1. Climate & Energy 1: Climate Adaptation		
Outcome/ Action	**Achieved?**	**Evidence**
Outcome 1	No	N/A
Action 1	Yes	N/A
Action 2	Yes	N/A
Action 3	Yes	Cool Roof Program[1]
Action 4	N/A	N/A
Action 5	Yes	Path to Positive[2]

[1] "Ordinance No. 183149." City of Los Angeles.
[2] Path to Positive: Los Angeles Website.

Action 6	Yes	LA Regional Collaborative for Climate Action[3]
Action 7	Yes	One Water LA[4]
Action 8	Yes	The pLAn 3rd annual report[5]
Action 9	Yes	LADWP rebates and incentives, cool roof program [6]
Action 10	Yes	10,000 cool roofs, 95 miles of replaced water pipes. etc (as seen in the pLAn)

Climate and Energy 2: Greenhouse Gas Mitigation

Climate & Energy objective 2 focuses on developing greenhouse gas mitigation strategies. The team was assigned Outcome 1 and Actions 3, 7, 8, and 9.

Outcome 1 requires that the city demonstrate a 28% reduction in GHG emissions by 2025 or an 80% reduction by 2050. While the city has reduced GHG emissions, they are not yet on track to meet these goals, so the city is expected to receive partial credit.

Action 3 requests that the city of LA commits to a GHG emission reduction goal. The City of LA is expected to meet this with Motion 14-0907, a city council-approved motion that commits LA to a reduction of 80% by 2050.

Action 7 requires that the City of LA create incentives to make opportunities for the distributed generation of renewable energy sources possible for residents. One incentive is the

[3] "A Greater LA Climate Action Framework." Los Angeles Regional Collaborative for Climate Action Action and Sustainability.
[4] "About One Water LA." City of Los Angeles.
[5] "The pLAn 3rd Annual Report 2017-2018." *Mayor's Office of Sustainability*. City of Los Angeles.
[6] "Rebates and Programs." *LADWP.* Los Angeles Department of Water and Power.

Solar Incentive Program by the Los Angeles Department of Water and Power established in 2007. This program provides incentives to offset the cost of installing solar rooftop systems for homes or businesses. In addition to the one-time payment made to customers to help buy or lease these systems, credit is offered to their accounts when excess energy generated from their system redistributes into the city's power grid.

Action 8 aims to help transition communities to alternative modes of transportation and low-emission vehicles. The city has been successful in establishing the LA Bike Share System and the BlueLA EV car-share program. The bike share program launched in July 2017, with over 1000 bikes offered at 65 docks across Downtown Los Angeles The 2nd annual update of the Sustainable City pLAn showed the completion of the BlueLA EV car-share goal. This program provides low-cost, low-emission transportation to disadvantaged communities to reduce the number of polluting vehicles in areas that bear the most burden of carbon emissions and pollutants.

Action 9 requests that the community implement programs or services that reduce water in the community. Los Angeles' recycLA program and the Zero Waste LA "green bin" collection service meet these requirements. The recycLA program, a public-private partnership launched in 2017, provides waste and recycling services to commercial and industrial businesses, institutions, and multi-family buildings. The "green bin" program, expanded and finalized in 2017, is an organic waste collection program. Organic waste is collected from food service establishments and thus diverted from the landfill.

Table 2. Climate & Energy 2: Greenhouse Gas Mitigation

Outcome/ Action	Achieved?	Evidence
Outcome 1	Partially	City Data
Action 1	N/A	N/A
Action 2	N/A	N/A
Action 3	Yes	Motion 14-0907[7]
Action 4	N/A	N/A
Action 5	N/A	N/A
Action 6	N/A	N/A
Action 7	Yes	LADWP Solar Incentive Program[8]
Action 8	Yes	LA Metro Bike Share & BlueLA[9]
Action 9	Yes	RecycLA[10] & Zero Waste LA "green bin" collection[11]

Climate and Energy 3: Greening the Energy Supply

Climate and Energy objective 3 focuses on developing green energy within a community through supporting policies and infrastructure. The team addressed STAR Outcome 2 and Actions 1-8 for this objective.

The City of LA received partial points for Outcome 2 based on the city's Renewable Portfolio Standard (RPS). For full credit, cities must achieve an RPS of 50% or more. The city has an RPS of 29%, so the city got some credit.

[7] "Motion 14-0907." City of Los Angeles.
[8] "Solar Incentive Program." Los Angeles Department of Water and Power
[9] "The pLAn 2nd Annual Report 2016-2017." *Mayor's Office of Sustainability*. City of Los Angeles.
[10] "RecycLA." LA Sanitation.
[11] "The pLAn 3rd Annual Report 2017-2018." *Mayor's Office of Sustainability*. City of Los Angeles.

The City of LA is expected to receive full credit for Actions 1, 4, 6, 7, and 8 based on our analysis. Action 1 calls for the development of a communitywide plan to shift energy sources towards renewable energy, one of the goals outlined in LADWP's Strategic Long Term Resource Plan. Action 4 calls for the establishment of community partnerships to further clean energy goals and is satisfied through the Los Angeles Clean Cities Coalition. Los Angeles receives points for Action 6 through a variety of incentive programs for renewable energy including the Solar Incentive Program, Solar Rooftops, and Small Residential Rooftop Installation. Further monetary incentives for solar installation are provided through LADWP's Feed-in-Tariff and Net Metering Programs, satisfying Actions seven and eight respectively.

Los Angeles received no credit for Actions 2, 3 and 5. Action 2 called for the use of community choice aggregation or power-sharing to promote solar implementation. Action 3 called for the removal of regulatory restrictions on solar energy implementation for residents and small businesses. Upon analysis of current policies, current policies within Los Angeles do not fulfill the criteria to achieve these points. Further, Los Angeles has not obtained recognition by a third-party as a solar-ready community, and so was not awarded points for Action 5.

Table 3. Climate and Energy 3: Greening the Energy Supply		
Outcome/ Action	**Achieved?**	**Evidence**
Outcome 1	Yes	City Inventory
Outcome 2	Yes, Partial (2.42)	City Inventory
Action 1	Yes	LADWP Strategic Long Term Resource Plan[12]
Action 2	No	N/A
Action 3	No	N/A

[12] *2015 Power Integrated Resource Plan*, Los Angeles Department of Water and Power.

Action 4	Yes	Los Angeles Clean Cities Coalition[13]
Action 5	No	N/A
Action 6	Yes	Solar Incentive Program[14], Solar Rooftops[15], Small Residential Rooftop Installation[16]
Action 7	Yes	LADWP feed-in tariff[17]
Action 8	Yes	LADWP Net Metering Program[18]
Action 9	Yes	N/A
Action 10	Yes	N/A

Climate and Energy 4: Energy Efficiency

Climate & Energy objective 4 focuses on improving energy efficiency across all sectors of a community. The team was assigned Outcome 1 and all 11 Actions. It is unclear whether Outcome one, which requires that the city demonstrates progress in an 80% reduction of energy use by 2050, will be met because the city has not yet started to collect this data.

Action 1 requests that the city adopt a strategic action plan to improve energy efficiency in residential and commercial buildings, as well as industrial processes. The Sustainable City pLAn fulfills this requirement, with a section on energy and goals written in the pLAn.

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[13] "Los Angeles Clean Cities Coalition," *Clean Cities Coalition Network*, US Department of Energy.
[14] "Solar Incentive Program," *Los Angeles Department of Water and Power*, LADWP.
[15] "Solar Rooftops Program," *Los Angeles Department of Water and Power*, LADWP.
[16] *Eligibility Checklist for Expedited Solar Photovoltaic Permitting for One- and Two-Family Dwellings*, Los Angeles Department of Building and Safety.
[17] "Feed-in Tariff Program," *Los Angeles Department of Water and Power*, LADWP.
[18] *Net Energy Metering Program*, LA City Clerk.

Action 2 requires that the community adopt new building codes to ensure they are more energy efficient. The city of LA is expected to meet this with the 2016 Building Energy Efficiency Standards, which are part of the California Code of Regulations (state law). Action three calls for an energy use disclosure ordinance, which the city meets with Ordinance No. 184674. This ordinance requires that city buildings and private buildings over a certain size must report their energy and water use.

Action 4 involves an education and outreach program to help inform residents on ways to reduce energy consumption. In July 2016, the city launched the Save Energy LA campaign, an effort to provide residents with strategies to reduce their energy consumption by presenting them with programs, services, and rebates the city and LADWP organize.

Action 6 states that the city must partner with external organizations that work to promote energy data collection and monitoring from commercial and industrial sectors of the community. Launched in 2011 by former City of Los Angeles Mayor Antonio Villaraigosa, the LA Better Buildings Challenge (LABBC) is a collaboration between building owners and managers. LABBC partners and collaborators share energy-related data, identify rebates, perform assessments, and finance retro-fits or other initiatives to reduce building energy consumption.

Action 7 requires that the City of LA develop a heat island mitigation program. As part of its resilience strategy, the city released its Resilient Los Angeles in March 2018. A section in this plan introduced a pilot program that would utilize cost-effective cooling strategies, including cool pavements and cool roofs. In the most recent update of the pLAn, Los Angeles has installed over 140,000 square feet of cool pavement and over 39 million square feet of cool roofs.

Actions 8 and 9 emphasize creating incentives to encourage new construction of energy efficient buildings and existing businesses, lessors, renters, and homeowners to improve the energy-efficient buildings. The city's Ordinance No. 184692 which applies the California Green Building Standards Codes in 2016 to the city's new construction building standards satisfies Action 8.The LADWP's Residential and non-residential energy efficiency rebate programs help fulfill Action 9.

Actions 10 and 11 both try to implement programs and services to help improve energy efficiency throughout the community. Action 10 focuses on providing accessible programs to low-income households and is accomplished by the Energy Savings Assistance Program. This program, a collaboration between LADWP and Southern California Gas Company offers free energy-efficient, water-efficient, and natural gas upgrades to low-income, multi-family households. In 2016 and 2017, efficiency measures were installed in approximately 11,900 households. Action 11 instructs that the city work with local utility companies implement energy commissioning programs. LADWP manages a retrocommissioning program under its Custom Performance Program.

Table 4. Climate & Energy 4: Energy Efficiency		
Outcome/ Action	**Achieved?**	**Evidence**
Outcome 1	No	N/A
Outcome 2	N/A	N/A
Action 1	Yes	Sustainable City pLAn's Energy Efficient Buildings[19] Section

[19] "pLAn" *Mayor's Office of Sustainability*. City of Los Angeles.

Action 2	Yes	2016 Building Energy Efficiency Standards[20]
Action 3	Yes	Existing Buildings and Water Efficiency Program, Ordinance No. 184674[21]
Action 4	Yes	Save Energy LA[22]
Action 5	No	N/A
Action 6	Yes	LA Better Buildings Challenge[23]
Action 7	Yes	Resilient Los Angeles[24]
Action 8	Yes	Ordinance No. 184692; California Green Building Standards Code 2016[25]
Action 9	Yes	LADWP Residential and non-residential energy efficiency rebate programs[26]
Action 10	Yes	LADWP Energy Savings Assistance Program[27]
Action 11	Yes	LADWP Custom Performance Program[28]

Climate and Energy 5: Water Efficiency

Climate & Energy objective 5 focuses on water efficiency, which includes minimizing water use and demand to conserve water in the community. The team took on all eight actions

[20] "2016 Building Energy Efficiency Standards." California Energy Commission.
[21] "Ordinance No. 184674." City of Los Angeles.
[22] "Save Energy LA." City of Los Angeles.
[23] LA Better Buildings Challenge. la-bbc.com.
[24] "Resilient Los Angeles." City of Los Angeles.
[25] "Ordinance No. 184692." City of Los Angeles.
[26] "Rebates and Programs." Los Angeles Department of Water and Power.
[27] "Energy Savings Assistance Program." Southern California Gas Company.
[28] "Custom Performance Program." Los Angeles Department of Water and Power.

for this objective, and the actions include plan development, policy and code adjustment, education and outreach, partnerships and collaboration, practice improvements, enforcement and incentives, and programs and services. Action 1 includes the community adopting a water management plan to improve water efficiency and reductions. This plan can be standalone or included in a broader community-wide plan. For Los Angeles, water management goals are in the Sustainable City pLAn. Action 2 is fulfilled by the Los Angeles Existing Buildings Energy & Water Efficiency Program (EBEWE). EBEWE satisfies both parts of action two by requiring water-efficient fixtures and the regulation of outdoor water use even during non-drought periods. Action 3 requires that the city create an education and outreach campaign to engage residents and businesses in water efficiency efforts. The city met this action with the Save the Drop Campaign, which educates citizens on water efficiency, sustainable landscaping, and conservation. Action 4 calls for a committee that focuses on water efficiency in buildings, or that this issue is integrated into the work of an existing committee. In 2015, Mayor Garcetti formed the Mayor's water cabinet, which includes water efficiency in buildings in the water issues they address.

