

ACTION 24

Manage stormwater with low impact development and green infrastructure

Implement green infrastructure (GI) and low impact development (LID) to reduce pollution from stormwater runoff into the Estuary. Develop planning and tracking tools, technical materials, policy recommendations, and financing strategy guidance to aid local and regional public agencies with implementation.

TASK 24-1 Develop outreach materials on lessons learned and the current state of LID benefits knowledge.

BY 2017 Develop materials.

TASK 24-2 Improve the San Francisco Estuary Institute's LID tracking tool "GreenPlan-IT." Enhance all components of the LID planning tool, "GreenPlan-IT."

BY 2017 Complete refined GreenPlan-IT.

TASK 24-3 Partner with local jurisdictions to analyze LID and GI potential in select areas using Green Plan-IT and other applicable planning tools, and integrate findings into relevant agency planning mechanisms and policies for adoption and implementation.

BY 2018 Complete identification and analysis.

TASK 24-4 Develop and promote a comprehensive regional road map that identifies key policies, documents, legislation, agencies, and specific actions needed for integrating GI with future climate change, transportation, and other infrastructure investments within the region, including looking for opportunities to implement large regional projects.

BY 2018 Complete work plan.

TASK 24-5 Create and make available to municipalities and other interested parties design tools for LID retrofits, such as: cost-effective, low maintenance standard design details for LID retrofits of typical road configurations; unit cost estimates for both LID retrofit practices and non-LID standard street details; and "lessons learned" reports on previous grant- or local agency-funded LID retrofit projects.

BY 2018 Complete design tools and make available.

TASK 24-6 Create a GIS-based database to track completed LID and GI projects in the public and private realms; coordinate the database with Total Maximum Daily Load (TMDL) accounting systems developed by other local partners to identify and quantify the load reduction benefits of LID and GI.

BY 2018 Launch database.

BACKGROUND

Green infrastructure (GI) and low impact development (LID) are a broad suite of techniques that municipalities can use to reduce the impacts of urbanization on local hydrology and water quality. As cities were built, much of the natural landscape was paved over. Impervious sidewalks and streets typically represent 15-25 percent of land cover in many Bay Area cities. Rain and runoff from storms and human activities flow over these paved impermeable surfaces and into storm drains and ultimately San Francisco Bay, often carrying pollutants like oil, grease, pesticides, and heavy metals, among others. In this way, paved areas contribute greatly to urban runoff peak flows, volumes, and pollutant loads.

GI and LID techniques include rain gardens, vegetated swales, and green walls that slow and filter polluted runoff, as well as permeable pavements, which allow water to infiltrate the soil beneath the pavement, where it is then filtered by the soil.

This CCMP action supports San Francisco Bay Regional Water Quality Control Board initiatives addressed in the current Municipal Regional Stormwater Permit, which requires 76 cities, counties, and other entities to develop GI action plans, use GI and LID to capture PCB- and mercury-laden runoff, and track GI and LID implementation. These requirements were informed by GI ordinances passed by San Francisco and North Bay counties.

In the Estuary region, parcel-level new and re-development projects of a certain size are also required by the current Municipal Regional Stormwater Permit to use certain LID and GI techniques, but local agency projects in the public right-of-way are not.

This CCMP action supports the San Francisco Estuary Partnership's work to speed the adoption of green infrastructure throughout the region, as well as the beneficial reuse of stormwater whenever possible. It also supports the Partnership's work with the San Francisco Estuary Institute on Green Plan-IT, a tool that helps planners select and place GI at a watershed scale.

OWNERS

SF Estuary Partnership (Tasks 24-1 through 24-6)

US Environmental Protection Agency (Tasks 24-1 through 24-6)

COLLABORATING PARTNERS

Bay Area Stormwater Management Agencies Association, SF Bay Regional Water Quality Control Board, SF Estuary Institute, various municipalities

NEXUS

Actions 1, 2, 4, 6, 11, 12, 14, 17-19, 21, 27, 30

Goals 1, 2, 3, 4; Objectives a, e, f, i, j, l