

CHAPTER 9

MISCELLANEOUS

9.8 Water Quality Best Management Practices

9.8.1 Treatment of Runoff

9.8.1.1 All projects shall provide water quality treatment based on the modeled Total Suspended Solids (TSS) load off the project for post construction conditions. The determination of the TSS load shall be in accordance with this manual. The modeled TSS shall not exceed 850 pounds/acre/year.

9.8.1.2 The water quality volume (WQV) shall be runoff from 1.2 inches of rain from the project site. The volume shall be calculated as:

$$\text{WQV} = 1.2 (R_v) A_t / 12 \text{ (ft}^3\text{)} \quad \text{(Eq. 9.8.1.2-1)}$$

Where $R_v = 0.5 + I (0.009)$

I = Percent Impervious as a whole number

A_s = On site area to be treated (ft²)

9.8.2 Facility Location Criteria

9.8.2.1 Facility location criteria shall be as specified for detention facilities in Subsection 9.3.4 of this manual.

9.8.2.2 In a residential subdivision, the following Best management practice with section 9.3.4.7 if not located on a recreation area lot as specified in Subsection 9.3.4.6

- Extended detention ponds;
- Retention ponds;
- Sand filters;
- Constructed wetlands;
- Infiltration trenches;
- Oil/grit separators.

9.8.3 Easement Requirements

9.8.3.1 Facility easement requirements shall be as specified in Subsection 9.3.5 of these regulations with the exception that the easement enclosing the facility shall be named a Best management Practice (BMP) easement.

- 9.8.3.2 Stream Buffer Easements shall be shown on the final plat for areas that area claimed in the TSS model as Undisturbed Stream Buffers for the site. These areas shall be left in a natural, undisturbed condition except for walking trails. Trails shall not be allowed within 25 feet of a stream bank without a state waters buffer variance.
- 9.8.3.3 Upland Area Easements in non-residential subdivisions that area claimed as undisturbed upland areas for the site shall be recorded in an easement acceptable to the City. These areas shall be left in a natural, undisturbed condition except for walking trails.

9.8.4 Facility Maintenance

- 9.8.4.1 Maintenance requirements shall be as specified in Subsection 9.3.6. of this manual.
- 9.8.4.2 Prior to or concurrent with the recording of a Final Plat for a subdivision, or issuance of a Certificate of Occupancy for a non-subdivision project, the developer shall provide acceptable surety such as a bond or letter of credit providing for the maintenance of the facility for a period of not less than 18 months. The amount of the surety shall be the greater or fifty (50) percent of construction costs of the facility or 100 percent of the cost to clean out the facility. At the end of 18 months, the City may require the surety to be renewed due to anticipated maintenance caused by such concerns as future construction activity in the basin draining to the facility. A renewed surety may be required up to a total maximum of ten (10) years. The surety for a facility shall be renewed during the ten years until:
 - 9.8.4.2.1 The surface water drainage area within the project has undergone final stabilization and all planned construction activity has been completed;
 - 9.8.4.2.2 All storm water runoff in the surface water drainage area within the project is coming from undisturbed or stabilized areas;
 - 9.8.4.2.3 At least 90% of the lots in that surface water drainage area within the project have been sold to an unrelated party, permanent structures completed and final stabilization achieved;
 - 9.8.4.2.4 The accumulation of acreage of undeveloped lots, lots with no completed permanent structure and no final stabilization, within the surface water drainage area within the project is less than five acres or 10 percent of the total

area of the common development draining to the facility, whichever is greater; and

- 9.8.4.2.5 Within two (2) months of surety release, the facility shall be cleaned out and a new record survey and certification showing that the facility complies with regulations as specified in Subsection 9.3.8 shall be submitted.

9.8.5 Facility Certification and Record Drawings

Requirements for a certified record survey and addendum to the Storm Water Management Report shall be the same for the water quality facilities as for detention facilities in Subsection 9.3.8

9.8.6 Existing Subdivisions with Regional Water Quality Facilities

Where the drainage is treated in a regional water quality facility approved before October 9, 2000, lots in non-residential subdivisions (or phases in residential subdivisions) shall conform to the current water quality regulations as stated in Section 9.8.

9.8.7 Existing Subdivisions without Regional Water Quality Facilities

Where drainage is treated in a regional detention facility approved before October 9, 2000, lots in non-residential subdivisions (or phases in residential subdivisions) shall conform to the current water quality regulations as stated in Section 9.8

9.8.8 Retrofitting of existing detention facilities for water quality treatment

If water quality treatment for a proposed development is to be provided in an existing detention basin then treatment must be provided for the entire original project basin. A modification to the 25-year detention requirement may be granted for the purpose of retrofitting the detention pond to meet current water quality regulations. Granting of a modification will meet the intent and purpose of these regulations when:

- 9.8.8.1 The detention requirements of the current regulations are provided in the facility for the 1-year, 2-year, 5-year and 10-year storm. For a retrofitted basin, the volume of the 1-year storm shall be based on the original project area being detained instead of the total area draining to the basin. All storm water detention facilities shall be designed to detain the 1-year storm runoff, for the area draining to the pond, for 24 hours. For the project, this volume called the channel protect volume, shall be equal to or greater than the 1-year storm runoff volume from the project. In addition, these facilities shall control the peak flow rates

associated with storms having 2-year, 5-year, 10-year, and 25-year return frequencies so that flows from the development site do not exceed those associated with pre-development conditions at the project boundary nor increase the peak flows by more than 5 percent at the point downstream from the project in the drainage basin where the project is 10 percent of the total basin.

9.8.8.2 The water quality requirements of the current regulations as stated in Subsection 9.8 are provided for the original project area in the facility

9.8.8.3 The ponding limits create a hardship if no modification is granted; and

9.8.8.4 The outlet structure meets the requirements of the current regulations.

9.8.9 Retrofitting of existing water quality facilities

If water quality treatment for a proposed development is provided in an existing water quality facility then water quality treatment conforming to the current regulations must be provided for the entire original project basin.

9.8.10 Redevelopment and Improvements

9.8.10.1 When more than 50% of the property of a developed project site is disturbed for either redevelopment or improvement, the water quality requirements of this section must be done for the entire site.

9.8.10.2 When less than 5% of the property of a developed project site is disturbed for either redevelopment or improvement, the project is except from having to provide the water quality requirements of this section for the project or the rest of the site.

9.8.10.3 When between 5% and 50% of the property of a developed project site is disturbed for either redevelopment or improvement, the project shall provide water quality treatment for just the improvements on the site.

END OF SECTION 9.8