# EXECUTIVE SUMMARY

Stormwater resource planning is a relatively new and important component of the watershed management process in California. Extended drought conditions, climate change, and the ongoing need to manage water quality and flooding requires additional planning from municipalities to manage surface water runoff. Through Senate Bill 985, a Stormwater Resource Plan (SRP) is required for municipalities to receive funding for stormwater and dry weather runoff capture projects. Development of the San Mateo County SRP was led by the City/County Association of Governments (C/CAG) of San Mateo County and its Countywide Water Pollution Prevention Program (Countywide Program), representing twenty cities and the County of San Mateo, through a collaborative effort with stakeholders and the public. The purpose of the SRP is to provide detailed analysis of stormwater and dry weather capture projects for the County. These projects aim to reduce flooding and pollution associated with stormwater runoff, improve biological functioning of plants, soils, and other natural infrastructure, and provide community benefits through stakeholder engagement and education.

## ES.1 Watershed-Based Approach

The San Mateo County SRP was not based on property boundaries, county lines, or other political boundaries, but was developed through a hydrologically defined watershed-based approach. While stormwater and dry weather projects were identified inside county boundaries, they were defined hydrologically based on watershed characteristics within the County. Using the United States Geological Survey (USGS) Hydrologic Unit designations (HUC), watershed scales and boundaries were used to ultimately prioritize stormwater and dry-weather projects (Figure ES-1). Two major watersheds were assessed in the SRP: San Francisco Bay Watershed and San Francisco Coastal South Watershed. Each watershed contains unique surface water and groundwater characteristics, and through the assessment process, priorities were identified on a watershed-basis. Parameters assessed were: watershed processes, surface and groundwater quality, water usage, land use characteristics, and natural habitats. For example, the San Francisco Bay Watershed has high levels of impervious cover along San Francisco Bay and contains most of the population for San Mateo

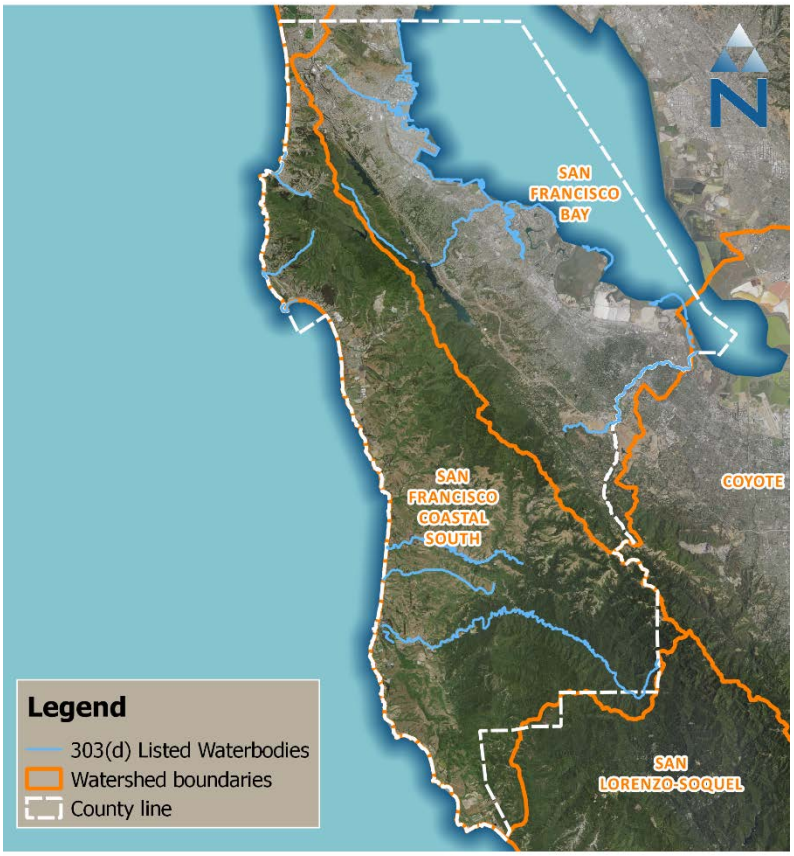


Figure ES-1. Major Watersheds Addressed by the SRP.

County. San Francisco Coastal South Watershed includes the Pacific coastline of San Mateo County and, in its southern reaches, includes large areas of open space and agriculture. The goal of this characterization is to provide an introduction to watershed processes in San Mateo County, give historical context of the watersheds through previous planning efforts, and aid in stormwater project prioritization.

The watershed-based approach also leveraged previous regional and watershed planning efforts. Various agencies and municipalities throughout the county have developed regional plans, local watershed plans, Total Maximum Daily Loads (TMDLs), and other research documents that provide depth to the SRP, allowing it to be tailored to the specific needs of each watershed while maintaining a regional perspective.

