CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: HONORABLE MAYOR AND CITY COUNCIL

FROM: District 10 YLC

SUBJECT: **DEVELOPMENT OF URBAN GREEN SPACES**

DATE: March 1, 2023

Approved

Date

INFORMATION

SUBJECT: DEVELOPMENT OF URBAN GREEN SPACES

Urban Green Spaces (UGS) is a crucial investment to bring nature back into our San Jose cityscape, and build both environmental resilience and human well-being. UGS isn't just limited to trees or plants in a park or yard. Hence, provisioning, maintaining, and broadening green spaces as a part of the urban master plans in the densely populated and limited space we live in San Jose will require measures and standards for responsible adoption and expansion.

RECOMMENDATION

We need to incorporate the UGS Standards in the San Jose Planning and Building divisions and track progress as a part of the Climate Smart Data Dashboard:

1. Establish standards: UGS should define standards on types of greening spaces *(defined in the background section below)* that should be incorporated in both existing and new constructions. (Example: EPA Policy guide[1] or Urban Greening San Diego City Plan[2] as reference).
2. Define greening practices: innovative greening techniques such as green roofs, green walls, street sites, and renaturation are very beneficial to improving green quality.
3. Use spatial data: to identify, analyze, and determine the feasibility of developing green sites in our city projects.
4. Community Engagement and promoting UGS: Educate the citizens by conducting UGS, workshops, seminars, and expert discussions to help the decision-makers better identify local needs and demands.

[1] https://www.epa.gov/green-infrastructure/policy-guides
[2] Urban Greening San Diego City Plan

BACKGROUND

Definitions:

1. **Urban Green Spaces**[3]: Urban green space is a component of "green infrastructure". It is an important part of public open spaces and common services provided by a city and can serve as a health-promoting setting for all members of the urban community.
   Types of UGS:
   a. roadside greenery and vegetation barriers along streets or rail tracks
   b. small urban green spaces (such as gardens or pocket parks) and playgrounds
   c. green roofs and facades
   d. parks and urban meadows
   e. greenways and corridors (such as green trails for walking/cycling)
   f. coastal, riverside, or lakeside trails, linking green with blue spaces
   g. recreational and urban gardening facilities (such as community gardens, sports and play areas, and school grounds)
   h. facilitated access to urban woodlands, forests, and natural wildlife areas.
2. **Geographic Information System** (GIS): is one such tool that processes the geospatial data from satellite imagery, aerial photography, and remote sensors helping to understand the current green space needs.
3. **Brownfield developments**: are constructions developed on sites previously used for industrial or commercial purposes.

Based on the studies articulated in the Mercury News[4], when lasers were used to map greenery or trees from the air, 58% of San Jose's urbanized area is covered with buildings, asphalt or concrete, and only 15.4% is covered by trees or greenery.
Interestingly, although the city has a goal to reach 20% green coverage by 2051, it could drop below 10% by 2030 at the current pace, according to the plan. To put things into perspective, let's understand where we stand as of now. Despite ambitious climate goals, San Jose, the nation's 10th largest city, is in the midst of an environmental crisis as the tree canopy that shades it with greenery dwindled by 1.82% between 2012 and 2018. That percentage may seem small, but consider that it represents 1,728 acres of public and backyard trees, or the equivalent of 2.7 square miles, according to a recent analysis by the U.S. Forest Service. That leaves only 13.5% of San Jose covered by trees and greenery, compared to 28% of Seattle, 27% of Boston, and 40% of steel city Pittsburgh.[5]

UGS should be an integral part of our urban environment to promote sustainability and inclusivity. 68% of the global population is set to live in Urban cities like San Jose by 2050. Without planning for UGS, we will find it harder to adapt to climate changes to reduce air pollution, avoid heat waves, regulate temperatures, mitigate the effects of drought, sustainable management of stormwater, and increase biodiversity.

