

**NINE MILE CREEK WATERSHED DISTRICT  
STATEMENT OF NEED AND REASONABLENESS**

**Amendments to Nine Mile Creek Watershed District Rules**

**March 2008 revision**

**I. BACKGROUND**

This Statement of Need and Reasonableness (“SONAR”) presents background on and an explanation of the rules of the Nine Mile Creek Watershed District.

- Rule 1: Procedural Requirements
- Rule 2: Floodplain Management and Drainage Alterations
- Rule 3: Wetlands Management
- Rule 4: Stormwater Management
- Rule 5: Erosion and Sediment Control
- Rule 6: Waterbody Crossings and Structures
- Rule 7: Shoreline and Streambank Improvements
- Rule 8: Sediment Removal
- Rule 9: Appropriations of Public Waters
- Rule 10: Exceptions and Variances
- Rule 11: Fees
- Rule 12: Sureties

**Legal Authority**

Legal authority for the District’s rules derives from Minnesota Statutes Chapters 103B and 103D. Under Minnesota Statutes Section 103D.341, subdivision 1, watershed districts must adopt rules “to accomplish the purposes of [the watershed act] and to implement the powers of the managers.” These purposes include, among others, conservation of water for public uses; controlling erosion and siltation of lakes, streams and wetlands; and protecting water quality in these bodies. Minn. Stat. § 103D.201, subd. 2. District managers are further authorized for example, to regulate and control the use of water within the watershed district, regulate the use of streams and watercourses to prevent pollution, and regulate the use and development of land under certain conditions. *Id.* § 103D.335, subds. 10, 16, and 23; § 103B.211, subds. 1.

District rules, and revisions to those rules, must be adopted by a majority vote of the Board of Managers, after public notice and hearing. *Id.* § 103D.341, subds. 1, 2(a). Before adoption, a copy of the proposed rules must be provided to the Minnesota Board of Water and Soil Resources (BWSR) and all public transportation authorities for a 45-day period of review and comment. *Id.* § 103D.341, subd. 2(b).

### **Overview of the Nine Mile Creek Watershed District Rulemaking**

The District completed a major revision of its watershed management plan in 2006, and adopted the revised plan on March 21, 2007.

The District has a long history of regulation. After first adopting rules and regulations on February 19, 1963, the District adopted detailed floodplain and sediment-control ordinances on July 18, 1973. The authority of the District to regulate activities in the floodplain under the watershed statute as it read at the time was upheld by the Minnesota Supreme Court in the case *Krahl v. Nine Mile Creek Watershed District* in 1979. Since then, the District has continuously refined the guidance it provides to permit applicants without changing the underlying legal structure of the permitting process.

The District rules have been revised to better reflect the District's knowledge, experience and water-resource protection goals as described in detail in the 2007 watershed management plan. While the plan was under review by the state and regional review agencies, the District prepared a detailed comparison of the policies and water resource goals established by the plan with the relevant ordinances of the six watershed cities – Bloomington, Eden Prairie, Edina, Hopkins, Minnetonka and Richfield. The result was a rich understanding of the existing local regulatory system, the gaps that could be addressed by and the harmonization of standards that could be achieved by the District's rules. While the rules were developed to implement the watershed plan's policies and goals, the comparison exercise allowed the District to focus its research and rule-development efforts on particular needs, such as onsite stormwater volume control and wetlands buffers. (The comparison will also improve the efficacy of the nonregulatory programs the District develops to implement the watershed plan.)

Immediately following the adoption of the plan, the District convened a Technical Advisory Committee (TAC) that worked hand-in-hand on rule development with District staff, and legal and technical consultants. In addition to representatives from state regulatory agencies and the Metropolitan Council, municipal public works, environment and planning staff served on the TAC, reflecting the ongoing importance

of the relationship between the cities' primary land-use regulatory role and the District's water resource-focused regulatory program.

The TAC met monthly through most of 2007. The details of each rule were discussed in an informal roundtable format, but the TAC discussion resulted in incorporation of comments into the rules, as well as changes and refinements. Members of the District's Board of Managers did not participate in the TAC meetings, but met separately in a series of workshops to develop each rule, frame specific inquiries requiring input from the TAC and weigh the feedback received from the TAC.

The District engaged in this collaborative approach to rulemaking to build on and strengthen its working relationship with the cities in anticipation of taking a more robust approach to water resource management through its revised rules. With the adoption of the rules by the Board of Managers, the District anticipates and welcomes opportunities to refine and formalize the regulatory relationships between the cities and the District in memoranda of understanding or cooperative agreements.

The District rules have been completely overhauled from the 1973 versions for several reasons: to reflect the growing sophistication of stormwater management knowledge and practices, to formalize the District's project-review process and the substantive provisions that will be applied therein, to appropriately organize rule provisions under substantive and procedural headings, and to harmonize to the greatest extent possible District rules with those of other watershed districts to facilitate compliance by the many public and private entities operating in multiple watershed districts in the metropolitan area. The District's proposed rules include a number of key elements that reflect these goals:

- required compensatory storage for any encroachment in the floodplain, evincing a no-net-loss policy on floodplain storage;
- enhanced protection of the remaining wetlands within the watershed through replacement ratios that strongly discourage alteration of wetlands and a provision requiring buffers around wetlands in the vicinity of development or redevelopment projects;
- increased focus on retention of stormwater and snowmelt on site to reduce discharge rates and volumes, provide flood control, enhance erosion and sedimentation control, and improve the quality of the water resources in the watershed. The rules establish a runoff volume-banking system to enhance the effectiveness of and prospects for the success of the District volume-retention requirements; and

- the application of erosion and sediment control regulations to single-family home construction and reconstruction projects.

