

## 4.0 Stormwater Management

### 4.1 Policy

It is the policy of the District to regulate the management of stormwater runoff to:

- 4.1.1 Require that onsite retention and regional water quality treatment systems operate together to provide complete and effective runoff management, through the following principles:
  - a Manage peak runoff rates to achieve rates equal to or below existing rates;
  - b Manage runoff volume to achieve a net reduction from existing conditions;
  - c Provide effective water quality treatment to remove sediment, pollutants and nutrients from stormwater and snowmelt before discharge to surface water bodies and wetlands; and
  - d Provide for nondegradation of surface water bodies in the watershed.
- 4.1.2 Encourage the use of Better Site Design, Low Impact Development and other techniques that minimize impervious surfaces or incorporate volume-control practices, such as infiltration, to limit runoff volumes.
- 4.1.3 Maximize opportunities to improve stormwater and snowmelt management presented by redevelopment of land.

### 4.2 Regulation

A permit from the District, incorporating an approved stormwater management plan, is required under this rule prior to the commencement of any activities to which this rule applies. The District may review a stormwater management plan at any point in the development of a regulated project and encourages project proposers to seek early review of plans by the District.

- 4.2.1 The requirements of this rule apply to:
  - a Land-disturbing activities that will disturb 50 cubic yards or more of earth,
  - b Land-disturbing activities that will disturb 5,000 square feet or more of surface area or vegetation, or
  - c Subdivision of a parcel into three or more residential lots.
- 4.2.2 Notwithstanding the provisions of section 4.2.1, the requirements of this rule do not apply to:
  - a Construction or reconstruction on a single-family home site, unless any

portion of the parcel is:

- 1 Within 300 feet of the centerline of and tributary to Nine Mile Creek,
  - 2 Within 500 feet of the ordinary high water level of and tributary to any other public water or protected wetland, or
  - 3 Below the 100-year flood elevation.
- b Construction or reconstruction on a single-family home site consistent with a subdivision, development or redevelopment plan that is subject to an active District permit.
- c Rehabilitation, including mill and overlay, of paved surfaces.
- 4.2.3 **Redevelopment.** If a proposed activity will disturb more than 50 percent of the existing impervious surface on the parcel or will increase the imperviousness of the entire parcel by more than 50 percent, the criteria of section 4.3 will apply to the entire project parcel. Otherwise, the criteria of section 4.3 will apply only to the disturbed areas and additional impervious surface on the project parcel. For purposes of this paragraph, disturbed areas are those where underlying soils are exposed in the course of redevelopment.
- 4.2.4 **Linear projects.** Notwithstanding section 4.2.3, a permit under this rule is not required for a linear project if the project entails construction or reconstruction, including mill and overlay or other maintenance, creating less than 1 acre of new or additional impervious surface. For linear projects creating more than 1 acre of new or additional impervious surface, the criteria of section 4.3 will apply only to the net new or additional impervious surface.
- 4.2.5 **Common scheme of development.** Activity subject to this rule on a parcel or adjacent parcels under common or related ownership will be considered in the aggregate, and the requirements applicable to the activity under this rule will be determined with respect to all development that has occurred on the site or on adjacent sites under common or related ownership since the date this rule took effect (March 2008).
- a For development or redevelopment under common or related ownership, compliance with the criteria of section 4.3 may be achieved through a shared stormwater management facility or facilities as long as the criteria are met on for each contributing drainage area within the common or related ownership.

### 4.3 Criteria

- 4.3.1 An applicant for a permit under this rule must demonstrate, using a model

acceptable to the District, that the implementation of its stormwater management plan will:

- a Provide for the retention onsite of one inch of runoff from all impervious surface of the parcel;
  - i Where below-ground infiltration facilities, practices or systems are proposed, pretreatment of runoff must be provided.
- b Limit peak runoff flow rates to that from existing conditions for the 2-, 10- and 100-year storm events for all points where stormwater discharge leaves a parcel; and
- c Provide for all runoff from the parcel from the 2.5-inch storm event to be treated, through onsite or offsite detention, to at least sixty percent (60%) annual removal efficiency for phosphorus, and at least ninety percent (90%) annual removal efficiency for total suspended solids. The onsite retention of runoff may be included in demonstrating compliance with the total suspended solids and phosphorus removal requirements.

#### 4.3.2 Low floor elevation

No structure may be constructed or reconstructed such that its lowest floor elevation is less than 2 feet above the 100-year event flood elevation.

- a All structures riparian to inundation areas or constructed or natural stormwater management facilities must be located and elevations must be set according to Appendix 4a, "Suggested Low Floor Guidance."
- b **Landlocked basins.** Any new or reconstructed structure wholly or partially within a landlocked basin must be constructed such that its lowest floor elevation is:
  - 1 1 ft above the surface overflow of the basin, or
  - 2 2 ft above the elevation resulting from two concurrent 100-year single rainfall events in a 24-hour period or a 100-year, 10-day snowmelt, whichever is higher.
  - 3 The starting elevation of the basin prior to the runoff event shall be established by one of the following:
    - A Existing ordinary high water elevation established by the Minnesota Department of Natural Resources;
    - B Annual water balance calculation approved by the District;
    - C Local observation well records, as approved by the District;or
  - D Mottled soil.

