

Green Infrastructure in the LA Region: Benefits and Needs

California is currently in the 5th year of a record-breaking drought. Climate models indicate that such long periods of drought are expected to be the 21st century norm. With the LA Region increasingly dependent on expensive and increasingly unreliable imported water sources, it makes economic and environmental sense to maximize our local water resources. Given that, the fact that even on a dry day, roughly 10 million gallons of urban runoff flows through the region's storm drains and out to the ocean represents a tragically wasted opportunity. On a wet day, this volume may escalate to billions of gallons.

In addition to being a wasted resource, stormwater and urban runoff are the number one sources of pollution to our waterways and ocean, as the water picks up pollutants such as bacteria, metals, oil and grease as it flows from where it lands into stormdrains. In our heavily urbanized region, the high percentage of impermeable area represents a particular challenge to solving this problem, with transportation land uses comprising a significant percentage of that area.

Streets and highways are estimated to make up approximately 27% of the impermeable area in the LA County area.¹ Further, some of the most challenging pollutants to deal with originate from transportation activities. For instance, 50% of zinc pollution, which is the number one driver for much of the needed stormwater treatment in the LA region, is generated from tire wear alone. Copper in brake pads, antifreeze, oils and grease, as well as pollutants from exhaust that then deposit on land surfaces are significant contributors as well.

At the same time, roadway improvements offer a significant opportunity for stormwater improvement through green infrastructure, and more specifically green streets. Green streets offer the potential to improve water quality, enhance local water supplies, mitigate flood risk, reduce the urban heat island effect, and build climate resilience. Smartly and holistically planned out, they can also provide opportunities for active transportation, recreation, and even habitat.

It follows then that Green Streets are relied on heavily by cities in the region to achieve their water quality goals. As described in their respective Enhanced Watershed Management Programs (EWMPs), for example, the City of Los Angeles depends on Green Streets for 20% of their stormwater program compliance effort. Los Angeles County depends on Green Streets for 26% of their compliance effort (see Figure 1).

This level of implementation unsurprisingly comes with significant costs. The City of Los Angeles will need \$857 million to implement their Complete Green Streets program. This equates to \$82 million annually during the EWMP planning period. The County costs are \$374 million total and \$33 million annually in Green Streets for their unincorporated communities.

Metro's Environmental and Sustainability Policy

Given the contribution of transportation activities to our Region's stormwater challenges, as well as the unique opportunity that transportation infrastructure offers to address some of these challenges, it

¹ Based on LA County Watershed Management Modeling System (WMMS) model domain, excluding forest.

