City of Mission Viejo

Community Development Department

Electronic Transmittal:
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August 13, 2021

Ms. Sarah Jepson
Planning Director
Southern California Association of Governments
900 Wilshire Blvd., Suite 1700
Los Angeles, California 90017

Subject: City of Mission Viejo Comments: SoCal Greenprint

The City of Mission Viejo appreciates the opportunity to review and provide initial comments on the proposed data layers for SCAG's SoCal Greenprint project, and our key comments are enclosed. We sincerely hope that SCAG's exploration and SCAG's responses to the provided questions and comments, will help the targeted stakeholders – including local jurisdictions and the building community – better understand the proposed scope and application of SoCal Greenprint.

We also appreciate the assistance that SCAG staffmembers Kimberly Clark and India Brookover have provided to us on requested background information on SoCal Greenprint.

Should you have any questions on the City's comments, please do not hesitate to contact our consultant, Gail Shiomoto-Lohr.

Respectfully,

E. Lister

Elaine Lister,
Director of Community Development
City of Mssion Viejo

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Attachment: City of Mission Viejo Comments: SoCal Greenprint

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Attachment
City of Mission Viejo Comments: SCAG SoCal Project Greenprint

Technical Accuracy of Data Layer; Appropriateness of Including Additional Non-Resource Data Points in Any Proposed Data Layer

Question/Comment:
Does SoCal Greenprint consist of published data alone, or does it also apply published data to suggest a best management practice or mitigation action? If a SoCal Greenprint data layer proposes recommendations that result from the application of a published data layer, it is critical that the origin data be vetted for accuracy, to avoid incorrect or misrepresented conclusions. Further, the City of Mission Viejo questions the appropriateness of including non-resource data points in any proposed data layer. These topics are illustrated in the discussion of the proposed Tree Equity Score Data Layer (Data Layer #166), as outlined below:

Tree Equity Score Data Layer: #166 and Application to the City of Mission Viejo:
SoCal Greenprint includes Data Layer #166: Tree Equity Score, developed by American Forests (see Exhibit A). The SCAG data layer description says "The Tree Equity Score tool *calculates* a score for all 150,000 neighborhoods and 486 municipalities in urban America. Each score indicates whether there are enough trees for everyone to experience the health, economic and climate benefits that trees provide. The scores are based on how much tree canopy and surface temperature align with *income, employment, race, age and health factors*." [emphasis added].

The website for the Tree Equity Score explains its use of a 0 to 100 point system to identify how a community fares on the number of trees in the geographic census block group area, with a score of 100 representing tree equity. The first release of scores was conducted in June 2021, and includes cities and towns that have at least 50,000 people.

The City of Mission Viejo is included in the Tree Equity database. There is not a citywide tree score. The City's Tree Equity Score is based on a specific census block designation. The City's tree score ranges from a high of 94 for Census Tract 320.27 that also includes the City of Lake Forest, to a low of 36 for Census Block Group 320.223 that includes Saddleback Community College and the Arroyo Trabuco Golf Club. As illustrated in Exhibit B – a print out of the Tree Equity tool – for Census Block Group 320.223, the surface temperature is identified to be 100 degrees, with a current canopy cover of 14% and a recommended canopy cover goal of 48%. In addition, other indicators besides surface temperature have been factored into the development of the tree equity score. These additional indicators include Unemployment, a Health Index, a People in Poverty percentage, a Seniors (65+) percentage, a Children (0-17) percentage, and a People of Color percentage, as illustrated in Exhibit B.

City of Mission Viejo Comments:

1) Socioeconomic Data Points Used in Developing the Tree Equity Score: One of the stated objectives of SoCal Greenprint is to map and identify natural resources from already published data. Such a tool allows stakeholders, such as local jurisdictions and project applicants, to understand and achieve an early identification of the location of natural resources in the project study area, and from this inventory, to better plan a project with such natural resources in mind.

