

# Green Region Initiative Methodology Guide

# Table of Contents

<b>Section</b>	<b>Subsection</b>	<b>Page</b>
Background	Overview	4
Energy	Overview	6
	Renewable Energy	7
	Community Energy Efficiency	9
	Municipal Energy Efficiency	11
Climate Action	Overview	13
	Climate Action Planning	14
	Community GHG Emissions Inventory	16
	Municipal GHG Emissions Inventory	18
Built Environment	Overview	20
	Municipal Green Building	21
	Community Green Building	24
	Parking Management	26
	Affordable Housing	28
Active Transportation	Overview	30
	Pedestrians	31
	Bikes	33
	Complete Streets	35
Motorized Transportation	Overview	38
	Electric Vehicles	39
	Electric Vehicles Permitting Streamlining	40
	Municipal Alternative Fuel Fleet	41

Open Space	Overview	42
	Natural Lands	43
	Farmland	45
Waste	Overview	47
	Waste Minimization	48
Water	Overview	59
	Water Conservation	50
Health	Overview	51
	Public Health	52
	Healthy Food Access	54
Engagement	Overview	55
	Sustainability Grants	56
	Green Business Program/Environmentally Preferable Purchasing	58
	Participation/Collaboration Policy	60
Adaptation & Resilience	Overview	62
	Adaptation Planning	63
Urban Greening	Overview	66
	Parks	67
	Stormwater Management	69
	Urban Forestry	71
Category Averages	Overview	73
Senate Bill 535 Disadvantaged Communities	Overview	76

# Background

SCAG has long recognized innovative planning and local development projects that best coordinate land use and transportation actions to improve the mobility, livability, prosperity, and sustainability within the region. In 2011, SCAG sent out a survey to all the jurisdictions within the region to assess the adoption of various sustainability programs and plans. The first version of the Green Region Initiative (GRI) map displayed the multiple sustainability plans and programs by jurisdiction based upon the survey information obtained. Version 1.0 quantified the total programs each jurisdiction adopted in regards to water conservation, transportation, energy efficiency, waste management, green buildings, etc. shown by a color gradient. Along with the survey and map, a Sustainability Indicators Chart was created to visualize each jurisdiction's status into a spreadsheet format.

However, this data did not measure the robustness of these programs and compare policies of different metrics with one another. Additional problems arose as the survey was voluntary and therefore missing information. To update the map, SCAG recruited the first cohort of CivicSpark fellows to provide support and capacity to update the Sustainability Indicators Chart and online map. They outlined the updates into a four-phase project: creating a detailed inventory of sustainability measures being planned or implemented by each jurisdiction, contacting each city or county to confirm our findings and inform them of our project, determining a consistent system to quantify the data and identify best practices findings to create comprehensive user-friendly resources (i.e an improved online mapping tool, online database, and visual charts). The objective of the map was to benefit all cities and counties within the SCAG region by determining where the best sustainability practices existed and providing a comprehensive resource of their locations for all jurisdictions.

The 2014-15 Fellows established eight main categories and 25 sustainability indicators for the Green Region Initiative. In addition to their work with the GRI, they assisted in the SCAG/Metro partnership that measured best transportation practices. They found their information by looking at Complete Streets Policies, First Mile/Last Mile Strategies, and Bicycle & Pedestrian Plans. While these programs were separate, they integrated similar guiding principles of sustainability. They outlined the GRI to be brought into Version 2.0.

The 2015-16 Fellows defined the 25 sustainability indicators through measuring progress made by the 197 cities in the 6 SCAG regions. The Fellows communicated this progress through 25 metric reports and updates to the Sustainability Indicators chart. The metric reports made notable observations about each indicator and outlined limitations to data to inform these ranking systems. Version 2.0 was an interactive GIS map that showed a visual for the policy metrics established during their service year. By scrolling over the city boundaries and clicking on local jurisdictions, the user could access the appropriate documentation for that city's available policy. They began to work on fact sheets from there, although they were unable to collect the performance data during their service year, they laid the foundation for the Fellows in the year to come.

Moving forward, the 2016-17 Fellows decided to move away from the ArcMap Web Viewer and towards an Esri platform, known as a Story Map, in order to convey both sustainability policy and performance data side by side. While the layers present in 2.0 were informative and allowed for faster processing of the data, there tended to be more confusion from front-end users. After deciding to move forth with the Story Maps platform, they began to collect performance data based on the recommendations from the previous service year. In Fall of 2017, Version 3.0 of the map was released to include the latest version of the map which divided the 25 indicators among the ten categories, along with the descriptions and the category averages from the year prior. By using various GIS data classification methods, these Fellows were able to establish ranking systems from the recommendations of previous year's fellows.

In the year following, the 2017-18 Fellows decided to take a step back and create the following methodology to lessen the burden of future fellows and staff on grasping the scope of this project. In addition to this guide, they worked to build the capacity of the map with three new indicators: *Adaptation*, *Affordable Housing*, and *Healthy Food Access*. To improve the functionality of the map, they proposed a redesign of the ESRI Story Maps platform into 11 different categories as well as a SCAG website redesign to host the new map services. Because the map did not undergo major modifications, they decided on the map's designated version of 3.5.

Moving forward, the 2019-20 Fellows incorporated the Senate Bill (SB) 535 disadvantaged communities (DACs) map layer to highlight sustainability efforts in relation to DACs in the SCAG region. Fellows incorporated the map layer by adding both a stand-alone DACs map as well as part of the *Consolidated Map*. The *Consolidated Map* combines all respective indicators and category averages along with the DACs map and exists for each category. Fellows also created the new Urban Greening category and chose the existing *Parks*, *Stormwater Management*, and *Urban Forestry* indicators for this category to emphasize strategies for greening urban spaces. Additionally, they updated the *Adaptation Planning* and *Climate Action Planning* indicators using data and findings from the *2020 Gap Analysis of Climate Adaptation Policies* from SCAG's Southern California Regional Climate Adaptation Framework. Fellows also added the new *Electric Vehicles Streamlining Permitting* indicator to the Motorized Transportation category to showcase region-wide compliance with Assembly Bill (AB) 1236. Because the map underwent several modifications, they decided on the map's designated version of 4.0.

# Energy

## Overview

Clean, stable and sustainable sources of energy for Southern California are critical to supporting a healthy and resilient region. When developing future plans, SCAG must thoroughly weigh and consider energy supply, efficiency, consumption, and environmental impacts.

Renewable energy and energy efficiency provide energy solutions beneficial to reducing environmental impacts, such as greenhouse gas (GHG) emissions. With energy-related emissions representing a significant component of GHG emissions, alternative energy solutions can result in lower energy system costs, environmental and social benefits, and less air pollution.

Topics chosen for this category include *Renewable Energy*, *Community Energy Efficiency*, and *Municipal Energy Efficiency*.

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# Renewable Energy

**Description:** Originally adapted from the 2011 sustainability indicator, “*Adopted program or policy to promote renewable energy (e.g. solar, wind, geothermal)*”

The Fellows’ research suggests that jurisdictions are increasing renewable energy purchasing and production in order to reduce their dependence on fossil fuels. They found that local renewable energy generation most often takes the form of solar production, whereas other forms of renewable energy are more frequently produced at a regional scale. Many jurisdictions have programs or policies that address renewable energy production and usage, but only a fraction include targets for offsetting energy consumption impacts with renewable power.

From available data, the 2015-16 CivicSpark Fellows developed a policy metric based on a modified ranking system and a performance metric based on the solar capacity per 1000 residents derived from [California Solar Statistics](#).

**Policy Ranking Reasoning:** Each rank represents a jurisdiction’s commitment to renewable energy, from no policies or programs to a comprehensive set of renewable energy-promoting policies and programs. Having renewable policies/codes demonstrates intent to develop renewable energy, while participating in a CCA program and providing renewable incentives show intent to make alternative energy more competitive with traditional energy sources at the local level.

**Performance Ranking Reasoning:** Solar energy production is the most standardized way available to measure renewable energy at the city level. While small-scale solar energy production can be traced back to a specific jurisdiction, wind and other renewable energy sources are often produced at the regional utility-scale. Though renewable energy production data is important, the Fellows suggest the additional measurement of renewable energy use data as some jurisdictions choose to buy renewable energy rather than produce it themselves. While total solar energy production is also available for each jurisdiction, dividing by a jurisdiction’s population normalizes the data for uniform evaluation among jurisdictions.

**Table 1: Renewable Energy Performance Overview**

<b>White:</b> No to Very Low Solar Capacity	<b>Light Green:</b> Low Solar Capacity	<b>Medium Green:</b> Moderate Solar Capacity	<b>Dark green:</b> Very high solar capacity	<b>Notes:</b> Natural breaks method
0.0000-144.461762	144.461763 - 479.275063	479.275064-1032.591492	1032.591493-30336.017020	Count: 197 Mean 276.749373 Median: 83.237421 Standard Deviation: 2174.928829

*For more information on data classification, please visit [ArcGIS](#) online.*

**Notes/Observations**

- Performance data difficult to track due to renewable energy sources often produced at regional utility-scale. Jurisdictions often buy their power from an IOU and do not always produce renewable energy themselves.
- Renewable energy sources are often produced at regional utility-scale. Local utilities may have the energy consumption information on hand, but this has proven difficult to access.
- The only type of renewable data that seems to be tracked at the local city level is solar. Other forms of renewable energy data may not be accounted for.
- Data for the GRI Version 3.0. was obtained from the CA Solar Statistics website.

*Section Disclaimer - Please note that this information was based on the limited capacity of six CivicSpark Fellows for the 2015-16/2016-17 service year. Information may not reflect true data as most data relied upon publicly available resources.*

## Community Energy Efficiency

**Description:** Originally adapted from the 2011 indicator, *“Adopted a program or policy to promote energy efficiency for community-wide operations”*

The Fellows’ research found that California has pursued energy efficiency for almost 40 years since the adoption of [Title 24](#), the first set of building and energy efficiency standards. For the purposes of this category, the Fellows explored avenues such as the energy use data from publicly owned utilities (POUs) in CA, energy savings per capita by jurisdiction, estimated annual population data as of 2014, and the number of households by jurisdiction.

From available data, the 2015-16 CivicSpark Fellows developed a policy metric based on a modified ranking system. The 2016-17 CivicSpark Fellows developed a performance metric based on data on a Electricity savings per capita and gas savings per capita obtained from California EE Statistics. The average was calculated for both electricity in kWh and natural gas in BTU. The average has presented in BTU.

**Policy Ranking Reasoning:** Each rank represents a jurisdiction’s commitment to community-wide energy efficiency, from no energy efficiency plan or policies to a comprehensive energy assessment with efficiency implementation and program support.

**Performance Ranking Reasoning:** Electricity and gas savings over a two year period show decreased energy consumption, potentially due to energy efficiency. However, electricity and gas use can decrease for a variety of reasons. This metric does not specify savings from particular energy efficiency programs. While total electricity and gas savings are also available for each jurisdiction, dividing by the jurisdiction’s population normalizes the data for uniform evaluation among jurisdictions.

**Table 2: Community Energy Performance Overview**

<b>White:</b> No to very low energy savings per capita	<b>Light Green:</b> Low energy savings per capita	<b>Medium Green:</b> Moderate energy savings per capita	<b>Dark green:</b> Very high energy savings per capita	<b>Notes</b> Natural breaks method
0.000000 - 206294.160000	206294.160001 - 574261.573500	574261.573501 - 1253708.136000	1253708.136001 - 3135778.726000	Count: 193 Min: 0 Max: 5321182.72600 Sum: 56539043.840601 Mean: 292948.413682 Median: 217189.937400 Std. Dev: 492995.591226

*For more information on data classification, please visit [ArcGIS](#) online.*

**Notes/Observations:**

- In Governor Brown’s 2015 inaugural address, the Governor set a goal to double efficiency savings in buildings in California through 2030. Other state goals include achieving zero-net-energy for newly constructed residences by 2020 and for commercial buildings by 2030.
- Title 24 standards have saved Californians upwards of \$74 billion since 1977. Most recent update is the 2016 standards.
- Energy savings over a two year period show decreased energy consumption, whereas energy demand reduction shows reduction of energy need during peak hours.

*Section Disclaimer - Please note that this information was based on the limited capacity of three CivicSpark Fellows for the 2015-16 service year. Information may not reflect true data as most data relied upon publicly available resources.*

# Municipal Energy Efficiency

**Description:** Originally adapted from the 2011 indicator, *“Adopted program or policy to promote energy efficiency for municipal operations”*

The Fellows’ research found that California has pursued energy efficiency for almost 40 years since the adoption of [Title 24](#), the first set of building and energy efficiency standards. As a result of Title 24, the State has maintained per capita energy consumption rates while the rest of the nation’s rates have increased. Energy efficiency planning and programs are usually implemented on a local scale, making municipal governments critical players in energy efficiency achievement. Municipal governments lead the way for their communities by adopting green building codes, retrofitting municipal buildings, and increasing streetlight and wastewater treatment plant efficiency, among others. For the purposes of the Municipal Energy Efficiency indicator, energy efficiency programming includes both energy-saving technology as well as behavioral changes that lead to energy conservation.