In addition, the District is establishing a fee schedule for permits for the first time, reflecting the Board of Managers' commitment to reserving funds from District-wide levies for projects, programs and activities that provide District-wide benefits, and charging developers appropriately for the time and resources required to ensure protection of water resources. The District has required sureties in the past, but the new rules formalize surety procedures. (Note that Rule 5.0, Erosion and Sedimentation Control, contains a particularized surety requirement.)

The District distributed Draft Rules Amendments and a Statement of Need and Reasonableness for a 45 day public review and comment period that ended on February 25, 2008. The District received extensive written comments and reviewed these comments and proposed responses with the Technical Advisory Committee. The District also held a public hearing on the Draft Rules Amendments on February 20, 2008.

The sections that follow detail the rationale and motivation for the revisions and additions to the District's rules. While this document attempts to be fully explanatory, it is important for all interested parties to reference the actual text of the rules to gain a complete understanding of the District's proposed regulatory provisions.

### **I. Floodplain management and drainage alterations**

The District has regulated floodplain alterations since the early 1960s and has developed considerable experience and expertise over the decades. That experience led the District to adopt a zero tolerance policy regarding diminution of floodplain storage. The revised rule relinquishes the equal encroachment principle, under which increases of no more than 0.5 feet in the creek flood management elevations were allowed, in favor of a more stringent requirement that compensation be provided, in advance, for *any* fill in the floodplain. Compensatory storage must be provided at an elevation within one foot of the elevation of the proposed fill – a provision that strongly encourages compensatory storage onsite or on an adjacent property. The revision was prompted by the District's concern that minor encroachments over the years have led to an increase in the potential flood elevation and that no further increases should be allowed.

The proposed floodplain rule clarifies and expands the District's policy of requiring that the low floor of structures within the District be a minimum of two feet above the

100-year flood elevation. (Further nuances on low floor elevations of structures adjacent to stormwater facilities are provided by paragraph 4.3.2 of the stormwater rule, 4.0, discussed below.) The District considered adopting a standard that required maintenance of elevations above a certain percentage volume increase over the regional floodplain elevation, but ultimately opted for the more conventional measurement system to reflect standards used by the District cities and other watersheds and thereby present applicants with a familiar method of determining compliance requirements for their projects.

The revised rule includes a new provision requiring a permit from the District for an alteration of surface water flows in the floodplain to ensure that such alterations will not result in increased flood risk or adverse impacts on neighboring properties. In considering permit applications under this provision, the District will rely on technical analyses performed by permit applicants to make determinations of whether adverse impacts on neighboring properties are expected.

The rule also prohibits, in section 2.3.4, the placement of structures or surface paving within 50 feet of the centerline of Nine Mile Creek. Given the substantially developed nature of the watershed around the creek and the number of flow restrictions (e.g., culverts and bridges) on the creek, District staff felt it critically important to prevent the construction of anything along the creek that presents the potential to either become blocked in a flood (e.g., fences) or loosed and sent downstream as a hazard (e.g., sheds). Surface paving near the creek results in the increased velocity of flood flows, and as such remains prohibited. Paving and structures within the setback zone will be permitted only when associated with bridges, culverts or trails less than 10 feet wide, which are excepted from the operation of provision 2.3.4. Bridges, culverts and other crossings are regulated by Rule 6.0. The District determined that public access to shoreland and streambank areas, facilitated by the trail exception, is an important recreational amenity that should be allowed.

The revised rule retains the District's exception, in section 2.5, for construction or reconstruction of single-family homes, but modifies the exclusion so that homes in critical floodplain and riparian areas are subject to District permitting requirements. The District rule also does not apply to activities that will be conducted within a landlocked water basin that is itself entirely contained within a single municipality – that is, projects that have no potential for floodplain impacts beyond the borders of a particular city. (All six cities in the watershed have approved floodplain ordinances that provide for regulation of such activities.)

Members of the TAC felt that securing drainage and utility easements from private-property developers was critical to effective implementation of the District's revised rule. The Board of Managers agreed, but were satisfied with the watershed cities' efforts to secure such rights, and did not wish to extend the District into the practice of acquiring similar easements.

This and all of the revised District rules require submission of electronic versions of the necessary plans, drawings and exhibits – an effort by the District to decrease paper used in complying with its rules.

## **II. Wetlands**

The District's new wetlands rule enhances state statutory wetlands protections. The cities of Minnetonka and Bloomington administer and enforce the state Wetlands Conservation Act (WCA) within their respective jurisdictions, as does the Minnesota Department of Transportation for its projects, while the District is the Local Governmental Unit to administer WCA within the watershed for the other four cities.

The rule enhances WCA, as administered by the District, in two main areas: strengthening requirements and incentives to locate replacement wetlands (wetlands created or restored to replace wetlands affected by land-disturbing activities) as close as possible to the affected wetlands, and requiring buffers around all significant wetlands potentially affected by work under a District permit even when the District is not the wetland regulatory body. The rule also requires treatment of stormwater before it enters wetlands. (Wetlands subject to the de minimis and incidental exemptions from WCA regulation – as well as wetlands that are subject to a no-loss determination – are exempted from the District's buffer and stormwater treatment provisions.)

