

++ SITE LAYOUT STRATEGY: Add Significant Tree Canopy



SOURCE: NEVUE NGAN ASSOCIATES

Figure 2-26: Trees are a vital resource for managing stormwater. Leaves, branches, and the roughness of bark intercept rainfall and decrease the rate of stormwater runoff.



SOURCE: NEVUE NGAN ASSOCIATES

Figure 2-27: These mature trees along a residential street in San Mateo County help shade the pavement.



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Figure 2-28: These mature oak trees in a San Mateo County neighborhood have been preserved and are an aesthetic resource to the community.

Trees contribute significantly to the slowing, absorbing, and filtering of rainwater. They intercept water on leaf surfaces, as well as “drink” water that does infiltrate into the soil. An averaged size tree can intercept and absorb hundreds of gallons of water a day depending on the tree species.

Adding significant amounts of tree canopy has other important environmental benefits not directly related to stormwater management.

Energy Benefits: Trees provide natural cooling benefits by evaporating water and providing direct shading of surfaces. Planting more trees can help reduce the urban heat island effect.

Air Quality Benefits: Trees act as natural filters or “lungs” to remove air pollutants, such as ozone, nitrogen oxides, sulfur dioxide, and ammonia.

Economic Benefits: Studies have shown that having mature trees and well-maintained landscaping can increase property values and provide a more enjoyable shopping experience in business districts.

It is important to preserve existing, healthy trees whenever possible. Mature existing trees should influence how and where stormwater facilities are designed. If the location of an existing mature tree is in direct conflict with the location of a proposed stormwater facility, it might be more advantageous to alter the design of the stormwater facility in order to preserve and protect the existing tree. Mature trees are often able to soak up water at a rate comparable to what can be infiltrated in a stormwater facility. In terms of overall stormwater benefit, it is usually worth reducing stormwater facility size in order to save a mature tree.