



Urban Forests & Urban Greening

A Guide to Green Infrastructure for AHSC Applicants

Overview

With 95% of Californians now living in urban areas, trees and green spaces are critical to improving human health, fighting climate change, and building community resilience. Including Urban Forests and Urban Greening in your project is not only required, but also makes the project beneficial for the residents and larger community. The goal of this guide is to help you better understand the role of Urban Forests and Urban Greening and to provide tools to make them a successful aspect of your application and project.

KEY TERMS

Urban Forest: AHSC defines Urban Forestry as “the cultivation and management of native or introduced trees and related vegetation in urban areas for their present and potential contribution to the economic, physiological, sociological, and ecological wellbeing of urban society.”

Urban Greening: AHSC defines Urban Greening* as “the incorporation of greenscaped pedestrian and bicycle trail systems, urban street canopy, green alleys, drought tolerant and native species landscaping and landscape restoration, green roofing, community gardens, natural infrastructure and stormwater features into public open spaces.”

Green Infrastructure: Green Infrastructure has different meanings in different contexts. It is sometimes used specifically to describe an alternative to grey infrastructure in stormwater management and is also used in a broader context referring to other uses of greening in urban areas. For the purposes of this document, we use “Green Infrastructure” to represent Urban Forests and Urban Greening, as defined above.

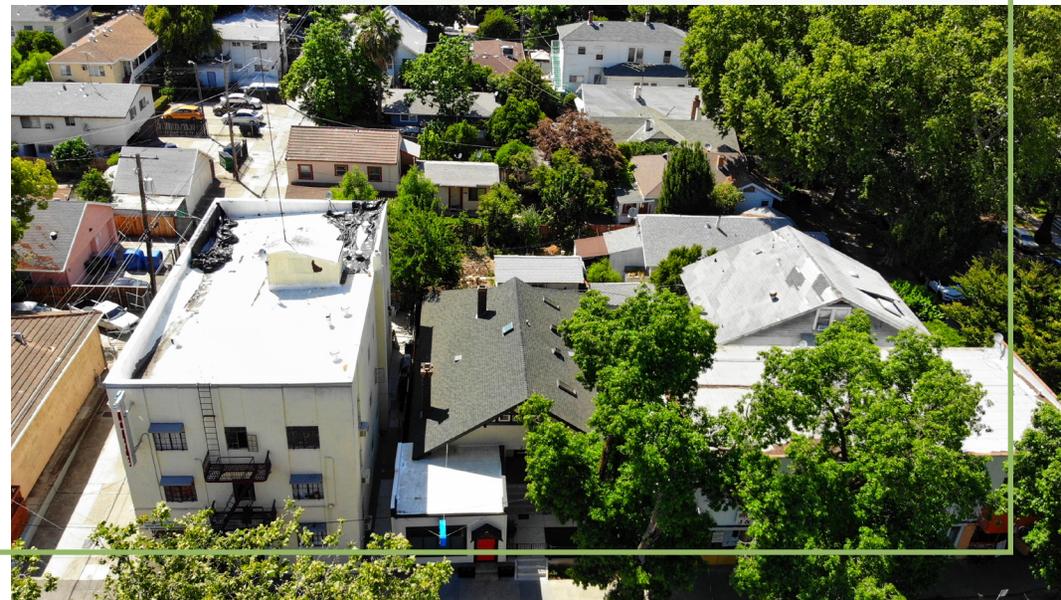
* Urban Greening elements must be publicly accessible. Per the AHSC Guidelines, “Public accessibility must be demonstrated to the satisfaction of Department staff, such as through a recorded instrument, and run for at least 55 years. Public open space must offer reasonable hours of use for the public, such as dawn to dusk.” However, community gardens do not have to be publicly accessible as long as they are available to residents of the Affordable Housing Development.

Over 130 million acres of America’s forests are located right in our cities and towns. Urban forests come in many different shapes and sizes. They include urban parks, street trees, landscaped boulevards, gardens, river and coastal promenades, greenways, river corridors, wetlands, nature preserves, shelter belts of trees, and working trees at former industrial sites. Urban forests, through planned connections of green spaces, form the green infrastructure on which communities depend. Green infrastructure works at multiple scales from the neighborhood to the metro area to the regional landscape.”