## ES.2 Project Prioritization Process

The SRP includes an evaluation of project benefits addressing several key metrics: Water Quality, Water Supply, Flood Management, Environmental, and Community benefits. The first steps were to identify suitable public parcels and public rights-of-way. Hydrologic Response Units (HRUs), small spatial units containing unique attributes (i.e. land use cover), were then used to evaluate watershed processes within San Francisco Bay and San Francisco Coastal watersheds and their subwatersheds to prioritize stormwater and dry weather runoff capture projects. HRUs assessed were: land use, impervious cover, hydrologic soil groups, and slope. Based on these key metrics, watershed characteristics, and watershed processes through HRUs, several stormwater projects were identified and prioritized to address water quality impairments, reduce flooding, and provide more natural groundwater recharge throughout the County. A screening and prioritization method was developed to reasonably site stormwater capture projects through a ranking method, with emphasis on projects that offered the greatest opportunity for multiple benefits. Higher prioritization was given to projects that addressed flood-prone streams, those located in PCBs-interest areas, and ones that drain to TMDL waters. Three types of project opportunities for stormwater management were identified throughout the County:

### Regional Stormwater Capture Projects

Regional stormwater capture projects consist of facilities that capture and treat stormwater from off-site. The primary objective of regional projects is often flood attenuation, but many also contain a water quality treatment or infiltration component.

### Green Streets

Green streets consist of stormwater capture infrastructure that is implemented in public rights-of-way. Green streets are intended to capture only runoff that is generated from the street and adjacent land that drains to the street (Figure ES-2).

Figure ES-2. Example green street with stormwater planter box (SMCWPPP 2009)

### Low Impact Development Retrofit

Low Impact Development (LID) is a form of on-site urban infrastructure design that uses a suite of technologies intended to imitate pre-urbanization (natural) hydrologic conditions. One of the most prominent effects of urbanization is the drastic increase in impervious surfaces, and thus, stormwater runoff. LID is meant to capture, remove (through infiltration), and slow runoff to reduce the impacts of the urban landscape.

Separate prioritization scoring processes were developed for each of the three project types. A project's priority score was determined by summing all of the points assigned from the evaluated physical characteristics, proximity to areas of interest, potential for co-locating projects, and the various multiple benefits. All public parcels and streets throughout the county were prioritized and the results were analyzed at the countywide scale, and city-scale. Figure ES-3 provides an example of green street prioritization of Menlo Park. While it is expected that LID will be implemented on private parcels as well, project opportunities were not evaluated at these sites.

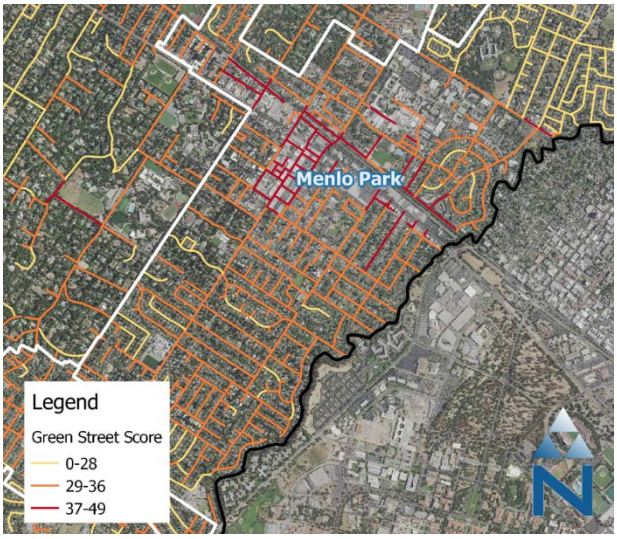


Figure ES-3. Example City Scale for Prioritization of Green Streets.

Twenty-two projects were selected from the prioritized project list for quantitative analysis of stormwater capture potential and preparation of conceptual designs. Modeling of average annual stormwater capture volume and pollutant load reductions provides further quantitative analysis for the highest opportunity projects and acts as a validation of the quantitative, metric-based prioritization process. The conceptual designs provide a platform to discuss project benefits with diverse audiences, including potential funding sources, project beneficiaries, stakeholders, and the community. The concepts provide project details and capital costs that will aid in the future design and implementation and seeking funding. Three projects were selected for regional planning projects, fifteen for green streets, and four for low-impact development. These projects were selected based on distribution across the county for multiple cities, proximity to impairments or flood prone streams, and opportunities for co-location of planned projects.

For example, Twin Pines Park, owned and maintained by the City of Belmont, was identified as a potential location for a regional stormwater capture project. Belmont Creek, which runs through Twin Pines Park, is the primary receiving water for the City and is identified as a flood-prone channel impacting downstream properties, including a pharmaceutical manufacturing facility. A nearby storm drain was identified as the most feasible opportunity for stormwater capture, and contains a drainage area of approximately 30 acres. The first page of the concept is shown in Figure ES-4 and is shown in more detail in Section 4.3.3.