#### 4.3.3 Maintenance

All stormwater management structures and facilities must be designed for maintenance access and properly maintained in perpetuity to assure that they continue to function as designed. Permit applicants must provide a maintenance and inspection plan that identifies and protects the design, capacity and functionality of onsite and offsite stormwater management facilities; specifies the methods, schedule and responsible parties for inspection and maintenance; provides for the inspection and maintenance in perpetuity of the facility, with documentation retained onsite and available to the District upon reasonable notice; and contains at a minimum the requirements in the District's standard maintenance declaration. The plan will be recorded on the deed in a form acceptable to the District. A public entity assuming the maintenance obligation may do so by filing with the District a document signed by an official with authority.

#### 4.4 Volume banking

The District has established and will maintain a bank of available runoff retention and water quality Volume Credits.

- 4.4.1 Volume reduction or runoff retention achieved onsite in excess of the requirement of Section 4.3.1 may be credited into the District's bank for use on other projects within the District that are unable fully to meet this requirement on parcel.
- 4.4.2 Stormwater management facilities or practices relied upon to create Volume Credits must be included in the recorded permanent maintenance plan specified in Section 4.3.3.
- 4.4.3 Volume Credits may be utilized by permit applicants to meet the requirements of Section 4.3.1 a and 4.3.1 c only after the applicant has demonstrated to the District that:
  - a One-half inch of runoff from all impervious surface of the parcel will be retained on the parcel; and
  - b Soil conditions and/or other site constraints prevent retention of additional runoff onsite.
- 4.4.4 The District will maintain an inventory of all qualified Volume Credits accumulated and sold. Permit applicants are responsible for contacting a seller of Volume Credits and arranging the sale on terms established by the interested parties. The District will certify the sale through a form established by the District and completed by the buyer and seller of the

#### Volume Credits.

- 4.4.5 If a project qualifies for use of volume banking credits but applicable credits are not available in the bank for the volume reduction required, the applicant shall pay into the District's Stormwater Facilities Fund to cover the cost of implementing offsetting volume-reduction and water-quality projects elsewhere in the watershed. The required contribution rate shall be set by the Board annually based on the cost of creation of the required retention capacity.
- a Funds contributed to the Stormwater Facilities Fund from a local government unit shall be spent within that local government unit's jurisdiction to the extent possible.
  - b Funds contributed to the Stormwater Facilities Fund shall be allocated to volume reduction projects by the District according to the Stormwater Facilities Fund Implementation Plan as approved by the Board.

#### 4.5 Required exhibits

The following exhibits shall accompany the permit application; one set full size (22 inches by 34 inches); one set reduced to maximum size of 11 inches by 17 inches, and one set as electronic files in a format acceptable to the District:

- 4.5.1 A narrative explaining Better Site Design/Low Impact Development techniques that were evaluated during the development of the design for the project, the results of the evaluation of each and, for any techniques that were deemed infeasible, the reasoning for the determination.
- 4.5.2 Stormwater management system modeling in a form acceptable to the District.
- 4.5.3 A site plan showing:
- a Property lines and delineation of lands under ownership of the applicant.
  - b Existing and proposed elevation contours.
  - c Identification of existing and proposed normal, and ordinary high and 100-year water elevations onsite.
- 4.5.4 A stormwater management plan including, at a minimum:
- a Proposed and existing stormwater facilities' location, alignment and elevation.
  - b Delineation of existing wetlands, marshes, shoreland and/or floodplain areas onsite or to which any portion of the project parcel drains, except that where a project will not alter or change the hydrology of a wetland,

the wetland need only be identified on the plan.

- c Geotechnical analysis including soil borings at all proposed stormwater management facility locations.
  - d If infiltration of runoff is proposed, the District engineer may require submission of a phase I environmental site assessment and/or other documentation to facilitate analysis by the District of the suitability of soils for infiltration.
  - e Construction plans and specifications for all proposed stormwater management facilities, including design details for outlet control structures.
  - f Stormwater runoff volume and rate analyses for the 24-hour, 2-, 10- and 100-year critical events, existing and proposed conditions.
  - g All hydrologic, water quality, and hydraulic computations completed to design the proposed stormwater management facilities.
  - h Narrative addressing incorporation of retention BMPs.
  - i Platting or easement documents showing sufficient drainage and ponding/flowage easements over hydrologic features such as floodplains, storm sewers, ponds, ditches, swales, wetlands and waterways.
  - j Documentation as to the status of the project's National Pollutant Discharge Elimination System stormwater permit, if applicable.
- 4.5.5 An erosion control plan complying with District rule 5.0.
- 4.5.6 Upon completion of site work, a permittee must submit as-built drawings demonstrating that at the time of final stabilization, stormwater facilities conform to design specifications as approved by the District.

Appendix 4a: Low Floor Elevation Guidance.

See p. 51.