The District rule imposes a sequencing regime that is generally more stringent than WCA's, including a requirement that all replacement wetlands be in the Minnesota River-Shakopee major surface water watershed, and increases certain replacement ratios by requiring replacement of affected high-quality wetlands at a ratio of nine-to-one, with at least one-to-one replacement in the metropolitan area. (Where WCA replacement requirements are more stringent – such as when impacted wetlands are not replaced in advance and in-kind – state rules will take precedence over the District's replacement ratios.) The Board of Managers is interested in the highest reasonable replacement ratios because of the critical importance of preserving the high-quality wetlands still found within the largely developed Nine Mile Creek watershed. Any effort to site replacement wetlands entirely outside the metropolitan

area or Minnesota River–Shakopee major watershed will require a variance from the District.

The TAC generally supported the District’s effort to focus on conserving wetlands in the watershed, while making suggestions that led to refinements to the rule, including the clarification in section 3.3.4 that the state public road replacement rule will apply in the District.

The rule also contains specific requirements for buffers around wetlands. The provisions require preservation or establishment of buffer on the applicant’s property around onsite wetlands and wetlands adjacent to the property even when the project proposed by the applicant does not directly affect the wetland. Advanced by members of the TAC, this provision was crafted to ensure the integrity and completeness of buffers – focusing on the needs of the resource to ensure that development or redevelopment around a wetland does not create gaps in the buffer that would undermine its water resource protection and habitat functions. (Some members of the TAC advocated for the nonapplication, as noted, of the buffer requirement to wetlands meeting WCA’s de minimis or incidental provisions. The exemption for wetlands subject to no–loss determinations also was added at the suggestion of the TAC.)

The required buffer widths were set by the Board of Managers after a review of buffer widths required by ordinance in Minnetonka, Bloomington and Eden Prairie, and by other watershed organizations. The Board set proposed widths based on a comparison to widths found in other jurisdictions to ensure the functionality and effectiveness of buffers required by the District.

The rule also includes a native–plantings requirement for buffer vegetation, the inclusion of which was urged by members of the TAC, and requires the applicant and successors to provide perpetual maintenance, which is a particular priority for the Board of Managers to ensure that the District’s and permittees’ efforts to establish buffers were not squandered by subsequent neglect.

Finally, the rule also requires treatment of stormwater before discharge to wetlands; for high–value wetlands, treatment must achieve 60 percent phosphorus removal and 90 percent total suspended solids removal, consistent with the District’s proposed stormwater management rule. (Again, the provision does not apply to de minimis and incidental wetlands and wetlands subject to a no–loss determination. But the rule’s buffer and stormwater–treatment provisions do apply generally even when the District is not the wetlands regulatory authority for a particular project.)

The District considered a specific provision for excavation of wetlands for natural resources restoration purposes, but ultimately determined that excavation in the critical type 3, 4 and 5 wetlands is adequately regulated by WCA. More broadly, the Board of Managers determined not to regulate wetlands replacement beyond the scope of, or specific exemptions from, replacement requirements of WCA. Members of the TAC recommended that the District honor WCA's scope and exemptions.

The District also considered requiring conveyance of a conservation easement on wetlands and buffers to the District, but decided that holding such property interests was not necessary and would overtax District resources.

The District considered simply incorporating the watershed cities' wetland classifications into the District rule, but ultimately decided, at the suggestion of TAC members, to instead look to the cities for guidance and input on wetland classifications, but require functions and values assessments as part of the permitting process.

The road authority representatives who participated in the TAC expressed concern that the District's wetlands rule should accommodate particular roadway maintenance challenges and site constraints. The District determined that it was appropriate to allow wetland demarcation to be flush with the ground (rather than on stanchions; see 3.4.4) and mowing of wetland buffers for public safety reasons in right of way (see 3.4.5). Also, the District does not, in any rule provision, require permit applicants to provide for buffers on property that the permit applicant does not own. Nevertheless, where new roadways, for example, are proposed, the District will require that sufficient right of way is acquired to allow compliance with District rules, such as the buffer provisions of the wetland-management rule.

Finally, while the District considered regulating wetlands that are not now subject to WCA, the replacement siting provisions in the District's proposed rule do not extend beyond the scope of WCA in terms of wetlands covered – WCA's exemptions apply, as established in state rules, in the Nine Mile Creek watershed.

### **III. Stormwater**

As with all of the District's revised rules, the stormwater management policies were established in the watershed management plan adopted in early 2007. While the policies recognize that regional stormwater treatment facilities will remain an important component of the system for the foreseeable future, the rule includes multiple

measures that encourage developers to retain stormwater onsite to the greatest degree possible.

The District's drive to achieve a net reduction in runoff volume is a watershed-wide goal; as is the peak rate goal. The rule includes multiple regulatory routes to the goal of volume reduction, accounting for the critical reality that infiltration capacity of soils varies widely across the watershed and that linear projects (roads and trails) often have limited space within which to construct infiltration facilities.

The substantive provisions implementing the rule's water-quality policy require site-specific improvements that should contribute substantially to achieving nondegradation of the region's surface water bodies.