From available data, the 2015-16 CivicSpark Fellows developed a policy metric based on a modified ranking system

**Policy Ranking Reasoning:** Each rank represents a jurisdiction’s commitment to energy efficiency in its municipal facilities, from no energy efficiency plan or policies to a comprehensive energy assessment with efficiency implementation and program support.

**Performance Ranking Reasoning:** At the current moment in time, there lacks a universal metric to quantify efforts made on behalf of local jurisdictions for this indicator.

## Notes/Observations

- Support for local governments to pursue energy efficiency has come from the State in the form of the Energy Efficiency and Conservation Block Grant (EECBG), allocating over \$3.2 billion to cities and counties in the State.
- Methods for measuring energy efficiency potential as well as Energy Star resources are available from the EPA.
- The EPA Guidelines for Energy Management outline seven steps: 1) Make commitment, 2) Assess performance, 3) Set goals, 4) Create action plan, 5) Implement action plan, 6) Evaluate progress, 7) Recognize achievements
- While energy efficiency in municipal facilities has a relatively low impact on reducing total greenhouse gas emissions, by conserving energy in municipal facilities, municipal governments lead by example and demonstrate a commitment to energy conservation.

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# Climate Action

## Overview

“Climate action” refers to the act of addressing climate change and rising greenhouse (GHG) emissions. Though climate action may be conducted through a number of methods, all work shares a common goal of reducing GHG emissions, helping more vulnerable regions, and helping mitigate climate-related disasters through methods such as switching to renewable energy (e.g. solar energy, wind power), improving the insulation of buildings, and expanding forests and other “carbon sinks” to remove greater amounts of carbon dioxide from the atmosphere.

Through California legislature, [Assembly Bill \(AB\) 32](#) and [Senate Bill \(SB\) 375](#), the State has set new standards for California’s production of GHG emissions. In particular, SB 375 gives Metropolitan Planning Organizations (MPOs), such as the Southern California Association of Governments (SCAG), the responsibility to work with local jurisdictions to develop strategies for reducing GHG emissions. Steps towards reducing GHG emissions may be in the form of the following topic chosen for this category: *Climate Action Planning, Community GHG Emissions Inventory, and Municipal GHG Emissions Inventory*.

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## Climate Action Planning

**Description:** Originally adapted from the 2011 indicator, “*Adopted a climate action plan or sustainability plan*”

The Fellows’ research found that initial steps to address sustainability may be in the form of outlining actions which reduce greenhouse gas (GHG) emissions or in the form of reporting GHG emissions in an inventory. However, the most impactful plans combine both strategies through the creation of a Climate Action Plan (CAP). The Fellows’ research suggest that jurisdictions leading the way in climate action planning have adopted CAPs into their General Plans, dedicate staff and funding to the plan’s implementation, or consistently measure GHG emissions. Jurisdictions may give these plans various titles, but for the purposes of the Climate Action Planning indicator, if a plan has a GHG inventory and GHG reduction measures, it is a CAP. The majority of jurisdictions in the SCAG region are in one phase or another of the climate action planning process.

From available data, the 2015-16 CivicSpark Fellows developed a policy metric based on a modified ranking system and a performance metric based on progress reporting frequency of GHG emissions. A jurisdiction without a CAP is used as the baseline for the point system. One point is given for the existence of an adopted CAP. Another point is given for a CAP adopted before 2011 with one or two CAP updates, or a CAP with one or two updates. Additional points are given with each subsequent CAP update.

**Policy Ranking Reasoning:** Each rank represents a jurisdiction’s commitment to climate action planning and mitigating climate change impacts, from no sustainability or climate action planning to a comprehensive and implementable CAP. A sustainability plan without a GHG inventory is ranked light green as understanding a jurisdiction’s emissions is a necessary first step to taking effective and measurable climate action.

**Performance Ranking Reasoning:** Following initial GHG emissions inventories and GHG reduction plans, jurisdictions may demonstrate efforts to track the implementation of climate action policies through regular progress updates on sustainability plans or CAPs. Regular reports on policy implementation are necessary to effectively track climate action progress. However, as many jurisdictions do not measure GHG emissions after the initial inventory, measuring the frequency of monitoring and reporting is used as an interim metric.

**Table 3: Climate Action Planning Performance Overview**

<b>White:</b> No to very low reporting frequency	<b>Light green:</b> Low reporting frequency	<b>Medium green:</b> Moderate reporting frequency	<b>Dark green:</b> High reporting frequency	<b>Notes:</b> Weighted score system
0 points	1-2 points	3 points	4+ points	Count: 197

*Data classification was not based off ArcGIS online methods for this category\**

**Notes/Observations**

- In April 2015, Governor Brown issued an executive order establishing a GHG reduction target of 40% below 1990 levels by 2030. To execute these GHG reductions, jurisdictions have taken on the task of climate action planning with the intention of mitigating emissions.
- Many State programs recognize jurisdictional achievements in climate action planning and emissions mitigation such as the ILG Beacon Award, Cool California City Challenge, and Cool California Case Studies. These programs may be helpful when recognizing best practices.
- The 2016-17 Fellows researched the use of GHG emissions per capita for the performance metric, but found that the point-based system best reflected progress made across the SCAG region.

*Section Disclaimer - Please note that this information was based on the limited capacity of three CivicSpark fellows for the 2015-16/2016-17/2019-20 service years. Information may not reflect true data as most data relied upon publicly available resources.*

# Community GHG Emissions Inventory

**Description:** Originally adapted from the 2011 indicator, “Completed GHG Inventory community operations”

Greenhouse gas (GHG) emissions inventories measure the metric tons of equivalent CO<sub>2</sub> (CO<sub>2</sub>e) emitted through a jurisdiction’s activities. Community inventories generally exclude municipal activities and measure emissions from different sources (transportation, energy use, waste), sectors (residential, commercial, industrial), and scopes (emissions resulting from internal and external city processes). Community GHG emissions inventories differ from General Plan Air Quality Elements which measure ambient air quality. Conducting a community-wide greenhouse gas emissions inventory is the first step of climate action planning as outlined by the State and Cool California.

From available data, the 2015-16 CivicSpark Fellows developed a policy metric based on a modified ranking system and a performance metric based on a weighted score system dependent on reporting frequency. Points were awarded based on the existence of a GHG inventory, inventory tracking beginning before 2006 (before AB 32 passed, showing cities who were ahead of State goals, and subsequent inventory updates.

**Policy Ranking Reasoning:** Each rank represents a jurisdiction’s commitment to measuring and reducing its community GHG emissions. OPR-recommended inventory methodologies have been used to promote consistency across all GHG emission inventories.

**Performance Ranking Reasoning:** GHG inventory updates show continued monitoring of emissions. Regular updates show intention to monitor and reduce GHG emissions. To effectively measure emissions reduction progress, it is necessary to track and report emissions on a regular or annual basis. As many jurisdictions do not measure GHG emissions after the initial inventory, measuring the frequency of monitoring and reporting is used as an interim metric.

**Table 4: Community GHG Emissions Inventory Performance Overview**

<b>White:</b> No to very low reporting frequency	<b>Light Green:</b> Low reporting frequency	<b>Medium Green:</b> Moderate reporting frequency	<b>Dark green:</b> Very high reporting frequency	<b>Notes:</b> Weighted scoring system
0 points	1-2 points	3 points	4+ points	Range 0 points (86 cities) 1-2 points (83 cities) 3 points (25 cities) 4+ points (3 cities - Santa Monica, Hawthorne, Inglewood)

*Data classification was not based off ArcGIS online methods for this category\**

**Notes/Observations**

- Equivalent CO<sub>2</sub> (CO<sub>2</sub>e) is the concentration of CO<sub>2</sub> that would cause the same level of radiative forcing as a given type and concentration of greenhouse gas.
- Some jurisdictions’ Energy Action Plans (EAPs) measure emissions solely from energy use and are therefore less comprehensive.
- Although several jurisdictions have conducted inventories, unique methodologies were used, making it difficult to evaluate the comprehensiveness of inventories across jurisdictions.
- A single inventory may measure emissions for more than one year but this does not count as an “updated” inventory. An “updated” inventory has been defined as a separate document, produced at a later date, measuring additional years’ emissions.
- AB 32 sets state emissions reduction targets to 1990 levels by 2020, 40% below 1990 levels by 2030 and 80% below 1990 levels by 2050. The 1990 level/2020 limit is 431 million MTCO<sub>2</sub>e.
- In some situations, Councils of Governments (COGs) or other organizations will conduct an inventory for an entire region. For example, Western Riverside COG completed a single inventory for their region and the Los Angeles Regional Collaborative (LARC) measured emissions for every city within Los Angeles County.

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# Municipal GHG Emissions Inventory

**Description:** Originally adapted from the 2011 indicator, “*Completed GHG Inventory for municipal operations*”

Greenhouse gas (GHG) emissions inventories measure the metric tons of equivalent CO<sub>2</sub> (CO<sub>2</sub>e) emitted from different sources. Municipal governments measure emissions from government building energy use, street lighting, fleet gasoline and diesel consumption, and waste. Conducting a municipal greenhouse gas emissions inventory is the first step of climate action planning as outlined by the state and Cool California.

From available data, the 2015-16 CivicSpark Fellows developed a policy metric based on a modified ranking system and a performance metric using a weighted score system dependent/determined by reporting frequency. Points were distributed based on the existence of inventory tracking beginning before 2006 (before AB 32 passed, showing cities ahead of State goals) and upon every subsequent inventory completed.

**Policy Ranking Reasoning:** Each rank represents a jurisdiction’s commitment to measuring and reducing its municipal GHG emissions. OPR-recommended inventory methodologies have been used to promote consistency across all GHG emission inventories.

**Performance Ranking Reasoning:** GHG inventory updates show continued monitoring of emissions. Regular updates show intention to monitor and reduce GHG emissions. To effectively measure emissions reduction progress, it is necessary to track and report emissions on a regular or annual basis. As many jurisdictions do not measure GHG emissions after the initial inventory, measuring the frequency of monitoring and reporting is used as an interim metric.

**Table 5: Municipal GHG Emissions Inventory Performance Overview**

<b>White:</b> No to very low reporting frequency	<b>Light Green:</b> Low reporting frequency	<b>Medium Green:</b> Moderate reporting frequency	<b>Dark green:</b> Very high reporting frequency	<b>Notes:</b> Weighted scoring system
0 points	1-2 points	3 points	4+ points	Range 0 points (86 cities) 1-2 points (83 cities) 3 points (25 cities) 4+ points (3 cities - Santa Monica, Hawthorne, Inglewood)

*Data classification was not based off ArcGIS online methods for this category\**

**Notes/Observations**

- Equivalent CO<sub>2</sub> (CO<sub>2</sub>e) is the concentration of CO<sub>2</sub> that would cause the same level of radiative forcing as a given type and concentration of greenhouse gas.
- Some jurisdictions’ Energy Action Plans (EAPs) measure emissions solely from energy use and are therefore less comprehensive.
- Although several jurisdictions have conducted inventories, unique methodologies were used, making it difficult to evaluate the comprehensiveness of inventories across jurisdictions.
- A single inventory may measure emissions for more than one year but this does not count as an “updated” inventory. An “updated” inventory has been defined as a separate document, produced at a later date, measuring additional years’ emissions.
- AB 32 sets state emissions reduction targets to 1990 levels by 2020, 40% below 1990 levels by 2030 and 80% below 1990 levels by 2050. The 1990 level/2020 limit is 431 million MTCO<sub>2</sub>e.
- In some situations, Councils of Governments (COGs) or other organizations will conduct an inventory for an entire region. For example, Western Riverside COG completed a single inventory for their region and the Los Angeles Regional Collaborative (LARC) measured emissions for every city within Los Angeles County.

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# Built Environment

## Overview

SCAG is the country's largest metropolitan planning organization and with that comes the challenges of accounting for sustainable growth within cities at every scale. From incorporating green buildings through policy and planning to accounting for urban heat and urban health, local jurisdictions need to be resilient to anticipate the future ecological and social needs within the region as a whole.

The built environment refers to "the human-made space in which people live, work, and recreate on a day-to-day basis." The connection between sustainability and urban design is essential to creating an equitable environment for all. Designing the relationship between urban and natural environments is vital to reducing greenhouse gas emissions from the energy use within buildings and other strategies related to this space. Because the built environment encompasses such a wide array of facets in daily life, other indicators may directly benefit from improvements made in this category.