   The City of Mission Viejo expresses several concerns with the SoCal Greenprint Tree Equity Score data layer, as detailed below:

   a) In developing a Tree Equity Score for a census area, the data layer goes beyond just the identification of natural resources data (i.e., how much tree canopy cover is in the area and what is the reported surface temperature of that area), to also include additional, non-resource data points such as Unemployment, a Health Index, a People in Poverty percentage, a Seniors (65+) percentage, a Children (0-17) percentage, and a People of Color percentage. This tool appears to reach beyond the factual presentation of resource data, to include an application of non-resource related, socioeconomic data points that are weighted and used in the calculation of a community's Tree Equity Score. The City of Mission Viejo expresses concern that this approach seems to delve into a grey, policy area where there has not been any evaluation or acceptance of the approach that uses socioeconomic data points such as unemployment or age cohort data, to not only calculate a community's tree score, but also suggest a proposed percentage of how much more the tree canopy should be increased. The City would suggest that there needs to be a robust vetting and determination to accept any approach that uses more than just natural resource data to compile a community index, in SoCal Greenprint.

   b) Regarding the socioeconomic data points used in the Tree Equity Score Tool, the City of Mission Viejo consulted with the Center for Demographic Research at CSU Fullerton on the non-resource, socioeconomic score indicators that were used. The data points of Unemployment, a People in Poverty percentage, a Seniors (65+) percentage, a Children (0-17) percentage, and a People of Color percentage, largely mirror data points in the U.S. Census American Community Survey (ACS) data. However, in further examining some of the ACS data points, two issues surface:

      (1) Frequency of Data Layer Updates: The socioeconomic data points in the Tree Equity Score Tool seem to be derived from the 2014 – 2018 ACS, but there is also a more recent and published 2015 – 2019 ACS dataset. Aside from the larger issue of whether non-resource, socioeconomic data should be used in the calculation of a community's tree score, there is the technical question of why the more current 2015 – 2019 ACS dataset is not used, especially when this tool was released in June 2021. How often should we expect any of the data layers to be updated in SoCal Greenprint?

(2) Accuracy of data points: One of the data points used in the Tree Equity Score Tool, is the percentage of People In Poverty. In looking at the two census block groups in Mission Viejo that have the lowest tree equity scores, there seems to be a disconnect with the percentages reported in the Tree Equity Tool versus what is reported in the ACS. For example, as illustrated in Exhibit B, the Tree Equity Score Tool identifies that Census Block Group 320.223 is reported to have 32% of said census group's population in poverty. However, the 2014 – 2018 ACS data, which is the year of ACS data used for the other socioeconomic data points, identifies that 15% of the population is reported to be in poverty, versus 32%. The current 2015 – 2019 ACS data reports that 17% of the population is reported to be in poverty. Is the Tree Equity Score data point on poverty accurate, or does it use other considerations besides the ACS poverty data information to arrive at the percentage of population in poverty?

c) Reported Surface Temperatures: Surface temperature represents the heat energy given off by land, buildings and other surfaces. According to the Tree Equity Score Tool methodology, the reported surface temperature is based on USGS Earth Explorer Landsat 8 imagery and thermal bands. However, CalEPA has also been assessing Urban Heat Island Impacts, as a result of AB 296 adopted in 2012. CalEPA's efforts is summarized at:

https://calepa.ca.gov/climate/urban-heat-island-index-for-california/understanding-the-urban-heat-island-index/

Of particular interest is the identification that CalEPA is defining and examining the characteristics of the urban heat island for each census tract in and around most urban areas in the State of California. The City of Mission Viejo suggests that the CalEPA effort be examined by SCAG staff, to better understand the status of this effort and if there has been any public outreach on this effort, especially if any of the CalEPA data is planned to be incorporated or applied to other statewide efforts. It would be helpful to know if the CalEPA effort is comparable or compatible with the approach used in the national Tree Equity Tool, especially since CalEPA also identifies that its urban heat index could be used for prioritizing urban greening.