— US FOREST SERVICE

CONTENTS

1. Introduction to Urban Forests & Urban Greening
 - 1.1. Why Green Infrastructure?
 - 1.2. Environmental Justice
 - 1.3. Climate Adaptation
2. What’s Possible
 - 2.1. Urban Greening Elements
 - 2.2. Other Valid Points
 - 2.3. AHSC Project Examples
 - 2.4. Other State-Funded Projects
3. Resources
 - 3.1. Trees for the 21st Century
 - 3.2. Nonprofit Partners



1.1. Why Green Infrastructure?

The purpose of the Affordable Housing and Sustainable Communities (AHSC) Program is “to reduce greenhouse gas (GHG) emissions through projects that implement land-use, housing, transportation, and agricultural land preservation practices to support infill and compact development, and that support related and coordinated public policy objectives.” The vision of the AHSC is “to make it easier for Californians to drive less by making sure housing, jobs, and key destinations are accessible by walking, biking, and transit.” Urban forests and urban greening are critical to a holistic approach of addressing climate change as well as providing not just affordable housing, but affordable clean, healthy communities.

GHG REDUCTIONS

California is committed to reducing greenhouse gases, but reducing new emissions is only part of the solution. Existing GHG levels in the atmosphere are very high, and no existing tool or technology removes GHGs from the air as effectively as trees!

AIR QUALITY

Trees and plants filter the air and reduce pollution, ozone and smog levels. This improves the quality of the air we breathe and reduces symptoms of asthma.

PLACEMAKING

Trees and green space create public spaces where people can come together to enjoy the neighborhood and one another, and can grow a sense of community pride. Honoring existing communities and meaningfully involving residents in decision-making encourages innovation, cultural relevance, and stewardship.



ACTIVE TRANSPORTATION

The shade, safety and beauty of trees encourage active transportation like biking and walking. Green alleys can provide even more protection from cars and shorten travel times by providing convenient connections.

ENERGY

Through carbon sequestration, evapotranspiration, and providing shade, green infrastructure lowers city temps and reduces the costs and demand for energy.

TRANSIT

Every transit ride begins and ends with a walk. Making this walk more safe and enjoyable makes public transportation a more preferable choice.

SAFETY

Trees reduce crime on streets, slow cars on the road, and provide a physical guard between cars and the sidewalk, making roads safer for drivers and pedestrians.

HUMAN HEALTH

Beyond improving air quality, water quality, and physical activity, trees and greening are also proven to have a positive effect on mental health including depression and stress.

1.2. Environmental Justice

Low-income communities and people of color frequently suffer disproportionate effects of environmental problems. In turn, these populations are often on the front lines of environmental hazards, and the health risks they exacerbate or cause. These same communities also have less access to environmental benefits, such as green space and a healthy tree canopy. The Environmental Justice movement asserts that living in a clean and healthy environment is a basic right all should be afforded.

The Environmental Protection Agency defines Environmental Justice as “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.” They add that Environmental Justice will be achieved when “everyone enjoys (1) the same degree of protection from environmental and health hazards, and (2) equal access to the decision-making process to have a healthy environment in which to live, learn, and work.”

Urban trees and urban greening play a critical role in bringing about environmental justice. They make neighborhoods cooler, safer, and more beautiful, while also cleaning the air and mitigating environmental hazards. In short, trees make healthy and clean environments. At the same time, greening can also spur gentrification, inadvertently pushing out the people whose lives it is intended to improve. This is why (1) the creation of affordable housing, job creation and small business support, and (2) the meaningful involvement of the community in the decision-making process (as the EPA suggests), are critical to creating healthy communities for all.



West Oakland



Piedmont

Above, tree canopy inequity is clear to see from satellite images. On the left: West Oakland, which is on the front lines of pollution caused by the nearby Port of Oakland. On the right: just a couple miles away, the affluent town of Piedmont (which lies as an island surrounded by the city of Oakland on all sides) enjoys a robust tree canopy.

RESOURCES

- [AHSC and Anti-Displacement Strategies](#)
- [California Environmental Justice Alliance](#)
- [Greenlining Institute](#)
- [EPA Environmental Justice](#)
- [Communities for a Better Environment](#)
- [NAACP](#)

1.3. Adaptation for Community Resilience

The State of California is working to stabilize and reduce the levels of GHGs in the atmosphere and mitigate climate change. But some of the damage of climate change is already here – and much is in the pipeline – and we must create resilient communities that can adapt to its effects. Trees and urban greening are an essential part of both the mitigation and adaptation efforts.



URBAN HEAT ISLAND EFFECT

Urban areas experience warmer temperatures due to increased infrastructure, people and waste heat, and decreased shade, evaporation and air flow. An urban heat island (UHI) is a metropolitan area that is significantly warmer compared to the surrounding rural area.