When updating regional plans, the interactions between humans in their urban environment is an important consideration to improve the quality of life for all Southern California residents. Topics chosen for this category include *Municipal Green Buildings*, *Community Green Buildings*, *Parking Management*, and *Affordable Housing*. The *Urban Forestry* indicator was reassigned to the *Urban Greening* category.

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# Municipal Green Building

**Description:** Originally adapted from the 2011 indicator, “*Adopted green building standards ordinance for municipal buildings (existing and new)*”

The Fellows’ research suggests that green buildings are designed and developed to be environmentally sustainable throughout their entire life cycles, which includes the design process, construction phase, operations and maintenance, renovation, and demolition of a building. There are many green rating systems in place that measure the sustainability of buildings, but the most widely accepted certification is Leadership in Energy and Environmental Design (LEED), which was developed by the U.S. Green Building Council (USGBC). Jurisdictions have begun implementing green building policies and codes for their facilities to not only reduce municipal GHG emissions but also to serve as an example for community building development.

From available data, the 2015-16 CivicSpark Fellows developed a policy metric based on a modified ranking system and a performance metric based on Community Energy Star/LEED buildings (weighted) per parcel. The 2015-16 CivicSpark Fellows worked to collect policy data, and the 2016-17 CivicSpark Fellows collected the performance data based on Municipal Energy Star/LEED buildings (weighted) per parcel.

**Policy Ranking Reasoning:** Each rank represents a jurisdiction’s commitment to green building, from no green building policies or codes to a legal requirement for green building in municipal facilities/operations. The inclusion of CalGreen in green building policies acknowledges State green building standards.

**Performance Ranking Reasoning:** Higher weights are given to the better green building ratings because those buildings are more comprehensive in their sustainability performance. However, this metric may not capture all green buildings because it only focuses on those with specific certifications. While a total number of municipal green buildings is also available for each jurisdiction, comparing the number of green buildings to the total number of municipal building parcels normalizes the data for uniform evaluation among jurisdictions.

**Table 6: Municipal Green Building Performance Overview**

<b>White:</b> No to very low green buildings per parcel	<b>Light Green:</b> Low green buildings per parcel	<b>Medium Green:</b> Moderate green buildings per parcel	<b>Dark green:</b> Very high green buildings per parcel	<b>Notes:</b> Natural breaks method
0.000000 - 0.220000	0.220001 - 1.000000	1.000001 - 3.000000	3.000001 - 16.000000	Stats: - Min: 0 - Max: 16 - Sum: 38.91 - Mean: 0.19852 - Median: 0 - Std. Dev: 1.337836

*For more information on data classification, please visit [ArcGIS](#) online.*

**Notes/Observations**

- Some of the data presented was unclear whether buildings were municipal. Estimations were taken.
- The most commonly used green building rating systems include Energy Star and LEED, and both have databases with all of their subsequent projects. This makes it easier to see which cities are more invested in green building as they will most likely have more Energy Star and LEED buildings.
- Energy Star only focuses on energy performance of buildings, while LEED encompasses all aspects of sustainable green buildings.
- One caveat of focusing on green building rating systems as a measurement is that not all green buildings are necessarily certified by any particular rating system. They can potentially exist without being accounted for.
- Currently, municipal green building goals are tracked by the number of municipal green buildings rather than by the area of municipal green buildings.
- While green buildings in municipal facilities have a relatively low impact on reducing total greenhouse gas emissions, by implementing sustainable building practices into municipal facilities, municipal governments lead by example and demonstrate a commitment to green building.

*Section Disclaimer - Please note that this information was based on the limited capacity of three CivicSpark Fellows for the 2015-16/2016-17 service years. Information may not reflect true data as most data relied upon publicly available resources.*

## Community Green Building

**Description:** Originally adapted from the 2011 indicator, *“Adopted green building standards ordinance for community buildings (existing and new)”*

The Fellows’ research suggests similar findings to that of Municipal Green Buildings. The Community Green Building indicator includes all buildings located within city boundary and are not owned by the city. This indicator also accounts for special districts such as schools. For information about green buildings overall, please see Municipal Green Building on *page 25*.

From available data, the 2015-16 CivicSpark Fellows developed a policy metric based on a modified ranking systems and a performance metric based on Community Energy Star/LEED buildings (weighted) per parcel. The 2015-16 CivicSpark Fellows worked to collect policy data, and the 2016-17 CivicSpark Fellows collected performance data.

**Policy Ranking Reasoning:** Each rank represents a jurisdiction’s commitment to green building, from no green building policies or codes to a legal requirement for green building in residential and commercial developments. Inclusion of CalGreen in green building policies acknowledges state green building standards.

**Performance Ranking Reasoning:** Higher weights are given to the better green building ratings because those buildings are more comprehensive in their sustainability performance. However, this metric may not capture all green buildings because it only focuses on those with specific certifications. While total number of community green buildings is also available for each jurisdiction, comparing the number of green buildings to the total number of community building parcels normalizes the data for uniform evaluation among jurisdictions.

**Table 7: Community Green Building Performance Overview**

<b>White:</b> No to very low green buildings per parcel	<b>Light Green:</b> Low green buildings per parcel	<b>Medium Green:</b> Moderate green buildings per parcel	<b>Dark green:</b> Very high green buildings per parcel	<b>Notes:</b> Geometric Interval Stats
0 - 0.005289	0.005290-0.033636	0.033637-0.185580	0.185581- 1.0	- Count: 179 - Minimum: 0.00000 - Maximum: 1.000 - Sum: 6.717141 - Mean: 0.037526 - Median: 0.013477 - Standard Dev: 0.088661

*For more information on data classification, please visit [ArcGIS](#) online.*

**Notes/Observations**

- Although jurisdictions may provide green building incentives for residential and commercial buildings, legally-binding green building codes are more effective than incentives.
- Currently, community green building goals are tracked by the number of community green buildings rather than by the area of community green buildings.
- The Fellows’ found that one of the issues was distinguishing between municipal and community. For example, because schools can be county operated, city, and private it was challenging to quantify and assess them fairly.

*Section Disclaimer - Please note that this information was based on the limited capacity of three CivicSpark fellows for the 2015-16/2016-17 service years. Information may not reflect true data as most data relied upon publicly available resources.*

# Parking Management

**Description:** Originally adapted from the 2011 indicator, “*Adopted parking pricing/management strategies*”

The Fellows’ research found that parking management is an effective planning strategy to regulate parking resources and improve circulation and transportation efficiently. This indicator focuses on progressive parking management, which aims for more efficient land use, fewer greenhouse gas emissions, and better air quality through reduction of single occupancy vehicle (SOV) parking and encouragement of carpooling and other forms of transit. A city’s parking policies can have a significant impact on what types of transportation modes residents and visitors choose to use, depending on what parking strategies the policies implemented.

From available data, the 2015-16 CivicSpark Fellows developed a policy metric based on a modified ranking system.

**Policy Ranking Reasoning:** Each rank represents a jurisdiction’s commitment to green building, from no green building policies or codes to a legal requirement for green building in residential and commercial developments. Inclusion of CalGreen in green building policies acknowledges state green building standards.

**Performance Ranking Reasoning:** At the current moment in time, there lacks a quantifiable effort on behalf of local jurisdictions to measure performance data.

## Notes/Observations

- Traditional parking management tends not to focus as much on sustainability, but rather ensuring adequate parking for all residents and visitors. More progressive management aims to reduce the incentives for SOVs and their associated emissions.
- Parking management is most beneficial when working in tandem with other land use planning strategies in order to be effective in decreasing VMT and carbon emissions. Progressive parking management benefits from active transportation (walking, biking) and public transit (rail, buses).

*Section Disclaimer - Please note that this information was based on the limited capacity of three CivicSpark fellows for the 2015-16 service year. Information may not reflect true data as most data relied upon publicly available resources.*



# Affordable Housing

**Description:** The Fellows' research suggests that California's housing-element law states that local governments must adopt plans and regulatory systems that provide opportunities for housing development in order for the private market to adequately address the housing demand and need of Californians<sup>1</sup>. Because some cities have failed to comply with these updates, but have measures that promote affordable housing the baseline for this ranking system was established on a point based system. The light, medium, or dark green indicate whether local jurisdictions have assessed this need through various implementation measures such as their HCD Status, sources of housing funds, dedicated housing staff, and internal housing policies. White represents jurisdictions who currently lack the capacity to address this issue.

**Policy Ranking Reasoning:** For the purposes of the Affordable Housing Indicator, a point-based system was used to encompass a local jurisdiction's housing element compliance, internal policies and funding sources, and capacity to employ dedicated housing staff. Each rank represents a jurisdiction's capacity to advancing affordable housing from a necessary compliance with housing element law to more advanced initiatives of requiring affordable housing within new development.

**Performance Ranking Reasoning:** At the current moment in time, there lacks a universal metric to quantify efforts made on behalf of local jurisdictions for this indicator.

## Notes and Observations:

- This indicator differs from most others in the Green Region Initiative project because it measures capacity as opposed to commitment and intent.
- Challenging to quantify the value of a city's efforts due to differences in city dynamics and resources
- Affordable housing built near transit can occur without any incentive or involvement from a local jurisdiction
- While programs such as the California Affordable Housing and Strategic Communities (AHSC) can be beneficial in reducing VMT and GHG emissions, unintended externalities can increase pollution burden of at-risk populations and further constrict these communities
- Indicators such as public health may already include negative consequences of the lack of affordable housing<sup>2</sup>
- SCAG's 2016 RTP/SCS reflects similar ideals in the Public Health index
- Building permits databases exist but do not specify the number of units in terms of affordable housing versus market-rate
- Green buildings have been excluded from this report due to stronger evidence for location efficiency's impact on greenhouse gas reductions<sup>3</sup>

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<sup>1</sup> <http://www.hcd.ca.gov/community-development/housing-element/index.shtml>

<sup>2</sup> <http://www.scag.ca.gov/Documents/CaliforniaHousingSummitReport.pdf>

<sup>3</sup> <https://www.arb.ca.gov/research/apr/past/11-323.pdf>

- Affordable housing can be treated as a form of environmental justice which can be shown by HUD AFFH maps<sup>4</sup>
- Based on the time-restraints of this report, livable quality of affordable housing was not considered as a metric
- Policies in the modified ranking system were limited by the Fellows' time and capacity to evaluate the extent of possible policy measures

*Section Disclaimer - Please note that this information was based on the limited capacity of three CivicSpark Fellows for the 2015-16/2016-17 service years. Information may not reflect true data as most data relied upon publicly available resources.*

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<sup>4</sup> <https://egis.hud.gov/affht/>

# Active Transportation

## Overview

Active transportation refers to human-powered methods of travel such as walking or biking as a form of transportation. Active transportation provides alternatives to the single-occupancy vehicle and improves access to transit, reducing greenhouse gas emissions and traffic congestion. Active transportation serves as a form of physical activity to improve public health while reducing transportation costs.

Jurisdictions within the SCAG region have promoted the use of active transportation to further reduce transportation-related greenhouse gas (GHG) emissions. Getting more people to utilize active transportation for their commuting needs can improve quality of life through improved public health and economic benefits in the SCAG region. The categories chosen for this section are *Bikes*, *Pedestrians*, and *Complete Streets*.

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## Pedestrians

**Description:** Originally adapted from the 2011 indicator, “*adopted a pedestrian plan/program*”

The Fellows’ research shows most jurisdictions in the SCAG region have a handful of pedestrian-focused policies in their General Plan. Additional steps that jurisdictions take to improve pedestrian infrastructure include pedestrian projects, applying for an receiving active transportation grants specifically for pedestrian projects, and pedestrian plans. Pedestrian plans are commonly attached to larger bicycle or active/non-motorized transportation plans, but are also seen as stand-alone plans. Pedestrian plans typically include infrastructure, but can often include land-use policy, programs, safety measures, and evaluation of walkability in a city. Jurisdictions leading the way have a stand-alone pedestrian plan with specific and detailed projects listed.

From available data, the 2015-16 CivicSpark Fellows developed a policy metric based on a modified ranking system and a performance metric using a weighted score system from walkscore.com. The 2015-16 CivicSpark Fellows worked to collect policy data, and the 2016-17 CivicSpark Fellows collected the performance data.

**Policy Reasoning:** Each rank represents a jurisdiction’s commitment to pedestrian planning, from no pedestrian plans or programs to a comprehensive and implementable pedestrian plan. Though pedestrian infrastructure projects and programs are very important, fully thought-out and functioning pedestrian plans are rarer and indicate intent to promote and encourage walking as a form of transportation in the future.

**Performance Reasoning:** A combination of both walk score by city and intersection density by jurisdiction incorporating data of existing staff with external resources.

Walk scores measure the land use side of walkability and are available for most cities in the SCAG region. While Walkscore.com’s ranking system is not transparent and is not completely accurate (e.g. it counts CVS as a retail store and 7-11 as a grocery store), it was the best available data to inform the metric.

