

ACHD Policy Manual Revisions, Sections 8000 and 8200 (effective August 23, 2017)

Purpose: to address water quality treatment and functionality of stormwater management facilities or structural Best Management Practices (BMPs). The NPDES Stormwater Permit has a requirement to address “Pollutant(s) of concern”, identified as causing or contributing to water quality impairment.

Surface Facilities (Planters, Swales, Basins)

- Sediment control, e.g. forebay
- Phosphorus: vegetation required in all surface facilities. Sand filters not allowed.

Subsurface Facilities (Seepage Beds, Sand Filters)

- Sediment pre-treatment
- Phosphorus: evaluated use of iron amendment in sand filter component of facilities
 - No local sources identified; will investigate regional sources
 - Investigating alternative local materials: volcanic cinder, arc-furnace slag
 - Will revisit when investigations are complete

Changes to Section 8000

- New performance standard: 8007.4 *Water Quality Treatment: Stormwater facilities shall be designed to provide treatment for the Pollutants of Concern.*
- 8009.6 Observations Wells
 - Not required for wet basins
 - Outside well located across the street in sidewalk
- 8012.1 Qualifications to Certify Design Plans & Related Submittals: *The landscaping and O&M Plans for stormwater facilities where the vegetation is a functional part of the facility shall be prepared by a professional with horticultural experience and knowledge.*
- 8012.5 Preliminary Plan Submittal
 - Show peak discharge rates at each inlet.
 - Drainage basin maps *“Show topography and ensure there is sufficient information or survey to explain the design and upstream/downstream effects.”*
 - Include map showing the locations of the test pits, boring holes, and groundwater monitoring.
- 8012.10 Post-Construction Submission: *One CD with a pdf of the final plans and CAD files based on District CAD to GIS Procedures showing the stormwater layer and street layout with survey control. PDF plan sheets shall be bound into one file.*

Changes to Section 8200

- 8202.5 Facility Revegetation: Clarifies developers responsibility for vegetation establishment; requiring an improvement agreement and \$5,000 warranty bond.
- Basins
 - Changed term “ponds” to “basins”. Added definitions.
 - Reduced basin forebays to 10% of total basin volume.
 - Conveyance areas in detention basins with 2% slope.

- Require more cover to protect basin liners (minimum 1’).
- Require vegetation throughout basins and in forebays.
- Embankment slopes no steeper than 3:1; preferable 4:1. Embankment soils compacted to 95% of maximum density at optimum moisture.
- New fence language: *Basins owned and maintained by ACHD shall be fenced with minimum 4-foot tall fence with a top rail and openings with a maximum separation of four inches (4”). ACHD reserves the right to review and approve on a case-by-case basis, a fence design that varies from the minimum design criteria.*
- BMP 12 Basin with Underdrain - Formerly Sand Filter Extended Detention Pond
 - Additions:
 - Eighteen inches of amended topsoil with 3% or greater organic matter content that will support vegetation germination required throughout the basin.
 - The bottom of the facility (below topsoil) shall be at least one foot above the seasonal high water table and bedrock.
 - The perforated under-drain pipe shall be 6-inch minimum diameter with a minimum wall thickness of SDR-35. Refer to the ISPWC Section 601, Par 2.2A.
- BMP 20 Seepage Beds
 - Sizing can account for infiltration during first hour.
 - The calculated volume shall be increased by 25% to account for sediment. When the seepage bed is located within a common lot, additional sediment storage is not required.
 - Seepage beds located within the right-of-way may extend no greater than five feet out from face of curb toward the centerline and shall not encroach on a private lot. Seepage beds shall be no greater than ten (10) feet in depth from finish grade to the bottom of the rock.
 - Seepage beds shall have a minimum cover of 1.5 feet. If placed in the roadway or under the sidewalk, minimum cover is 1 foot below the pavement subgrade.
- BMP 21 Vertical Sand Filter - Formerly Horizontal Sand Filter
 - Only allowed in subdivision common lots and only where 3-foot separation to high groundwater is not possible. Specific design requirements added.
- BMP 31 Bioretention Planters - Other inlet options identified.
- BMP 34 Permeable Pavers – Changes to edge restraints width (from 1’ to 8”) and depth (18”).

Other Changes to 8200

- Drawings modified to reflect changes in policy.
- Design example removed from appendix.
- Revegetation Guidance added as appendix.
- Five details removed (available in ISPWC).