The extreme heat (daytime highs and especially high nighttime lows) caused by the urban heat island effect is considered one of the top human health threats by public health officials. The EPA lists “increasing tree and vegetation coverage” as one of the five primary strategies to combat heat islands. Trees provide shade and evapotranspiration, reducing heat retention and reliance on air conditioning, and are one of the most cost-effective solutions for low-income communities.



STORMWATER MANAGEMENT

Urbanization has fundamentally changed how water moves through the environment. Impervious surfaces like streets, sidewalks, parking lots, and structures prevent rainwater from soaking into the ground. The water instead runs along these surfaces, carrying pollutants into our rivers and streams, and overwhelming local infrastructure, leading to flash flooding.

As climate change brings more extreme weather, our infrastructure needs to be ready to manage increased rainfall. Trees help reduce the stormwater entering our grey infrastructure systems with rainfall retention and detention. Green alleys and bioswales create infrastructure to allow stormwater to be absorbed at the site.



GROUNDWATER RECHARGE

Years of California drought have over-tapped the groundwater, depleting aquifers and even causing the Central Valley to sink. Rainfall retention and detention through elements such as bioswales, raingardens, and pervious pavement not only reduce flash flooding and water pollution but also allow the water to soak into the ground and recharge our groundwater stores.

RIGHT TREE, RIGHT PLACE

Changing climates mean that the trees that have historically thrived in certain regions might not be best suited for those areas in years to come. Tree selection and location play an important part in ensuring the long-term success of your project.

RESOURCES

- [AHSC and Community Climate Resiliency](#)
- [California Climate Adaptation Strategy](#)
- [EPA Strategies for Climate Change Adaptation](#)
- [Selectree: A Tree Selection Guide](#)

2.1. Green Infrastructure Elements



Photo courtesy of Paula Peper

URBAN STREET CANOPY

A diverse, healthy street tree canopy can help address some of our most pressing modern-day challenges. Urban trees help reduce greenhouse gases, clean our air, manage our stormwater, support wildlife, create a sense of place, cool our buildings and our cities, and even help our roads last longer!

To achieve this great multitude of benefits, keep the following in mind: (1) Choose the largest tree possible for the space (smaller trees may be necessary, for example, under power lines). Nearly all of the benefits of trees are directly tied to their size, so bigger is definitely better. (2) Plant a diversity of species. California's urban forests are being targeted by a number of pests and diseases; planting a variety of trees helps reduce the effects of these epidemics. (3) Where possible, plant trees to shade buildings and pavement. This can reduce energy use and mitigate the urban heat island effect. (4) Be water-wise in your species choices. For more details, see Section 3.1 Trees for the 21st Century.



Shutterstock

GREENSCAPED PEDESTRIAN & BIKE TRAILS

There are often limited opportunities for active transportation in the form of walking or biking in our cities. When facilities do exist, they can be hot, unshaded, and feel too close to adjacent traffic.

Where possible, incorporate trees and understory vegetation along sidewalks, park trails, and bike paths to make using these routes more attractive, more ecologically sustainable, and more comfortable. Allow at least a 6-ft-wide planting strip for trees (12 ft is better), and consider the leaf type. Deciduous trees provide shade in summer and allow the warming rays of the sun through in winter. When shading trails and sidewalks, avoid trees that produce messy or slippery litter. Incorporating a variety of species and plant types (trees, shrubs, groundcover, flowers) will increase the ecological value while maintaining interest over the course of the year.



Trust for Public Land

GREEN ALLEYS

The alleys that run behind our homes and businesses are an underutilized asset, usually relegated to garage access, commercial deliveries, and trash pickup. But because they don't experience heavy traffic, they offer great opportunities for "greening," and once improved in this way, can provide alternatives for pedestrians and bicyclists to move around the city.

Potential components of green alleys include pervious pavement or bioswales to allow stormwater runoff to seep into the ground recharging the groundwater, lighter colored pavement to combat the urban heat island effect, and water-wise and native landscaping.

Per the AHSC Guidelines, urban greening is an eligible cost component within all project types (AHD, HRI, STI and TRA). Applicants are encouraged to work with partners to ensure these costs are correctly captured in the appropriate capital project columns (i.e. AHD components should only be included if they are on the property of the AHD).