There are few substantive provisions to effectuate policy 4.1.2, but the District recognizes that its municipal partners and developers will likely identify benefits to the Better Site Design and Low Impact Development paradigms beyond facilitating compliance with stormwater management rules. Site-design considerations and the land-use management policies and goals in the District's watershed plan informed the Board of Managers' decisions on applicability of the stormwater rule and criteria. The explicit encouragement in the regulation section (4.2) to project developers to meet with District staff when the site is still in the design phase also is an effort to manifest the policy. (The policy is also reflected in the District's procedural requirements, which contain an invitation to project developers to meet early in the development process to discuss ways to minimize impervious surfaces and runoff in the site design.) Policy 4.1.3, similarly, is meant to encourage an approach to land-use planning that treats stormwater as a resource to be retained and used onsite, rather than diverted off-property as quickly as possible.

#### *Applicability – regulatory scope*

Section 4.2 of the rule extends the District's regulatory purview to land-altering activities of any significant size, but contains an exception (4.2.2a) for most single-family home sites from the rule's stormwater management requirements. In its watershed plan, the District acknowledged that activities disturbing less than 100 cubic yards of soil generally are not expected to introduce sediment into public waters. The District also committed to reviewing the 100 cubic yard trigger that has applied to its grading permit, and the Board determined that tightening the requirement to 50 cubic yards and adding a 5,000 square foot vegetation disturbance threshold were necessary to achieve District water-quality improvement goals and to bring the District's threshold into harmony with city ordinances in the watershed.

The Board of Managers gave rigorous consideration to the scope of the rule as it applied to single-family homes, and ultimately focused on a regulatory delineation that captures construction or reconstruction of single-family home sites that present particular risk to water resources – those within the floodplain (4.2.2a(3)) or otherwise close to water bodies (4.2.2a(1–2)). The proximity rule provisions apply if any portion of a project parcel is within 300 feet of the centerline of Nine Mile Creek or 500 feet of the ordinary high water level, or if any portion is within the floodplain. The Board of Managers set the distance parameters in light of the predominant development pattern in the District, in which direct hydrological connections generally are not found beyond these distances (i.e., other breaks, such as roadways, interrupt the flow from sites farther away than 500 feet, rendering construction or reconstruction thereof less necessary to regulate).

The single-family exemption should also be viewed in light of the District’s review of subdivisions that plat as few as three home sites (4.2.1c), proposed based on the suggestion that such small subdivisions were a particular concern in some otherwise well-developed areas because they have private streets and no or inadequate stormwater management. (The TAC representative from Minnetonka confirmed the concern and noted that the city is revising its code in response to the same phenomenon.)

Section 4.2.3 is an overlay of the rule provisions on redevelopment projects. The provision addresses directly considerations that figured significantly in the revision of the stormwater rule: the need to improve runoff management and water quality even as the urbanization and densification of the watershed continues. (Several members of the TAC emphasized the importance of redevelopment in their cities to both restore economic vitality and accommodate future population growth.) The specific applicability provision for redevelopment projects in section 4.2.3 respond to this challenge by limiting the applicability of the rule’s stormwater management criteria when less than 50 percent of the impervious surface of a property is disturbed. The Board of Managers refrained from a broader redevelopment exemption because it does not want to miss opportunities to improve stormwater management when the redevelopment activities are significant enough to include new surface or underground facilities in the design; Better Site Design and Low Impact Development principles can be applied to improve the environmental performance of redeveloped sites just as they improve greenfield developments.

The District and TAC gave careful consideration to the application of the stormwater permit criteria to road projects. The exception in section 4.2.4 was crafted in recognition of the reality that mill-and-overlay and other road maintenance projects do not add impervious surface and are relatively unlikely to increase runoff problems. Practically, they also do not usually present an opportunity to add right-of-way in which stormwater facilities can be built. The other significant consideration in applying the stormwater rule criteria to road projects was the availability of volume banking, discussed in detail below. The District determined that banking would provide flexibility such that a separate volume-retention standard for linear projects was not necessary.

### *Criteria*

The District will apply its criteria – as set in section 4.3 of the rule – through review of applicants’ stormwater management plans and stormwater management modeling. The District has not required stormwater management plans previously, but has added this submission requirement (in section 4.5.4) as part of its effort to develop a more robust and comprehensive stormwater management regime, and, more practically, to allow flexibility in the means chosen to demonstrate to the District engineer how applicants will achieve the District’s retention, rate control and quality-management criteria.

The Board of Managers mandated that the volume retention requirement be set according to accurate, District-specific runoff modeling. The one-inch rainfall volume retention quantity in section 4.3.1, measured over the impervious area of subject parcels, corresponds to a rainfall that the District engineer has determined correlates closely to bankful flow conditions in watershed watercourses. The engineer has also reasoned that the standard is clear and will achieve the watershed-wide goal of reducing runoff volume from existing conditions. Therefore, retention of these flows will mitigate erosion, scour and sedimentation damage caused by runoff, in addition to providing for the retention of phosphorus and sediment that would otherwise be carried off site. The rule’s quality criteria accounts for this double-benefit effect of volume retention by allowing inclusion of modeled water quality improvements from volume retention to be accounted for in the calculation of the parcel’s water-quality performance (under 4.3.1c). The TAC agreed that a one-inch volume retention requirement was reasonable and generally achievable across the watershed – especially given the planned availability of banked volume credits.