Compatibility of SoCal Greenprint Data Layers with Local General Plan and Project CEQA Analyses

Question/Comment:
How is the information in SoCal Greenprint, envisioned to be used or not used, for project mitigation assessment and mitigation? How do the SoCal Greenprint data layers align with data used by local jurisdictions in their environmental assessments? Are there definitive, recognized data sources for certain subject areas, such as Noise?

City of Mission Viejo Comments:
SoCal Greenprint proposes to include data on noise levels for Aviation, Passenger Rail, and Road Noise, using 2018 Noise data from the U.S. Bureau of Transportation Statistics (BTS). This is identified in Proposed Data Layer #13: 2018 Noise Data (See Exhibit C).

From a project analysis perspective, conducting a Noise assessment and mitigating Noise impacts is a requirement of both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). From a General Plan perspective, noise analyses and assessment are conducted to develop a jurisdiction's required General Plan Noise Element, to ensure that the noise contours are used as a guide to establish a pattern of land uses in the Land Use Element to minimize exposure to excessive noise.

The City of Mission Viejo did not know if the use of the U.S. Bureau of Transportation Statistics (BTS) is the definitive data source to measure noise data, and sought the counsel of environmental consultants for their input on this issue. There was consensus that there is no one, individual data source for noise. Further, there was recognition that the BTS data source may have been used because of the large scale of the SCAG region, and the difficulty to consolidate the individual noise contour maps from local jurisdiction General Plans into one map. However, one key concern that was raised, is the level of detail in the BTS source data, and whether it is too generalized to be useful for the SCAG region.

One of the environmental consultants contacted the BTS to better understand what populates the BTS map and the detail level of the data. The U.S. Department of Transportation responded to this inquiry with the following caveat:

"*Please note that the National Transportation Noise Map and associated data were developed for national level analysis and includes simplified noise modeling. It is intended for the tracking of trends and should not be used to evaluate noise levels in individual locations and/or at specific times. There are potential differences in the data sources and the complexity of the models used for noise modeling depending on type of analysis. The term "potential to be exposed" is used because there are several conservative assumptions that go into the analysis. If any one of those assumptions were to change, the noise exposure numbers could also change. For example, the documentation states "Shielding is not considered (i.e. attenuation due to barriers and terrain are not considered)"; for areas that have shielding, the noise levels may be overestimated. The average implies that sound levels could be both higher and lower, depending upon time of day, season of the year, etc. Additionally, sounds from transportation sources other than aviation and road (e.g. rail and maritime) as well as non-transportation sources are not considered. Sounds from things such as construction sites, rock quarries, power plants, etc., could dampen some of the transportation noise.*"

The consultant further noted that there could be conflict or inconsistency between local noise assessment data and the BTS noise data. It is recommended that one area that should be further examined, is the BTS's use of a 24-hour L_{eq} noise measurement. The consultant noted that L_{eq} data might not provide any nighttime noise weighting that is used for the L_{dn} measurement in California or the evening weighting for the CNEL metric, which would be important for land use siting decisions in the SCAG region.

The City of Mission Viejo respectfully requests that the use of the 2018 Noise data from the U.S. Bureau of Transportation Statistics be further examined with the input provided by the U.S. Department of Transportation and local environmental consultants consulted.

Related to SoCal Greenprint, the larger key issue is to clearly understand and explain how any data in SoCal Greenprint is to be used for local planning efforts, including environmental assessment and mitigation, and to address the potential that data in SoCal Greenprint may conflict with local planning data, adopted policies and adopted plans.