Action 5 requires that the community work with local utilities to increase smart meters for water use throughout the community. LADWP installed 100 smart meters in 28 city parks, and they record data on water usage. Actions 6 and 7 call for incentives and programs to help residents and businesses become more water efficient and reduce use. LADWP offers a water rebate program that includes rebates for landscaping and retrofitting water infrastructure, like toilets.

Table 5. Climate & Energy 5: Water Efficiency		
Outcome/ Action	**Achieved?**	**Evidence**

Outcome 1	N/A	N/A
Action 1	Yes	The pLAn[29]
Action 2	Yes	EBEWE[30]
Action 3	Yes	Save the Drop Campaign[31]
Action 4	Yes	Mayoral Water Cabinet[32]
Action 5	Yes	Smart Meter Pilot Program[33]
Action 6	Maybe	N/A
Action 7	Yes	LADWP Water Conservation Rebate Program[34]
Action 8	Yes	LADWP Water Conservation Rebate Program

Climate and Energy 6: Local Government GHG and Resource Footprint

Climate and Energy objective 6 focuses on local government efforts to reduce their GHG emissions and resource usage. This team was responsible for all three outcomes and the first eight of the total eleven actions. The City of Los Angeles Mayor's Office provided the team with the City of Los Angeles 2014-16 Municipal Greenhouse Gas Inventory Report. The report showed that the City will receive points for Outcome 1 as the city has reduced its GHG emissions annually. Outcomes 2 and 3 are not achieved, as STAR requires the city to demonstrate a 10% reduction in all of eight categories (ports, power plants, public transit

[29] http://plan.lamayor.org/
[30]https://www.ladbs.org/services/green-building-sustainability/existing-buildings-energy-water-efficiency-program
[31] http://savethedropla.com/
[32]Drought Response-Creating a Waterwise City."lamayor.org
[33]"Mayor-garcetti-announces-innovative-pilot-program-conserve-more-water-historic-drought." lamayor.org
[34]"Rebates and Programs." Los Angeles Department of Water and Power.

systems, solid waste or recycling facilities, stormwater facilities, streetlights and traffic signals, wastewater facilities, and water delivery facilities). Los Angeles does not meet the 10% criteria in each category and therefore will not receive credit. Outcome 3 is similarly complicated but is focused on Los Angeles City water usage. Nine types of public infrastructure are listed, and the city must demonstrate a 10% decrease in usage for each category, including ornamental water features, pools and spas, and ice rinks and ski areas. Los Angeles does not have data for each infrastructure type and therefore does not receive credit.

Action 1 requires the local government to perform a GHG Inventory Report at least every five years, which Los Angeles does. The Existing Buildings Energy & Water Efficiency Program (EBEWE) Ordinance was passed in 2017 and completes Actions 2, 3, and 8.[35] The program requires large building owners to disclose their energy and water usage so the City can create the annual resource inventories. The pLAn fulfills Action 4 by providing a sustainability action plan. In the pLAn, a section dedicated to increasing government renewable resource usage satisfies the requirements of Action 5.[36] The LADWP Electric Transportation Program for 2015-2020 requires the city to "electrify LADWP and LA City Fleet: 100% of new LADWP light duty vehicles and 50% of new LA City light duty vehicles are to be electric vehicles", therefore completing Action 6.[37] California State Bill 1368 requires LADWP investments to comply with GHG emission standards, fulfilling Action 7.[38]

Table 6. Climate & Energy 6: Local Government GHG and Resource Footprint		
Outcome/ Action	**Achieved?**	**Evidence**

[35] "Existing Buildings Energy & Water Efficiency Program." LADBS.
[36] "The Sustainable City pLAn." Lamayor.
[37] "2015 Power Integrated Resource Plan." LAcity.
[38] "SB-1368 Electricity: Emissions of Greenhouse Gases." California Legislative Information.

Outcome 1	Yes	City of Los Angeles 2014-16 Municipal Greenhouse Gas Inventory Report
Outcome 2	No	N/A
Outcome 3	No	N/A
Action 1	Yes	City of Los Angeles 2014-16 Municipal Greenhouse Gas Inventory Report
Action 2	Yes	EBEWE[39]
Action 3	Yes	EBEWE[40]
Action 4	Yes	pLAn[41]
Action 5	Yes	pLAn[42]
Action 6	Yes	LADWP Electric Transportation Program for 2015-2020[43]
Action 7	Yes	SB 1368[44]
Action 8	Yes	EBEWE[45]
Action 9	N/A	N/A
Action 10	N/A	N/A
Action 11	N/A	N/A

[39] "Existing Buildings Energy & Water Efficiency Program." LADBS.
[40] "Existing Buildings Energy & Water Efficiency Program."
[41] "The Sustainable City pLAn." Lamayor. http://plan.lamayor.org/wp-content/uploads/2017/03/the-plan.pdf.
[42] "The Sustainable City pLAn."
[43] "2015 Power Integrated Resource Plan." LAcity.
[44] "SB-1368 Electricity: Emissions of Greenhouse Gases." California Legislative Information.
[45] "Existing Buildings Energy & Water Efficiency Program." LADBS.

Climate and Energy 7: Waste Minimization

Climate and Energy objective 7 focuses on minimizing solid waste outputs from a community: through infrastructure improvements, progressive policies and public education. Our team tackled the first outcome and all of the actions listed in this objective. The first outcome required that the community demonstrate progress towards zero waste by 2050, which was satisfied through the LADWP Total Solid Waste Report.

The City of Los Angeles had programs to earn for all of the actions in this category. Los Angeles' Solid Waste Integrated Resources Plan provided evidence of a solid waste management plan (Action 1), with the Los Angeles Regional Agency working to coordinate waste management services throughout a larger regional area (Action 4). The plastic bag ban ordinance served as a product-specific ban in place within the city (Action 2). The LAUSD Recycling Program provides public education on recycling (Action 3). Recycling opportunities for business and residents provided by a variety of LA Sanitation Programs (Action 6) including green and blue bin recycling and participation are encouraged through regulations such as California State Assembly Bill 341 requiring mandatory commercial recycling and a more local Citywide Construction and Demolition Waste Recycling Ordinance (Action 5). The City of Los Angeles also has targeted recycling programs in place in different areas around the community in the form of SAFE centers, which accept items such as E-waste and household hazardous waste (Action 7). Additionally, specific recycling programs within the city for tires, metal household appliances, and brush collection give Los Angeles credit (Action 8). Additionally, the City feeds into material recovery facilities, such as the one in Puente Hills (Action 9). Successful fulfillment

of these outcomes and actions within the City of Los Angeles indicates that the City should receive full points based on the criteria for this objective.

Table 7. Climate and Energy 7: Waste Minimization		
Outcome/ Action	**Achieved?**	**Evidence**
Outcome 1	Yes	LADWP Total Solid Waste Report
Outcome 2	Yes	N/A
Action 1	Yes	Solid Waste Integrated Resources Plan[46]
Action 2	Yes	Los Angeles Municipal Code Ordinance 182604[47]
Action 3	Yes	LAUSD Recycling Program[48]
Action 4	Yes	Los Angeles Regional Agency [49]
Action 5	Yes	Citywide Construction and Demolition Waste Recycling Ordinance[50], Mandatory Commercial Recycling (AB 341)[51]
Action 6	Yes	RecycLA[52], Blue and Green Bin Recycling[53]
Action 7	Yes	SAFE Centers[54]
Action 8	Yes	LA Sanitation Programs[55]

[46] *Los Angeles Solid Waste Integrated Resources Plan - Home*, LA City Sanitation.
[47] *Carry Out Bags Ordinance*, LA City Clerk.
[48] "LAUSD Recycling Program." *Los Angeles Environment and Sanitation*.
[49] *Los Angeles Regional Agency*, www.laregionalagency.us/.
[50] "Construction and Demolition Recycling," *Los Angeles Environment and Sanitation*.
[51] California Department of Resources Recycling, "Mandatory Commercial Recycling," *California Department of Resources Recycling and Recovery (CalRecycle)*.
[52] "RecycLA," *Los Angeles Environment and Sanitation*.
[53] *Los Angeles Department of the Environment and Sanitation*, www.lacitysan.org/.
[54] "S.A.F.E. CENTERS & MOBILE COLLECTION EVENTS," *Los Angeles Environment and Sanitation*.
[55] *Los Angeles Department of the Environment and Sanitation.*

Action 9	Yes	Puente Hills MRF[56]

Equity and Empowerment 3: Environmental Justice

objective 3 of Equity and Empowerment is environmental justice and focuses on identifying and reinvigorating overburdened communities regarding environmental pollution and socioeconomic factors. The team tackled actions 1-9 which required restorative policies, education and outreach, collaborative partnerships, community benefit agreements, and regulatory practice improvements. The only actions not fulfilled were Action 6 and 8. Action 6 involved city-wide community benefit agreements for remediation of projects with environmental justice concerns. Action 8 requires documentation for monitoring and enforcing regulations for existing facilities in overburdened communities.

Using data from EPA's CalEnviroScreen, Clean Up Green Up identifies and prioritizes cleaning up 3 of Los Angeles' most burdened communities through new zoning policies and greater protections from polluting industries. The communities are majority Latino and are Wilmington, Pacoima, and Boyle Heights (Action1). Strategies for relieving the burden in these communities include adjustments to zoning and building codes and new conditional use permitting for asphalt and refinery industries (Action 2). New zoning policies include buffer zones to protect residential areas, air filters in new buildings within 1,000 feet of freeways, and enclosures and ventilation for new smoke or dust emitting operations (Action 5). The collaborative that engaged stakeholders and the local government to pass this transformative ordinance is the Los Angeles Collaborative for Environmental Health and Justice (Action 3).

[56] "Puente Hills Materials Recovery Facility," *LACSD Website - Wastewater Treatment and Water Reclamation*.

Education and outreach programs are conducted by the community organizations that comprise the collaborative in addition to the South Coast Air Quality and Management District's Environmental Justice Program (Action 4).

In addition to Clean Up Green Up, the Los Angeles Sanitation Brownfields program reduces exposure to contaminants by providing funding for assessment and remediation of highly contaminated areas (Action 9). Environmental justice efforts continue to be considered by the local government in the Mayor's Office of Sustainability (Action 7).

Table 8. Equity & Empowerment 3: Environmental Justice		
Outcome/ Action	**Achieved?**	**Evidence**
Outcome 1	N/A	N/A
Action 1	Yes	Clean Up Green Up[57]
Action 2	Yes	Clean Up Green Up
Action 3	Yes	L.A. Collaborative for Environmental Health & Justice[58]
Action 4	Yes	SCAQMD Environmental Justice Program[59]
Action 5	Yes	Clean Up Green Up
Action 6	No	N/A
Action 7	Yes	Mayor's Office of Sustainability
Action 8	No	N/A

[57] "Ordinance No. 184286." City of Los Angeles.
[58] "The Los Angeles Collaborative for Environmental Health and Justice." Clean Up Green Up.
[59] "SCAQMD's Environmental Justice Program." South Coast Air Quality Management District.

Action 9	Yes	LA Sanitation Brownfield Programs[60]

Equity and Empowerment 4: Equitable Services and Access

Our group worked on two Actions from Equitable Services and Access. Action 2 evaluates current community conditions and creates strategies for improving neighborhood equity of community assets. The Mayor's Sustainable City pLAn has an equity section that has identifies Los Angeles' access to parks, street walkability, food deserts and more. The pLAn fulfills this action by including goals and initiatives for improving access. Action 3 requires a change in the law to establish a commitment to social justice and equity in local government decision making. Los Angeles does not have an enforceable code to fulfill this action.

Table 9. Equity & Empowerment 4: Equitable Services and Access		
Outcome/ Action	**Achieved?**	**Evidence**
Outcome 1	N/A	N/A
Action 1	N/A	N/A
Action 2	Yes	The pLAn[61]
Action 3	No	N/A
Action 4	N/A	N/A
Action 5	N/A	N/A
Action 6	N/A	N/A
Action 7	N/A	N/A

[60] "Citywide Brownfields Program." LA Sanitation.
[61] "The pLAn 3rd Annual Report 2017-2018." *Mayor's Office of Sustainability*. City of Los Angeles.

