

## RELATION TO GROUNDWATER

**Background.** The Washington County Water Consortium initiated the process of developing model groundwater rules for future adoption by watershed districts located in Washington County in spring 2004. As part of this process, Emmons and Olivier Resources (EOR) produced a report for the Washington County Water Consortium entitled, “Incorporating Groundwater Protection into Watershed District Rules”.

The resulting report provided potential rule language pertaining to groundwater appropriations, volume control, groundwater quality, and groundwater dependent natural resources. The District’s proposed groundwater rules come directly from the EOR report.

Because the District rules do not have a section specifically addressing groundwater, language addressing the referenced groundwater issues are scattered throughout the rules discussing other topics (i.e. stormwater management). For this reason, this groundwater section consolidates all the district rules concerning groundwater into one place.

It is the general policy of the Board of Managers to follow general recommendations presented in the County Groundwater Plans (located in subsection 2.1.10 and section 4.1 of District rules). Both Washington County and Chisago County have adopted groundwater plans.

The following bullets represent specific language within the District’s rules pertaining to groundwater and details where each are located in the District’s rules. Each specific rule is categorized in the four headings used in the Washington Water Consortium EOR report; groundwater appropriations, volume control, groundwater quality, and groundwater dependent natural resources.

### **Groundwater Appropriations**

Objective: To monitor the use of groundwater in areas where existing wells and/or groundwater dependent natural resources could be negatively impacted by overuse of groundwater. Negative impacts include reduced flow to surface water bodies, lowering of lake and wetland levels, or interference with other wells.

- To manage a sustainable water supply ensuring ample, high quality groundwater is available for residential, commercial, and natural resource needs. (Appropriations not specifically addressed in rules, however, volume control standards help maintain groundwater supply and protect groundwater quality).

### **Volume control**

Objective: To control the rate and volume of stormwater runoff so that surface water and groundwater quantity and quality are protected, soil erosion is minimized, flooding potential is reduced, and thermal impacts are reduced. In addition, it is designed to address the preservation of natural infiltration and recharge of groundwater to ensure that subsurface flows are maintained for groundwater dependent natural resources such as lakes, streams, wetlands, plant communities, and drinking water supplies

- Assure property owners control the rate and volume of stormwater runoff originating from

their property so that surface water and groundwater quantity and quality is protected, soil erosion is minimized, flooding potential is reduced and thermal impacts are reduced (located in subsection 2.1.7 of rules).

- Preserve natural infiltration and recharge of groundwater and to maintain subsurface flows which maintain groundwater dependent resources including lakes, streams, wetlands, plant communities and drinking water supplies (located in subsection 2.1.1 of rules).

### **Groundwater Quality**

Objective: To protect groundwater quality while promoting groundwater recharge. Many of the current stormwater management/water quality standards prohibit the use of volume control practices for groundwater in certain applications (e.g. commercial, industrial, and institutional land uses) due to the potential for groundwater contamination. This rule would allow for controlled infiltration in these areas by using best management practices (BMPs) to pre-treat the stormwater runoff before it is infiltrated.

Language included in the District rules pertaining to groundwater quality:

It is the policy of the District:

- Require management of stormwater flow to limit sediment, nutrient, and other pollutants conveyed to the groundwater (located in subsection 2.1.5 of rules).
- Manage land-use activities to minimize adverse impacts to groundwater quality (located in subsections 2.1.8, 2.3.11, and 8.1 (f) of rules).
- The District will work with all communities and non-community public water supply systems as they develop and implement their wellhead protection plan (located in subsection 2.1.9 of District rules).

### **Groundwater Dependent Natural Resources**

Objective: To protect the unique and sensitive resources found in Washington County and Chisago County. While there is some overlap in this standard with the volume control and groundwater quality standards, it addresses groundwater protection by providing specific criteria for vegetative buffers, stormwater management, water quality, and wetland bounce and duration.

- Promote groundwater/surface water management practices that protect the hydrologic functions of groundwater dependent resources (located in subsection 2.3.12 of District rules);
- Limit activities that result in the loss of locally/unique groundwater dependent resources (located in subsection 2.1.10 of District rules).
- Basin in Contributing Area to Groundwater-Dependent Natural Resource. A stormwater basin within the surface contributing area to a groundwater-dependent natural resource must contain and infiltrate the volume generated by a two-year, 24-hour storm event, if feasible. The basin bottom must be at least three feet above the seasonally high water table. If this infiltration standard is not met, basin outflow must be non-erosive and routed through a subsurface system, flow spreader or other device that discharges water through or across the ground to lower discharge temperature to that of the ambient soil (located in 2.3.12 of District rules). <sup>[1]</sup><sub>SEP</sub>
- If a lake or wetland is a groundwater-dependent natural resource, the buffer will be one hundred (100) feet. If the stream is a groundwater-dependent natural resource, the

streamside zone will be fifty (50) feet, and the middle zone one hundred (100) feet (located in subsection 4.3.1 (d) of District rules).