2.1. Green Infrastructure Elements



Local Ecologist

SHADED PARKING LOTS

Though not widely known, cars that are parked and not running represent a significant portion of vehicular pollutants (one study estimated the contribution of parked cars at 16%). As cars sit in the hot microclimate of an unshaded parking lot, gases evaporate from the engine and contribute to California’s debilitating smog problem. In addition, parking lots are a source of stormwater contamination. Fluids leak from vehicles and are then washed down the storm drain when it rains.

Planting trees to shade parking lots can address both of these problems. Trees lower the temperature of the parking lot and the cars parked within it. This reduces the rate of evaporation, lowering the amount of pollutants released into the air. The trees also work to capture the rainwater as it falls, reducing runoff and reducing the burden on the stormwater management system. For maximum benefit, plant broadleaf evergreen trees that will be large at maturity. Aim for at least 50% shade cover when the trees are grown or to exceed local standards (whichever is greater), but note that 100% shade cover is achievable.



National Association of City Transportation Officials

RAIN GARDENS, BIOSWALES & FLOW-THROUGH PLANTERS

Rain gardens, bioswales, and flow-through planters are a solution to the problem of stormwater runoff. Rain gardens and bioswales are vegetated landscape features designed to capture and filter stormwater. The two terms are often used interchangeably, but there are some distinctions. Rain gardens are at a smaller scale, designed to manage the stormwater of a residential property. They usually make use of the existing soil, sometimes with amendments to improve drainage. Bioswales tend to be linear and larger, as they are designed to handle the stormwater of commercial properties, large parking lots, roads, etc. They may require engineered soil or careful grading to manage the greater amounts of water. Both rain gardens and bioswales are planted with hardy vegetation that can withstand flooding and drought-like conditions.

Flow-through planters also capture and filter stormwater but within a constructed planting box rather than a more naturalistic garden. They may be more appropriate in highly urban settings where space is limited or where site conditions (soil type, topography) don’t allow for rain gardens or bioswales. Note that they do not usually offer the same opportunities for groundwater recharge as the filtered water is typically returned to the storm sewer system after moving through the soil.



CC Flickr, RDPixelShop

COMMUNITY GARDENS

Urban communities can feel disconnected from the plants and trees that nourish us and even ground us. For Californians occupying apartments and affordable housing units, lack of access to outdoor space is particularly acute. In some communities, access to fresh fruits and vegetables can also be limited or nonexistent.

Your project can help ameliorate this condition by providing access to gardening space in the form of a community garden. If your project does not have sufficient room on site for a garden, offsite solutions may be possible. We recommend a minimum of 3,500 square feet, which will allow for 10-12 garden plots. The site should offer a minimum of six hours of direct sun and ideally will be mostly flat.

2.1. Green Infrastructure Elements



CC, flickr.com, CA Native Plant Society

DROUGHT-TOLERANT & NATIVE LANDSCAPING

Recent years of drought have taught us that water-wise landscaping is critical. Wide areas of turf and water-loving groundcover, shrubs and trees take a hit when the rain dries up. In the future, increasing restrictions on water use are likely, and by choosing low-water-use species now, we will do our best to ensure that plants in our landscapes are healthy and long-lived.

Choosing native species can also be beneficial in many cases, particularly when selecting groundcover, flowers, and shrubs. Native choices will often be hardier, better suited to the climate, and more resilient against pests and diseases. They also help ground us in our neighborhoods, teaching us about the natural history of our landscape. When it comes to trees, however, choosing a native species is not always the best option. The trees that are native to the California tend to be big (too big for most urban spaces), grow in wet ground along rivers and streams, or struggle under challenging urban conditions.

For best water-wise results, avoid large areas of lawn, make use of the WUCOLS website and your local master gardeners to find low-water-use plants, and irrigate trees in such a way that, should water restrictions arise, the trees can continue to be irrigated separately from the rest of the landscaping.



CC Flickr.com, ECV-OnTheRoad

CISTERNS & RAIN BARRELS

In standard site designs, rainwater flows off of roofs and other impervious surfaces and into the storm sewer system. At the same time, we bring clean drinking water onto our sites to irrigate our gardens. Rain barrels and cisterns help interrupt that cycle by capturing water before it leaves your site and allowing it to be used for certain purposes, such as for watering plants (but not for drinking!).

Rainbarrels are a very simple intervention—a barrel, usually 55 gallons, placed at the end of the drainspout from a roof. The water captured in the barrel is used to fill watering cans and buckets to water your garden. Cisterns are bigger and may be more complicated, but they work by the same principle. They capture rainwater from roofs, driveways, and other impervious surfaces and store it for later use as irrigation. They can be located above- or below-ground; a typical residential-scale cistern holds 800-1,500 gallons of water.