While the District’s volume-retention provision is a significant new requirement, some cities have included volume-reduction provisions in their local surface water

management plans and/or are developing volume control ordinances. It also responds to the need for four of the District cities – Bloomington, Eden Prairie, Edina and Minnetonka – to manage runoff volume as part of their Metropolitan Separate Storm Sewer System permits under the Clean Water Act’s National Pollutant Discharge Elimination System.

At the same time, the District incorporated significant flexibility in its volume retention requirement. Use of banked volume credits, allowed only upon a showing that the full one-inch retention requirement cannot or should not be met onsite, provides much of this flexibility. The provision also is meant to accommodate differing site conditions: The requirement is not that one inch of runoff be infiltrated; rather it is that one inch be retained onsite – the idea being that stormwater management technologies are being introduced and refined at an increased pace, and the District rule should allow for effective retention, by whatever means, so runoff management goals can be met even on properties where infiltration – because of tight soil, contamination or a high water table – does not work. The various ways runoff can be managed onsite – underground vaults, green roofs, infiltration rain gardens, vegetation management, etc. – is sometimes also expressed as “abstraction” of runoff – a term the District has elected not to include in the operative sections of the rules because it is not yet widely understood.

The criteria also effectuates most directly the District’s move toward onsite management of stormwater. In part, this policy shift away from a focus on regional facilities is motivated by an increasing awareness that regional ponds do not provide the full range of stormwater management (most particularly inasmuch as they do not effectively infiltrate). Onsite facilities are able to handle small, frequent storm events, while regional ponds are still needed to provide effective water management for large rainfall events. The District also recognizes the reality that its member cities have constructed and maintained significant stormwater ponds that have done much to improve runoff water quality.

The District rate-control requirement brings it into harmony with most city and watershed regulations. The Board of Managers considered using predevelopment conditions as the baseline for setting rates, but dismissed this as unrealistic given the long-since developed nature of most of the watershed.

Likewise, the District’s water quality standards – 60 percent phosphorus removal and 90 percent total suspended solids removal – correspond to the Nationwide Urban Runoff Program (NURP) standards, which are well-established and -understood by

municipalities and the development community. Given this, the District believes it will be able to focus educational and outreach efforts on builders working on developments of less than an acre (i.e., those that do not already have to comply with the state-wide NPDES stormwater construction permit, who may not have as much experience constructing and installing runoff-management systems.

The District's consideration and acceptance of NURP standards also was informed by the use attainability analyses it has completed in recent years for virtually all of the major lakes in the watershed. Application of NURP standards under the revised stormwater rule will ensure the effectiveness of best management practices and capital improvements undertaken to address specific impairments or other water quality challenges identified for each water body.

Further, the mandate for at least some onsite treatment will produce auxiliary benefit in the form of removal of secondary contaminants, such as metals and hydrocarbons, from the regional stormwater management system, and should reduce the frequency with which regional ponds and other facilities must be maintained.

The specific regulation of low-floor elevations of structures adjacent to stormwater facilities such as catch basins, rain gardens and detention ponds is designed to prevent flooding damage and seepage. Guidance provided by the District in Appendix 4a will allow permit applicants to weigh proximity of the stormwater facility to the structure, water table elevation and soil conditions to determine the appropriate distance and elevation of a structure relative to such facilities.

The District engineer used both the 100-year, 24-hour rainfall event and the 100-year, 10-day snowmelt to establish regulatory criteria that address actual year-round conditions to the greatest extent possible.

### *Maintenance*

While agreeing that it was critical for the District rules to require maintenance of onsite runoff management facilities, the TAC expressed particular concern about the resources required for enforcement of such requirements. Cities have developed capacity and systems to maintain regional stormwater ponds, but the TAC indicated that cities would be loath to extend their resources any further and would not maintain rain gardens, infiltration basins and the like on private property.

To a great extent, the District will rely on and devote resources to requiring landowner compliance with permit conditions requiring inspections, maintenance as necessary

and reporting to ensure that runoff-management facilities continue to function as designed over the long term. To this end, the Board felt strongly about recording maintenance obligations on the deeds for properties subject to a District permit. Given watershed cities' and other agencies' long history of maintaining such facilities and strong working relationship with the District, public entities' assumption of maintenance requirements need not be recorded. Further, in practice, the District intends to work closely with project developers and permittees to ensure that maintenance, inspection and reporting requirements are well understood from the outset. The memorialization and recording of the maintenance plan will help ensure that maintenance continues even after transfer of ownership.

### *Volume banking*

The District's progressive runoff volume-retention requirement is paired with a volume-banking program designed to maximize the results achieved by the stormwater rule while providing flexibility to account for varying soil and site conditions across the watershed. The availability of volume-banking under the District's rules also responds to the need to accommodate redevelopment.

The requirement that at least half an inch of runoff must be retained onsite reflects the District Engineer's determination that this requirement can be reasonably achieved throughout the watershed. It also reflects the District's commitment to requiring developers to explore various technologies and techniques that will allow them to retain runoff. The requirement also will help developers meet the District's water-quality goals.

The road authority representatives on the TAC expressed particular support for District volume banking. Their interest underscores how important it will be for projects on sites with excess infiltration capacity to maximize their construction of facilities to take advantage of this capacity.