Additionally, this data nicely couples with data from SCAG. The higher the intersection density, the more walkable a jurisdiction is. While intersection density measures the infrastructure side of walkability, it only represents one aspect of pedestrian infrastructure and cannot be used to evaluate all the facets of a pedestrian program and is therefore coupled with WalkScore.com’s criteria categories. While total number of intersections is also available for each jurisdiction, dividing by jurisdiction size normalizes the data for uniform evaluation among jurisdictions.

**Table 9: Pedestrians Performance Overview**

<b>White:</b> No to very low walkability	<b>Light Green:</b> Low walkability	<b>Medium Green:</b> Moderate walkability	<b>Dark green:</b> Very high walkability	<b>Notes:</b> Natural breaks method; # intersections/area of jurisdiction
1.52 - 47.52	47.520001 - 87.76	87.760001 - 156.05	156.050001 - 297.89	Minimum: 1.52 Maximum: 297.89 Mean: 66.383590 Median: 56.22 Standard Deviation: 45.032934

*For more information on data classification, please visit [ArcGIS](#) online.*

**Notes/Observations:**

- Safe Routes to Schools is a program that examines and works to improve pedestrian and bike accessibility to and safety around schools. However, SRTS does not fit satisfactorily into the bike or pedestrian indicator topic and may instead be a separate indicator topic in the future.
- Projects designed to make a city more walkable include amenities such as marked and enhanced crosswalks to make walking a safer choice of transportation.
- In the SCAG region, 38% of all trips are less than three miles, a distance that can be reasonably covered by bike or on foot. However, as of 2012 walking trips averaged 16.8% of all trips in the SCAG region (and bike trips only added an extra 1.12%).

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## Bikes

**Description:** Originally adapted from the 2011 indicator, “*adopted a bike plan or program*”

The Fellows’ research shows that the primary ways that jurisdictions address biking is through adopting bike plans and building bike infrastructure needed to implement bike plans. Levels of efforts taken towards improving biking by jurisdictions include a bikeway map in the jurisdictions’ General Plan, adopting bike plans that are part of a larger active transportation, non-motorized transportation, or Complete Streets plan. A handful of jurisdictions have adopted stand alone bike plans, and certain jurisdictions have adopted bike plans that include engineering, education, encouragement, enforcement, evaluation, and equity of bike infrastructure in cities. Jurisdictions leading the way will designate a staff member or committee to carry out the bike plan, including implementing specific bike projects to increase the number of bikeways in comparison to the miles of roadways in a city.

From available data, the CivicSpark Fellows developed a policy metric based on a modified ranking system and a performance metric using SCAG’s existing bikeways database and the California DOT Public Road Data report. The 2015-16 CivicSpark Fellows worked to collect policy data, and the 2016-17 CivicSpark Fellows collected the performance data.

**Policy Ranking Reasoning:** Total bikeway density on the policy side can be compared against existing bikeway density on the performance side. In the ranking system, each rank represents a jurisdiction’s commitment to bike planning, from no bike plan at all to a comprehensive and implementable bike plan. A jurisdiction can qualify as medium green only if it has a recent or recently updated bike plan because it is assumed that newer bike plans would meet or exceed BTA requirements (*see Notes/Observations*), and thus meet state recommendations.

**Performance Ranking Reasoning:** This metric determines the number of designated bikeways relative to roadways in each jurisdiction. However, it only represents one aspect of bike infrastructure and cannot be used to evaluate all the facets of a bike program. While information on the total existing miles of bikeway is also available for each jurisdiction, dividing by miles of roadway normalizes the data for uniform evaluation among jurisdictions.

**Table 10: Bikes Performance Overview**

<b>White:</b> No to very low existing bikeway density	<b>Light Green:</b> Low existing bikeway density	<b>Medium Green:</b> Moderate existing bikeway density	<b>Dark green:</b> Very high existing bikeway density	<b>Notes:</b> Natural breaks method
0- 0.073983	0.073984- 0.180510	0.180511- 0.300089	0.300090- 0.535628	Minimum: 0 Maximum: 0.535628 Mean: 0.098909746 Median: 0.06881969 Standard Deviation: 0.09911316

For more information on data classification, please visit [ArcGIS](#) online.

**Notes/Observations:**

- SCAG encourages city and county governments to conduct bicyclist counts though counts are not currently comparable between jurisdictions. The organization’s partnership with the UCLA Luskin Center and LA County Metro created a Bike Count Data Clearing Center<sup>5</sup>. This site includes a repository for any bicycle count data collected throughout the SCAG region, as well as a training manual and other supporting documents to facilitate a jurisdiction’s bike and pedestrian counts.
- There are four classes of bikeways. Class I bikeways are bike paths, class II are bike lanes, class III are bike routes, and class IV are cycle tracks.
- Performance of the existing bikeway density percentage is equal to the total existing divided by centerline miles of roadway
- Existing bikeway information can be obtained from SCAG’s database and centerline miles of roadway information can be obtained from the California DOT Public Road Data report. Existing miles of bikeway by class will also be available.
- In 2009 female bike trips constituted only 24% of all bike trips nationally. Women cite safety concerns like “distracted driving” and lifestyle issues such as “inability to carry children or other passengers” for their lack of cycling.

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<sup>5</sup> <http://www.bikecounts.luskin.ucla.edu/>

## Complete Streets

**Description:** Originally adapted from the 2011 indicator, *“Adopted the Complete Streets policy”*

The Fellows’ research indicates Complete Streets for safe use of a variety of transportation modes by all people have been gaining traction in the SCAG region through the inclusion of Complete Streets language in General Plans, implementation of Complete Streets projects, and Active Transportation Project (ATP) project applications submitted. Not many jurisdictions have mentioned specific Complete Streets projects, policy, or language, but Complete Streets are a new concept in the SCAG region and continue to gain momentum across the SCAG region and are slowly becoming an accepted sustainability strategy. Cities leading the way have several projects that specifically implement Complete Streets with inclusion of strong and practicable Complete Streets language in a General Plan or a stand-alone Complete Streets plan.

From available data, the CivicSpark Fellows developed a policy metric based on a modified ranking system and a performance metric using SCAG’s existing database or from the CalTrans website to get. The 2015-16 CivicSpark Fellows worked to collect policy data, and the 2016-17 CivicSpark Fellows collected the performance data.

**Policy Ranking Reasoning:** Each rank represents a jurisdiction’s commitment to Complete Streets, from no Complete Streets inclusion in the General Plan to strong inclusion and a number of planned projects. Complete Streets is slowly becoming an accepted sustainability strategy, and only recently has the state required inclusion of the Complete Streets concept in General Plans.

**Performance Ranking Reasoning:** Even if an ATP project was not successfully funded, a jurisdiction that submits an ATP project application demonstrates the intent to promote a variety of transportation modes.

**Table 11: Complete Streets Performance Overview**

<b>White:</b> No to very low number of applications submitted	<b>Light Green:</b> Low number of applications submitted	<b>Medium Green:</b> Moderate number of applications submitted	<b>Dark green:</b> Very high number of applications submitted	<b>Notes:</b> Weighted score system
0 - 1	2 - 5	6 - 12	13+	Count: 197

*Data classification was not based off ArcGIS online methods for this category\**

**Notes/Observations:**

- In 2004 Smart Growth America launched the National Complete Streets Coalition, which promotes Complete Streets policies and implementation throughout the country.
- AB 1358 (also known as the Complete Streets Act of 2008) revised the CA General Plan Guidelines to require, as of 2011, inclusion of aspects of the Complete Streets concept in the Circulation Element of a county or city’s General Plan if they substantially revise that element.
- Currently no city or county in the SCAG region tracks the number or mileage of Complete Streets projects in the jurisdiction. This is most likely because there are not yet enough Complete Streets projects to warrant tracking.
- ATP application information can be obtained from SCAG’s database or from the CalTrans website.
- Many of the California Transportation Commission’s ATP projects have Complete Streets components, or at least implement aspects of the Complete Streets concept. Until Complete Streets projects become more widely adopted and more implementation occurs, ATP projects provide a useful way to identify cities and counties that are taking complete streets-related action.

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# Motorized Transportation

## Overview

California is working to expand the use and production of alternative fuels and vehicles to further efforts in improving air quality, addressing climate change impacts, and reducing dependence on petroleum-based fuels. [Executive Order S-01-07](#), the Low Carbon Fuel Standard (LCFS), calls for a reduction of at least 10% in the carbon intensity of California's transportation fuels by 2020, instructing the California Environmental Protection Agency (EPA) to work with other State agencies to meet the 2020 target.

Jurisdictions within the SCAG region have promoted the use of electric and alternative fuel fleets vehicles to further reduce transportation-related greenhouse gas (GHG) emissions. Although the policies associated with such vehicles vary across the SCAG region, the use of alternative fuel vehicles provides a lead-by-example method for cities and counties to demonstrate a commitment to reducing GHG emissions from the transportation sector.

Common alternative fuels include the following:

- Biodiesel/Renewable Diesel
- Electricity
- Hydrogen Fuel
- Methanol
- E85
- Liquefied Propane Gas (LPD)
- Natural Gas (Compressed) (CNG)

Topics chosen for this category include *Electric Vehicles* and *Municipal Alternative Fuel*.

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# Electric Vehicles

**Description:** Originally adapted from the 2011 sustainability indicator, “*Adopted an electric vehicle plan/program*”

The Fellows’ research found that jurisdictions within the SCAG region are in the early stages of the promotion and expansion of electric vehicles (EVs.) Promotion of EV use is evident through jurisdictions’ efforts in the following areas: installation of EV charging stations, rebate programs for home charging stations, preferential or free parking, carpool lane usage, planning for a Neighborhood Electric Vehicle network, streamlining home charging station permitting processes, and building jurisdictional EV fleets.

From available data, the 2015-16 CivicSpark Fellows developed a policy metric based on a modified ranking system.

**Policy Ranking Reasoning:** Each rank represents a jurisdiction’s commitment to EV expansion, from no sustained EV policies or programs to a comprehensive set of EV policies and goals. Having a quantifiable goal shows a jurisdiction’s intent to commit to EV expansion.

**Performance Ranking Reasoning:** At the current moment in time, there lacks a universal metric to quantify efforts made on behalf of local jurisdictions for this indicator.

## Notes/Observations

- EVs are being promoted in numerous ways at the State level such as the Governor’s Zero-Emission Vehicles Action Plan, numerous Executive Orders to facilitate EV charging and use, and updates to the CA building code requiring new buildings to be EV charger-ready.
- There are three levels of charging devices (level 1, level 2, and DC fast charging) that vary by charging speed and ability. Charging stations may vary by price.
- Neighborhood Electric Vehicles (NEVs) are small, low-speed electric vehicles that are only authorized to be on certain neighborhood roads.

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# Electric Vehicles Permitting Streamlining

**Description:** Adopted as a new sustainability indicator in 2020.

Assembly Bill (AB) 1236 was adopted to expand the accessibility of electric vehicle charging infrastructure in order to reduce greenhouse gas emissions as well as provide local economic benefits. AB 1236 requires cities and counties to create an ordinance that mandates an expedited and streamlined permitting process for electric vehicle charging stations (EVCS). To prevent miscommunication and promote efficiency during the application process, the law requires cities and counties to post an EVCS checklist on the city or county webpage that details the requirements for an expedited review.

**Policy Ranking Reasoning:** Each rank represents a jurisdiction's compliance with AB 1236, from not streamlined to fully streamlined. Cities and counties must meet 6 of the first 7 checklist criteria to be considered fully streamlined and the missing criteria must not have a negative influence on permitting. Additionally, a city or county must have a checklist in order to be graded as fully streamlined. The 7 criteria are: streamlining ordinance, permitting checklists, administrative approval, approval limited to health and safety review, electric signatures accepted, EVCS not subject to association approval and one complete deficiency notice.

**Notes/Observations:**

- Electronic submission of an application is permitted through email, internet and/or fax, and electronic signatures are allowed on all forms.
- AB 1236 forbids jurisdictions from allowing unreasonable barriers to station installations.
- Jurisdictions were given until September 30, 2017 to develop and adopt streamlining ordinances but due to the lack of awareness and enforcement, there is a wide variance in compliance status across the state.
- Ordinances and checklists do not need to be developed from scratch, California Building Officials (CALBO) offer AB 1236 compliance toolkits for all jurisdictions.

*Section Disclaimer - Please note that this information was based on the limited capacity of three CivicSpark fellows for the 2015-16 service year. Information may not reflect true data as most data relied upon publicly available resources due to a lack of response from local jurisdictions on outreach*

## Municipal Alternative Fuel Fleet

**Description:** Originally adapted from the 2011 indicator, “*Adopted plan to transition to a cleaner fuel municipal fleet (e.g. hybrid, natural gas)*”

Most municipal fleets with alternative fuel vehicle (AFV) policies employ a replacement strategy that exchange old vehicles with AFVs. However, the strength and stringency of these policies vary between jurisdictions. The use of AFVs provides a method for jurisdictions to lead by example and demonstrate a commitment to reducing GHG emissions from the transportation sector.

