



ATTACHMENT P:

VTA LANDSCAPING AND STORM WATER
REQUIREMENTS FREQUENTLY ASKED QUESTIONS



Why use this manual?

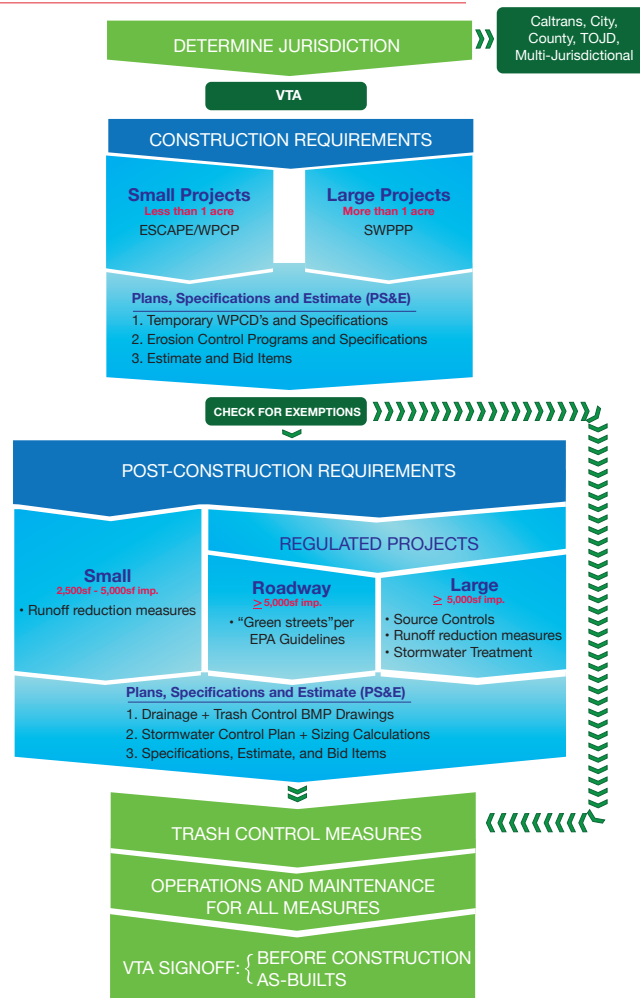
The Statewide Construction General Permit for Stormwater (CGP) and the Municipal Separate Storm Sewer System (MS4) Phase II permit contain regulations for VTA's capital and facilities projects, including new and redevelopment projects. In addition, VTA's Sustainability Policy requires that native and drought tolerant plants be used on VTA projects.

The goals of the permit requirements are to:

1. Prevent impacts to local waterways from construction and post-construction project runoff, and;
2. Eliminate or minimize any additional runoff from increased impervious areas as a result of the project.

This is accomplished by requiring during-construction best management practices (BMPs), source control measures, runoff reduction measures, and

Figure 1: Outline of Stormwater Design Process





stormwater treatment to be incorporated into construction documents, contractor construction activities, and operation & maintenance (O&M) elements. To the right is a visual guideline of the stormwater design process.

What projects must comply with the regulations?

All projects must comply with the permit requirements and prevent silt, sediment and other pollutants from leaving the project site. There are different size criteria for different types of projects, and during-construction and post-construction requirements, as follows:

- Construction Projects:
 - <1 acre must prepare an Erosion and Sediment Control Action Plan Element (ESCAPE) or Water Pollution Control Plan (WPCP)
 - ≥ 1 acre must include a Stormwater Pollution Prevent Plan (SWPPP)
- Post-Construction:
 - Development projects that create and/or replace $\geq 2,500$ square feet of impervious surface
 - Roadway projects that create and/or replace $\geq 5,000$ square feet of impervious surface
 - Projects that initiate design on or after June 30, 2015

What projects are exempted?

- Projects that initiate design before June 30, 2015
- Interior remodels
- Impervious trails built to direct storm water runoff to adjacent vegetated areas
- Trails, sidewalks, and bike lanes made with permeable materials
- Routine maintenance and repair projects, such as:
 - Pavement or asphalt resurfacing within the existing footprint
 - Sidewalk replacement within an existing footprint
 - Routine replacement/repair of damaged pavement/asphalt
 - Maintenance, repair, and replacement work on existing underground utilities
 - Building roof or exterior wall surface replacement

How is VTA complying with the During-Construction requirements?