SoCal Greenprint | Proposed Data Layers for Inclusion | July 2021 Version

#	Theme	Data Name	Source	Description	Additional Information
166	Environmental Justice, Equity, and Inclusion	Tree Equity Score	American Forests	The Tree Equity Score tool calculates a score for all 150,000 neighborhoods and 486 municipalities in urban America. Each score indicates whether there are enough trees for everyone to experience the health, economic and climate benefits that trees provide. The scores are based on how much tree canopy and surface temperature align with income, employment, race, age and health factors.	https://www.americanforests.org/our-work/tree-equity-score/

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EXHIBIT B

TREE EQUITY SCORE | NATIONAL EXPLORER

Search for your town

Mission Viejo — Municipal report →

CA Congressional District 49

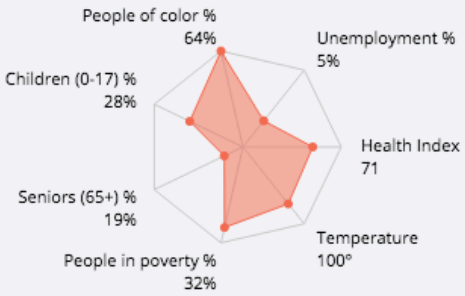
Census Block Group 60590320223

36
Tree Equity Score

RANK
58th of 58 blockgroups in Mission Viejo

Score indicators

Priority index

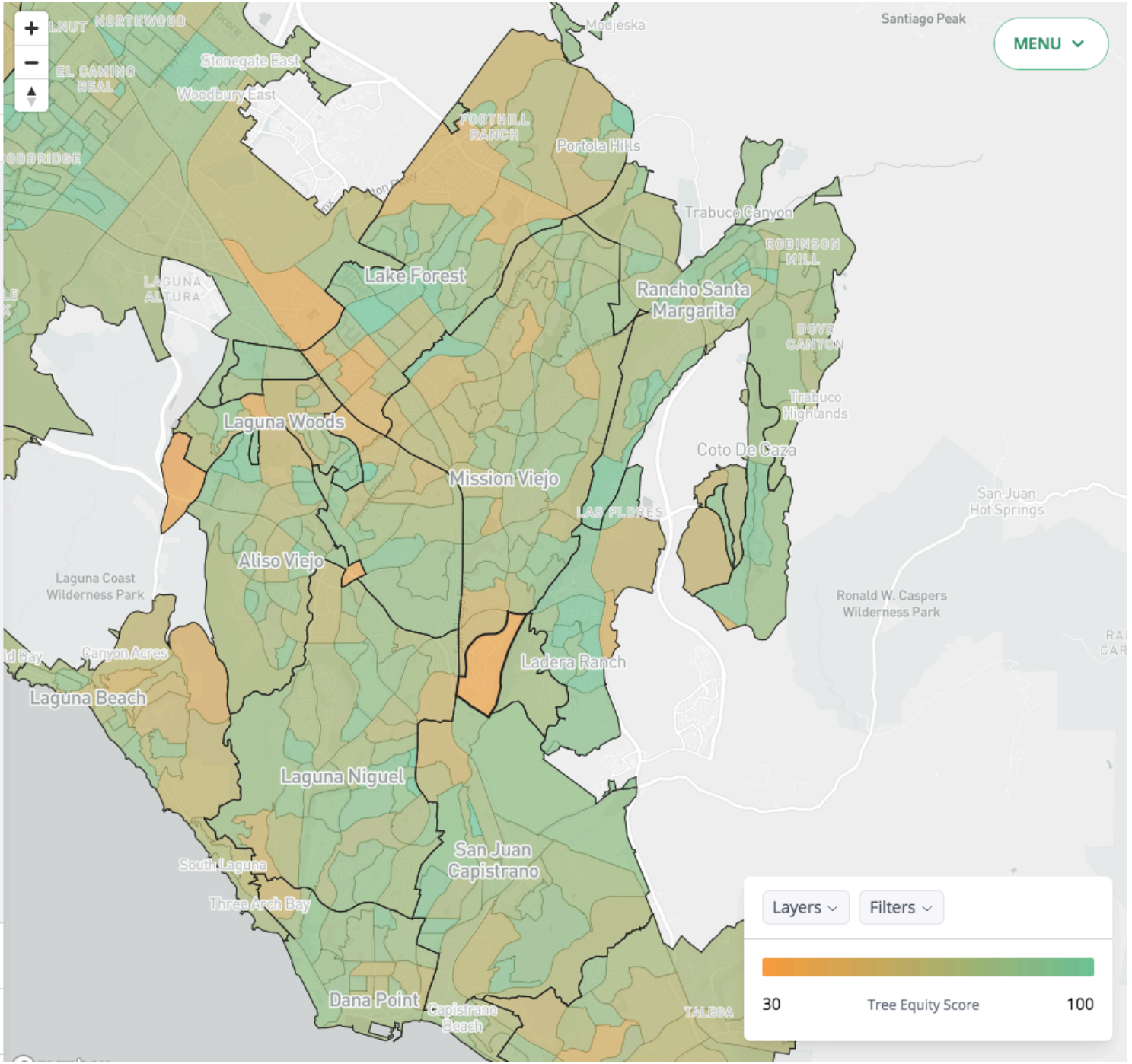


Canopy cover goal: 48%

Current canopy cover: 14%

CA Congressional District 49 — District report →

California — State report →



#	Theme	Data Name	Source	Description	Additional Information
11	Built Environment	Light pollution	1) Falchi, Fabio; Cinzano, Pierantonio; Duriscoe, Dan; Kyba, Christopher C. M.; Elvidge, Christopher D.; Baugh, Kimberly; Portnov, Boris; Rybnikova, Nataliya A.; Furgoni, Riccardo (2016): Supplement to: The New World Atlas of Artificial Night Sky Brightness. GFZ Data Services. http://doi.org/10.5880/GFZ.1.4.2016.001 2) Falchi F, Cinzano P, Duriscoe D, Kyba CC, Elvidge CD, Baugh K, Portnov BA, Rybnikova NA, Furgoni R. The new world atlas of artificial night sky brightness. Science Advances. 2016 Jun 1;2(6):e1600377.	www.lightpollutionmap.info is a mapping application that displays light pollution related content over Microsoft Bing base layers (road and hybrid Bing maps). The primary use was to show VIIRS/DMSP data in a friendly manner, but over the many years it received also some other interesting light pollution related content like SQM/SQC measurements, World Atlas 2015 zenith brigtness, almost realtime clouds , aurora prediction and IAU observatories features.	https://www.lightpollutionmap.info/