From available data, the 2015-16 CivicSpark Fellows developed a policy metric based on a modified ranking system.

**Policy Ranking Reasoning:** Each rank represents a jurisdiction’s commitment to a cleaner fleet, from no transition strategy or goal to an ambitious strategy or goal. Fleet replacement with AFVs provide an avenue for jurisdictions to lead by example and are one of the initial steps jurisdictions can take towards transitioning to zero-emission fuel sources.

**Performance Ranking Reasoning:** At the current moment in time, there lacks a universal metric to quantify efforts made on behalf of local jurisdictions for this indicator.

### Notes/Observations:

- Alternative fuel vehicles include the following: EVs, hybrids, compressed natural gas (CNG) vehicles, liquid natural gas (LNG) vehicles, plug-in hybrids (PHEVs), hydrogen fuel cell vehicles, biofuel-powered vehicles, etc. The terms low- or zero-emission vehicles (LEVs or ZEVs) may be used to describe AFVs.
- The State fleet plan, which includes a goal of a 20% reduction or displacement of petroleum consumption in its fleet by 2020 and 25% of state fleet purchases to be ZEVs by 2020, can be used as an example for municipal fleet plans.

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# Open Space

## Overview

As our region's population grows, the preservation of open space becomes increasingly more critical. California's natural corridors provide a multitude of benefits from resources to natural hazard relief. Due to the different topographies of the Southern California region, communities can act by preserving and increasing ecosystem productivity, improving wildlife habitats, and making greenspace more easily accessible.

Incorporating open space into the SCAG's regional plan is essential as it serves as an avenue in mitigating climate change. Potential mitigation programs include planning of transportation projects to avoid or lessen impacts to open space, recreation land, and agricultural lands through information and data sharing, increasing density in developed areas and minimizing development in previously undeveloped areas that may contain crucial open space.

Topics chosen for this category include *Natural Lands* and *Farmland*. The *Parks* indicator was reassigned to the *Urban Greening* category.

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# Natural Lands

**Description:** Originally adapted from the 2011 indicator, of “*Adopted program for preservation/creation of parks/open space*”

The Fellows’ research found that Southern California is located in the California Floristic Province, one of the top 25 natural biodiversity hotspots in the world. Sprawling development encroaches on the SCAG region’s natural lands, not only reducing biodiversity but removing natural carbon sinks and thus increasing greenhouse gas (GHG) emissions. Planning for the conservation of natural lands consists of infill development land-use strategies as well as natural resource conservation policies that protect specific lands from development.

From available data, the CivicSpark Fellows developed a policy metric based on a modified ranking system and a performance metric using Performance data was based on natural land acreage conserved per 1,000 residents California Protected Area Database (CPAD). The 2015-16 CivicSpark Fellows worked to collect policy data, and the 2016-17 CivicSpark Fellows collected the performance data.

**Policy Reasoning:** Each rank represents a jurisdiction’s commitment to conservation, from no land conservation policies to comprehensive land conservation plans. This ranking system is based on recommendations from the RTP/SCS Natural and Farm Lands Appendix,<sup>6</sup> which encourages regional conservation planning, innovative land use planning for the protection of natural lands, and improvement of natural corridor connectivity.

**Performance Ranking:** This metric measures the existence of natural lands and the access to open spaces for residents within a jurisdiction. However, it does not account for the protected status of the land. While total acres of natural land data is also available for each jurisdiction, dividing by the jurisdiction’s population normalizes the data for uniform evaluation among jurisdictions. Based on best publicly available data, this was chosen as the best metric.

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<sup>6</sup> [http://scagrtpscs.net/Documents/2016/proposed/pf2016RTPSCS\\_NaturalFarmLands032816.pdf](http://scagrtpscs.net/Documents/2016/proposed/pf2016RTPSCS_NaturalFarmLands032816.pdf)

**Table 13: Natural Lands Performance Overview**

<b>White:</b> No to very low availability	<b>Light Green:</b> Low availability	<b>Medium Green:</b> Moderate availability	<b>Dark Green:</b> Very high availability	<b>Notes:</b> Natural breaks method
0 - 25.646204	25.646205 - 100.83	100.830001 - 232.69	232.690001 - 1026.428885	Minimum: 0 Maximum: 1026.428885 Sum: 4481.167891 Mean: 29.874453 Median: 1.470117 Standard Dev: 114.046323

*For more information on data classification, please visit [ArcGIS](#) online.*

**Notes/Observations:**

- The original topic considered all “open space” without distinction between urban parks and natural lands. However, for the Fellows’ research purposes this topic has been split in two in order to make a distinction between the presence of and access to recreational urban park spaces and the conservation and/or preservation of natural habitats, ecosystems, and wildlife within a city or county’s jurisdiction.

*Section Disclaimer - Please note that this information was based on the limited capacity of three CivicSpark fellows for the 2015-16/2016-17 service years. Information may not reflect true data as most data relied upon publicly available resources.*

# Farmland

**Description:** Originally adapted from the 2011 indicator, “(Adopted agricultural/open space/sustainability plan or program)”

The Fellows’ research found that Southern California contributes 1/6 of the state’s total agriculture output with sales of \$7 billion annually. Agriculture takes place in all counties of the SCAG region but particularly in Imperial, Ventura, and Riverside counties which rank 9<sup>th</sup>, 10<sup>th</sup>, and 14<sup>th</sup> most agriculturally profitable counties in the state, respectively. Persistent drought and sprawling development are the biggest threats to the region’s continued agricultural prosperity. The most effective tool to conserve farmland for agricultural use is a permanent conservation easement. However, as of 2014 there were no permanent conservation easements funded by the California Farmland Conservancy Program within the SCAG region.<sup>7</sup> Cities and counties in the SCAG region may implement other forms of farmland conservation such as Land Conservation Act contracts, non-permanent conservation easements and other enforceable land use restrictions.

**Policy Ranking Reasoning:** Each rank represents a jurisdiction’s commitment to farmland conservation, from no conservation policies to a comprehensive set of policies or programs. Agricultural conservation easements and agricultural preserves are the most effective methods for conserving farmland because both offer financially competitive alternatives to development.

**Performance Ranking Reasoning:** At the current moment in time, there lacks a universal metric to quantify efforts made on behalf of local jurisdictions for this indicator.

## **Notes/Observations:**

- Agricultural land consists of farmland and grazing land. This indicator focuses on farmland, which includes areas where crops are grown.
- Prime farmland is the best farmland for growing crops. About 1/3 of the agricultural land in the state is prime farmland.
- The Department of Conservation is required by law to collect information on the amount of land converted to or from agricultural use for every mapped county and to report this information biennially.
- An agricultural conservation easement (ACE) is a deed restriction that landowners voluntarily place on their property to keep productive land available for farming. An ACE will permit agricultural activities and related structures but limit development unrelated to commercial agriculture.
- PACE programs compensate landowners for placing an agricultural conservation easement (ACE) on their land and offer a financially competitive alternative to selling farmland for development. PACE programs can be implemented locally or by the state. Funding comes from the public or matching from the state ACE program.

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<sup>7</sup>[http://www.conservation.ca.gov/dlrp/cfcp/stories/Documents/CFCP%20funded%20easements\\_0814.pdf#search=map%20of%20conservation%20easements](http://www.conservation.ca.gov/dlrp/cfcp/stories/Documents/CFCP%20funded%20easements_0814.pdf#search=map%20of%20conservation%20easements)

- Agriculture preserves are land designations that prohibit any use besides agriculture. Only land in agriculture preserves can be protected under a Land Conservation Act contract. Agricultural preserves must be at least 100 acres.
- Urban agriculture is also present within the SCAG region, but focuses on healthy/fresh food access over land conservation. For more information please see Healthy Food Access on *page 59*.

*Section Disclaimer - Please note that this information was based on the limited capacity of three CivicSpark fellows for the 2015-16 service year. Information may not reflect true data as most data relied upon publicly available resources.*

# Waste

## Overview

According to CalRecycle, California has made significant progress in reducing solid waste; garbage, refuse, sludges, and other discarded solid materials resulting from residential activities, and industrial and commercial operations. However, further progress and solutions are needed in the areas of reducing waste and recovering recyclable materials, such as addressing plastic packaging (about 25% of the waste stream) and food waste (about 18% of the waste stream). A considerable amount of energy and resources are used throughout the waste disposal process. Waste is generated by residents and businesses, transported through the use of heavy-duty trucks, and, for the most part, disposed of at landfills where methane is generated as it decomposes. Limiting the amount of waste that is transported to and decomposes in landfills will help reduce the impact on the environment.

California Legislature passed Assembly Bill 939 (AB 939) in 1989, requiring every city and county in California to provide an implementation schedule to divert 25% of solid waste by 1995 and 50% by 2000 through source reduction, recycling, and composting. Recently, California Legislature and Governor Brown set an ambitious goal of 75% source reduction, recycling, and composting of solid waste by 2020 through Assembly Bill 341 (AB 341) and a 75% reduction of organic waste by 2025 through Senate Bill 1383 (SB 1383). *Waste Minimization* is explored in this section as communities in the SCAG region progress towards the goals outlined in AB 341 and SB 1383.

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## Waste Minimization

**Description:** Originally adapted from the 2011 indicator, “*adopted waste diversion/zero waste plan*”

The Fellows’ research suggests that jurisdictions in the SCAG region address waste minimization through reducing waste generated, recycling, and composting through different policies and programs to reduce the pounds of waste disposed per person per day (PPD). Policies and programs put into place to reach California’s 75% waste minimization goal include the development of a strategic plan with formal targets, product bans, education campaigns, coalition partnerships, incentives or regulations, diversion services such as composting, targeted recycling programs, and use of a materials recovery facility.

From available data, the CivicSpark Fellows developed a policy metric based on a modified ranking system and a performance metric using CalRecycle to get pounds of waste disposed per person per day. The 2015-16 CivicSpark Fellows worked to collect policy data, and the 2016-17 CivicSpark Fellows collected the performance data.

**Policy Ranking Reasoning:** Each rank represents a jurisdiction’s commitment to waste minimization, from no policies and goals to ambitious goals and a comprehensive set of waste minimization policies and programs. Establishing targets that align with or exceed the state goal warrants a higher ranking.

**Performance Ranking Reasoning:** This metric assesses disposal rate (rate of waste going to the landfill) because diversion rate (rate of waste diverted from the landfill) is no longer measured by CalRecycle. The state per capita disposal rate allowable to reach the state’s 75% waste minimization goal is 2.7 PPD. Noting each jurisdiction’s disposal rate alongside the state target allows for easy comparison against the state target. While total waste disposed is available for each jurisdiction, dividing by the jurisdiction’s population normalizes the data for uniform evaluation among jurisdictions.

**Table 14: Waste Minimization Performance Overview**

<b>White:</b> No to very low per capita disposal rate	<b>Light Green:</b> Low per capita disposal rate	<b>Medium Green:</b> Moderate per capita disposal rate	<b>Dark green:</b> Very high per capita disposal rate	<b>Notes:</b> Natural breaks method
5.300001-6314.300000	4.100001-5.300000	3.500001-4.100000	2.100000-3.500000	Minimum: 2.100000 Maximum: 6314.30000 Mean: 52.170552 Median: 4.100000 Standard Deviation: 501.999334

*For more information on data classification, please visit [ArcGIS](#) online.*

**Notes/Observations:**

- The state’s 75% target does not include forms of waste diversion such as waste-to-energy.
- There are two waste-to-energy facilities in the SCAG region in Commerce and Long Beach. It is not possible to determine how much waste is being diverted to these facilities and by whom meaning that our calculations may include waste diversion methods that are not considered by the state as acceptable to meeting the 75% goal.
- As of 2016, California’s per resident disposal rate of 6.0 pounds per resident per day calculated using AB 341’s measurement system and a recycling rate of 44%.

*Section Disclaimer - Please note that this information was based on the limited capacity of three CivicSpark fellows for the 2015-16/2016-17 service years. Information may not reflect true data as most data relied upon publicly available resources*

# Water

## Overview

Water supplies in the SCAG region come from a blend of local and imported sources. Water conservation and efficiency involves technological and behavioral changes that lower the demand for water. With California's long-standing history of drought and growing population, sufficient water resources will be needed to meet future water demands, including addressing water quality and watershed management.

Because water is a limited resource, it is important to maximize conservation efforts. Although water regulations are often left to water agencies to address, jurisdictions have the opportunity to influence and implement strong water-related policy to promote water conservation efforts. Currently, the *Water* category includes the *Water Conservation* indicator. The *Stormwater Management* indicator was reassigned to the *Urban Greening* category.