The Board and TAC considered applying a ratio to the use of banked credits - i.e., requiring purchase of twice as much banked retention capacity as onsite retention capacity. The Board chose instead in the proposed rule to keep the banking provision simple and allow a 1:1 use of banked credits for onsite retention, once the necessity to use the bank has been proven.

In keeping with the goal of making the banking system as simple and easy to negotiate as possible from the outset, the District will establish the minimum possible infrastructure to facilitate the banking program. The District will maintain a list of

banked credits created by permitted projects (i.e., proven retention capacity beyond the one-inch requirement in the rule). The document will be made available on the District's web site and will include contact information for those credit-holders who indicate that they wish to offer their credits for sale. Credit transactions will be entirely between the seller and buyer of the credits, without District involvement in price negotiations or transactional details. The District will simply track sales of credits used to meet rule requirements.

The District is disinclined to require reporting of prices paid for credits, or to publish reported prices if there is a reporting requirement. Also in keeping with its commitment to minimum-possible involvement in transactions, the District is disinclined to prevent public or private entities from declining to sell credits created at a particular site in favor of reserving them for later use at another of the entity's project sites.

Section 4.4.5 provides a second alternative to retention of the full inch of runoff onsite: a contribution to a District Stormwater Facilities Fund. This third option is available only when site conditions preclude onsite retention of the required stormwater volume and there are no credits available in the District volume bank. The principal driver for the provision is a lack of desire on the District's part to construct a rule that could preclude development projects in certain circumstances, and thereby broach cities' primary land-use authority. The District fervently hopes that such a situation will cause developers to explore recrafting their designs to incorporate Low Impact Development strategies and the increasing number of alternative runoff-retention systems available to them. But the District also wanted to provide the cash-in-lieu provision as an option of last resort.

#### **IV. Erosion and sedimentation control**

Best management practices and techniques for erosion and sedimentation control are well established and understood by the development and construction communities. The District and watershed cities have substantial experience in regulating erosion and sediment control through years of grading and development permit review. The revised District rule provisions in Rule 5.0 Erosion and Sediment Control reflect the broadly shared understanding of how erosion and sediment can be effectively controlled, and discussion of the revision of the District's approach to the issue focused instead on the scope of applicability of the rule and enforcement.

The first three policies underpinning the rule are straightforward. A desire to inculcate planning for erosion-minimization into site design is reflected in policies 5.1.4 and

5.1.5: One highly effective way to control erosion and sedimentation is to avoid disturbing the soil surface and vegetation in the first place. Site designs minimizing impervious surface also will often necessarily require less soil and surface disturbance, and thereby avoiding opportunities for loss of topsoil during construction. Policy 5.1.6, addressing soil compaction, surfaced during the course of rulemaking and was informed by the TAC members' practical experience with heavy equipment movement rendering work sites essentially impervious during construction, substantially inhibiting vegetation growth and infiltration capacity. The Board responded by endorsing the policy.

#### *Regulatory scope*

The District committed, in its watershed plan, to work with the watershed cities to tighten up requirements for control of soil and sediment erosion. The watershed is primarily – 75 percent – developed for residential use, and anecdotal information indicates that many residential properties are undergoing vigorous redevelopment in the watershed. In addition, small sites can present substantial erosion and sediment control problems; small construction companies focused on residential projects tend to be less aware of and experienced at implementation of erosion and sediment control practices (or rigorous maintenance thereof). These factors inspired the Board of Managers to lower the threshold for erosion control permits to disturbance of 50 cubic yards or more of earth, add a threshold for projects that disturb 5,000 square feet or more of surface vegetation, and decline to exempt single-family home development or redevelopment projects.<sup>1</sup> The Board so extended the rule's scope despite concerns about the District resources that will be required to enforce the rule – a situation that will be tracked closely as the rule is implemented.

The TAC agreed that single-family home sites represent a serious contribution to erosion and sediment-control problems, but the TAC also noted the difficulty of enforcing such a broadly applicable provision. The District crafted its inspection and maintenance requirements to place the onus on property owners and permit-holders, and, as is discussed more extensively below in the inspection and maintenance section, the District will take a highly collaborative approach to enforcement. Further, the Board will consider appropriate and necessary delegation of permitting authority to

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<sup>1</sup> Oblique maps, available from the Hennepin County property information website, may be submitted in lieu of topographic maps for single-family home site projects, and single-family project applicants are not required to submit tabulation of the relevant construction implementation schedule. See sections 5.4.2a and b.

the District administrator to accomplish its ambitious erosion and sediment control goals and, at the same time, facilitate compliance on small projects.

The District considered whether routine road maintenance should be excepted from the operation of the rule, but the Board and staff ultimately determined that many of the types of work anticipated – apron and guardrail repairs, riprap repairs, washout/erosion repairs, pond and infiltration area cleanouts – would usually not trigger the rule. To the degree such projects do trigger the rule, the District has concluded that it is appropriate to require erosion and sediment control. The need for such projects to apply for and receive permits on a quick turnaround may be accommodated by Board delegation of permitting authority to staff.