Google

GREEN TRAFFIC CALMING

In recent years, new design ideas to slow traffic and improve safety have taken hold, including curb extensions, roundabouts, narrowed streets and median crossing islands. An even more valuable solution is to make these engineered traffic calming devices green!

Stormwater management features can be incorporated into many traffic-calming features, capturing runoff from the street or sidewalk and filtering it as it moves through the soil, eventually recharging the groundwater. Native and drought-tolerant landscaping can provide habitat for birds, insects and other wildlife and help create a sense of place in a neighborhood. Trees planted along the streets provide a barrier between pedestrians and cars.

2.2. Other Valid Points

INTEGRATING YOUR URBAN GREENING ELEMENTS INTO MULTIPLE SCORING SCENARIOS

Round 5 of the AHSC program requires applicants to “incorporate more than one Urban Greening feature with dedicated maintenance for at least two years” into every project. This is integrated into scoring, as follows:

1 point will be awarded to applicants that propose between \$100,000 - \$199,999 in reasonable direct Urban Greening costs.

2 points will be awarded to applicants that propose \$200,000 or more in reasonable direct Urban Greening costs.

What is not captured in the above are the numerous additional opportunities to use the urban greening elements to strengthen your project in select quantitative and narrative portions of the application.

To illustrate this point, think about an urban greening element that utilizes the services of a local conservation corps to construct a safe access pedestrian route that incorporates shade trees. Quantitatively, you’ve probably checked one of the boxes for urban greening, but have you considered and captured how this connects to active transportation and workforce development? Depending on project specifics, this urban greening element may integrate nicely into other project data worth up to three points in quantitative scoring.

And what about the narrative? Is this urban greening element responsive to a local urban forestry management plan or climate action plan? Is it adequately captured in your description of “the integration of housing, transportation, and urban greening infrastructure components in creating a cohesive Project?” Is it addressing community needs identified during community engagement? And, finally is it responsive to community climate resiliency needs and community air pollution exposure mitigation? The urban greening element alone is not likely sufficient to complete the narrative in all of these areas, but every “yes” answer to the aforementioned questions can help solidify your response to select questions that are worth a point (or more) if convincingly conveyed and appropriately articulated. So in this very simple scenario, your one urban greening element can serve multiple cross-cutting purposes and help strengthen your score. And, remember, two urban greening elements are required.

Carefully evaluate your urban greening components, and consider how they could possibly integrate into the scoring elements on the right.

QUANTITATIVE POLICY SCORING

Active Transportation Improvements

- Safe access for bicycle routes
- Pedestrian crossing points
- Safe access for pedestrian routes

Local Workforce Development & Hiring Practices

- Partnership with community-based workforce development and job training entities...
- Partnerships with pre-apprenticeship programs, state certified community conservation corps programs, “earn-while-you-learn” programs, YouthBuild programs, and/or registered apprenticeship programs.

NARRATIVE-BASED POLICY SCORING

Collaboration and Planning

- Local Planning Efforts
- Housing and Transportation

Community Benefits & Engagement

- Addressing Community Needs

Community Climate Resiliency

- Climate Adaptation

Community Air Pollution Exposure Mitigation

- Air Pollution Exposure Mitigation Strategies

2.3. Awarded AHSC Project Examples

Consider setting your sights high for your project's urban greening element. Look at what awarded projects from previous AHSC cycles did to meet this threshold requirement, and how they integrated these elements into the overall project narrative.



MANZANITA FAMILY APARTMENTS (ROUND 4)

This project's 51 units of multifamily housing in Napa are complemented by multiple green features that will reduce climate change effects, such as warming temperature and cyclical droughts that contribute to an increased risk of fire danger. Project design elements include bioswales that will remove silt and pollution from surface runoff water, drought tolerant and native species landscaping to reduce reliance on scarce water resources, and a community garden that will encourage residents to eat locally, mitigating climate change and rising temperatures.

MANCHESTER URBAN HOMES (ROUND 4)

This 122-unit, Transit-Oriented Development located in south Los Angeles incorporates a green alley into the project that will create walkable streets and lighted bike pathways to the Silver Line. To address increased heat, the project will significantly increase tree canopy in the project area, with trees both on the affordable housing site and along surrounding streets. The project will install 200 shade trees on the surrounding corridors, which will cool down the street and encourage non-motorized transportation. Low-water-use wide-canopy trees will be planted along all sidewalks that line the perimeter of the project and on walkways between buildings to provide shade and cooling during hotter months. Green public space, bike/pedestrian-friendly amenities, parklets, and community garden features are a cornerstone of the residential housing component at the property and will meet community needs.



