Background

The Central Valley Regional Water Quality Control Board (RWQCB) issued a Municipal Separate Storm Sewer System (MS4) Permit to the Fresno Metropolitan Flood Control District (District) on May 30, 2013. The permit requires the District, the County of Fresno, City of Fresno and City of Clovis to develop and revise development standards to address stormwater quality requirements for new development and redevelopment projects that do not drain to the Regional Stormwater Management Basin System (Basin System) and within the MS4 permit area.

Five drainage areas within the FMFCD Storm Drainage and Flood Control Master Plan service area and two areas outside the Master Plan service area do not drain into regional stormwater management basins. Targeted development in these areas are required to meet specific numeric standards for stormwater runoff outlined in the new development standards. The map on page 3 shows the areas not served by Basin System.

Post-Development Standards

The Post-Development Standards Technical Manual (Manual) applies to priority development in drainage areas not discharging to a stormwater management basin. Go to www.fresnofloodcontrol.org to view the manual and detailed maps.

The Manual provides guidance for implementing stormwater quality Best Management Practices (BMPs) for drainage areas that do not drain to the Basin System, with the intention of improving water quality and mitigating potential water quality impacts from stormwater and non-stormwater discharges.

Priority Projects

Priority Projects are identified as meeting one or more of the following criteria and do not discharge to FMFCD stormwater management basins:

- Home subdivisions of 10 housing units or more;
- Commercial developments greater than 100,000 square feet;
- Automotive repair shops;
- Restaurants;
- Parking lots 5,000 square feet or greater with 25 or more parking spaces and potentially exposed to urban runoff;
- Streets and roads;
- Retail gasoline outlets (RGOs); and
- Significant redevelopment projects (developments that result in creation or addition of at least 5,000 square feet of impervious surface on an already developed site).

County of Fresno Drainage Design Standards

The County of Fresno drainage design standards that apply to permit areas not covered by the District’s Master Plan are based on the difference in stormwater runoff volume between the pre and post development 100-year, 48-hour storm. This is detailed maps and a complete copy of the Post-Development Standards Technical Manual are available at www.fresnofloodcontrol.org.
equivalent to approximately six inches of rainfall.

**Low Impact Development (LID) Strategies**

LID strategies can be used to meet the new development standards and include use of bio-retention/infiltration landscape areas, disconnected hydrologic flow paths, reduced impervious areas, functional landscaping, and grading to maintain natural hydrologic functions that existed prior to development, such as interception, shallow surface storage, infiltration, evapotranspiration, and groundwater recharge.

**Project Plans**

The project applicant must submit proposed project plans to the planning and development department of the appropriate jurisdictional agency (e.g., City of Fresno, City of Clovis, and County of Fresno) for review and approval. The proposed project plan must provide a comprehensive, technical discussion of how the proposed project will comply with the requirements of the Post-Development Standards Technical Manual.

**Stormwater Quality Design Volume or Stormwater Quality Design Flow**

All Priority Projects must mitigate the Stormwater Quality Design Volume (SWQDV) or Stormwater Quality Design Flow (SWQDF) through LID or treatment-based stormwater quality BMPs or a combination thereof.

All stormwater quality BMPs, based on SWQDV design, must mitigate (infiltrate or treat) either:

- The volume of stormwater runoff produced from a 24-hour, 85th percentile storm event, as determined from the local historical rainfall record; or
- The volume of stormwater runoff produced by the 85th percentile, 24-hour storm event, determined as the maximized capture stormwater volume for the area, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87 (1998); or

For Priority Projects in areas that do not discharge to the Basin System, the developer must:

- Conduct site assessment and identify design considerations;
- Apply source control BMPs;
- Calculate the SWQDV or SWQDF;
- Implement stormwater quality BMPs; and
- Develop a Maintenance Plan, if necessary.

Current water quality requirements are based on treating a specific volume or flow of stormwater runoff from the project site (stormwater quality design volume [SWQDV] or stormwater quality design flow [SWQDF]). By treating the SWQDV or SWQDF, it is expected that pollutant loads, which are typically higher at the beginning of storm events, will be prevented from or reduced in the discharge into the receiving waters.

**Stormwater Quality BMPs**

The stormwater quality BMPs included in the Manual are common non-proprietary BMPs being implemented nationwide. The focus of the design criteria for stormwater quality BMPs is the construction and implementation of stormwater quality BMPs that meet stormwater runoff requirements in terms of stormwater runoff mitigation and pollutant removal.

**Stormwater Quality Best Management Practice Maintenance**

A Maintenance Plan may be required as part of the project application submittal to FMFCD and jurisdictional agencies outside the FMFCD Storm Drainage and Flood Control Master Plan.

Go to www.fresnofloodcontrol.org for more information.
Design Process for Meeting Stormwater Requirements for Priority Projects

1. **Does project area discharge to regional basin?**
   - Yes: Implement FMFCD Storm Drainage and Flood Control Master Plan requirements
   - No: Proceed to next step

2. **Is project a Priority Project?**
   - Yes: Proceed to next step
   - No: Is project a restaurant (<5,000 ft²)?
     - No: Proceed to next step

3. **Conduct site assessment/Identify design considerations**

4. **Apply Source Control BMPs**

5. **Calculate SWQDV/SWQDF**

6. **Select LID-based Stormwater Quality BMPs to maximize on-site retention/infiltration**

7. **Select Treatment-based Stormwater Quality BMPs to treat stormwater runoff not retained on-site**

8. **Are stormwater requirements met?**
   - Yes: Develop BMP Maintenance Plan (if applicable)
   - No: Return to previous steps

Go to www.fresnofloodcontrol.org for more information.