### *Criteria*

The District's revised erosion and sediment control criteria should look familiar to experienced developers and construction professionals. The MPCA guidance referenced in section 5.3.1b is well established and widely accepted in the watershed cities and other watershed districts as authoritative on the topic. The statewide nature of the guidance facilitates familiarity and streamlined compliance. The District's criteria in 5.3.1 through 5.3.3 are well in line with industry and regulatory standards, and move away from the more specific but less comprehensive criteria in the District's current guidance. The District's revised approach also will ease incorporation of innovative practices added to the state guidance into the District's regulatory practice. Consistency with statewide practices is further emphasized by the requirement – in section 5.4.2h – that applicants submit indication of the status of their NPDES permit application, if required. The District intends to develop educational and outreach materials for small contractors and single-family homeowners serving as general contractor for their own construction, addition or reconstruction projects, to familiarize them with basic erosion-control practices and point them toward additional resources.

The District's goal with the criterion in 5.3.3c is to ensure that vegetated surfaces are fully pervious and capable of the maximum infiltration of runoff available, in keeping with policy 5.1.6. The ripping depth called for – 18 inches – was set by the District based on informal advice from professionals experienced with compaction caused by heavy equipment.

The site inspection and maintenance provisions of the rule, section 5.3.4, are of particular importance and show that the District will, by necessity, rely on self-inspection and -reporting. This issue was the subject of extensive discussion among the TAC, and systems including web-based photo-upload reporting systems were

given consideration. The District will continue to rely on its strong working relationships with its member cities to take a collaborative approach to the inspection of permitted sites and deployment of enforcement mechanisms as necessary. (The requirement that the permittee maintain an inspection log onsite (section 5.3.4) is a simple device that will greatly aid in the coordination of District and city erosion control inspections.) As the revised rules are adopted and applied, the District will continue to work with all relevant governmental subdivisions and state agencies to refine efficient enforcement mechanisms. Of particular importance will be the MPCA's enforcement of NPDES permitting requirements for construction projects of greater than one acre.

The District will use the specific surety requirement in section 5.5 and the general surety requirements of rule 12.0 to substantially bolster its efforts to achieve compliance with its erosion control criteria. The District will also continue to work with cities to encourage compliance. The District also has the authority to issue a stop work order or notice of probable violation, and will explore their use as appropriate. In that regard, the District will pay particular attention to the development of BSWR's administrative penalty order protocol and the agency's deployment of that authority on behalf of watershed districts.

It was suggested during the rule-drafting process that daily inspection of disturbed surfaces may be onerous, and that inspections could be required before or after rainfall events to ensure that damage is either prevented or immediately rectified. The District concluded, though, that such a regime would actually be more difficult to consistently enforce. The District does not believe that the daily requirement is unnecessarily onerous. Section 5.3.4 allows the inspection and reporting regime to be relaxed during winter shutdown and when site work will cease for a significant time before completion of the project. At the same time, these provisions require continued vigilance and specific maintenance efforts on the part of the site manager even when land-disturbing activities are not actively under way.

#### **V. Waterbody Crossings and Structures, Shoreline and Streambank Improvements, Sediment Removal, Appropriations of Public Waters**

The Nine Mile Creek Watershed District has administered permits for work in public waters under Department of Natural Resources (DNR) General Permit 97-6112 for more than a decade. As part of its rules review process, the District examined the scope and specifics of its public waters permitting program and responded to comments from DNR on the ongoing exercise of joint authority. The process produced District rules 6.0 through 8.0, covering work in public waters as defined in state

statute and designated by DNR (see [http://www.dnr.state.mn.us/waters/watermgmt\\_section/pwi/maps.html](http://www.dnr.state.mn.us/waters/watermgmt_section/pwi/maps.html)). In addition, Rule 6.0 responds to specific Technical Advisory Committee member comments regarding the applicability of the 50-foot setback requirement in section 2.3.4 to bridges, culverts and trail projects that by necessity create impervious surface within what would otherwise be the setback zone. Rule 9.0, Appropriations of Public Waters, responds to a comment from BWSR, noting the District's statutory requirement to regulate small appropriations from public waters.

### *Waterbody Crossings and Structures*

Rule 6.0, Waterbody Crossings and Structures, applies to non-public water waterbodies as well as public waters, reflecting the District's interest in comprehensively regulating projects that have significant potential to affect hydraulics, floodplain storage and water quality throughout the watershed (and especially in non—public waters wetlands). In conjunction with the 50-foot creek setback requirement in section 2.3.4 and the District's Erosion and Sediment Control Rule, Rule 6.0 also is designed to ensure that work directly affecting beds and banks is conducted in a manner that prevents to the greatest extent possible the deposition of sediments and associated pollutants from entering the waters of the watershed.

To accomplish these goals, Rule 6.0 sets criteria for construction and maintenance of crossings in keeping with DNR regulations. (In addition, permittees must comply with all conditions in the District's General Permit, some of which overlap with District criteria, while others require interaction with DNR at certain project stages or when a project particular includes particular components such a coffer dams or temporary channel diversions. At the same time, the District rule precludes, for example, alterations to the flowline/gradient of a waterbody, where the conditions of the General Permit provide that DNR may specifically approve such alterations. Interested parties should carefully compare the District rules and the DNR general permit for a complete understanding of overlapping and superseding provisions.)