Action 8	N/A	N/A
Action 9	N/A	N/A
Action 10	N/A	N/A
Action 11	N/A	N/A

Natural Systems 1: Green Infrastructure

Natural Systems objective 1 focuses on the implementation of green infrastructure within a community to meet stormwater management goals. The team evaluated STAR Actions 2 through 9 for this objective. Action 2 called for the development of an integrated community green infrastructure plan, satisfied through Los Angeles' Enhanced Watershed Management Plans which aim to integrate stormwater control efforts across watersheds in Los Angeles. Los Angeles' Low Impact Development Ordinance satisfied green infrastructure policy objectives for STAR Actions 3 and 4 within this objective, requiring a minimum level of stormwater infiltration within specific developments. Action 5 called for the development of a community partnership to advance green infrastructure implementation, demonstrated through the partnership of Los Angeles Parks and Recreation and the LA Parks Foundation. The City of Los Angeles incentivizes green infrastructure integration onto private properties through the LADWP City Plants Program and LADWP California Friendly Landscape Incentive Program (Action 6). Larger scale community level green infrastructure projects were developed on private property within the City of Los Angeles, as demonstrated by many of the Proposition O clean water bond projects (Action 9) and successively monitored to determine their performance success (Action

7). Due to the presence of these programs, the City of Los Angeles will receive points for Actions 2, 3, 4, 5, 6, 7, and 9 within this objective.

Action 8 for this objective required the City of Los Angeles to contribute a certain percentage of stormwater funding to green infrastructure development, a parameter which the city does not reach at this time. The city will not receive points for this action.

Table 10. Natural Systems 1: Green Infrastructure		
Outcome/ Action	**Achieved?**	**Evidence**
Outcome 1	No	N/A
Outcome 2	No	N/A
Action 1	No	N/A
Action 2	Yes	Enhanced Watershed Management Plans[62]
Action 3	Yes	Los Angeles' LID Ordinance[63]
Action 4	Yes	Los Angeles' LID Ordinance[64]
Action 5	Yes	LA Parks Foundation[65]
Action 6	Yes	LADWP City Plants[66], LADWP California Friendly Landscape Incentive Program[67]
Action 7	Yes	Prop O Clean Water Bond Program Projects Performance Report
Action 8	No	N/A
Action 9	Yes	Proposition O, South LA Green Alley Master Plan

[62] "Enhanced Watershed Management Plans: City of Los Angeles Stormwater Program", *City of Los Angeles Stormwater Program*.
[63] "Low Impact Development: City of Los Angeles Stormwater Program," *City of Los Angeles Stormwater Program.*
[64] "Low Impact Development: City of Los Angeles Stormwater Program."
[65] Los Angeles Parks Foundation.
[66] California Friendly Landscaping In Los Angeles, LADWP.
[67] *Welcome to City Plants - City Plants*, LADWP.

Natural Systems 2: Biodiversity and Invasive Species

Natural Systems objective 2 promotes biodiversity strategies and initiatives to prevent invasive species and protect a community's urban ecosystem. The team worked on all 10 Actions for this objective.

Los Angeles recently began to emphasize biodiversity in the cities. In May 2017, City Council passed a motion that included "developing an index to measure protection, enhancement, and mitigation of impacts to biodiversity." LA Sanitation then worked with other groups to create indicators for Los Angeles and conducted the Singapore Index, an index created to "evaluate and monitor the progress of their biodiversity conservation efforts against their baselines .[68]" Researchers found that the index on its own was not enough to measure the level of biodiversity in Los Angeles and additional indicators were necessary to understand biodiversity, invasive species, and threatened species.[69]

The city falls short for nearly all of the outcomes and actions for this objectives, which focus on removing invasive species and implementing strategies for promoting native plants and organisms. However, Action 7 is met, which required that the city devise incentives to encourage businesses to grow and sell native species. In 2008, new county Ordinance No. 2008-0064 was signed and directed that landscaping projects built after January 1, 2009, were to establish drought-tolerant requirements. These requirements included that at least 75% of landscapes must

[68]"Biodiversity." LA Sanitation

[69] "2018 Biodiversity Report: Measurement of the Singapore Index of Cities' Biodiversity and Recommendation for a Customized Los Angeles Index." City of Los Angeles

include plants from the drought-tolerant plant list, which include native plants. As part of the County of Los Angeles, the City of Los Angeles must abide by this ordinance. Although not an incentive, this enforcement encourages businesses to sell plants that adhere to this requirement.

Table 11. Natural Systems 2: Biodiversity & Invasive Species		
Outcome/ Action	**Achieved?**	**Evidence**
Outcome 1	N/A	N/A
Outcome 2	N/A	N/A
Outcome 3	N/A	N/A
Outcome 3	N/A	N/A
Action 1	No	N/A
Action 2	No	N/A
Action 3	No	N/A
Action 4	No	N/A
Action 5	No	N/A
Action 6	No	N/A
Action 7	Yes	LA County Ordinance 2008-0064[70]
Action 8	No	N/A
Action 9	No	N/A
Action 10	No	N/A

[70] LA County Ordinance No. 2008-0064. County of Los Angeles

Natural Systems 3: Natural Resource Protection

Natural Resource Protection focuses on the preservation and restoration of natural ecosystems through land use and conservation plans (See Table 12). The Actions within the objective calls for management of ecosystems via buffers, financial strategies, and policy adaptation. Action 1 requires that the city develop a plan to protect and restore natural resources through land conservation, corridor connectivity, and restoration of biological integrity and function. The city did meet this with the Los Angeles Revitalization Master Plan, which targets to revamp the 11-mile soft-bottomed stretch of river. It will also attempt to restore the historic riparian strand and freshwater marsh habitats. The city of Los Angeles has been able to satisfy the various Actions by generating proposals targeting rehabilitation and restoration of natural resources; however, the city has yet to propose a plan that tackles establishing buffer zones in the protection of wetlands, streams, and shorelines (Action 2). While the city has generated buffer zones within the city's General Plan, the buffer zones focus on development buffers rather than conservation buffers. The city of Los Angeles needs to generate a plan that establishes buffer zones for ecosystem protection.

Action 3 calls for an advisory board to inform land conservation and restoration. The city does not have an advisory board specifically for land conservation/restoration. Action 4 requires that the community partners with adjacent jurisdictions, state and federal agencies and nonprofits advance land conservation. The city of LA met this requirement with the Los Angeles River Cooperation Committee, which is composed of the city, the US Army Corps of Engineers, and

the Los Angeles Flood Control District. This committee performs restoration projects for the LA River.

Action 5 calls for the city to sponsor activities that increase ecological literacy and knowledge concerning natural resource protection. The Department of Recreations and Parks runs the Cabrillo Marine Aquarium, which educates visitors about conservation, pollution, and climate change, satisfying this action. Actions 6 through 8 were satisfied through existing plans which allocated land and financial incentives for development easement and land conservation.

Table 12. Natural Systems 3: Natural Resource Protection		
Outcome/ Action	**Achieved?**	**Evidence**
Outcome 1	No	N/A
Outcome 2	No	N/A
Outcome 3	No	N/A
Outcome 3	No	N/A
Action 1	Yes	Action 20[71]
Action 2	No	N/A
Action 3	No	N/A
Action 4	Yes	Los Angeles River Cooperation Committee[72]
Action 5	Yes	Cabrillo Marine Aquarium[73]
Action 6	Yes	Coastal Bluffs Specific Plan
Action 7	Yes	LA County EIFD
Action 8	Yes	Machado Lake Ecosystem

[71] http://boe.lacity.org/lariverrmp/
[72] http://boe.lacity.org/lariver/rcc/
[73] http://www.cabrillomarineaquarium.org/

		Rehabilitation Project

Natural Systems 4: Outdoor Air Quality

The purpose of Outdoor Air Quality is to ensure healthy outdoor air quality for all communities (See Table 13). The Actions within this objective focuses on generating community outreach and conducting studies on outdoor air quality. While the city has programs in targeting outdoor air quality, few satisfy the Actions. Outdoor air quality programs generated by the state of California were utilized to satisfy Actions. EnviroScreen, a program operated by the California Environmental Protection Agency, satisfies the study on the disparity of outdoor air pollution amongst communities (Action 1). The Air Quality Management District's 1-800-END-SMOG program aims to allows Californians the ability to report idling vehicles (Action 5). Several other state programs fulfilled the requirements of Actions within Outdoor Air Quality. Consequently, for Los Angeles to be a sustainable city, the city needs to implement city programs and studies that tackle outdoor air pollution. While the city has implemented systems that reduce traffic times, the city lacks any independent study on measuring environmental justice relating to air pollution.

Table 13. Natural Systems 4: Outdoor Air Quality		
Outcome/ Action	**Achieved?**	**Evidence**
Outcome 1	No	N/A
Outcome 2	Yes	N/A
Action 1	Yes	CalEnviroScreen[74]

[74] https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30

Action 2	Yes	Clean Air Action Plan[75]
Action 3	Yes	Clean Air Action Plan[76]
Action 4	Yes	BREATH LA's O24u environmental education program[77]
Action 5	Yes	1800-END-SMOG (Air Resources Board)[78]
Action 6	Yes	West Los Angeles Community Plan[79]
Action 7	Yes	SCAQMD Leaf Blower Exchange Program[80]
Action 8	Yes	LADWP Tree Program[81]

Natural Systems 5: Water in the Environment

Natural Systems objective 5 focuses on protecting local waterways and watersheds, engaging the public in these efforts, and lowering pollution levels in waterways. This team tackled all 8 Actions for this objective (Table 14). The first three actions involve local government regulations regarding watershed and natural water body management and protection. Los Angeles does not have specific ordinances or regulations for these actions; however, the California Water Board has set regional Total Maximum Daily Limits (TMDL) that accomplish

[75] http://www.cleanairactionplan.org/
[76] http://www.cleanairactionplan.org/
[77] https://breathela.org/programs/#1475597912027-05e5aabd-39fa
[78] https://www.arb.ca.gov/enf/complaints/smoke.htm
[79] https://planning.lacity.org/complan/pdf/wlacptxt.pdf
[80] http://www.aqmd.gov/docs/default-source/Lawn-Equipment/leafblower-brochure.pdf
[81] https://www.ladwp.com/ladwp/faces/ladwp/residential/r-savemoney/r-sm-rebatesandprograms/r-sm-rp-treesforgreenla?_afrLoop=106353512510050&_afrWindowMode=0&_afrWindowId=b9gvyptrf_1#%40%3F_afrWindowId%3Db9gvyptrf_1%26_afrLoop%3D106353512510050%26_afrWindowMode%3D0%26_adf.ctrl-state%3Db9gvyptrf_17

these goals. A TMDL is the "sum of the individual waste load allocations for point sources, load allocations for nonpoint sources plus an allotment for natural background loading, and a margin of safety".[82] TMDLs are more stringent than what STAR asks for, and therefore Los Angeles should receive full credit for these actions. Also, the TMDLs also give Los Angeles credit for action 6, which requires incentives to residents and developers to reduce pollution. Los Angeles goes further than giving incentives, the city requires residents and developers to limit their pollution. Action 8, routinely inventory and monitor natural water bodies for biological, chemical, and hydrological integrity, is also covered due to TMDLs, as well as the MPDS and the Bay Restoration Plan.

The fourth action requires the establishment of partnerships with the community to regulate ambient water pollution. The Santa Monica Bay Foundation, part of the U.S. EPA's Santa Monica Bay National Estuary Program (NEP), works with a "broad group of stakeholders, including government agencies, environmental groups, local communities, industry and scientists".[83] Action 5 is achieved due to the Community Education Outreach requirements of Los Angeles's MS 4 permit.[84] Finally, NS 5 Action 7 requires investments in watershed and buffer zone restoration and maintenance over the preceding five years. The City of Los Angeles voted to pass Proposition O in 2004 which provides up to $500 million in funding to watershed maintenance projects.[85] Echo Park Lake is an example of such a project, as the funding from Proposition O allowed cleanup and restoration of this previously impaired water body.

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[82] Los Angeles Regional Water Quality Control Board. "Total Maximum Daily Loads (TMDLs)." State Water Resources Control Board. May 31, 2018.
[83] "Who We Are." The Bay Foundation. Accessed June 14, 2018.
[84] "City of Los Angeles Stormwater Public Education Program." LA Stormwater. June 30, 2011.
[85] "Proposition O « City of Los Angeles Stormwater Program." City of Los Angeles Stormwater Program.