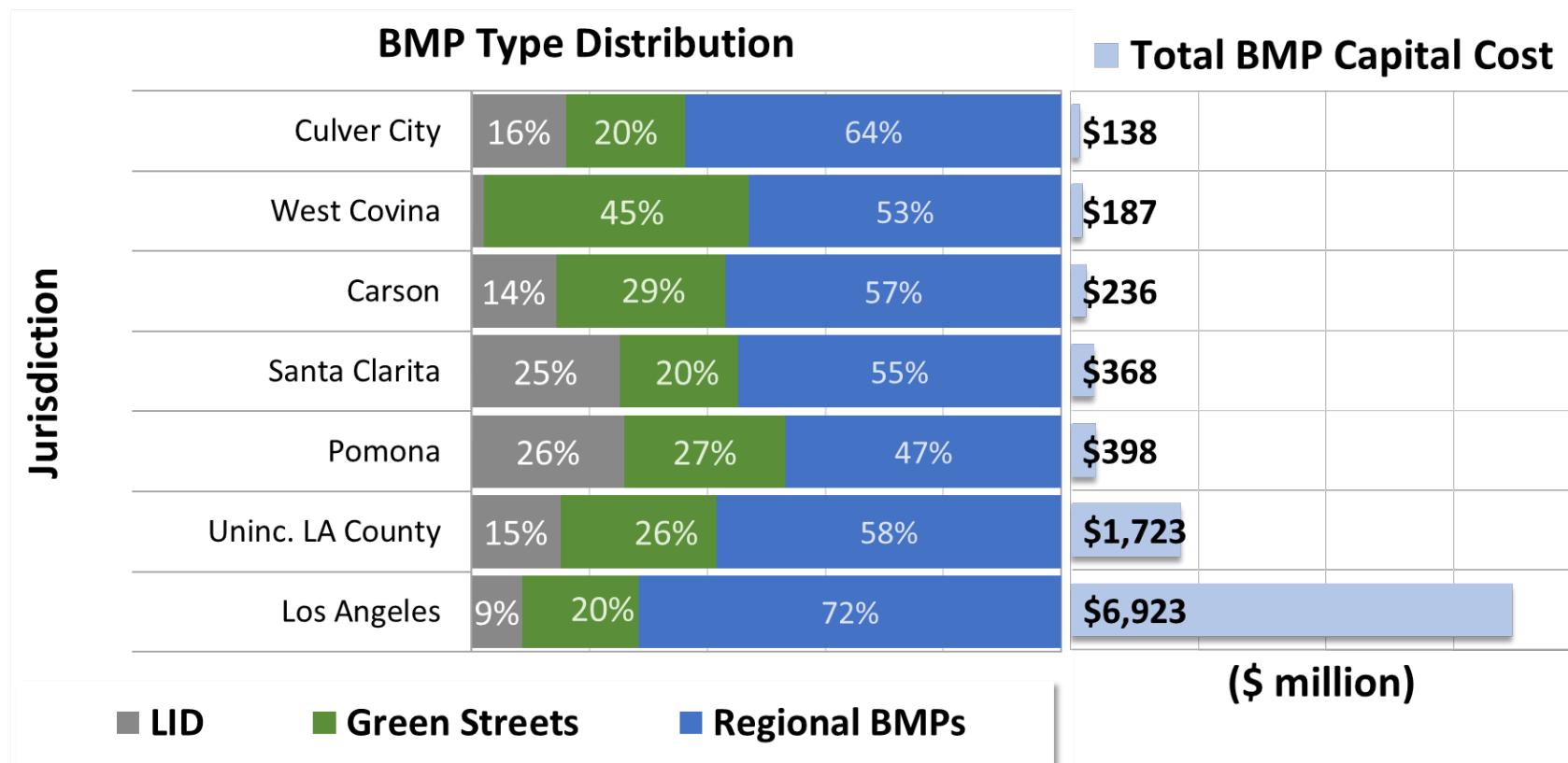
seems reasonable and responsible for the proposed Measure R2 to include dedicated funds to support stormwater projects, and for Metro's Environmental and Sustainability Policy to include material and measurable metrics that will ensure the most effective use of funds that are directed at meaningful green infrastructure projects.

While we recognize and applaud the efforts that Metro has made so far towards sustainability through policies and tools such as the Green Construction Policy, the Urban Greening Plan and Toolkit, and the Sustainable Design Program Requirements, it should be noted that many of these efforts are several years old, and thus may not be reflective of more recent standards and thresholds that, during this time of rapidly shifting focus on climate adaptation and water resources, are becoming state of the practice.

Further, we believe that these existing policies fall short of comprehensively covering the scope of Metro operations. In order to maximize the potential for the Environmental and Sustainability Policy to be effective in achieving the stated goals, the Policy should be applicable to all aspects of Metro operations and programs, including grant programs as well as capital construction projects.

The Policy should also serve to foster collaboration between Metro and other relevant agencies and other stakeholders in order to create the most cost effective, multi-benefit projects. As stakeholders who have been engaged in this process from the beginning, we request that EnviroMetro representatives, along with other key stakeholders, have a formal role in developing this guidance.

Figure 1. BMP type distribution and capital costs in EWMPs for select cities in LA Region



Note: the BMP and cost information above was based on a literature review of multiple E/WMPs, which use differing methods for reporting BMP types and costs. In some cases, interpretation was needed to extract information from the E/WMP, and therefore the figures above should be considered a coarse approximation of the actual planning documents (particularly for jurisdictions in multiple E/WMPs). The cost estimation approach for green streets in the E/WMPs varied and often differed from the unit costs used for the previous green street figures.