

# LOWER MINNESOTA RIVER WATERSHED DISTRICT PROJECT REVIEW REQUIREMENTS

## Who should submit?

Local units of government shall submit project proposals to the LMRWD for review and comment whenever the project meets one or more of the following criteria:

- The project is a residential development affecting five or more acres of land.
- The project is a public/commercial/industrial development affecting one or more acres of land.
- The project involves construction or reconstruction of runoff management infrastructure where the contributing watershed is five acres or more.
- The project will result in diversion of surface water flows between defined subwatersheds.
- The project will change intercommunity flow rates.
- The project is located in the Minnesota River floodplain.

## Submittal requirements

Project proposers shall submit to the LMRWD:

- A Runoff Management Plan containing:
  - Property lines and delineation of lands under ownership of the project proposer.
  - Delineation of on-site subwatersheds and off-site subwatersheds contributing runoff to the site.
  - Identification of the receiving waterbody, its subwatershed, and the subwatershed's water quality category (from Figures 3-6a through 3-6g and Table 5-6 of the LMRWD Water Management Plan, 1999).
  - Location, alignment, and elevation of proposed and existing surface water facilities.
  - Delineation of existing on-site wetlands, shoreland, and/or floodplain areas. Removal or disturbance of streambank or shoreland vegetation should be avoided. The plan shall address how unavoidable disturbances to this vegetation will be mitigated.
  - Existing and proposed normal, 5-year (10-year may be substituted), and 100-year water elevations.
  - All inlets to detention basins and wetlands shall be placed at or below the normal water elevation.
  - Existing and proposed site contour elevations relative to the NGVD, 1929.
  - Construction plans of all proposed surface water management facilities.
  - Hydrologic and hydraulic computations completed to design the proposed surface water management facilities.
  - Provision of outlots or easements for maintenance to detention basins, constructed wetlands, and other surface water management facilities.
  - Maintenance agreement between developer and local unit of government which addresses pond inspection and sediment removal and disposal.

- Documentation indicating conformance with the existing local water management plan.
- An Erosion Control Plan that:
  - Conforms with the MPCA's NPDES General Permit to Discharge Stormwater from Construction Sites.
  - Incorporates the appropriate best management practices (BMPs) described in the MPCA's 2000 *Protecting Water Quality in Urban Areas*.
  - Contains sufficient detail to show erosion control methods on individual sites (e.g., silt fence, driveway entrances).
  - Meets applicable local standards.

### **Design Criteria**

Runoff Management Plans shall comply with the following criteria:

- The peak rate of stormwater runoff from the developed project site shall not exceed the existing peak rate of runoff for the 5-year (10-year may be substituted) and 100-year return frequency critical duration storm events.
- Detention basins shall be designed for the 100-year storm event.
- To the extent practical, stormwater runoff from the site after development shall conform to the LMRWD's design considerations according to the subwatershed's water quality category (Level I, II, III, IV, or V; see attached).

*Note to local units of government:*

- Regional facilities are preferred over on-site facilities for surface water management. Where regional facilities that meet LMRWD standards are in place or are planned to be constructed/installed within five years, on-site detention and treatment facilities are not required.
- Where regional facilities that meet LMRWD standards are not in place and are not planned to be constructed/installed within five years, local units of government shall do one or more of the following:
  - Require construction of on-site detention and treatment facilities meeting LMRWD standards.
  - Require use of other stormwater quality treatment measures, such as in-line treatment devices or infiltration practices.
  - Collect an appropriate fee from the project proposer for the local unit of government to put towards construction of a future regional facility within the LMRWD.

## **DESIGN CONSIDERATIONS**

### **Levels I and II Water Quality Category**

- A permanent pool volume below the normal outlet shall be provided which is greater than or equal to the runoff from a 2.5-inch, 24-hour storm over the entire subwatershed for regional basins, or over the project site for on-site basins, assuming full development.
- The permanent pool mean depth (pond volume/pond surface area) shall be 4-10 feet.
- An emergency spillway shall be provided adequate to convey the 100-year storm event.
- Pond side slopes above the normal water level shall be no steeper than 3H:1V when possible, and preferably flatter. A shelf with a minimum width of 10 feet extending from the normal water level to a depth of 1 foot is recommended to enhance wildlife habitat, reduce potential safety hazards, and improve access for long-term maintenance.
- To prevent short-circuiting, the distance between the major inlets and normal outlet shall be maximized.
- The 100-year peak discharge rate for developed conditions shall not exceed the peak rate for existing conditions.
- If possible, the outlet should be designed to allow the pond to be drained for maintenance purposes and sediment removal.
- Energy dissipation structures shall be provided to prevent erosion at all stormwater inlets into the pond and at the pond outlet.
- Skimmer structures shall be provided at pond outlets to remove floatables.

### **Levels III, IV, and V Water Quality Category**

- A permanent pool volume below the normal outlet shall be provided which is greater than or equal to the runoff from a 2.0-inch, 24-hour storm over the entire subwatershed for regional basins, or over the project site for on-site basins, assuming full development.
- All other requirements (except the first) as listed for the Levels I and II water quality category shall apply.