Table 14. Natural Systems 5: Water in the Environment		
Outcome/ Action	**Achieved?**	**Evidence**
Outcome 1	N/A	N/A
Outcome 2	N/A	N/A
Outcome 3	N/A	N/A
Action 1	Yes	California Water Control Board TMDLs[86]
Action 2	Yes	California Water Control Board TMDLs[87]
Action 3	Yes	California Water Control Board TMDLs[88]
Action 4	Yes	Santa Monica Bay Foundation[89]
Action 5	Yes	Community Education Outreach Programs[90]
Action 6	Yes	California Water Control Board TMDLs[91]
Action 7	Yes	Proposition O[92]
Action 8	Yes	California Water Control Board TMDLs[93]

[86] Los Angeles Regional Water Quality Control Board. "Total Maximum Daily Loads (TMDLs)."
[87] Los Angeles Regional Water Quality Control Board.
[88] Los Angeles Regional Water Quality Control Board.
[89] "Who We Are." The Bay Foundation.
[90] "City of Los Angeles Stormwater Public Education Program." LA Stormwater.
[91] Los Angeles Regional Water Quality Control Board. "Total Maximum Daily Loads (TMDLs)."
[92] "Proposition O « City of Los Angeles Stormwater Program." City of Los Angeles Stormwater Program.
[93] Los Angeles Regional Water Quality Control Board. "Total Maximum Daily Loads (TMDLs)."

Natural Systems 6: Working Lands

Natural Systems objective 6 aims to provide strategies for the conservation and management of agricultural lands. The team researched all 10 Actions for this objective. The City of Los Angeles is a unique case in comparison to other metropolitan areas that have achieved a STAR rating due to the manner in which it developed into a large urban area with scarce agricultural land. Therefore, conserving working lands can be difficult to achieve in Los Angeles, but the city has made strides in increasing urban and school gardens.

Action 1 required for this objective is an inventory assessment of the city's working lands. A project conducted in 2013 by students from the University of California, Los Angeles Luskin School of Public Affairs, produced the report Cultivate L.A. An Assessment of Urban Agriculture in Los Angeles County. This report includes maps of the types of agricultural lands found in Los Angeles, including community gardens, school gardens, nurseries, and farms.

Actions 3 and 4 are both policy and code adjustments. Action 3 states that the city must adopt zoning or development regulations to permit the production and sale of urban agriculture goods. In September 2016, California Governor Jerry Brown passed AB 1616, otherwise known as the California Homemade Food Act. AB 1616 allows foods prepared in homes, referred to as cottage foods, to be sold to the general public. As a state law, the City of Los Angeles is obligated to abide by the law and thus permit the sale of goods. Additionally, the city does not have regulations against the production of urban agriculture goods. Ordinance No. 183474 permits the cultivation of edible plants in parkways. Action 4 requires that the city adopt land use strategies to protect or increase working lands. In 2017, the City of Los Angeles passed

Ordinance No. 185022, known as the Urban Agriculture Incentive Zones. This new zoning law promotes urban agriculture on vacant or unimproved lots by offering property owners reduced property tax assessments in exchange.

Action 8 attempts to provide stakeholders of working lands with specific conservation strategies and programs. These programs can include conservation issues such as drinking water protection, reduction of soil erosion, wildlife habitat preservation, and additional measures. The Natural Resource Conservation Service performed a soil erosions assessment of Los Angeles County, which includes the City of LA.

The City of LA did not meet many actions for Natural Systems Objective 6. For Action 2, best management plans or stewardship plans from local farms must be in the city's natural resource plan. Los Angeles has very few working lands remaining. Consequently, local agricultural lands' management plans are not in the city's natural resource plan. Actions 5 and 6 focus on educating and outreaching to farmers, urban producers, and the general public about best management practices and the value of working lands. Action 7 requires the implementation of financial strategies to help conserve working lands. Finally, Action 9 requires that the city provide future operators of working lands with support in the form of services and programs. However, the City of LA does not prioritize these efforts with minimal working land left within the city boundaries.

Table 15. Natural Systems 6: Working Lands Outcomes and Actions

Outcome/ Action	Achieved?	Evidence
Outcome 1	N/A	N/A
Outcome 2	N/A	N/A
Outcome 3	N/A	N/A

Action 1	Yes	Cultivate L.A. An Assessment of Urban Agriculture in Los Angeles County[94]
Action 2	No	N/A
Action 3	Yes	California Homemade Food Act[95], AB 1616[96]
Action 4	Yes	Ordinance No. 185022[97]
Action 5	No	N/A
Action 6	No	N/A
Action 7	No	N/A
Action 8	Yes	Soil Erosions Assessment by Natural Resource Conservation Service[98]
Action 9	No	N/A
Action 10	No	N/A

Built Environment 2: Community Water Systems

This objective focuses on the development of water-related infrastructure within a community. Within the objective, our team contributed to finding data for Actions 1-3 and 7-11. Action 1 called for the creation of a jurisdiction-wide plan to manage water supply, and stormwater: fulfilled in combination through Los Angeles' 2015 Urban Water Management Plan

[94] "Cultivate L.A.: An Assessment of Urban Agriculture in Los Angeles County." University of California, Los Angeles
[95] Ordinance No. 182474. City of Los Angeles.
[96] Cottage Food Operation - AB 1616. County of Los Angeles Public Health.
[97] "Ordinance No. 185022." City of Los Angeles.
[98] Web Soil Survey. United States Department of Agriculture.

and Enhanced Watershed Management Plans. LA's Emergency Water Conservation Ordinance satisfies Action two, which allows for restrictive water measures to be put in place in times of drought (Action 3). LADWP's Low Income Discount Program (Action 7) supports the Accessibility of water resources for low-income group, and LA demonstrates a continued effort at water infrastructure maintenance through LADWP's Water Infrastructure Plan (Action 8). Investments in new community water-related infrastructure projects receive funding from Proposition O and other initiatives within the city. Specifically, the City of LA earned credit for Action 10 through the integration of a nutrient capture system into the Machado Lake Restoration Project, construction of the Griffith Park South Water Recycling Project, and the Hansen Dam Wetlands Restoration Project. Action 11 called for restoration and maintenance of drinking water bodies, aligning with the goals of LADWP's water quality improvement projects. The City is not expected to receive points for Action 3, which requires the establishment of protocols to ensure clean water supply to low-income residents in case of an insufficient clean water supply scenario, such as the situation in Flint, Michigan.

Table 16. Built Environment 2: Community Water Systems		
Outcome/ Action	**Achieved?**	**Evidence**
Outcome 1	Yes	N/A
Outcome 2	No	N/A
Outcome 3	No	N/A
Outcome 4	No	N/A
Action 1	Yes	2015 Urban Water Management Plan[99], Enhanced

[99] "2015 Urban Water Management Plan," *Los Angeles Department of Water and Power*, LADWP.

		Watershed Management Plans [100]
Action 2	Yes	Emergency Water Conservation Ordinance[101]
Action 3	No	N/A
Action 4	Yes	N/A
Action 5	Yes	N/A
Action 6	No	N/A
Action 7	Yes	LADWP Low Income Discount Program[102]
Action 8	Yes	LADWP Water Infrastructure Plan[103]
Action 9	Yes	Proposition 0 Projects[104]
Action 10	N/A	N/A
Action 11	Yes	LADWP Water Quality Improvement Projects[105]

Survey of Other Cities

The team assessed the practicality and accuracy of the STAR system by sending both cities that have been STAR certified and certain cities that have not been certified a series of questions about the STAR process in an opinion survey. The STAR-certified cities surveyed were Northampton, MA (5-Star), Baltimore, MD (5-Star), Austin, TX (4-Star), Riverside, CA

[100] "Enhanced Watershed Management Plans « City of Los Angeles Stormwater Program," *City of Los Angeles Stormwater Program*.
[101] "Emergency Water Conservation Plan," *LA City Clerk*.
[102] "Low Income Discount Program" *LADWP: Financial Assistance*.
[103] "2016 Water Infrastructure Plan," *Los Angeles Department of Water and Power,* LADWP.
[104] "Proposition O," *Los Angeles Environment and Sanitation*, LA City Sanitation.
[105] "Water Quality Improvement," *Los Angeles Department of Water and Power*, LADWP.

(3-Star), and Goleta, CA (3-Star). Each STAR-certified city received the same series of questions:

1. How did you hear about STAR Communities?
2. Why did you choose STAR over other rating systems? [If they participated in STAR's Pilot program, they were asked, "Why did you choose to participate in the Pilot program?" instead.]
3. What do you think were the main shortcomings of STAR?
4. What do you think are the main strengths?
5. How do you think STAR compares to other rating systems?
6. Do you think STAR has a practical way of rating communities?
7. Your city received a score of _____. Do you think this score accurately represents the actual the sustainability of your city? Why or why not?
8. Your city scored best in _____ category, and worst in _____. Do you agree that these are the city's best and worst categories?
9. After STAR, how does [city] evaluate their sustainability initiatives? Do you still rely on STAR as a guide?

The questions were sent directly to a sustainability coordinator for each city. Answers to a few questions are included in Table 17.The first question received a variety of answers, with cities saying they usually heard about STAR from other people in the same field. For the second question, multiple cities said they liked STAR because many times sustainability is only associated with lowering greenhouse gas emissions or addressing environmental issues, when in

reality sustainability has a much broader scope. For the third question, five out of five cities said the certification process is labor-intensive and cumbersome. Northampton said the cities must give up control of what they are measuring, and this misses unique issues for each community. Riverside said there was minor regional bias, due to the city's geography and atmospheric conditions. Goleta said since the system is so broad, it cannot be tailored to one part of the country. Lastly, Austin said STAR covered too many topics, and after they were certified, the general community did not care about the result. Though the process provided little external benefit to the city in terms of public perceptions, there were some internal benefits, such as seeing where their city stood in terms of sustainability. For question four, all cities said it was very detailed and comprehensive. Austin also added that it was a good framework to follow if cities do not have sustainable city plans.

For the fifth question, all five cities said STAR had a wide breadth, and no other rating system is comparable to it. Riverside commented that it was the "most robust.' Question six received three “yes” responses (Northampton, Riverside, and Baltimore), one "yes and no" (Goleta), and one “no” (Austin). Goleta said that STAR is a good exercise to go through for a city, but the fact that communities have to self-select their answers might skew the results. They also said it was not a complete picture of sustainability. Austin said no because it is not an efficient way to certify. For question seven, Northampton said, "for the most part," because it reflects the hard work they are doing to make their city more sustainable. Riverside said yes, their score was reflective of the city's efforts. Baltimore said "yes and no" because it allowed them to highlight what they were doing in the city, but they had much more to do. Goleta replied "sort of," because they could have scored higher, but the effort to get those points was not worth

it. Austin replied yes. For questions seven and eight, all cities agreed that those were the categories they needed to improve in the most (question seven), and excelled in (question eight). For the final question, Northampton, Riverside, and Baltimore all replied that they rely on STAR somewhat. Austin said they do not because they rely on other metrics defined by the internal government. Goleta, since they were only recently certified, are unsure if they will continue to use STAR. Table 1 shows a summary of each city's response.

Overall the cities gave the system a lukewarm review, with none of them being too enthusiastic about STAR. They all liked how much material is included, but the process of submission was too much work. Several cities also brought up that unique issues in each city are not represented in STAR, and it causes them to miss out points for actions they are doing.

To obtain additional perspectives, cities that had not been STAR-rated were interviewed to understand whether they were aware of the STAR Communities Rating System, and if they had any current interest in achieving a STAR-rating or, if not, why they were not interested. Answers to half of the questions can be found in Table 18. Cities we interviewed were all located in California and included Walnut Creek, San Francisco, Berkeley, Santa Cruz, Malibu, and West Hollywood. Questions distributed to the cities were:

1. Are you aware of the STAR Communities non-profit and their rating tool?
2. Have you considered becoming STAR certified?
    a. Why or why not?
3. How does [city] evaluate their sustainability initiatives?
4. What are some tools that you have utilized to gain a better understanding of where [city] stands in its efforts to become more sustainable?

5. Do you have an opinion on STAR Communities as its effectiveness as a sustainability rating tool?
6. What do you think were the main shortcomings of STAR?
7. What do you think are the main strengths?
8. How do you think STAR compares to other rating systems?
9. Do you think STAR has a practical way of rating communities?