12	Built Environment	Desert Renewable Energy Conservation Plan (DRECP) Development Focus Areas & Variance Lands	Bureau of Land Management	Zones where renewable energy development is permitted.	https://www.blm.gov/programs/planning-and-nepa/plans-in-development/california/desert-renewable-energy-conservation-plan#:~:text=The%20Desert%20Renewable%20Energy%20Conservation,San%20Bernardino%2C%20and%20San%20Diego ; https://navigator.blm.gov/data?keyword=DRECP
13	Built Environment	2018 Noise Data	Bureau of Transportation Statistics	Data within the National Transportation Noise Map represent potential noise levels across the nation for an average annual day for the specified year. This dataset is developed using a 24-hr equivalent A-weighted sound level (denoted by LAeq) noise metric. The results represent the approximate average noise energy due to transportation noise sources over a 24-hour period at the receptor locations where noise is computed. Layers include Aviation, Passenger Rail (prototype), and Road Noise for the Lower 48 States as well as Alaska and Hawaii.	https://data-usdot.opendata.arcgis.com/datasets/2018-noise-data
14	Built Environment	Local Area Transportation (vehicle miles traveled)	Bureau of Transportation Statistics	Average weekday household Vehicle Miles Traveled (VMT) is the estimated miles traveled by a household. The estimate is derived using data from the National Household Transportation Survey and the American Community Survey. Data is available at the census tract level.	https://www.bts.gov/latch/latch-data
15	Built Environment	Sewer network - LA county	LA County	Los Angeles Public Works Sanitary Sewer System includes sewer lines, manholes, pump stations, treatment plants and SMD Operations grid.	https://egis-lacounty.hub.arcgis.com/datasets/lacpw-sanitary-sewer-network

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