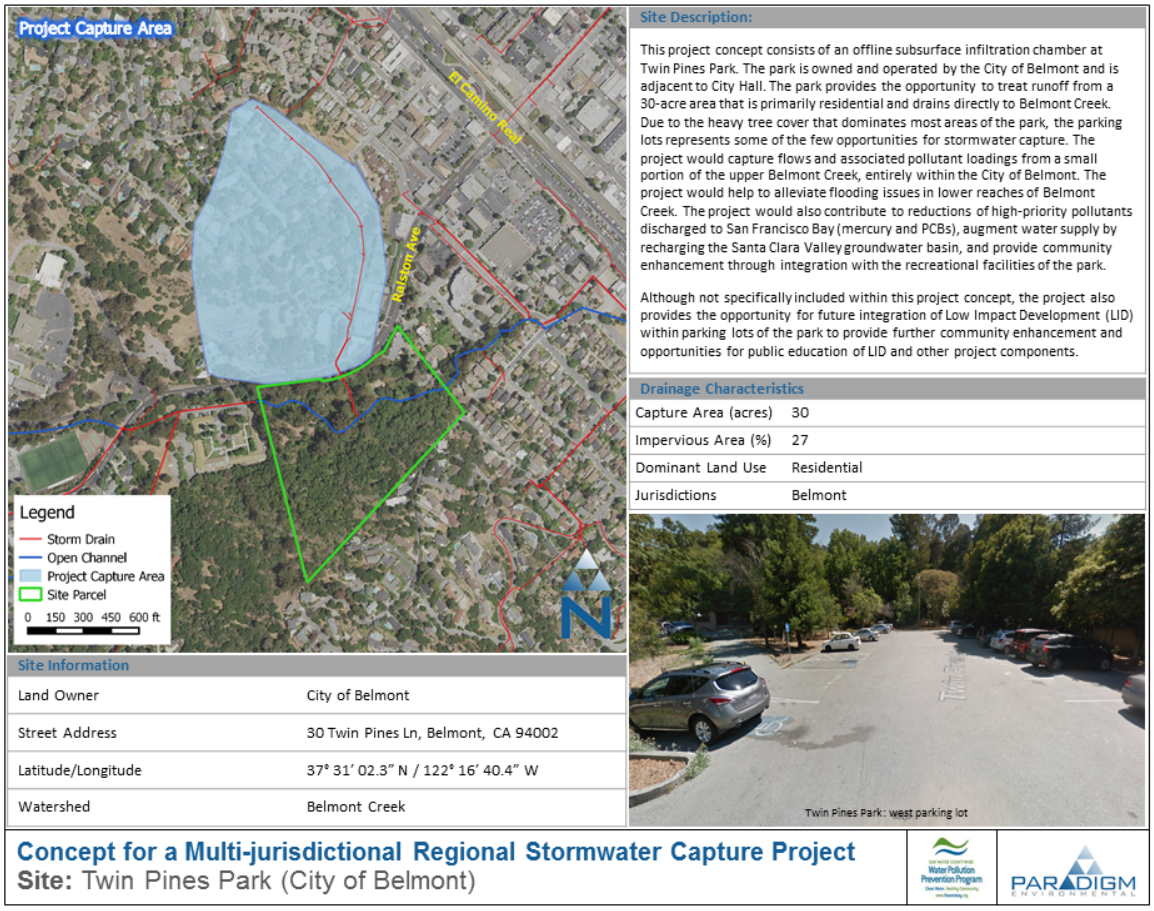


Figure ES-4 Example Concept of Twin Pines Park in the City of Belmont.

## ES.3 Implementation and Adaptive Management

For the SRP to be effective, an adaptive management and funding strategy is needed to transition from planning to implementation. TMDL pollutant reduction schedules and requirements of the Municipal Regional Stormwater Permit (MRP) will determine the pace for implementation of projects, timing, and project funding. To address the MRP, a TMDL Implementation Plan will be completed in the coming years for priority pollutants in the watersheds. The TMDL Implementation Plan will determine the amount of green infrastructure and other stormwater capture projects necessary to achieve pollutant reductions to meet interim and final TMDL wasteload allocations.

The SRP will act as a living document that will continue to be updated to incorporate multiple-benefit projects as they are identified. As projects are implemented and lessons are learned through wider scale integration of LID, green streets, and regional stormwater capture projects within traditional infrastructure, the SRP will be periodically revised to update the project implementation plan. This is expected to occur once every five years, coinciding with the five-year cycle for updates to the MRP. Throughout implementation of the SRP and TMDL Implementation Plan, C/CAG, via the Board of Directors, committees, and Countywide Program committees will continue to meet to discuss both planning efforts.