Officials from the cities interviewed stated that while the STAR-rating system seemed like a comprehensive system, they did not have the necessary staff or resources required to appropriately undergo STAR-certification, which can entail a significant amount of time and work. The Cities of Berkeley and Santa Cruz both shared they used rating systems as tools to understand where they could improve and apply these ideas to their plans, but would not undergo certification. San Francisco and Berkeley also shared that a limitation they viewed in a rating system like STAR was that cities could not prioritize what they believed was important to them. San Francisco added that their monitoring systems are specific to their plans and programs, which would make it difficult for a city like them to use a rating system that "would bring it together under one tool." West Hollywood shared that it was interested in pursuing certification and that it believed the STAR Communities Rating System is “THE best Rating System out there to date for rating municipalities in the US.”

Overall, cities that were not STAR-rated reported knowing about STAR Communities Rating Tool, except for Walnut Creek. However, they all demonstrated hesitation when asked

about their intentions to undergo STAR certification at some point in the future, citing concerns about staff and resource availability.

pLAn and STAR Analysis

The Sustainable City pLAn serves as a roadmap for the city in achieving higher sustainability standards in the near future. In respect to the environment, the pLAn aims to address multiple issues ranging from local water sourcing and conservation, to equity for accessible green spaces and pedestrian walkways. To bolster sustainability efforts, the pLAn calls for the city to receive certification as a STAR Community. Through the practicum team's investigation into STAR's environmental categories, we determined that some of the Actions within the STAR rubric are of lesser relevance within such a predominately urbanized city like Los Angeles. In order to evaluate whether STAR aligns with the pLAn's vision for a sustainable Los Angeles, we decided to evaluate STAR sustainability objectives from the perspective of the pLAn. Our pLAn and STAR analysis compares side-by-side whether the STAR rating appropriately satisfies or matches the goal areas of the pLAn. The team collected the various long-term sustainability goals established within the Sustainable City pLAn and attempted to match them with appropriate STAR Community Outcomes and Actions. Table 17 showcases the findings and analysis on whether the team believes STAR appropriately addresses the goal of the pLAn for each goal area.

Similarities

There were multiple areas in which goals outlined in the pLAn directly coincided with those laid out by STAR. For example, the pLAn lays out a goal for local water conservation based on reducing per capita water usage by a certain percentage, a metric directly echoed in STAR's water conservation goals. Other areas where STAR metrics for sustainability directly aligned with those in the pLAn were the pLAn's Climate and Climate Leadership: Greenhouse Gas Emissions and Coal-Free Electricity Goals and pLAn sections- Housing and Development, Preparedness and Resiliency, Environmental Justice and Livable Neighborhoods. We labeled sections as matching where the metrics or indicators used between the pLAn and STAR to measure the cities progress were directly comparable.

Differences

In other areas, STAR was lacking in objectives relating to sustainability goals laid out in the pLAn. For example, STAR lacks Actions or Outcomes directly intended to reduce the dependence of communities on imported water, as laid out in the Local Water-Sourcing goal within the pLAn. Sections of the pLAn with no direct correlate within the STAR system are denoted with a "No" in the matching column within our table.

The absence of some sections of the pLAn within the STAR rating system could be a result of the increased specificity of the pLAn as compared to the general sustainability format of STAR as a system designed to rate a variety of different cities. Sustainability issues in Los Angeles may vary from those in other places in the country, and so it would make sense that a

sustainability plan specifically designed for Los Angeles, as the pLAn is, would have some variation from a more general model of sustainability.

“Yes/No”

The Sustainable city pLAn contains many specific, numerically based goals. Several pLAn sections did not have direct matches regarding metrics used in STAR, but there were actions or outcomes within the STAR Rating System that laid out similar sustainability goals. For these more ambiguous alignments, we denoted "Yes/No" in the match column of our final chart. One example of this partial overlap of goals is the Local Water: Stormwater Quality objective laid out in the pLAn. The pLAn describes a goal of increases in beach water quality GPAs, while the closest corresponding section in STAR is concerned with maintaining fishable and swimmable water bodies. While the two objectives are similar in the overall objective of limiting water pollution to protect recreational uses, the pLAn objective is more specific to Los Angeles, in that the beaches are a major source of recreation and tourism in the city, and their water quality is graded through a beach report card. A second example arises when looking at the Local Solar: Energy Capacity goal outlined in the pLAn. The pLAn calls for an increase in energy storage capacity by a certain number of MW, while the corresponding STAR objective calls for the development of storage capacity to support renewable energy growth. Both goals have the same objective of increasing storage capacity, but the goal of the pLAn is more quantitatively based. Additionally, the city calls for a reduction in municipal energy use by 25% by 2025. While STAR does not directly address a 25% reduction in municipal energy use, several Actions and Outcomes focuses on establishing incentives, policies, and programs that

improve energy efficiency in buildings. Several examples can be seen throughout Table 17 where “Yes/No” is denoted.

Evaluation

Through our comparison, we can see that in many areas STAR and pLAn do have similar goals for environmental protection and citywide sustainability. Even where the metric between the two may differ, often the same overall objective is outlined across the two systems. In some cases, the pLAn may set out more numerically based goals, requiring a more strict interpretation of success. In our view, quantitative goals are usually superior to qualitative goals in setting definitive baselines for achievement, although numeric based goals may be necessarily easier to create on a city by city basis and challenging to incorporate into a general sustainability model as set out by STAR. The differences in STAR and the pLAn based on local issues raise the question of whether a general sustainability model can be applied effectively to a variety of different cities. In some cases, it may be better to adopt more regionally specific sustainability goals and metrics, to maximize progress and benefit to the local communities. Collectively, there is a 28.2% correlation, 33.3% no correlation, and 38.5% ambiguous alignment of pLAn and STAR (Figure 1) Certainly, sections are missing from the STAR system that may be considered essential to Los Angeles' specific sustainability concerns.

STAR evaluates the city on the basis of how well the city has accomplished and attempted to achieve designated goals. While the STAR evaluation system does in some ways effectively rate a city’s sustainability, the benchmark contains some flaws. Specifically for the city of Los Angeles, a number of pLAn objectives are not present in STAR. This indicates that

the city's perception of sustainability does not fall in direct alignment with STAR's vision. The pLAn calls for increasing the percentage electric vehicles in city and increasing number of new housing units along public transit. Both targets to reduce the tailpipe emission and promoting a better environment; however, the STAR evaluation system fails to mention these sustainability goals. Several examples denoted as "No" expresses the discorrelation between pLAn and STAR (Table 19). Overall, our analysis demonstrates that pLAn and STAR target similar sustainability goals in different ways. STAR is a generalized rating system created to be versatile enough to rate various cities and communities across the United States. STAR is not specifically tailored towards any one city, whereas the pLAn was created by the mayor's office to specifically tackle the environmental issues within Los Angeles. While our findings did not address whether the pLAn is objectively better at benchmarking sustainability than STAR and vice versa, we believe that STAR has value as a holistic evaluation of sustainability allowing for cross-city comparisons, while the pLAn generates a more in depth and accurate evaluation of sustainability for Los Angeles.

Discussion

Star Evaluation

The STAR Communities Rating System is a useful tool for mapping out Los Angeles' current sustainability efforts and revealing additional steps that the city could take to become even more sustainable. However, the large amount of categories, actions, and outcomes creates a broad and sometimes biased definition of sustainability. We have learned through literature reviews, interviews with other cities, and through our own experience, that the process of

collecting data for STAR is labor intensive enough to prevent cities from completing or even starting the verification process. Most cities in America do not have staff specifically focused on environmental sustainability, and those who do usually have limited staffing resources. Self-reporting can present a considerable burden to a limited staff, and funds may not be able to hire a third party or an intern to complete the work. Additionally, cities may not have other relevant resources to complete certification, resulting in a difficulty in completing some sections. For example, CE 2 Outcome 1 required the community to show how much GHGs the city emitted over several years. GHG emission inventories to determine this can cost thousands of dollars to complete for cities, and may not be included in their budget. Also, based on past certification pattern, it seems that it may be easier to become STAR-certified for cities with small populations. The city with the highest population to become certified was Houston, TX (3-STAR), with a population of 2.1 million. Only three cities (including Houston) have been STAR-certified with populations exceeding one million, and none of them were 5-STAR certified. This puts Los Angeles at a disadvantage due to their large population (3.85 million). Further research can explore the reasons behind this.

The amount of detail contained within STAR supports the system's utility as a general outline for cities to use to model their own sustainability plans. Within each category, outcomes begin with an assessment of an environmental condition, while the following actions support advancement of the environmental condition through policies and programs. Actions in the STAR Framework can contribute significantly to a cities score, and points earned can make up for a lack of demonstrated outcomes. A city can earn 4 stars through completion of actions alone, lending significant weight to a cities intention for sustainability rather than focusing on

environmental progress. Because the framework allows so many points to be obtained from actions alone, some cities have admitted that any community can achieve certification if they 'dig deep enough' into their policies[106]. Additionally, cities that are doing well in terms of sustainability may struggle to fulfill the actions and get a lower score than deserved if the outcome was achieved in a way not captured through STAR's actions.

A consequence of having a general and adaptable rating system is that the framework does not have room to highlight where the city is putting in a great amount of effort to change. The documentation process can feel limiting because there are many objectives with actions that only ask for one program or policy to verify the city's efforts. However, the city may have multiple programs, while only obtaining credit for the one relevant action. For instance, education and outreach programs for environmental justice or climate adaptation are being enacted by multiple nonprofits and educational collaboratives, and this increased depth of action is not taken into account. It is important to consider how a rating system like STAR can both highlight a city's local achievements yet also be less burdensome in required workload.

The STAR Communities Rating System can be compared to LEED Buildings (Leadership in Energy and Environmental Design[107]) as both are environmental non-governmental organizations that have individuals/groups apply to be rated by the organization. LEED is older than STAR and has gone through multiple revisions and updates during the years to make it the renowned and respected organization it is today. When LEED first started, however, it ran into very similar obstacles to what STAR is currently facing. People complained that the process was too work-heavy, that certification was too expensive, and that

[106]Elgert, L. (2016). "The double edge of cutting edge: Explaining Adoption and Non-adoption of the STAR Rating System and Insights for Sustainability Indicators, In Ecological Indicators"
[107] Leadership in Energy and Environmental Design, https://new.usgbc.org/leed.

upon completion no one understood the significance of the certification. To fix these issues, LEED streamlined their program and reduced the workload required. Not to say that LEED has fixed all problems, as oversights such as not taking into account where the building is located are still present. For example, one could build a platinum-certified (the highest rating) building on a wetland. STAR Communities Rating System has already updated their rating system once, which bodes well for improvements in the future.

Policy Gaps and Los Angeles Sustainability

Los Angeles has a unique sustainability history that continues to be challenged by its geography, social dynamics, and built environment. Although there may be some inaccurate representations within specific objectives, we believe STAR has provided a fair assessment for gauging the city's sustainability efforts and achievements overall.

Geographically, Los Angeles is a valley surrounded by mountains that trap air pollution as it is created and swept in by the ocean breeze. This geography results in some of the nation's worst air pollution even though Los Angeles currently has its best air quality in over 40 years.[108] STAR's objective for Outdoor Air Quality requires the outcome of increased attainment and maintenance status for criteria pollutants, which Los Angeles struggles to achieve. Currently, the actions make up a more significant portion of the points achieved for the category. But to improve air quality in the region to the point of achieving the desired outcomes, the city needs to go beyond current actions. Recommendations include increasing the use of electric vehicles, improving public transportation, decreasing stationary emissions such as buildings and industrial

[108] Gold, M., Pincetl, S., & Federico, F. "2015 Environmental Report Card for LA County." *UCLA Institute of Environmental Science.*
https://www.ioes.ucla.edu/wp-content/uploads/report-card-2015-2.pdf

sources. The worst polluted areas, along freeways, the ports, and industrial areas, should be targeted first. Alleviating air pollution in these regions will also help the city achieve environmental justice goals because these regions tend to coincide with low-income residents and minorities.