FLORENCE NEIGHBORHOOD MOBILITY, TOD AFFORDABLE HOUSING, AND URBAN GREENING (ROUND 3)

This project will develop 109 units of affordable housing within walking distance from the Metro Blue Line in this transit-oriented community in unincorporated Los Angeles County. Forty-two trees will be planted in the neighborhood to reduce the urban heat island. Additionally, the project will sequester carbon and reduce airborne pollutants by planting 30 shade trees and making improvements to Roosevelt Park to facilitate community access to parks and green space. This includes designing a stormwater capture project underneath the sports fields at the park, the addition of a new artificial turf soccer field, new parcourse equipment, new skatepark equipment, a picnic area and an interpretive area focused on low-water-use planting -- all to be completed by the County of Los Angeles Dept. of Public Works.

AHSC funds will leverage this effort by replacing approximately 2,700 linear feet of existing walking path with decomposed granite with curbing that extends throughout the park.

Additional information on these projects and all awarded AHSC projects can be found on the AHSC resources page: sgc.ca.gov/programs/ahsc/resources/

2.4. Other State-Funded Project Examples

GOT A MATCH?

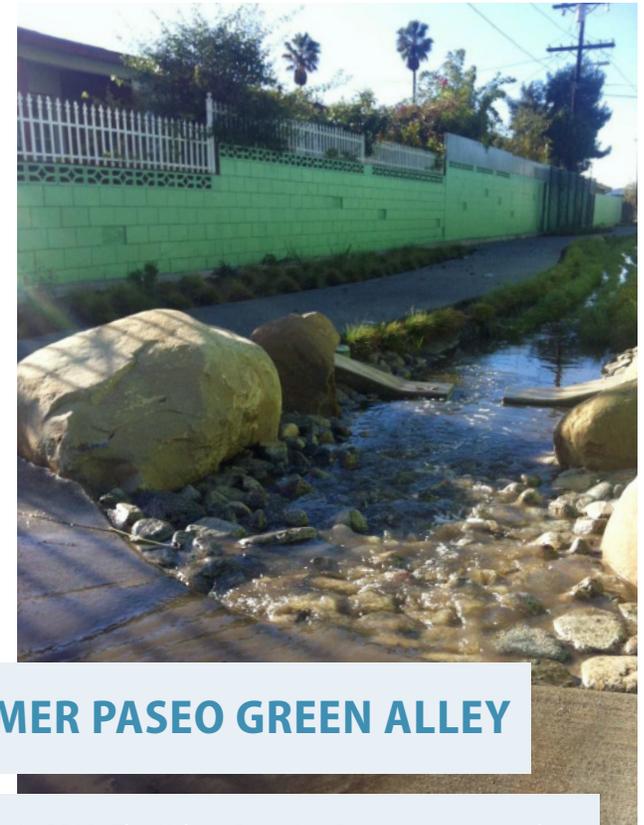
Applicants may want to consider other programs in addition AHSC to support some of their green infrastructure elements investment. This not only demonstrates “outside the box” thinking to SGC but can also leverage significant dollars that can help support a more transformational urban greening landscape for your project. And remember, those dollars can count towards your “funds leveraged” that can increase overall scores by up to five points.

California has numerous existing competitive grant programs that support some or all elements of “urban greening” as defined in the AHSC guidelines. California Natural Resources Agency’s (CNRA) Environmental Enhancement and Mitigation Program supports urban forestry projects tied to transportation mitigation. California Transportation Commission’s (CTC) Active Transportation Program supports connectivity of parks and non-motorized trails, along with a wealth of other eligible projects under different categories of the AHSC guidelines. And the passage of Proposition 68 by voters in June 2018 opened the door to a plethora of additional funding opportunities through State Parks and regional conservancies that could be applicable depending on the size and scale of your green infrastructure project.

The two programs that are perhaps most pertinent and hold the most potential for match dollars are CNRA’s Urban Greening Program and CAL FIRE’s Urban and Community Forestry Program. These programs are supported by bonds and GGRF dollars and have demonstrated success in supporting green infrastructure projects directly connected to affordable housing and infill development. Both programs received funds in the 2019-2020 State Budget, so RFPs and program information can be found on their respective websites.