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# Water Conservation

**Description:** Originally adapted from the 2011 sustainability indicator, “*Adopted water conservation policy/ordinance*”

Recent State legislation directs water conservation mandates to urban water retail suppliers, with many jurisdictions leaving water conservation actions up to their urban water suppliers. However, the Fellows’ research has found that half of the jurisdictions within the SCAG region are their water retail suppliers, therefore having control over their water use.

From available data, the 2015-16 CivicSpark Fellows developed a policy metric based on a modified ranking system.

**Policy Ranking Reasoning:** Each rank represents a jurisdiction’s commitment to water conservation, from no water conservation policies or programs to a set of water conservation programs and legal requirements.

**Performance Ranking Reasoning:** At the current moment in time, there lacks a universal metric to quantify efforts made on behalf of local jurisdictions for this indicator.

## Notes/Observations

- Under the current ranking system, jurisdictions that are not their water retail suppliers will rarely rank darker than light green because they leave most water conservation actions to the water suppliers.
- State law requires a 20% reduction in water use by 2020. Urban water retail suppliers are required by the State to develop Urban Water Management Plans (UWMPs), set regional water conservation goals, and implement water conservation measures to achieve this statewide reduction in water use. A 2030 Statewide Urban Water Use Efficiency Plan will set future water conservation goals.
- Gov. Brown called for a 25% reduction of water use in Executive Order B-29-15. 4 However, this is an emergency regulation and does not affect the 2020 water conservation goals.
- The State also has a goal to increase use of recycled water over 2002 levels by at least one million acre-feet per year (afy) by 2020 and by at least two million afy by 2030.

*Section Disclaimer - Please note that this information was based on the limited capacity of three CivicSpark fellows for the 2015-16 service year. Information may not reflect true data as most data relied upon publicly available resources due to a lack of response from local jurisdictions on outreach.*

# Health

## Overview

Sustainability aims to promote healthy, safe, and clean communities under the notion of healthy planet, healthy people. Many health issues are directly related to poor water and air quality among other negative environmental impacts. Reducing these environmental impacts improves health, enhances livelihoods and encourages healthier communities.

Cities have opportunities to influence and improve health of its residents by dictating plans, policies, and programs to ensure everyone has access to components of a healthy life. Evidence links neighborhoods and built environment characteristics such as transportation and land use patterns to behaviors that can support or discourage healthy, active, and safe lifestyles. Topics chosen for this category are *Public Health* and *Healthy Food Access*.

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## Public Health

**Description:** Originally adapted from the 2011 indicator, “*Public Health Element/HEAL Campaign Participant*”

The Fellows’ research indicates jurisdictions are making the connection between public health, land use & transportation policies, and sustainability. Jurisdictions have different programs and policies to address evidence that links neighborhoods and built environment characteristics such as transportation and land use patterns to behaviors that can support or discourage healthy, active, and safe lifestyles. Programs and policies include a healthy city resolution, public health-focused program or plan, Public Health Element, appointment of a staff person or group of staff dedicated to working on public health, and representation of a public health component in the General Plan. The seven components of public health used are from SCAG’s 2016 Regional Transportation Plan/Sustainable Community Strategies and include: access to essential destinations, affordable housing, air quality, climate adaptation, economic opportunity, physical activity, and transportation safety.

From available data, the CivicSpark Fellows developed a policy metric based on a modified ranking system and a performance metric using CalRecycle to get pounds of waste disposed per person per day. The 2015-16 CivicSpark Fellows worked to collect policy data, and the 2016-17 CivicSpark Fellows collected the performance data.

**Policy Ranking Reasoning:** Each rank represents a jurisdiction’s commitment to public health and acknowledgment of the connection between public health and sustainability, from no acknowledgement to a demonstration of comprehensive understanding and some sort of actionable policy or program. The lower limit for the dark green ranking is 9 points because even if a jurisdiction has a Public Health Element and all 7 components of public health represented in its General Plan, it must still have some other public health program or policy that demonstrates application of the General Plan policies to be considered dark green.

**Performance Ranking Reasoning:** Though it uses an extensive list of social indicators to develop a relatively comprehensive picture of public health, the current version of the Health Disadvantage Index (Version 1.1) could include more indicators focused on land use and transportation to suit SCAG’s purpose of dictating land use and transportation in the region.

**Table 15: Public Health Performance Overview**

<b>White:</b> Very high HDI score	<b>Light Green:</b> Moderate HDI score	<b>Medium Green:</b> Low HDI score	<b>Dark green:</b> No to very low HDI score	<b>Notes:</b> Weighted score system
76-100	51- 75	26-50	0-25	Count: 197

*Data classification was not based off ArcGIS online methods for this category\**

**Notes/Observations:**

- Many metrics reflect various aspects of public health, but because it is such a broad topic, one measurement alone cannot entirely reflect the public health of a city.
- Many programs and policies that have components of public health are reflected in other indicators in the Green Region Initiative project. Thus, this public health indicator only notes programs and policies that focus on public health as a whole.

*Section Disclaimer - Please note that this information was based on the limited capacity of three CivicSpark fellows for the 2015-16/2016-17 service years. Information may not reflect true data as most data relied upon publicly available resources.*

## Healthy Food Access

**Description:** The Fellows' research suggests jurisdictions are taking different paths towards healthy food access. Jurisdictions leading the way look to obtaining grant money; having a dedicated working group, committee, task force, commission, or staff member(s); subsidies, expedited permitting, joint-use policies, and land use strategies to promote healthy food; establishment of farmer's markets; and approving EBT use at farmers market. Many jurisdictions have already established farmer's markets, but farmers markets at many communities also serve as community events. A recent development in many jurisdictions allowing people to use EBT towards farmers market purchases promotes healthy food access among lower income people. A jurisdictions efforts towards healthy food access can impact the eating habits that people have, improving their health and quality of life.

**Policy Ranking Reasoning:** This metric tracks how jurisdictions are doing in making it easier for residents to access healthy food options through policy, programs, and incentives. The amount of grocery stores and healthy food markets in a community and increased proximity to health care is linked directly to the overall health of its residents. Increased healthy food access reduces risk of illness, including some of the most common acute or chronic diseases such as heart disease and diabetes. Ensuring travel reliability and accessibility for all people to access healthy food options is central to maintaining and improving public health.

From available data, the CivicSpark Fellows developed a policy metric based on a modified ranking system. The 2017-2018 CivicSpark Fellows collected policy data.

**Performance Ranking Reasoning:** At the current moment in time, there lacks a universal metric to quantify efforts made on behalf of local jurisdictions for this indicator.

### Notes/Observations:

- Emits food waste, seen to be more in line with the waste reduction indicator. CivicSpark Fellows recognize what reducing food waste through redistribution among other programs can do towards healthy food access.
- In 2014, California implemented Assembly Bill 551, which allows landowners in metropolitan areas to receive tax incentives for putting land in agriculture use. First, cities and counties must create urban agriculture incentive zones. Unfortunately, not many cities have created urban agriculture incentive zones.
- This indicator does not include farmers markets owned and operated by private, for-profit business and fast food moratoriums not looked at for this indicator, but is used by jurisdictions to address healthy food access.

*Section Disclaimer - Please note that this information was based on the limited capacity of three CivicSpark Fellows for the 2017-18 service year. Information may not reflect true data as most data relied upon publicly available resources.*

# Engagement

## Overview

In order to thrive as a region, local governments need to provide leadership within their communities to actively support the overall sustainability of Southern California. Southern California is a leading center for innovation, university research, and technology development, all critical aspects of building a sustainable region. SCAG honors the commitment to foster collaboration to improve the overall sustainability of the region.

In recent years, climate organizations within the public and private sectors have been on the rise to tackle some of the most daunting climate change concerns. When local jurisdictions actively participate in engagement efforts, they initiate actions to address global challenges.

Topics in this category include *Sustainability Grants*, *Green Business/Environmentally Preferable Purchasing*, and *Participation Collaboration Policy*.

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## Sustainability Grants

**Description:** Originally adapted from the 2011 indicator, of “*Support Sustainable Compass Blueprint Principles*”

The Fellow’s research suggests that this topic originally focused on SCAG’s Compass Blueprint program which has since been changed to the Sustainability Planning Grant program. This topic has been expanded to also track two other types of grants: CalTrans Active Transportation Program (ATP) grants and seven grants funded through the Greenhouse Gas Reduction Fund (GGRF). These seven GGRF grants include only those for which local governments qualify.

**Policy Ranking Reasoning:** Each rank indicates a jurisdiction’s commitment to actively searching additional sources of funding.

**Performance Ranking Reasoning:** Each rank indicates the number of Affordable Housing and Sustainable Communities (AHSC), SCAG Sustainability, and ATP grants received by each jurisdiction.

*Disclaimer: For the purposes of this indicator, the Fellows used the slider function of the map to compare and contrast the amount of applications to the amount of awarded grants. While it does not reflect true policy, the Fellows found that intention of the local jurisdiction shows a correlation to holistic approaches to policy and planning.*

### **Notes/Observations:**

- This indicator differs from most others in the Green Region Initiative project because policy applies to grants applied and performance applies to grants awarded.
- The SCAG Sustainability Planning Grant, formerly known as the Compass Blueprint Grant Program, is awarded in three categories: integrated land use (for sustainable land use planning and transit oriented development), active transportation (for bike, pedestrian, and safe routes to school plans), and green region (for Climate Action Plans, natural resource plans, and greenhouse gas reduction programs).<sup>8</sup>
- CalTrans distributes grants through the ATP to encourage active transportation and enhance public health and safety, with a focus on disadvantaged communities.<sup>9</sup>
- The GGRF through California’s Cap-and-Trade program supports a variety of grant programs. The grants that local governments are eligible to receive include Affordable Housing & Sustainable Communities, Low Carbon Transportation, Water-Energy Efficiency, Sustainable Agriculture Land Conservation, Urban Forestry & Forest Health, and Waste Diversion. Only AHSC grants were included at this time because this is the only grant with information on all applications currently available.<sup>10</sup>

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<sup>8</sup> <http://sustain.scag.ca.gov/Pages/Grants%20and%20Local%20Assistance/GrantsLocalAssistance.aspx>

<sup>9</sup> <http://www.dot.ca.gov/hq/LocalPrograms/atp/>

<sup>10</sup> <http://www.ca-ilg.org/post/funding-local-governments>

***Example Best Practices:***

- South El Monte—has applied for 1 AHSC, 1 SCAG, and 5 ATP grants
- Moreno Valley—has applied for 2 AHSC, 3 SCAG, and 4 ATP grants
- Oxnard—has applied for 1 AHSC, 1 SCAG, and 5 ATP grants
- Orange County—has applied for 1 AHSC, 4 SCAG, and 9 ATP grants

*Section Disclaimer - Please note that this information was based on the limited capacity of three CivicSpark fellows for the 2015-16/2016-17 service years. Information may not reflect true data as most data relied upon publicly available resources.*

# Green Business Program/Environmentally Preferable Purchasing

**Description:** Originally adapted from the 2011 indicator, of *“Adopted a Green Purchasing/Green Business Program”*

The Fellows’ research suggests that environmentally preferable purchasing (EPP), or green purchasing, is the process where cities and counties purchase goods and services that have a reduced impact on human health and the environment (e.g. products contain recycled content, are energy efficient, etc.) as compared to other goods and services serving the same purpose. Green business programs serve as a way for jurisdictions to recognize, showcase, and connect businesses that are taking steps to implement environmentally sustainable practices within their operations (e.g. waste reduction, energy conservation, etc.). These programs have voluntary memberships for any local business that a jurisdiction deems qualified. Green purchasing and green business programs have been combined in this topic due to a lack of substantial action in either area in the SCAG region.

**Policy Ranking Reasoning:** Each rank indicates a jurisdiction’s commitment to green purchasing and green businesses, from no policies or programs executed by a city to exemplary initiatives. Exemplary performance can be determined by a jurisdiction’s participation in California’s Green Business Program or establishment of a legally-enforceable environmentally preferable purchasing or green business ordinance.

**Performance Ranking Reasoning:** At the current moment in time, there lacks a universal metric to quantify efforts made on behalf of local jurisdictions for this indicator.

## **Notes/Observations:**

- Due to a lack of comprehensive set of existing initiatives, green purchasing and green business programs are combined for this indicator.
- The California Green Business Program is a grassroots coalition of local governments and utilities that aim to work with small and medium-sized business throughout the state to contribute towards livable communities and healthier environments, while also conserving resources and saving money. All member cities and counties can be found on their website.<sup>11</sup>
- Eco-labels are voluntary certifications that identify environmentally sustainable products, and are used to create market competition with traditional products. Examples include EcoLogo (office supplies, cleaning products, building materials, etc.), FSC (sustainably-sourced wood), and Energy Star (electronics, appliances, etc.).
- By making sustainable choices in municipal facilities, local jurisdictions lead by example and demonstrate a commitment to sustainability by reducing total greenhouse gas emissions and resource consumption.