Other challenges in Los Angeles involve greater environmental justice issues. As a highly urbanized area, Los Angeles has great social and economic diversity. The city of Los Angeles is addressing these diverse needs by incorporating equity into the pLAn, and their efforts are appropriately acknowledged through the STAR Framework. Goals such as having a zero-emissions transport of goods from the ports will improve overall air pollution and pollution in burdened communities. Clean Up Green Up is providing stricter permitting access to industry into the three most vulnerable communities: Wilmington, Pacoima, and Boyle Heights. New emitters of pollution must now be enclosed and ventilated as is seen in wealthier communities. However, existing emitters do not have to make adjustments. Many Angelenos live uncomfortably close to open oil drilling operations and targeting new operations will not make a dramatic change any time soon. Additional ordinances could further these changes. Actions from STAR that the city could implement include community benefit agreements for remediation and improvements in monitoring and enforcement of existing facilities in burdened neighborhoods. With over 19% of the city's most sensitive population living in the worst polluted areas[109], improvements in these areas will have a far-reaching impact.

Climate change will exacerbate adverse conditions and those most vulnerable are predicted to face the worst impacts. It is necessary for a sustainable city to prepare in advance

[109]Gold, M., Pincetl, S., & Federico, F. "2015 Environmental Report Card for LA County." *UCLA Institute of Environmental Science.*

which Los Angeles has done through participating in 100 Resilient Cities, creating a resilient plan and report, and by having several partnerships with research institutions and climate impact collaboratives. These academic partnerships will continue to inform the city on the best climate science so that they can make informed decisions. The UCLA 2017 Environmental Report Card, for example, suggests that the city is still far too reliant on coal and needs to reduce fossil fuel emissions. The report card also mentions that building energy use has not significantly decreased in the past years and that existing buildings need to adjust to further reductions. Reduction of greenhouse gas emissions is critical to slow down the acceleration of global warming. STAR addresses these concerns through the subcategories in their Climate Adaptation category, and the City's efforts are well reflected.

Los Angeles scores well in objectives involving water usage, protection, and sustainability. The pLAn has contributed to this, as well as California Governor Jerry Brown's declaration of a State of Emergency due to drought. These conditions prompted the passing of ordinances such as EBEWE (Existing Building Energy and Water Efficiency) to mandate that not only new construction but also existing buildings have water efficiency standards. In addition, Los Angeles has shown an annual decrease in water usage according to the pLAn third annual update.

One area where the city falls short in relation to STAR is in implementing strategies to improve its biodiversity, protect its native species, and remove invasive species. Los Angeles began working on biodiversity with the adoption of the Biodiversity motion on May 10, 2017. The motion included three objectives that involved creating an index, policies, and projects and options for the community to promote biodiversity and the conservation of the urban ecosystems

present. Los Angeles completed a similar index to the Singapore Index of Cities' Biodiversity, with indicators created to measure Los Angeles' biodiversity. Also, no buffer zones exist to protect wetlands or natural water bodies. Los Angeles demonstrates steps toward achieving the objectives outlined by STAR, but still lacks management and legislation concerning invasive species, as well as programs and educational services on the topic.

In addition to these conclusions we have highlighted policies that could be suitable for making Los Angeles environmentally healthy, resilient and equitable. These recommendations will also help the city secure a rating of 4 stars, and can be found in our appendix. We have separated these recommendations into STAR based recommendations and general advice for leading a sustainable city.

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Appendix

STAR Based Recommendations

- According to the pLAn, Los Angeles has the most solar power than any other city in the nation. It should therefore qualify to be a solar-ready community. (Awards 1 more point to CE3)
- While the city has reduced GHG emissions, they are not yet on track to meet these goals, so the city is expected to receive partial credit. The city should continue its efforts to achieve 80% reduction in GHG emissions by 2050. (Awards 15 points to CE2)
- To get a better sense of the local footprint, the city should increase its monitoring. Outcomes 2 and 3 are not achieved from Objective CE6 as STAR requires the city to demonstrate a reduction of water usage in city facilities and infrastructure. Los Angeles does not have data for each infrastructure type and therefore does not receive credit. (Awards 10.5 points to CE6)
- Actions from STAR that the city could implement include community benefit agreements for remediation and improvements in monitoring and enforcement of existing polluting facilities in burdened neighborhoods. The ombudsperson established by CUGU helps with new businesses complying with regulations but could fulfill this action by also monitoring existing facilities (Awards 2 more points to EE3).
- While the city has generated buffer zones within the city's General Plan, the buffer zones focus on development buffers rather than conservation buffers. The city of Los Angeles needs to generate a plan that establishes buffer zones for ecosystem protection, especially for bodies of water. (Awards 3 points to NS3)
- Los Angeles has several programs devoting public funds to green infrastructure development, including project funded through Proposition O. However, the City would achieve more points under STAR if they could show that a certain percentage of stormwater funds were invested in green infrastructure development. (Awards 6 points to NS1)
- One area where the City of Los Angeles could obtain a significant amount of points is in relation to the biodiversity and invasive species goals outlined in NS2. The City of Los Angeles is currently lacking in policies relating to native plant promotion and invasive species policies. This is an area in which Los Angeles could both fill a gap in city sustainability and increase their STAR score. (Awards 19 points to NS2)

Sustainability Recommendations

- Clean Up Green Up states new emitters of dust and smoke pollution must now be enclosed and ventilated. However, existing emitters do not have to make adjustments. Many Angelenos live uncomfortably close to open oil drilling operations and targeting new operations will not make a dramatic change any time soon. Additional ordinances could further these changes.
- To improve air quality and local ghg emissions the the city needs to go beyond current actions. Recommendations include increasing the use of electric vehicles, improving public transportation, decreasing stationary emissions such as buildings and industrial sources. The worst polluted areas, along freeways, the ports, and industrial areas, should be targeted first.

- Include more considerations, like best a farm's best management practices plans, for agricultural lands into Los Angeles' land management plans. Also, provide more educational resources for citizens interested in agriculture and existing farmers. Finally, work to provide future operators of working lands with support in the form of services and programs.

Table 17

City	What do you think were the main shortcomings of STAR?	What do you think are the main strengths?	How do you think STAR compares to other rating systems?	Do you think STAR has a practical way of rating communities?	Do you think the score accurately represents the actual the sustainability of your city?
Northampton	Labor-intensive, "dilutions" of different approaches, giving up control of what they are measuring and missing unique issues for each community	National norming, third party review, comprehensive framework, support, ease of use, detailed	More comprehensive, relevant, robust	Yes, but it leaves out issues that are hard to measure, and is not perfect	For the most part, represents hard work they are doing
Riverside	Regional bias, time-consuming, cumbersome	Measures quality of life, encouraged collaboration	Most robust information with objective baselines	Yes	Yes
Baltimore	Sheer volume of information needed and time to gather it is daunting	Comprehensive look at sustainability through many sectors	Rigorous reporting with checks and balances	Yes	Yes and no
Goleta	Tailored to local government, some information needed was confidential, not really tailored to one part of the country	Staff was supportive, has structure, encompassed a lot including business	N/A	Sort of, good exercise to go through, self-selecting might skew results, not a complete picture	Sort of, could have scored higher but the effort to get those points was not worth it
Austin	Covers too many	Comprehensive,	Nothing	No, not efficient	Yes

	things, very large and burdensome, large commitment. Hard to create useful things out of it when it is done, people didn't care about it only good internally	benchmarking is useful, focuses on all the right things, provides guidance, if cities don't have sustainability plans it is useful	comparable to it, has large breadth		

Table 18

City	Have you considered becoming STAR certified? Why or Why Not?	What do you think were the main shortcomings of STAR?	What do you think are the main strengths?	How do you think STAR compares to other rating systems?	Do you think STAR has a practical way of rating communities?
San Francisco	Not heard anyone discuss this option, so do not know concretely, but based on other conversations the past few years, I can surmise it's a combination of: (a) do not have the staffing or budgets to justify the investment in a 3rd-party outside certification; (b) the City typically feels that between all of our green building, LEED, open space, sustainability plan from 1997, and other requirements we are heading in the right direction, although of course a rating tool would help communicate that; (c) we do not have consistent or easy access to data across those topic areas, especially for things involving	In my limited experience, I would say cities might wish the framework had some organizational or prioritization flexibility so communities can personalize the topic categories to what they are most dealing with. Also, the staff time estimates are significant and potentially underestimated because much would be dependent on ease of data availability and use.	Helping folks think more comprehensively about sustainability and identify efficiencies / co-benefits with things they are already doing.	It would be interesting to compare, we have studied EcoDistricts, UN SDGs, LEED neighborhood, and what other major cities are doing -- most of our peers seem to have developed their own frameworks and ways to measure/monitor them, not sure what that says about STAR	N/A

	non-city entities like utilities; (d) the community is not asking for it; (e) our department of public health just launched it's next gen indicators project, which you might find interesting (f) right now we are simultaneously working on the City's Climate Action Strategy update, Hazard and Climate Resilience Plan, sea level rise adaptation, Resilient SF, anti-displacement strategy, and SF Planning has been developing a sustainable neighborhood framework that will more consistently integrate environmental sustainability goals into neighborhood scale planning in new and existing communities				
Berkeley	Staff and capacities levels are tied; engaged in climate sustainability initiatives like Compact of Mayors; those projects already take up a large amount of time	N/A	Like how STAR tries to make things holistically, but the city isn't large and the office focuses	N/A	Amount of work matters; city doesn't want to put in the work and get in a 3 at the end; already reporting to other projects

	(reporting); also try to update climate action plan annually		on energy and sustainable development		
Walnut Creek	No, not familiar with the program	N/A	N/A	N/A	N/A
Malibu	Not at this time. Malibu is currently focusing on developing a sustainability plan, enrolling in a rating system would be down the line for the City.	Don't know much about STAR, but based on a brief review of the website map, it looks like STAR lacks participation from model sustainability cities in California.	N/A	N/A	N/A
Santa Cruz	Yes; Won't do it, don't have the capacity; no funding; already report for the Compact of Mayors, to CDP, to city council annually; there is a cost to applying	Don't like that cities of all sizes are compared; tools from CDP can filter for smaller cities and coastal cities	Like the idea that cities across the US are standardizing along reporting platforms	N/A	N/A
West Hollywood	Yes, we have considered becoming STAR certified. The City of West Hollywood has been committed to sustainability for a long time and has worked hard to weave this	STAR, similar to LEED, is a national standard. So there are certain aspects of the program that we just do not qualify for as a	Having a benchmarking tool to set the City's baseline for sustainability and measure itself against is super helpful. STAR criteria,	I appreciate STAR's technical rigor and the work it took to distill the many possibilities for rating system categories for cities into several	Yes, based on all the above, I think the rating system is likely THE best Rating System out there to date for rating municipalities in the US.

	concept into not only its core values, but in everything we do at the City and for the community. We just completed a feasibility assessment to determine if in fact we could qualify for a STAR certification rating.	1.9-square mile city within the vast LA region. We do think it is fantastic that we can rely on regional or County data for some of the criteria, but there will be others that just don't fit our physical makeup. This is not a shortcoming per se, but is just a reflection of our experience.	in its diversity, forces us to consider all three E's of sustainability – equity, environment, economy – and how we are doing against the full concept spectrum.	relevant Focus Areas. Now understanding how much effort and work it takes to document our City's performance against set metrics will make us proud to be a STAR certified community (if we officially pursue it) and if achieved, feel confident that we are among peers with a similar stewardship for sustainability.	