RESOURCES

- [CTC Active Transportation Program](#)
- [CNRA Environmental Enhancement and Mitigation Program](#)
- [CNRA Urban Greening Program](#)
- [Cal FIRE Urban and Community Forestry Program](#)



ELMER PASEO GREEN ALLEY

In 2013, The Urban Greening Program supported the Sun Valley Neighborhood Retrofit Project that converted a flood-prone pedestrian alleyway to a community green space that infiltrates approximately four acre-feet of stormwater into the San Fernando Valley Groundwater Basin. The project replaced impervious asphalt with 1,300 square feet of pervious pathway, constructed a 2,600 square foot swale infiltration system, and planted 2,500 square feet of native, drought-tolerant plants and trees. This green alley is publicly accessible from north and south entrances adjacent to Elmer Avenue and Lull Street in LA County.



2.4. Other State-Funded Project Examples

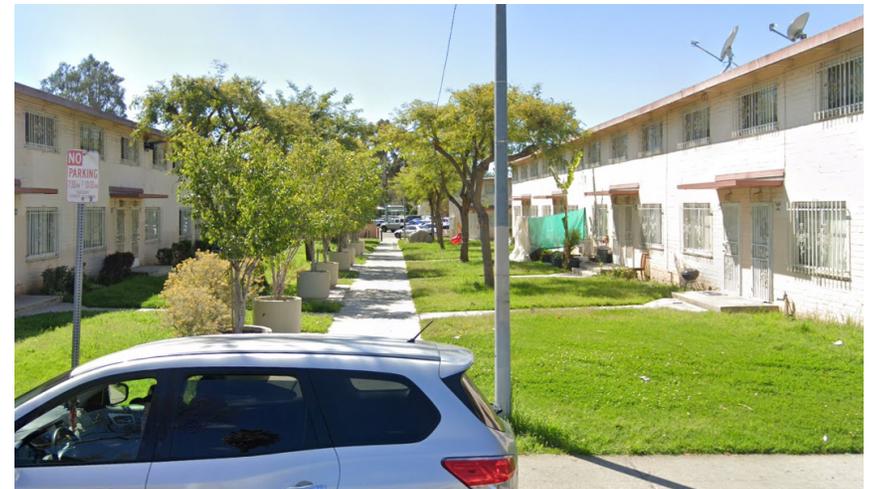


NOE VALLEY TOWN SQUARE

In 2013 the Urban Greening Program funded the Noe Valley Town Square Development in San Francisco. The project transformed an underutilized lot into a new community space by converting the impervious pavement to a pervious surface, and replacing high water-use landscape to drought resistant green infrastructure. The project planted 10 shade trees, community garden pods totaling 1,500 square feet, and an additional 1,500 square feet of raingarden/planting buffer. The project is centrally located in the Noe Valley Neighborhood and is accessible by walking, car, bicycle, or public transportation.

HOUSING AUTHORITY OF THE CITY OF LOS ANGELES

Working through California ReLeaf, CAL FIRE's Urban and Community Forestry Program is currently supporting urban forests at multiple affordable housing facilities across LA. The project is planting shade trees at 13 Housing Authority of the City of Los Angeles (HACLA) facilities and surrounding streets while employing and training at-risk youth. The project is not only bringing the beneficial effects of trees to the facilities but also involves HACLA staff in the process of urban greening by conducting training workshops for the maintenance staff members who are responsible for the long term care of the trees and landscapes within their facilities. This will ensure that the trees are well-cared for and will continue to benefit the communities.



3.1. Trees for the 21st Century

The 21st century holds many challenges for California's urban forests. The climate is changing. Recent years of drought and wildfires are indicators of the increasing extreme weather events to come. By selecting and planting trees with a mindset towards resilience and adaptability, you safeguard the success of your project and maximize its community benefits for years to come. Here are seven steps to selecting and planting trees that will thrive.

1. THINK BIG

Bigger trees mean more captured GHGs and air pollutants, more shade, and more stormwater interception. One full-grown oak tree provides the same environmental benefits as 10-20 small flowering trees. Whenever possible, plant the biggest species a space can handle. Use [SelecTree](#) to check the mature size of the species you plan to plant.

3. KEEP SAVING WATER

It's important to understand that tree species have vastly different water needs. While some trees need regular rain or supplemental water, others can survive months without water once they've established themselves. Even in non-drought years, Californians can't afford to waste water. Planting drought-tolerant trees is prudent for long-term success considering the likelihood of future water cuts.

5. PRIORITIZE DIVERSITY

A wide variety of trees planted throughout a community reduces the risks associated with tree pests and diseases. Increase diversity by choosing a wide variety of species for your planting project and considering species that are less common in your community and might thrive in your climate.