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[3] https://www.euro.who.int/__data/assets/pdf_file/0010/342289/Urban-Green-Spaces_EN_WHO_web3.pdf
[4] https://www.mercurynews.com/2013/04/23/nearly-60-percent-of-urbanized-san-jose-has-been-paved-over/
[5] https://phys.org/news/2022-01-san-jose-trees-city-hundreds.html

ANALYSIS

Based on the latest 2022 data from the US census[6], the current population of San Jose is close to a million and has grown 8.8% since 2000. San Jose is the 19th highest density population among the largest cities in the US and has a population density of 5.3K. With the more densely populated cities like San Jose, we have to rethink our system and environmental impacts. Sustainable development with the development of Urban green spaces is of utmost importance to help improve the lifestyle of urban dwellers and meet our sustainability goals. Defining standards for designing UGS in the policy is key and having them at a suitable distance from people is essential. The World Health Organization (WHO) suggests a minimum of 9 m2 of green space per person and should be close to people and within 5 mins walk from their homes.

In the 19th century, urbanists created large landscaped parks which represented the "lungs for the city", but that isn't enough and today's times have changed. We need to develop more innovative frameworks like UGS to be a green city by 2050. UGS should be implemented in the San Jose community at different scales in both private and public spaces based on the different type jv s of UGS defined in the background section. As defined by WHO in EU[7], potential opportunities to include Green Spaces in as the following - 1/ development of new residential neighborhoods, community facilities, business parks, or transport infrastructure projects; 2/ regeneration projects and urban renewal initiatives; 3/ brownfield development and rehabilitation of industrial areas; 4/urban gardening or agriculture projects; 5/initiatives to enhance biodiversity[8].

UGS is a long-term vision that should be integrated into master plans and within infrastructural projects like housing, transport, business, community, and health facilities. The UGS plans should be diverse including different types from small to large, including different plant species catering to all population types. Additionally, it should be designed with best practices considering safety, accessibility, visibility, drainage, catering to all seasons, and will need ongoing maintenance. 90% of San Jose's trees or greenery are on private property or in a public right-of-way and property owners are responsible for maintaining them. Hence, it is essential that Urban Green Spaces take a dual approach of not only improving the environment, but also involving the local community to encourage their involvement and engagement, and collect their feedback.

UGS has made it into many countries in different shapes, sizes, and forms[9]. In the UK in the form of a living wall with more than 14K evergreens, to ten mini forests with 1,000 oases of green spaces in Brazil or with Singapore setting a goal of no more than a ten-minute walk from

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[6] https://www.biggestuscities.com/city/san-jose-california
[7] https://www.euro.who.int/__data/assets/pdf_file/0010/342289/Urban-Green-Spaces_EN_WHO_web3.pdf
[8] https://royalsocietypublishing.org/doi/10.1098/rsbl.2007.0149
[9] https://www.bbcearth.com/news/six-cities-making-room-for-nature

an accessible green space. Continents like Europe have mandated cities with more than 20,000 residents to develop UGS plans aligned with its Biodiversity Strategy for 2030.

CONCLUSION

Urban Green Spaces will get us one step closer to reaching our San Jose city goal of at least 20% green coverage by 2050 and indirectly assisting with all the sustainability initiatives towards becoming a greener city.

To summarize, UGS will help in all three dimensions below:

1. **Environmental**: Urban Green Spaces will reduce heat-absorbing surfaces and reduce harmful air pollutants, thus, maintaining San Jose city temperatures and decreasing carbon footprint. Besides enhancing the community's appearance, it will increase water catchment in floodplain surfaces, and stabilize the soil. Additionally, green spaces will expand and preserve our natural spaces as habitats for nature, wildlife, and biodiversity reservation.
2. **Economic**: Green Spaces will not only increase the aesthetic values of the city but also attract visitors and investors. It will also help increase the land and property values.
3. **Psychological**: UGS promotes healthy living and well-being by building an emotional and spiritual connection between nature and people. Multiple studies have shown that green spaces reduce stress and boost mental and physical health. It can help increase recreational activities and physical activity.

Every spot of Urban Green space counts!

DEPARTMENT HEAD
Title, Department

For questions, please contact Lizzie Nolan, Senior Librarian, at (408) 808-2000.