All new construction projects must comply with the current MS4 permit and VTA's Sustainable Landscaping Policy. All new construction projects must comply with the current CGP permit through:

- Preparation of the required SWPPP (projects that disturb more than 1 acre) or ESCAPE/WPCP (for all smaller VTA projects)
- Inclusion of construction BMPs to address both erosion control (keeping soils in place) and sediment control (stopping soils that have migrated offsite)
- Inclusion of the costs of construction BMPs in the contract bid/pay items
- Evaluation of the during-construction conditions and project staging/phasing and inclusion of the temporary BMPs needed during construction in the Water Pollution Control Drawings
- Inclusion of permanent BMPs that address site stabilization and erosion control in Final Erosion Control Drawings
- Inclusion of inspection frequencies as outlined in the Manual

How is VTA complying with the Post-Construction requirements?

If projects exceed the threshold of 2,500 square feet of impervious surface, one of the following Templates and related Checklists are required to be filled out and submitted to PED:





- Stormwater Control Plan for Small Projects (2,500-5,000 sq. ft)
 - Includes at least one runoff reduction measure
- Stormwater Control Plan for Regulated Projects (>5,000 sq. ft)
 - Includes source control measures, runoff reduction measures, and stormwater treatment (as needed)
- All new stormwater infrastructure must be captured in CAD and GIS
- If a Roadway Project, include “Complete Streets” elements
- The Checklist and Stormwater Control Plans will be reviewed by VTA PED and VTA Environmental Programs. Any required changes to meet the requirements will be communicated to designers by the PM.
- Once project design is completed and prior to advertising for bid, VTA PED will document to VTA Environmental Programs personnel that the post-construction measures are in place and that O&M requirements are met through the VTA Signoff form.

What are Low Impact Design Strategies?

Compliance with post-construction requirements includes integration of Low Impact Design (LID) strategies from the conceptual stages of a project; these include:

- Source Control Measures – control pollution-generating activities by requiring the design, construction, and O&M of specified activities and sources to meet Best Management Practices (BMPs). These apply to Regulated projects only.
- Runoff Reduction Measures – reduce the amount of runoff from related construction. These apply to all projects.
- Stormwater Treatment Measures and Sizing Criteria – these numeric sizing requirements are included in the permit and outline requirements to infiltrate, evapotranspire, and/or biotreat runoff, based on the 85th percentile storm event.



What is a Post-Construction Water Balance?

The Post-Construction Water Balance is a tool used to demonstrate that there is an **equal pre- and post-construction runoff from a project**. Designers use this tool to quantify that their selected runoff reduction and site design measures sufficiently mitigate the amount of impervious surfaces they have added into a Regulated Project, to meet the design criteria in the MS4 permit.

- To determine the post-construction water balance for the project, use the State's Storm Water Multiple Application & Report Tracking System (SMARTS) system or use the Office of Water Programs (OWP) online California Phase II LID Sizing Tool- v1.1.

What are the design criteria for Regulated Projects (>5,000 SF impervious)?

Site design measures must infiltrate, evapotranspire, and/or harvest/reuse for the **85th percentile** storm event. **For projects in Santa Clara County, the 85th percentile storm event varies based on location.** Projects that increase impervious surface by **more than 50%** must address runoff from the **existing and new** impervious surface. Projects that increase the impervious surface by **less than 50%** of the impervious surface must address runoff from the **new** impervious surface only. If the Runoff Reduction Measures alone cannot address the 85th percentile storm event, then the remaining runoff must be addressed through Stormwater Treatment (a bioretention system or another facility demonstrated to be equivalent).

Are there specific design criteria for different stormwater treatment measures?

Yes. Depending on the measure selected, there are detailed design criteria that must be met. These are described in the Design Criteria Manual. Note the Stormwater Control Plan templates include detailed checklists to be submitted to VTA, along with all sizing calculations used.

What projects must include Trash Control Measures?

All VTA-owned areas are subject to Trash Control requirements; however, these will vary based on location and annual Trash Implementation Plan monitoring results. **Designers should consult with VTA Environmental Programs staff to determine if trash control measures are required.**



- For VTA projects that have post-construction requirements, Trash Control Measures should be integrated with the drainage design through:
 - Installation of trash full capture systems at storm drains, manholes, or outfalls, wherever feasible. Trash full capture systems must be certified by the State Water Resources Control Board (SWRCB).
 - If full capture systems are infeasible, at a minimum, partial-capture systems, such as retractable screens, must be installed at drain inlets.
 - Installation of 5mm mesh screens at the overflow of stormwater treatment systems (such as bioretention basins).
 - Inclusion of the locations of trash control measures on the project's Stormwater Control Plan Drawings and related CAD Details.
 - Inclusion of language regarding the maintenance of the trash control measures installed in an O&M Plan.

Is an Operation and Maintenance Plan Required?

Yes, a long-term O&M Plan must be developed by the designer to ensure that post-construction stormwater management features are adequately maintained.

- Plan must include exhibits outlining both surface and subsurface MS4 features and describe procedures necessary to operate and maintain BMPs for a minimum of 5 years..