7. PLANT LIKE A PRO

All the big-picture benefits of planting the right trees for your community can only be ensured by a strong foundation of basic tree planting and maintenance techniques. Take a few minutes to learn how to handle a root ball, where to water, and what to prune--these details will set your trees up for success!

2. AVOID INVASIVE SPECIES

Plants known as "invasive species" spread quickly and threaten natural habitats. Most publicly funded projects do not allow these species, and you should avoid them to support the native species thriving in your region. The California Invasive Plant Council (Cal-IPC) maintains an [inventory of invasive plant species](#). Use this as your "do not plant" list to guide your tree selection.

4. PEST RESILIENCE OR BUST

Environmental and human stressors make some urban trees vulnerable to pest invasions. Two notorious examples are the Invasive Shot-hole Borer in Southern California and Sudden Oak Death in Northern California. Protect your project by selecting trees that demonstrate resilience to pests and diseases. Consult your regional experts to pick species that will stay strong in your region.

6. KEEP IT SHADY

Shade lowers the temperature inside buildings, significantly reducing energy use, which in turn reduces the GHG and air pollution emissions created when fossil fuels are burned to make electricity. In historically cooler regions where air conditioning is not common, trees can provide needed cooling on increasingly hot days. Whenever possible, plant trees to shade buildings. To maximize benefits, plant trees to the west, east, or south of buildings within 60 feet.

California ReLeaf is here to help!
Contact us to navigate these elements in your project.



RESOURCES

For Species selection:

- [Water Use Classification of Landscape Species Plant List](#)
- [CAL FIRE's Nursery Standards and Technical Specification](#)
- [California Invasive Plant Council](#)
- [Cal Poly SelecTree](#)
- [Trees are Good Arborist Search](#)

For Tree Planting & Tree Care:

- [UC Extension Agents](#)
- [CAL FIRE Regional Urban Foresters](#)

For Regional Experts:

- [UC Extension Agents](#)
- [International Society of Arboriculture "Find an Arborist"](#)

3.2. Finding Nonprofit Partners

California has the highest concentration of non-profit, community-based organizations with on-the-ground expertise in urban forestry, resource conservation, and urban greening. Most of them have strong community ties and can play a valuable partnership role in meeting your urban greening needs.

The groups below can connect you to local groups through links, maps, and data available at their websites.



CALIFORNIA RELEAF

California ReLeaf works statewide to promote alliances among community-based groups, individuals, industry, and government agencies, encouraging each to contribute to the livability of our cities and the protection of our environment by planting and caring for trees. California ReLeaf is the only entity that convenes nonprofit and community organizations to support healthy urban forests across the state. The California ReLeaf Network is comprised of members that vary from small groups of dedicated individuals, working after hours to improve their communities, to well-established nonprofit organizations with paid staff. Activities range from planting and caring for urban trees to restoring native oak habitat and riparian areas.

Find a local nonprofit with urban forest experience at:
<https://californiareleaf.org/network/map/>



CALIFORNIA COUNCIL OF LAND TRUSTS

CCLT's mission is to conserve California's extraordinary land and water resources through a strong network of land trusts with one cohesive voice across urban and rural communities. CCLT member land trusts protect, steward and enhance many of the State's most important conservation lands and resources to benefit Californians.

Find profiles of the CCLT members land trusts and their location in California through an interactive map at:

<https://www.calandtrusts.org/map-ca-land-trusts/>



CALIFORNIA ASSOCIATION OF LOCAL CONSERVATION CORPS

CALCC was formed in 1993 to enable California's certified Local Conservation Corps to collaborate and to provide a forum to advance the conservation corps movement in California and nationally. CALCC represents 14 state-certified Local Conservation Corps. The mission of each Local Conservation Corps is to preserve and protect the environment and provide job skills training and educational opportunities to marginalized young men and women, primarily aged 18-25.

Links to local conservation corps can be found at:

<https://mylocalcorps.org/join-a-corps/#directory>

C A L I F O R N I A
ReLEAF



In accordance with Federal law and U.S. Department of Agriculture policy, this institution is prohibited from discriminating on the basis of race, color, national origin, sex, age or disability. (Not all prohibited bases apply to all programs.) To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provide and employer.

Empowering grassroots efforts and building strategic partnerships that preserve, protect and enhance California's urban and community forests.

2115 J Street, Ste. 213, Sacramento, CA 95816 • (916) 497-0034 • CaliforniaReLeaf.org