Table 19: pLAn and STAR Analysis

pLAn	Description	STAR	Description	Does it match?	Notes
Local Water- Sourcing	Reduce Department of Water & Power (DWP) purchases of imported water by 50% by 2025, and source 50% of water locally by 2035, including 150,000 acre-feet per year (AFY) of storm water capture.	BE-2 Outcome 2	Option B: Demonstrate that the ratio of water withdrawals for human use to the total renewable, stored, and allocated water resources is less than 0.2 [Partial credit applies]	No	the STAR objectives that most closely match are more concerned with not overdrawing and maintaining an abundance of water resources. There does not seem to be a distinction between imported and local water.
		NS-5 Outcome 1	Option A: Demonstrate a local Watershed Health Index of greater than or equal to 70--OR— Option B: Demonstrate that the amount of water withdrawn from the system for human uses does not exceed the amount of freshwater entering the system through precipitation, river flow, and other sources (can use imported water)		

		NS-5 Outcome 2	Demonstrate a local Watershed Vulnerability Index of less than 70		
Local Water-Conservation	Reduce average per capita water use by 22.5% by 2025 and 25% by 2035	CE-5 Outcome 1	Option A: Demonstrate achievement of 10% reduction in community domestic water use per capita since 2010 --OR---Option B: Reduce local domestic water use per capita at a rate of 2% per year from a 2010 baseline [Partial credit applies]	Yes	STAR and the pLAn both lay out objectives for a decrease in per capita water use.
		CE-5 Actions	Different policies to achieve water conservation		

Local Water- Stormwater Quality	Improve beach water quality grade-point average (GPA) to: 3.9 (dry) and 3.2 (wet) by 2025, and 4.0 (dry) and 3.5 (wet) by 2035	NS-5 Outcome 3	Option A: Demonstrate that all non-industrial water bodies are swimmable and fishable during 90% of days in the past year□--OR--□Option B: Demonstrate a steady reduction in water closures of at least 2% annually towards achieving 90% of days being swimmable and fishable [Partial credit applies]	Yes/No	The STAR objective mentions ensuring that water bodies are fishable and swimmable most of the year, a similar objective to protecting beach water quality. Different metrics are used, and the pLAn objective is focused solely on beach water quality.
Local Water- Sewer Spills	· Reduce number of annual sewer spills to fewer than 100 by 2025 and less than 67 by 2035	BE-2 Outcome 3	Demonstrate that all NPDES permit holders, including publicly owned treatment works (POTWs), are in compliance with Clean Water Act effluent and reporting guidelines	Yes/No	There are not STAR objectives specifically concerned with reducing sewer spills, they are more focused on NPDES permit compliance. Sewer spills vs permit compliance.
		BE-2 Outcome 4	Comply with all NPDES permit requirements for MS4s, construction activities, and regulated industrial activities		

Local Solar- Solar Power	Increase cumulative total megawatts (MW) of local solar photovoltaic (PV) power to: 900-1500 MW by 2025, 1500-1800 MW by 2035	CE-3 Outcome 2	Option A: Demonstrate that the community's overall electric utility generating capacity includes a portion from renewable energy sources [Partial credit available]--OR— Option B: Demonstrate that the community's electric utility is in compliance with RPS requirements and document the portion from renewable energy sources [Partial credit available]	Yes/No	The STAR objective focuses on increasing the relative proportion of renewable energy in a community, however it is not so specific as in the pLAn that outlines the specific amounts of energy we are looking to gain with solar. LA more targeted and specific.
		CE 3 Actions	other CE-3 actions list policies to help increase renewables in a community		

Local Solar-Energy Storage	Increase cumulative total MW of energy storage capacity to at least: 1654-1750 MW by 2025	CE-3 Action 10	Build the necessary distribution or storage infrastructure to support further investment in renewable energy sources	Yes/No	The STAR action mentions building up storage for renewables, but no specific numbers are named.
Energy Efficient Buildings - Energy Use	Reduce energy use per square foot below 2013 baseline — for all building types — by at least: 14% in 2025 and 30% by 2035	CE-6 Outcome 2	Part 1: Demonstrate local government building stock energy use intensity is below the regional aggregated energy use intensity per building type [Partial credit available]--AND--Part 2: Demonstrate a 10% decrease in local government-owned public infrastructure energy use [Partial credit available]	No	There is no STAR objective that looks at reducing energy efficiency in all buildings per square foot. However, the STAR Outcomes do include measures to decrease energy use in local government buildings, community buildings, and to adopt plans or new building codes that could be used to achieve the goal outlined in the pLAN. Is the pLAns metric a good metric?
		CE-4 Outcome 1	Part 1: Demonstrate incremental progress towards achieving an 80% reduction by 2050 in energy used by community buildings or industrial processes--OR--Part 2: Demonstrate		

			incremental progress towards achieving an 80% reduction by 2050 in energy use within specific residential, commercial, and industrial sectors [Partial credit available]		
		CE-4 Action 1	Adopt a strategic action plan to improve the energy efficiency of residential and commercial buildings and industrial processes in the community		
		CE-4 Action 2	Adopt or upgrade building codes to ensure that new and renovated buildings are more energy efficient		

Energy Efficient Buildings - Energy Efficiency	Use energy efficiency to deliver 15% of all of LA's projected electricity needs by 2020, including through rebates, incentives, and education:	CE-4 Action 4	Create an education and outreach campaign or challenge to engage residents in energy efficiency efforts	Yes/No	There are several STAR Actions that involves educating and promoting energy efficiency; however, the targeted 15% mentioned in pLAn was not highlighted/mandated in STAR.
		CE-4 Action 5	Establish a committee to provide recommendations on policies related to energy efficiency in buildings OR integrate this role into the work of existing committees		
		CE-4 Acton 8	Create incentives to encourage the new construction of energy efficient buildings		

		CE-4 Action 9	Create incentives for businesses, lessors, homeowners, and renters to improve the energy efficiency of their existing buildings and homes		
		CE-4 Action 10	Create local program specifically helping low-income households reduce energy-related burdens		
		CE-4 Action 11	Work with the local utilities to implement energy commissioning programs throughout communities		

Carbon & Climate Leadership - Greenhouse Gas Emissions	Reduce GHG emissions below 1990 baseline by at least: 2025: 45%; 2035: 60%; 2050: 80%	CE-6 Action 4	Develop a local government sustainability action plan that includes strategies related to greenhouse gas emission mitigation, energy efficiency, and water conservation	Yes	The STAR action addresses GHG emission reduction, but does not specify the pLAn's target dates and percentage . The Outcome express the goal of pLAn but does not share the same target values.
		CE-2 Outcome 1	Demonstrate incremental progress towards achieving a 28% reduction by 2025 and/or an 80% reduction by 2050 in community wide greenhouse gas (GHG) emissions		
Carbon & Climate Leadership - GHG Efficiency	Improve GHG efficiency of Los Angeles's economy from 2009 levels: 2025: 55%; 2035: 75%	CE-6 Action 4	Develop a local government sustainability action plan that includes strategies related to greenhouse gas emission mitigation, energy efficiency, and water conservation	No	The STAR Action promotes GHG efficiency, but does not specify the pLAn's target dates and percentage

Carbon & Climate Leadership - Climate Leadership	Influence national and global action through the leadership of LA and other cities on climate change			No	STAR focuses mainly on a city/community level. No Actions regarding this topic is found.
Carbon & Climate Leadership - Coal - Free Electricity	Have no ownership stake in coal-fired power plants by 2025	CE-6 Action 5	Create a policy to ensure that the local government's energy supplies increasingly come from renewable sources	Yes	STAR Action addresses the goal but does not establish target date
Waste & Landfills - Landfill Diversion	Increase landfill diversion rate to at least: 2025: 90%; 2035: 95%	CE-7 Action 1	Adopt a waste management plan	Yes/No	There are several STAR Actions that address and targets landfill diversion; however, it does not propose a reduction requirement or target year.

		CE-7 Action 2	Adopt specific product bans that will significantly advance progress towards waste reduction goals		
		CE-7 Action 4	Develop or participate in a regional coalition that enhances the community's ability to address waste management targets		
		CE-7 Action 5	Implement community wide incentives or enforce regulations ensuring that residents and businesses are working toward community waste reductions targets		

		CE-7 Action 6	Provide services to enable residents and businesses to recycle and reduce their waste footprint		
		CE-7 Action 7	Collaboratively create and run at least 3 targeted recycling programs at key locations throughout the community		
		CE-7 Action 8	Operate at least 3 specific waste management programs for critical waste stream types found in the community, such as: organic waste, hazardous waste, electronic waste, and construction and demolition waste		

		CE-7 Action 9	Create a Materials Recovery Facility for the community or demonstrate that community waste is diverted to a regional Materials Recovery Facility		
Waste & Landfills - Local Reuse	Increase proportion of waste products and recyclable commodities productively reused and/ or repurposed within LA County to at least: 2025: 25%; 2035: 50%	CE-7 Action 1	Adopt a waste management plan	Yes/No	The STAR Action targets waste management with regard to recycling and repurposing. Some Actions propose a multi-community approach in addressing the issue; however, it does not suggest a target reduction percentage or year.
		CE-7 Action 6	Provide services to enable residents and businesses to recycle and reduce their waste footprint		

		CE-7 Action 7	Collaboratively create and run at least 3 targeted recycling programs at key locations throughout the community		
		CE-7 Action 8	Operate at least 3 specific waste management programs for critical waste stream types found in the community, such as: organic waste, hazardous waste, electronic waste, and construction and demolition waste		
		CE-7 Action 9	Create a Materials Recovery Facility for the community or demonstrate that community waste is diverted to a regional Materials Recovery Facility		

Economy- Housing and Development: New Housing	Increase cumulative new housing unit construction to: 100k in 2021, 150k in 2025, 275k in 2035	BE-4 Outcome 2	Option A: Achieve targets for creation of new subsidized affordable housing identified in a locally adopted comprehensive housing strategy--OR—Option B: Demonstrate new affordable housing starts are being produced at a rate of 5% annually	No	The pLAn goal focuses on overall new housing, while STAR is more concerned with the production of a higher percentage of affordable housing.
Economy- Housing and Development: Transit Oriented Development	Ensure proportion of new housing units built within 1,500 feet of transit is at least: 57% in 2025, 65% in 2035	BE-7 Action 7	Increase the percentage of households with access to public transit	No	STAR does not have an objective concerned with building new housing near transit. There are objectives for increasing access to transportation from housing, but on the side of expanding the transportation systems. BE-5 Concerned with infill and redevelopment
		BE-5 Action 4	Use regulatory and design strategies to encourage compatible infill and redevelopment with a mix of housing types in neighborhoods close to employment centers, commercial areas, and where public transit or		

			transportation alternatives exist		
Economy- Housing and Development: Total Affordability	Reduce the number of rent-burdened households by: 10% in 2025, 15% in 2035 (defined as spending 30% or more of income on rent, 61.7% of renters in 2012)	BE-4 Outcome 1	Part 1: Demonstrate that there are at least 80% of Census block groups where a household earning the Area Median Income (AMI) would spend less than 45% on housing and transportation combined [Partial credit available]--AND--Part 2: Demonstrate that there are at least 60% of Census block groups where a household earning 80% AMI would spend less than 45% on housing and transportation combined [Partial credit available]	Yes	Both the pLAn and STAR have objectives that focus on affordable housing, however the STAR objective combines this metric with affordable transportation costs. Additionally, they have different end goals, although similar in effect.
		BE-4 Outcome 3	Option A: Demonstrate no loss of subsidized affordable housing units due to expiring subsidies in the past 3 years--OR—Option B: Demonstrate that any loss of subsidized affordable housing units is being replaced		

			with new affordable housing production [Partial credit applies]		
Economy- Mobility and Transit: Vehicle-Miles Traveled (VMT)	Reduce daily VMT per capita by at least: 5% in 2025 and 10% in 2035	BE-7 Outcome 4	Demonstrate an annual decrease in vehicle miles traveled measured from a baseline year	Yes	STAR does not include actual values but same goal.
Economy- Mobility and Transit: Mode Share	Increase the percentage of all trips made by walking, biking, or transit to at least: 25% in 2025 and 50% in 2035	BE-7 Outcome 1	Achieve the following thresholds for journey-to-work trips: Drive alone maximum: 60% Bike + Walk + Transit minimum: 25%Bike + Walk minimum: 5%	Yes	Both have outcomes focused on increasing trips made by biking and walking with set percentage goals.
Economy- Mobility and Transit: Shared Transportation	Increase number of trips through shared services, including car share, bike share, and ride share to at least: 2% in 2025 and 5% in 2035	BE-7 Action 10	Establish or support a communitywide public bike share program	No	STAR does have some actions relating to bike sharing and ride sharing but does not set shared transportation goals as in the pLAN.

		BE-7 Action 5	Offer local government employees incentives to commute by modes other than single-occupancy vehicles (incl ride sharing)		
Economy- Prosperity and Green Jobs: Green Jobs	Increase green jobs in LA by at least: 72,500 by 2025 and 150,000 by 2035	EJ-2 Action 1	Amend existing local economic plans and strategies to focus market demand for green jobs, technology, products and services	Yes/No	STAR has some objectives aimed at increasing green jobs and focusing job growth but does not set explicit goals for green job growth as in the pLAn.
		EJ-5 Outcome 2	Increase total employment in targeted industry sectors over time [Partial credit available]		

Economy- Prosperity and Green Jobs: Green Investment	Increase green investment in LA by at least:$750 million by 2025 and $2 billion by 2035	EJ-2 Action 1	Amend existing local economic plans and strategies to focus market demand for green jobs, technology, products and services	Yes/No	STAR has various investment objectives but no one that outlines an objective for green investment.
Economy- Prosperity and Green Jobs: Employment	Eliminate unemployment rate gap between City of LA and LA County from today's gap: .35% by 2025 and 0% by 2035	EJ-1 Outcome 2	Part 1: Demonstrate the percentage change between the jurisdiction's employment rate and the national rate is 10% or better [Partial credit available]--AND--Part 2: Demonstrate the percentage change between the jurisdiction's unemployment rate and the national rate is 10% or better [Partial credit available]	No	Both objectives are about limiting the unemployment gap, but between the city and the country vs nation.