## **Example Best Practices:**

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<sup>11</sup> <http://greenbusinessca.org/>

## Cities with EPP Policy and Green Business Program

- Los Angeles:
  - [EPP Policy](#) w/ [Exemplary Performance](#)
  - [Green Business Program](#) w/ [Exemplary Performance](#)
- Manhattan Beach:
  - [EPP Policy](#)
  - [Green Business Program](#) w/ [Exemplary Performance](#)
- Santa Monica:
  - [EPP Policy](#)
  - [Green Business Program](#) w/ [Exemplary Performance](#)
  - [EPA Case Study](#)
- Rancho Cucamonga:
  - [EPP Policy](#) w/ [Exemplary Performance](#)
  - [Green Business Program](#)
- Thousand Oaks:
  - [EPP Policy](#)
  - [Green Business Program](#) w/ [Exemplary Performance](#)

*Section Disclaimer - Please note that this information was based on the limited capacity of three CivicSpark fellows for the 2015-16 service years. Information may not reflect true data as most data relied upon publicly available resources.*

## Participation/Collaboration Policy

**Description:** Originally adapted from the 2011 indicator of “*Participation/Collaboration in existing efforts (e.g. Local Governments for Sustainability (ICLEI), Climate Registry, US Conference of Mayors, ILG Beacon Program)*”

The Fellows’ research suggests that participation and collaboration are essential for jurisdictions to engage with other organizations and address environmental sustainability issues. While there are many opportunities for participation and collaboration with different programs, this report focuses on the U.S. Conference of Mayors (USCM), ICLEI, The Climate Registry, the Institute for Local Government (ILG) Beacon Program, and the Compact of Mayors. More information about these five programs can be found in the Notes/Observations section for this indicator.

**Policy Ranking Reasoning:** Each rank represents a jurisdiction’s commitment to collaboration in climate action, from no participation to active membership in multiple programs. Participation and collaboration in these existing efforts can display a jurisdiction’s sincerity and intent to take climate action.

**Performance Ranking Reasoning:** At the current moment in time, there lacks a universal metric to quantify efforts made on behalf of local jurisdictions for this indicator.

### Notes/Observations:

- When local governments participate or collaborate in existing efforts, they lead by example and demonstrate a commitment to sustainability for their jurisdictions.
- **United States Conference of Mayors (USCM)**—aims to promote the development of effective national urban/suburban policy, strengthen federal-city relationships, ensure that federal policy meets urban needs, provide mayors with leadership and management tools, and create a forum in which mayors can share ideas and information. There is limitations on this organization as participating mayors must be from jurisdictions with populations of at least 30,000 people.
- **ICLEI**—aims to provide technical consulting, training, and information services to build capacity, share knowledge, and support local government in the implementation of sustainable development at the local level.
- **The Climate Registry**—designs and operates voluntary and compliance GHG reporting programs globally and assists organizations in measuring, reporting, and verifying the carbon in their operations in order to manage and reduce it. They also consult with governments nationally and internationally on all aspects of GHG measurement, reporting, and verification. Participation is voluntary and available for any local government to participate in.
- **ILG Beacon Program**— a statewide program that provides support and recognition to California cities and counties that are working to reduce greenhouse gas emissions, save energy, and adopt policies and programs that promote sustainability. It also provides a

framework for local governments to share best practices that create healthier, more efficient vibrant communities.

- Cities and counties participating in the ILG Beacon Program must do the following: adopt a resolution by the governing body committing the agency to participate in the program, designate a lead staff person as a point of contact, designate an elected official that will represent and serve as a contact for the agency, develop and/or implement sustainability initiatives and or/a Climate Action Plan and respond to data inquiries in order to share best practices and receive award recognition.
- **Compact of Mayors**—establishes a common platform to capture the impact of cities' collective actions through standardized measurement of emissions and climate risk and consistent public reporting of their efforts.

***Example Best Practices:***

Participation in all five existing efforts:

- Santa Monica
- Palm Springs

Participation in four existing efforts:

- San Buenaventura

*Section Disclaimer - Please note that this information was based on the limited capacity of three CivicSpark fellows for the 2015-16/2016-17 service years. Information may not reflect true data as most data relied upon publicly available resources.*

# Adaptation & Resilience

## Overview

Climate change mitigation means reducing or sequestering greenhouse gases, whereas adaptation is preparing for the unavoidable impacts of climate change. Over the coming century, some climate change studies, such as the 2009 California Adaptation Strategy, project that Southern California will be expected to manage extremes of precipitation and temperature, increased storm frequency and intensity, and sea-level rise. The effects of climate change could lead to impacts in the following areas:

- Streamflow
- Flooding
- Water supply
- Sea level
- Soil water content
- Agriculture
- Stormwater
- Wastewater treatment
- Wildfire risk
- Roads
- Forest health
- Biodiversity
- Public health
- Economic livelihoods
- Financial sector
- Insurance industry
- Individual comfort and recreation

Failure to anticipate and plan for climate variability and the prospect of extreme weather and related events could have serious impacts on the regional economy and quality of life. Starting now and continuing in the years and decades ahead, we can adapt to these risks through resilient resource and land use choices.

Currently, the *Adaptation & Resilience* category includes the *Adaptation Planning* Indicator with future plans of including a *Resilience Planning* Indicator.

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# Adaptation Planning

**Description:** The Fellows’ research found that due to Senate Bill 379 (SB 379), jurisdictions are now required by law to address climate change adaptation within the Safety Element of General Plans by January 1, 2022, or when they next update their local hazard mitigation plan. Upon conducting a gap analysis of adaptation policies to determine SB 379 compliance across the SCAG region, SCAG found that a majority of jurisdictions have not considered climate change impacts in their policy documents, while several jurisdictions have either drafted or adopted adaptation policies. A three-tiered ranking system was developed based on the status of adaptation planning and the degree to which policies addressed various climate change risks, from “acknowledgement of climate risks” to “adopting a stand-alone plan or general plan that addresses numerous relevant climate risks.”

Additional adaptation planning resources can be found through SCAG’s Southern California Climate Adaptation Planning Framework, including details on the methodology for the adaptation policy gap analysis incorporated into the GRI.

From available data, the 2017-18 CivicSpark Fellows developed a policy metric based on a modified ranking system. The 2019-2020 CivicSpark Fellows updated this policy metric based on SCAG’s Gap Analysis ranking system.

**Policy Ranking Reasoning:** Each rank represents a jurisdiction's commitment to addressing climate change adaptation: White represents no adaptation policies, light-green represents plans that acknowledge climate risks, medium-green represents plans that have not been locally adopted or adopted plans that include some policies addressing multiple climate change risks, and dark-green represents adopted stand-alone plans or General Plans with extensive adaptation policies that addresses all relevant climate risks. The medium-green ranking also includes jurisdictions that have adopted a stand-alone plan or General Plan but have one or few policies addressing all relevant climate risks. General Plans, Climate Action Plans, Sustainability Plans, and Local Hazard Mitigation Plans were reviewed to determine the ranking of each jurisdiction.

**Performance Ranking Reasoning:** At the current moment in time, there lacks a universal metric to quantify efforts made on behalf of local jurisdictions for this indicator.

## Notes/Observations

- From April 2020 *Gap Analysis of Climate Adaptation Policies in the SCAG Region*
  - Although having adopted a plan, some jurisdictions were ranked “Medium-green: Drafted stand-alone plan” as opposed to “Dark-green: Adoption of stand-alone plan” because their adopted stand-alone or general plan addresses one or few climate risks. These cities are: the city of Alhambra, city of Avalon, city of Burbank, city of Rosemead, city of Walnut, city of Huntington Beach, city of San Clemente, city of Palm Springs, city of Chino, city of Hesperia, city of Redlands, and county of San Bernardino.

- Currently, only 13 cities and one county in the SCAG region have adopted or drafted an updated general plan safety element that addresses climate change.
  - In total, 84 cities and 4 counties have adopted climate adaptation policies or are in the process of updating their policy documents.
  - 107 cities and 2 counties have not yet considered climate change impacts in their policy documents.
- *SB 379 Summary*
    - Adopted on October 8, 2015.
    - Applies to all cities and counties in California.
    - Created to ensure that climate adaptation is integrated into the general plan process.
    - Builds upon the requirements of AB 162, which requires flood protection to be considered in the safety elements of general plans and SB 1241, which requires the consideration of fire protection.
    - Supports the State's overall adaptation strategy, *Safeguarding California*, by ensuring cities and counties are providing for the safety of their communities and planning for adaptation to climate change impacts.
- *What does SB 379 require?*  
 Requires the safety elements of general plans to be reviewed and updated to include climate adaptation and resilience strategies. The review and update must consist of the following components:
    - A vulnerability assessment that identifies the risks climate change poses to the local jurisdiction and the geographic areas at risk from climate change.
    - Set of adaptation and resilience goals, policies, and objectives based on the information specified in the vulnerability assessment.
    - Set of feasible implementation measures designed to carry out the goals, policies, and objectives identified in the adaptation objectives.
- *From Safeguarding California: Implementation Action Plans -- Appendix B: Resilience Outcome Metrics*
    - % of Local Hazard Mitigation Plans that address climate impacts.
    - Local jurisdictions with CAPs, adaptation plans, general plans, and hazard mitigation plans that address climate, health, and equity for vulnerable populations.
    - Climate change vulnerability assessments, mapping, and/or local planning for natural hazards.
    - # of state agency staff enrolled in climate-related education courses and other trainings.
    - Existence of state agency plans (infrastructure, investment, operational) or grant guidance documents.

*Section Disclaimer - Please note that this information was based on the limited capacity of three CivicSpark fellows for the 2017-18/2019-20 service year. Information may not reflect true data as most data relied upon publicly available resources.*

# Urban Greening

## Overview

Urban Greening, ranging from small street-landscaping to large community parks, provides social, health, economic, and environmental benefits. It is one of the essential strategies to mitigating climate change impacts. Because Southern California communities are already beginning to face these climatic changes, it is important to maximize conservation efforts and prevent green space development in order to ensure equitable access for all communities. Although green space is a limited resource, the California State Coastal Conservancy explains that in many urban areas, there are opportunities to create greener, more environmentally sustainable and livable communities by creating new parks, improving existing parks and green spaces, and planting trees. In order to promote new Urban Greening opportunities, this GRI topic tracks existing green space in Southern California.

Parks and Urban Forestry create opportunities to access nature in urban environments while providing ecosystem services, such as increased air and water quality. Another ecosystem service provided through Urban Greening is Stormwater Management. With Southern California's large metropolitan areas and growing population, sufficient water runoff prevention will be needed to mitigate the pollution entering oceans and flooding communities. The Urban Heat Island effect can be minimized through Urban Greening when increasing shade trees and thus walkability for communities. Topics chosen for this category include *Parks*, *Stormwater Management*, and *Urban Forestry*.

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## Parks

**Description:** Originally adapted from the 2011 indicator, of “*Adopted program for preservation/creation of parks/open space*”

The Fellows’ research found that Parks have numerous benefits for the physical, psychological and social health of residents as well as the health of the environment. The Quimby Act, California legislation passed in 1975, recommends 3 to 5 acres of park per 1,000 residents as a protection for parkland in new development<sup>12</sup>. However, acreage alone is not a sufficient metric for the quality of a park system; distribution, access and funding for maintenance must also be considered. Progressive park policies and plans consider all of these aspects of park management. Though there were 3.27 acres of park space per 1,000 residents in the SCAG region in 2012<sup>13</sup>, only about half of the population lives within a 1/2 mile of a local park<sup>14</sup>.

From available data, the CivicSpark Fellows developed a policy metric based on a modified ranking system and a performance metric using Walk Score<sup>15</sup> and SCAG’s existing intersection density database. The 2015-16 CivicSpark Fellows worked to collect policy data, and the 2016-17 CivicSpark Fellows collected the performance data.

**Policy Reasoning:** Park acreage goals on the policy side can be compared against actual park acreage on the performance side. A jurisdiction’s commitment to park expansion can be demonstrated both by how aggressive its expansion goal is and how ambitious the goal’s time frame is. The interim ranking system represents each rank as a jurisdiction’s commitment to park planning and implementation, from maintenance-focused park policies to a comprehensive and implementable park plan.

Parks and recreation policies are required (as relevant) in each General Plan’s Open Space Element and show less commitment to parks preservation, whereas policies deemed light green intend to expand the park system and increase park quality. A Parks and Recreation Element in a General Plan is a suggested optional element and demonstrates further focus on and commitment to parks.

**Performance Ranking:** The Partnership for Sustainable Communities between HUD, EPA, and DOT recommends the metric of . However, this metric does not provide a full picture of the quality of the parks, park access, or financial commitment to parks. While total acres of park may also available for each jurisdiction, dividing by the jurisdiction’s population normalizes the data for uniform evaluation among jurisdictions.

