

# Our Natural Community

## Green Infrastructure

The General Plan calls for a network of green spaces that protects and enhances the natural ecosystems (i.e.: wildlife) and provides associated benefits for people and the economy. Green Infrastructure harnesses the power of nature to provide critical services such as protection against floods or excessive heat, help improve air and water quality, which underpin human and environmental health.

In the Downtown area the Green Infrastructure includes:

**Core Areas:** Public Open Space that are destinations, such as the Station Area Plaza, other plazas, parks, and parklets. The desire to retain and build on an authentic sense can be reinforced by public art, contextual architectural features or materials, commemorative features and signage which express and convey the distinctive personality of Downtown area and the regional/local character of the landscape and heritage.

**Connecting Corridors:** These are the corridors that link the public open spaces. They are streets such as the enhanced Mission and Fair Oaks, with network of bikeways, and enhanced network of alleys. The goals for connectivity include strengthening pedestrian and multi-modal access, and wayfinding and greenway linkages in a networked system throughout the Downtown landscape. These corridors also incorporate infiltration, biofiltration, and/or storage to collect, retain, or detain stormwater runoff. Street trees and other plantings provide cooling, shade, wind protection, attractive streetscapes, and other environmental benefits.

## Air

The two main pollutants of concern in South Pasadena are: ozone and suspended particulate matter. In South Pasadena, reducing air pollution is contingent on reducing the number of vehicles miles traveled (VMT) in the city.

Promoting walkable and mixed-use development served by high transit systems; and promoting complete street policies that encourage walking and use of public transit, reduces traffic congestion and improving air quality.

Mission Street is envisioned to be re-striped as a Main Street with two travel lanes, two bicycle lanes and parallel parking on both sides. This reinforces the character of Mission Street as a bicycle-friendly street connecting the light rail station to Fair Oaks Avenue.

Fair Oaks Avenue is envisioned to be configured as a grand double-tree lined north-south arterial. It will be restriped to have four travel lanes, two bicycle lanes and parallel parking on both sides. The bicycle lanes are located closest to the street curb and separated from the parallel parking by potted plants in the initial phases and permanent planters in the eventual phases. Bulb outs at each intersection help slow traffic speeds. The bicycle lanes remain continuous across the bulb outs.

*Insert rendering of intersection design developed at the Charrette.*

Green Infrastructure in the form of trees and plants absorb certain pollutants from the air through leaf uptake and contact removal. South Pasadena's widely planted trees and plants also cool the air and slow the temperature-dependent reaction that forms ground-level ozone pollution. *(see Trees Section for related policies and actions)*

## Policies and Actions

**P1.X** Promote alternative transportation modes like walking, biking, and transit that reduce emissions related to vehicular travel.

**A1.X** Redesign Mission Street and Fair Oaks Avenue to promote walking, biking, ride-sharing, public transit use, the use of alternative fuel vehicles or other clean engine technologies.

## Water

By weaving natural processes into the built environment, green infrastructure provides both stormwater treatment and flood mitigation benefits.

**Green Streets:** Green Streets incorporate infiltration, biofiltration, and/or storage to collect, retain, or detain stormwater runoff as well as a design element that creates attractive streetscapes. The Public Works Department requires new and reconstructed streets and roadway projects and CIP projects conducted within public streets which add or disturb at least 10,000 square feet of impervious surface to require Green Streets.

**Low Impact Development (LID):** The City requires LID for projects that are required to incorporate stormwater mitigation measures. LID is a strategy for improving the quality runoff by requiring that development projects direct runoff to treatment systems consisting of vegetation and soil.

### Policies and Actions

**P.1X** Promote and require the integration of Green Infrastructure into storm water management systems.

**A1.X** Review and revise development regulations to encourage a green approach in new developments. Minimize impervious areas. Develop new projects and retrofit existing surfaces to reduce runoff through infiltration.

**A1.X** Incorporate Green Street elements into the redesign of Mission Street and Fair Oaks Avenue.

**A1.X** Promote the use of green roofs, bio-swales, pervious materials for hardscape, and other stormwater management practices to reduce water pollution.

**A1.X** Promote the use of captured rainwater, grey water, or recycled water.

**A1.X** Require landscaping for all new development to use drought tolerant plants.

## Trees

Trees produce oxygen, provide shade and cooling, encourage walking, filter out air pollution, slow traffic, absorb rainwater and noise, improve property value and reduce people's stress levels. A healthy urban forest is a remarkably valuable asset for Downtown.

Mission Street redesign includes a tree-lined intimate Main Street with historic commercial buildings and parklets. Fair Oaks is re-designed as grand double-tree lined arterial going from north to south.

Improving the urban forest and significantly increasing tree canopy in Downtown will require years of investment in infrastructure improvements and many new trees. Once adequate soil volumes are in place, and coordinated with private development and smart stormwater management strategies, the Downtown urban forest will be a sustainable amenity that delivers numerous social, environmental and economic benefits for generations to come.

Recently planted trees, including drought tolerant species, are dependent upon supplemental irrigation until established, typically for two to three years. The method and amount that is applied may vary depending upon soil composition, heat, wind, planted in turf or ground cover, periods of abnormal rainfall or in poorly drained soils. A water audit should be performed to set watering patterns and timing to minimize waste.

The "Our Prosperous Community" recommends establishing a Business Improvement District (BID) for a variety of public realm enhancements and maintenance. The BID could provides funds for planting and maintaining street trees in the Downtown area.

### Policies and Actions

**P1.X** Preserve, manage, and grow the downtown tree canopy.

**A.1.X** Preserve the existing Downtown canopy with continued maintenance and protection against tree removal.

**A1.X** Replace the dead, diseased, declining, or poorly structured, street trees.

**A1.X** Plant at a minimum 50 new trees annually on Downtown streets and parks.

**A1.X** Require smart irrigation controls for newly planted trees that adequately water the trees without wasting water.

**A1.X** Increase species diversity – encouraging the use of native, non-invasive, and water efficient species for a more resilient urban forest.

**A.I.X** Craft appropriate incentives that encourage property owners to add green infrastructure on private property, including trees, living walls and green roofs.

**A1.X** Require new development to plant street trees along the property frontages.

**A1.X** Support BID as a funding source for maintaining trees in the Downtown area.

**A1.X** Explore alternate sources such as fundraising and private sector donations for planting and maintaining street trees.