Economy-Preparedness and Resiliency: Urban Heat Island	Reduce urban/rural temperature differential by at least: 1.7 degrees in 2025 and 3 degrees in 2020	CE-4 Outcome 2	Option A: Demonstrate that 85% of the population lives within a reasonable distance from a heat island mitigation feature that provides 1 of the following functions:localized cooling through tree canopy cover, green roofs or green walls;white roofs or cool roofs; and/or light colored pavement or groundcover--OR--Option B: Demonstrate that the surface temperature of the community is no more than 5 degrees Fahrenheit higher than surrounding suburban or rural areas when measured on a summer and winter night	Yes	Both objectives have provisions for decreasing the urban rural temp differential, the pLAn to a higher degree than required in the STAR objective.

		CE-4 Action 7	Develop a heat island mitigation program		
Economy-Preparedness and Resiliency: Return to Normal	· Improve our preparedness and resiliency so the city and commercial activity can “return to normal” after a disaster as quickly as possible, · Develop measurable targets for post-disaster service restoration in the areas of water, electricity, communications, and surface transportation, Develop measurable targets for post-disaster service restoration by Tier 1, 2, and 3 City Departments	HS-3 Outcome 3	Option A: Demonstrate that the emergency management community is prepared to manage emergency incidents involving all threats and hazards [Partial credit available]--OR--Option B: Demonstrate that the local government has received accreditation by the Emergency Management Accreditation Program (EMAP)	Yes/No	Both have objectives with similar goals of disaster preparedness and resiliency.

		BE-2 Action 3	Establish protocols in the case of insufficient clean water supply to meet the needs of low-income and other vulnerable populations		
		HS-6 Outcome 2	Demonstrate a measurable reduction in vulnerability and/or increase in resiliency to existing communitywide hazard threats over time		
		HS-6 Action 2	Develop a post-disaster plan that addresses long-range redevelopment issues such as land use, economic development, housing, infrastructure, public services, and environmental restoration		

Equity - Air Quality Attainment	By 2025, we will have zero days when air pollution reaches unhealthy levels	NS-4 Action 2	Collaborate with local industrial operations to reduce and minimize the release of criteria and hazardous air pollutants in the community	Yes/No	Both place listed helps reduce air pollution, but it does not highlight the goal of generating Zero days of unhealthy air pollution levels
		NS-4 Action 3	Collaborate with local industrial operations to reduce and minimize the release of noxious odors in the community		
Equity - Electric Vehicles	Increase the percentage of electric and zero emissions vehicles in the city to: 2025: 10%; 2035: 25%	CE-1 Outcome 1	Option A: Demonstrate that the number of private and public electric vehicle stations meets or exceeds 1.07 per 10,000 residents--OR--Option B: Demonstrate that the number of private and public alternative fuel stations meets or exceeds 1.52 per 10,000 residents [Partial credit applies]	No	No STAR Actions involves introduction of electric or zero emission vehicles, just fuel stations for these vehicles.

Equity - Goods Movement	Increase the percentage of Port-related goods movement trips that use zero-emissions technology to at least: 2025: 15%; 2035: 25%			No	No STAR Actions involves transportation of goods.
Equity (EJ) - Respiratory Illness	Reduce the number of annual childhood asthma-related emergency room visits in LA's most contaminated neighborhoods to less than: 2025: 14 per 1000 children; 2035: 8 per 1000 children	EE-3 Action 8	Monitor and enforce environmental regulations for existing facilities that impact prioritized environmental justice sites and overburden neighborhoods	No	Both STAR Actions involves creating programs to mitigate environmental factors that disproportionately affect a community, but it neither specify asthma-related incidents nor target reduction
		EE-3 Action 9	Implement projects to reduce exposure to contaminants and risks associated with environmental justice conditions		

Equity (EJ) - Food Deserts	Ensure all low-income Angelenos live within ½ mile of fresh food by 2035	EE-3 Action 5	Incorporate environmental justice criteria and priorities into zoning, land use planning, permitting policies, and development of new projects	Yes	The STAR Action promotes better zoning however it does not specify reduction of food deserts. STAR Outcome does not indicate the 1/2 miles but rather a minimum 1/4 miles.
		HS-4 Action 11	Support programs that enable healthful retail food outlets to locate in underserved areas, promote mobile vendors that only sell fresh food, or increase the mix of healthful food sold in existing establishments		
		HS-4 Outcome 2	Demonstrate an increase over the past 3 years in the percentage of residents within a walkable 1/4-mile of a healthful retail food outlet		

Equity (EJ) - Improving Most Impacted Neighborhood	Reduce the number of census tracts in the top 10% of CalEnviroScreen by: 2025: 25%; 2035: 50%			No	No STAR Actions regarding the reduction of rank in any quintile ranking. There are, however, Actions that involves planning in mitigating/reducing environmental issues
Equity (Urban Ecosystem) - Los Angeles River	· Complete 32 miles of river public access within the city of LA by 2025 · Complete or initiate restoration work on 8 “reaches” identified in the Area with Restoration Benefits and Opportunities for Revitalization (ARBOR) Study by 2035	NS-3 Action 1	Develop a plan to protect and restore natural resources through land conservation, corridor connectivity, and restoration of biological integrity and function	Yes/No	
Equity (Urban Ecosystem) - Park Access	Ensure proportion of Angelenos living within 1⁄2 mile of a park or open space is at least: 2025: 65%; 2035: 75%	BE-6 Action 3	Adopt regulatory strategies or development incentives to create, maintain, and connect public parkland	Yes	

		BE-6 Outcome 2	Demonstrate that housing units are located within a ½-mile walk distance of public parkland based on population density as follows: • High or Intermediate-High: 85% or greater • Intermediate-Low or Low: 70% or greater		
Equity (Urban Ecosystem) - Urban Agriculture	Increase number of urban agriculture sites in LA from the 2013 baseline by at least: 2025: 25%; 2035: 50%	HS-4 Action 2	Adopt zoning and development regulations that allow farmers markets, community gardens, and other forms of urban agriculture that promote increased food access	No	
Equity (Liveable Neighborhood) - Walk Score	Increase LA's average Walk Score to 75 by 2025	BE-7 Action 3	Subdivision and other development regulations require walkability standards that encourage walking and enhance safety	Yes	Multiple STAR Actions that promotes walkability of the city but does not mention target Walk Score 75, only 70

		BE-7 Action 7	Increase the percentage of households with access to public transit		
		BE-7 Action 8	Increase the mileage of sidewalks, particularly on arterial or collector roads,that connect people with destinations		
		BE-7 Action 10	Establish or support a communitywide public bike share program		

		HS-1 Action 6	Achieve recognition as a Bicycle-Friendly Community or Walk-Friendly Community OR achieve an average community Walk Score or Bike Score of 70 or above		
Equity (Liveable Neighborhood) - Pedestrian/Bike Safety	Implement Vision Zero policy to reduce traffic fatalities	BE-7 Action 1	Adopt a bicycle and/or pedestrian master plan that prioritizes future projects to improve safety and access to non-motorized transportation and connections to public transit	Yes	
		BE-7 Action 2	Adopt a complete streets policy that addresses all users, applies to all projects with limited exceptions, and includes specific next steps for implementation		

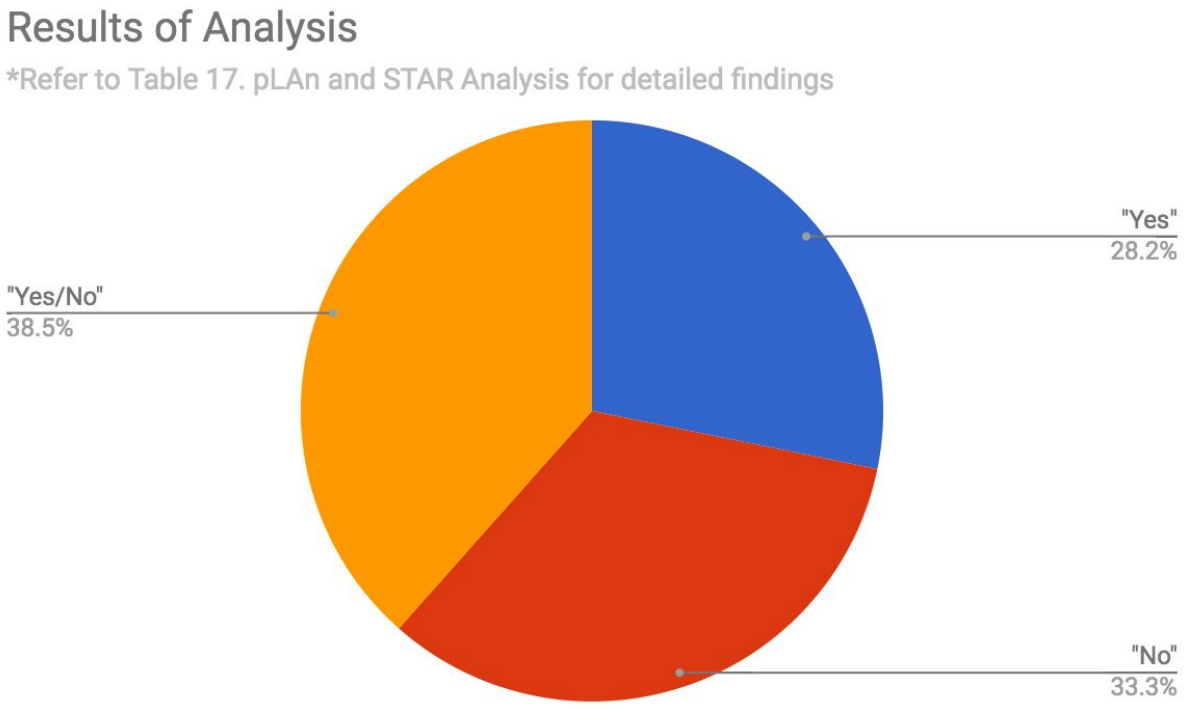
		BE-7 Action 9	Increase the mileage of striped or buffered bicycle lanes, cycle-tracks, parallel off-street paths and/or other dedicated facilities		
Lead by Example - Energy Efficiency	Reduce municipal energy use by: 2025: 18%; 2035: 35%	CE-4 Action 5	Establish a committee to provide recommendations on policies related to energy efficiency in buildings OR integrate this role into the work of existing committees	Yes/No	STAR Actions does not include target values or year. STAR Outcome considers energy use reduction.
		CE-4 Acton 8	Create incentives to encourage the new construction of energy efficient buildings		

		CE-4 Action 9	Create incentives for businesses, lessors, homeowners, and renters to improve the energy efficiency of their existing buildings and homes		
		CE-4 Outcome 1	Part 1: Demonstrate incremental progress towards achieving an 80% reduction by 2050 in energy used by community building for industrial processes--OR--Part 2: Demonstrate incremental progress towards achieving an 80% reduction by 2050 in energy use within specific residential, commercial, and industrial sectors		

Lead by Example - Water Efficiency	Reduce municipal water use by at least: 2025: 25%; 2035: 30%	CE-5 Action 1	Adopt a communitywide water management plan to improve water efficiency and reductions by residential and commercial sectors	Yes/No	STAR Actions does not include target values or year. STAR Outcome does not share the same target goals.
		CE-5 Outcome 1	Option A: Demonstrate achievement of 10% reduction in community domestic water use per capita since 2010 --OR--Option B: Reduce local domestic water use per capita at a rate of 2% per year from a 2010 baseline		
Lead by Example - GHG Reduction	Reduce Greenhouse gas (GHG) emissions by at least 55% by 2035 from 2008 baseline (35% by 2025)	CE-2 Action 2	Adopt a climate action plan designed to reduce GHG emissions throughout the jurisdiction	Yes/No	STAR Actions does not include target values or year. STAR Outcomes does not share the same target goals.

		CE-2 Outcome 1	Demonstrate incremental progress towards achieving a 28% reduction by 2025 and/or an 80% reduction by 2050 in community wide greenhouse gas (GHG) emissions		

Figure 1


Results of Analysis
*Refer to Table 17. pLAn and STAR Analysis for detailed findings
"Yes"
28.2%
"Yes/No"
38.5%
"No"
33.3%

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