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<sup>12</sup> <http://codes.findlaw.com/ca/government-code/gov-sect-66477.html>

<sup>13</sup> [http://scagrtpscs.net/Documents/2016/draft/d2016RTPSCS\\_PublicHealth.pdf](http://scagrtpscs.net/Documents/2016/draft/d2016RTPSCS_PublicHealth.pdf)

<sup>14</sup> Ibid

<sup>15</sup> <https://www.walkscore.com/>

**Table 12: Parks Performance Data Overview**

<b>White:</b> No to very low availability	<b>Light Green:</b> Low park availability	<b>Medium Green:</b> Moderate park availability	<b>Dark Green:</b> Very high park availability	<b>Notes:</b> Natural breaks method
0 - 129.378374	129.378375 - 449.958050	449.958051 - 1153.090091	1153.090092 - 3251.200841	Minimum: 0 Maximum: 3251.200841 Mean: 76.450762 Median: 2.146190 Standard Deviation: 314.108194

*For more information on data classification, please visit [ArcGIS](#) online.*

**Notes/Observations:**

- The original topic considered all “open space” without distinction between urban parks and natural lands. However, for our purposes this topic has been split in two in order to make a distinction between the presence of and access to recreational urban park spaces and the conservation and/or preservation of natural habitats, ecosystems, and wildlife within a city or county’s jurisdiction.
- Important sources for park information and advocacy are the Trust for Public Land (TPL), the National Resources and Parks Association (NRPA) and The City Project. The City Project conducted an assessment of park existence and access in Southern California entitled “Healthy Parks, Schools and Communities: Mapping Green Access and Equity in Southern California.”<sup>16</sup>

*Section Disclaimer - Please note that this information was based on the limited capacity of three CivicSpark fellows for the 2015-16/2016-17 service years. Information may not reflect true data as most data relied upon publicly available resources.*

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16

[http://sustain.scag.ca.gov/Sustainability%20Portal%20Document%20Library/TheCityProjSouthern\\_California\\_Report\\_Final\\_Medium\\_Res.2.pdf](http://sustain.scag.ca.gov/Sustainability%20Portal%20Document%20Library/TheCityProjSouthern_California_Report_Final_Medium_Res.2.pdf)

## Stormwater Management

**Description:** Originally adapted from the 2011 sustainability indicator, *“Adopted plan and measures to improve water quality”*

The Fellows’ research found that stormwater management impacts water quality, as well as water use and conservation. While many jurisdictions rely on urban water retail suppliers and regional water quality boards to manage water quality and water conservation, stormwater management deals largely with the built environment and is an issue jurisdictions themselves are beginning to address through Low Impact Development (LID) ordinances, Green Streets policies, and the like.

From available data, the 2015-16 CivicSpark Fellows developed a policy metric based on a modified ranking system.

**Policy Ranking Reasoning:** Each rank represents a jurisdiction’s commitment to stormwater management, from no stormwater policies or programs to a comprehensive stormwater management plan or program.

**Performance Ranking Reasoning:** At the current moment in time, there lacks a universal metric to quantify efforts made on behalf of local jurisdictions for this indicator.

### Notes/Observations

- Most jurisdictions currently have unique methods of addressing stormwater management, making it difficult to make comparisons across stormwater management systems.
- A jurisdiction’s stormwater management and water quality efforts in its role as urban water retail supplier are ignored in this report to establish uniformity among jurisdictions.
- The State of California has a goal to increase the use of stormwater by at least 500,000 acf by 2020 over stormwater use in 2007 and by at least one million acf by 2030.
- As part of California’s Water Action Plan, the Strategy to Optimize Resource Management of Storm Water (STORMS), is a stormwater strategy document that outlines Statewide stormwater management objectives and actions. One objective includes a project to create an open stormwater database that may be a valuable resource for data collection in the future.
- California’s State Water Resources Control Board has a Municipal Storm Water Permitting Program that requires National Pollutant Discharge Elimination System (NPDES) permits for municipalities of a certain size. These permits, called MS4 permits, require certain stormwater management actions, and set pollution discharge limits. As part of LA County’s MS4, the county requires permittees to develop LID ordinances and Green Streets policies.
- LID and Green Infrastructure (GI) can include a variety of practices including those related to site planning, hydrologic analysis, integrated management, erosion and sediment control, and public outreach programs. Some examples of LID and GI practices include smart clearing and grading, bioswales and permeable pavements, and use of rain barrels and cisterns.

*Section Disclaimer - Please note that this information was based on the limited capacity of three CivicSpark fellows for the 2015-16 service year. Information may not reflect true data as most data relied upon publicly available resources*

## Urban Forestry

**Description:** Originally adapted from the 2011 indicator, "*Adopted tree planting/urban forestry plan or program*"

The Fellows' research found that the maintenance and expansion of urban forests is important due to their ability to reduce the urban heat island effect, sequester carbon dioxide and remove particulate matter from the air, and improve resident's mental health and the perception of safety and crime rate of the area, among many other benefits. Jurisdictions usually implement one of two main categories of tree policies: general maintenance and replacement plans to keep the urban canopy stable, and proactive tree policies that aim to increase urban canopy cover by planting more trees than need to be replaced. According to American Forests, the Southwest and dry West should have an average tree cover of 25-35%. Performance data comes from LandFire's existing vegetation cover dataset.

From available data, the CivicSpark Fellows developed a policy metric based on a modified ranking systems and a performance metric using LandFire's existing vegetation cover dataset. The 2015-16 CivicSpark Fellows worked to collect policy data, and the 2016-17 CivicSpark Fellows collected the performance data.

**Policy Ranking Reasoning:** Each rank represents a jurisdiction's commitment to green building, from no green building policies or codes to a legal requirement for green building in residential and commercial developments. Inclusion of CalGreen in green building policies acknowledges state green building standards.

**Performance Ranking Reasoning:** Higher weights are given to the better green building ratings because those buildings are more comprehensive in their sustainability performance. However, this metric may not capture all green buildings because it only focuses on those with specific certifications. While total number of community green buildings is also available for each jurisdiction, comparing the number of green buildings to the total number of community building parcels normalizes the data for uniform evaluation among jurisdictions.

**Table 8: Urban Forestry Performance Overview**

<b>White:</b> No to very low percent tree canopy cover	<b>Light Green:</b> Low percent tree canopy cover	<b>Medium Green:</b> Moderate percent tree canopy cover	<b>Dark green:</b> Very high percent tree canopy cover	<b>Notes:</b> Natural breaks method
0 - 1.466	1.466001 - 4	4.066001 - 10.058	10.058 - 19.35	Minimum: 0 Maximum: 19.35 Mean: 2.152117 Median: 0.98 Standard Deviation: 3.134942

*For more information on data classification, please visit [ArcGIS](#) online.*

**Notes/Observations**

- Each tree program measures its jurisdiction’s trees and identifies urban forestry goals a little bit differently (e.g. number of street trees, number of trees city maintains, number of trees in urban forest, etc.) so it is impossible to uniformly evaluate urban forests with the data currently provided by each jurisdiction.
- LMU, headed by Michele Romolini, is doing a tree canopy analysis for LA using LiDAR data; however this study is limited to coastal regions<sup>17</sup>
- According to American Forests, metropolitan areas in the Southwest and dry West should have an average tree cover of 25% with a breakdown of approximately 35% tree cover in suburban residential zones, 18% tree cover in urban residential zones, and 9% tree cover in central business districts.
- Tree City USA<sup>18</sup> is a popular program through the Arbor Day Foundation in which a city has to maintain a tree board or department, have a community tree ordinance, spend at least \$2 per capita on urban forestry, and celebrate Arbor Day.
- Performance and policy are less integrated in this category. The Fellows found that some of the higher scoring cities in the performance category may have less robust policy data.
- Percent tree canopy cover includes unincorporated areas.

*Section Disclaimer - Please note that this information was based on the limited capacity of three CivicSpark Fellows for the 2015-16/2016-17 service years. Information may not reflect true data as most data relied upon publicly available resources*

<sup>17</sup> <http://digitalcommons.lmu.edu/cate/vol10/iss2/3/>

<sup>18</sup> <http://www.arborday.org/programs/treecityusa/about.cfm>

# Averages

Policy and Performance Category Averages for the 12 sustainability categories (Energy, Climate Action, Built Environment, Active Transportation, Motorized Transportation, Open Space, Waste, Water, Health, Engagement, Adaptation & Resilience, and Urban Greening) were calculated based on available data.

For further detail on Category Average calculations and indicator fact sheets, please email [SCAGgreenregion@scag.ca.gov](mailto:SCAGgreenregion@scag.ca.gov).

## Energy

The Category Average for *Energy* Policy was calculated using the following indicators: *Renewable Energy*, *Community Energy Efficiency*, and *Municipal Energy Efficiency*.

The Category Average for *Energy* Performance was calculated using performance data on the following indicators: *Renewable Energy* and *Community Energy Efficiency*.

## Climate Action

The Category Average for *Climate Action* Policy was calculated using the following indicators: *Climate Action Planning*, *Community GHG Emissions Inventory*, and *Municipal GHG Emissions Inventory*.

The Category Average for *Climate Action* Performance was calculated using performance data on the following indicators: *Climate Action Planning*, *Community GHG Emissions Inventory*, and *Municipal GHG Emissions Inventory*.

## Built Environment

The Category Average for *Built Environment* Policy was calculated using the following indicators: *Community Green Building*, *Municipal Green Building*, *Parking Management* and *Affordable Housing*.

The Category Average for *Built Environment* Performance was calculated using performance data on the following indicators: *Community Green Building* and *Municipal Green Building*.

## Active Transportation

The Category Average for *Active Transportation* Policy was calculated using the following indicators: *Bikes, Pedestrians, and Complete Streets*.

The Category Average for *Active Transportation* Performance was calculated using the following indicators: *Bikes, Pedestrians, and Complete Streets*.

## Motorized Transportation

The Category Average for *Motorized Transportation* Policy was calculated using the following indicators: *Electric Vehicles, Electric Vehicles Permitting Streamlining and Municipal Alternative Fuel Fleet*.

The Category Average for *Motorized Transportation* Performance was not included due to lack of available resources.

## Open Space

The Category Average for *Open Space* Policy was calculated using the following indicators: *Natural Lands and Farmland*.

The Category Average for *Open Space* Performance was not included due to lack of available resources.

## Waste

The Category Average for *Waste* Policy was not included due to the existence of only one indicator.

The Category Average for *Waste* Performance was not included due to the existence of only one indicator.

## Water

The Category Average for *Water* Policy was not included due to the current existence of only one indicator.

The Category Average for *Water* Performance was not included due to lack of available resources.

## Health

The Category Average for *Health* Policy was calculated using the following indicators: *Public Health and Healthy Food Access*.

The Category Average for *Health* Performance was calculated using the following indicator: *Public Health*.

## Engagement

The Category Average for *Engagement* Policy was calculated using the following indicators: *Participation Collaboration Policy and Green Business Participation/Environmentally Preferable Purchasing*.

The Category Average for *Engagement* Performance was not included due to lack of available resources.

## Adaptation & Resilience

The Category Average for *Adaptation & Resilience* Policy was not included due to the existence of only one indicator.

The Category Average for *Adaptation & Resilience* Performance was not included due to lack of available resources.

## Urban Greening

The Category Average for *Urban Greening* Policy was calculated using the following indicators: *Parks, Stormwater Management, and Urban Forestry*.

The Category Average for *Urban Greening* Performance was calculated using performance data on the following indicators: *Parks and Urban Forestry*.

## Senate Bill 535: Disadvantaged Communities (DACs)

Senate Bill (SB) 535 requires that 25% of funds from the Greenhouse Gas Reduction Fund go towards projects that benefit disadvantaged communities (DACs). In 2017, the California Environmental Protection Agency (CalEPA) identified DACs based on the results from CalEnviroScreen 3.0, a tool developed by the Office of Environmental Health Hazard Assessment (OHEAA). OHEAA developed CalEnviroScreen by calculating census tract scores and defines disadvantaged communities as “the top 25% scoring areas from CalEnviroScreen along with other areas with high amounts of pollution and low populations.” CalEnviroScreen 3.0 was last updated in 2018.

The 2019-20 Fellows incorporated SCAG’s SB 535 DACs map into each category. Based on SCAG’s most recent data from 2016, DACs represent 6.4 million people – 34.2% of the total population in the SCAG region. By incorporating the DACs map into the GRI, SCAG will be furthering the Three E’s of Sustainability (Environment, Equity and Economics) and protect the health and well-being of communities most negatively impacted by environmental injustice.

Fellows decided to highlight the following DACs map attributes: census tract number, population, percentage of poverty, unemployment, age, and race. For each category, there is both a stand-alone DACs map as well as a map that consolidates all respective indicators, including the DACs map, and category averages from that category. Fellows have included the DACs map both within its own tab and consolidated with all indicators within each category in order to streamline the process of making data comparisons for users. This map is directly linked to the CalEPA online live mapservice.