



Upgrading Streets, Sidewalks, and Alleys for a Healthy and Resilient California



California State Water Resources Control Board provided multiple grants from the Proposition 84's Storm Water Grant Program to the City of Santa Barbara to implement Low Impact Development (LID) designs within parking lots, alleys, and streets. The City replaced more than 230,000 square feet of asphalt and concrete with permeable interlocking concrete pavers to treat stormwater, allow runoff to infiltrate into the soil, and provide groundwater recharge and flood protection. The projects capture and infiltrate approximately 8 acre-feet of rainfall in Santa Barbara per year. The elimination of runoff mitigates public health risks associated with pooling, flooding, and polluted runoff resulting from recurring flash storms, and it also reduces the risk of flash floods and prevents habitat damage downstream. The infiltrated water increases the amount of groundwater which is pumped, treated, and distributed to residents for municipal water. Increased infiltration and higher groundwater levels contribute to higher base flows in the creeks, thereby enhancing the stream habitat benefits for aquatic organisms. The city's century-old Italian pine trees displayed some of the most surprising results; the trees, which had previously displaced cemented sidewalks with their water-deprived roots, began to grow deeper to reach the newly-replenished water source far below ground and showed visible signs of improved health soon after the projects were implemented. The trees will further help to filter pollutants from water, improve air quality, and reduce urban heat island effect in the city. The light color of pavers also helps reduce the urban heat island effect. The environmental and public health benefits are especially important with the threat of storms becoming more frequent and extreme, and the number of extreme heat days increasing with climate change. Recognizing multiple benefits, ease of maintenance, reusability, and durability of permeable pavers, city staff are now favoring LID practices over traditional methods for managing stormwater and dry weather flows.



Image provided by the State Water Resources Control Board

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