Utilizing its authority to impose regulations stricter than the state agency's, the District crossings rule exceeds DNR criteria in requiring that existing wildlife traffic be accounted for, that a crossing be designed for minimal impact, and that crossings be maintained in good repair, and in regulating directional boring under the beds and banks of waterbodies. (The DNR requires that permittees discuss opportunities to enhance habitat, prior to commencing work under the General Permit.) The TAC urged that the wildlife provision, in section 6.3.1d, be focused on maintaining existing crossings, which will be identified in collaboration with the District in the permit review

process. TAC members indicated that wildlife crossings have become a familiar component of crossings projects, and the practice is well-established and understood by entities that potentially will come to the District for crossings permits.

The minimal impact provision in 6.3.1e requires a showing by the applicant that the crossing proposed is designed to achieve its purpose at the smallest possible cost to the environment, relative to other possible solutions.

The District's requirements, in section 6.3.2, for directional boring are simple and straightforward supplements to the scope of the General Permit.

Section 6.5 contains crossing-maintenance obligations. The District Board of Managers and staff have been alarmed by the poor condition of certain existing crossings in the watershed, prompting the maintenance requirement. TAC members agreed with the logic and wisdom of requiring such structures to be maintained.

Finally, the District rules also are more stringent than the DNR General Permit in that while the latter allows a new crossing to increase the 100-year flood stage by 0.5-foot, section 2.3 of the District's floodplain rule does not allow any increase in flood stage, and the crossings rule provisions are crafted consistently with that standard.

#### *Shoreline and Streambank Improvements*

The District's shoreline and streambank rule very closely tracks with the scope and requirements of the DNR General Permit. Unlike the crossings rule, Rule 7.0 applies only to the shores and banks of public water waterbodies.

Watershed districts have as one of their purposes under subdivision 2(11) of Section 201 of the Watershed Law the regulation of "improvements by riparian property owners of the beds, banks, and shores of lakes, streams and wetlands for preservation and beneficial public use." In partial fulfillment of that purpose, Rule 7.0 is designed to ensure that shoreline and streambank work secures the stability of these areas, to prevent or correct erosion to protect the public waters of the watershed. In agreement with the suggestion in the comments from the DNR, the District has included a requirement in section 7.3.1 that an applicant show a need to prevent erosion or repair erosion damage to obtain a District permit. The provision means the District will not permit purely cosmetic or decorative shoreline installations.

The District rule includes, in section 7.3.2, a sequencing requirement mandating that applicants first consider bioengineering (stabilization using natural materials), then

consider a mixture of bioengineering and riprap, before opting to stabilize a shoreline or streambank with riprap. Submission requirements include a sequencing analysis in compliance with the provision.

The District rule also requires that finished shoreline or streambank slopes be no steeper than 3:1, horizontal-to-vertical, while the General Permit allows slopes as steep as 2:1. The District slope requirement maintains consistency with the slope provisions in the District's Erosion and Sediment Control rule, which reflects the District's sensitivity to the potential for erosion in its largely urbanized watershed.

Where the DNR General Permit discourages retaining walls, the District rule allows such structures only in public improvement projects where they provide the best-possible means to maintain the stability of a shoreline or streambank and thereby protect the water resource. The District considered declining to permit retaining walls at all, but determined that better policy was to adhere to the advice of the TAC regarding their utility in certain public works projects.

#### *Sediment Removal*

The District's Sediment Removal Rule also responds to the statutory direction in Section 103D.201 to regulate the beds, banks and shores of water bodies for preservation and beneficial public use.

Regulation by the District of dredging of sediment is critical to the District's surface water quality policies, described in Section 4.2 of the District's Water Management Plan. District regulation of the excavation of materials will help preserve the natural character of public waters, the natural appearance of shorelines areas, and recreational, wildlife and fisheries resources. Regulation is also important because the littoral zone (where runoff sediment typically is deposited) is the most biologically productive and ecologically sensitive area of a water body. Dredging has the potential to create adverse impacts including deterioration of water quality as a result of disturbance and suspension of bottom sediment, the damage or destruction of aquatic and wildlife habitats, and the creation of optimal conditions for colonization by invasive plant species such as Eurasian water milfoil and purple loosestrife. In addition, regulation is important to minimize the release of nutrients from resuspended sediments, which stimulate growth of algae. Finally, storage or disposal of dredging spoils (i.e., sediment) in inappropriate locations can lead to reintroduction of sediment into water bodies.

In keeping with the above-described purposes for the rule, Rule 8.0 is tightly focused on the removal of accumulated sediment from outfalls into public waters. The District's Rule 8.0 criteria require a minimal impact approach to dredging for the purposes of sediment removal. Otherwise, the regulation and criteria in the rule track the DNR General Permit.

### *Appropriations of Public Waters*

Rule 9.0, Appropriations of Public Waters, responds to the requirement in Minnesota Statutes Section 103B.211, Subdivision 4, for such a rule, as noted by BWSR in its comments. The rule provides for a straightforward, simple review and tracking system for nonessential appropriations below the quantity thresholds for permitting by the state or its delegate<sup>2</sup> – as reflected in section 9.2.

The rule establishes a nontechnical criterion based on a legal reasonableness standard that generally will allow small appropriations that do not interfere with the rights of others, including the public broadly. In keeping with this approach, the exhibit requirements for the rule are generally less technical than the requirements under the other substantive District rules.

## **VI. Procedural requirements, variances and exceptions, fees, sureties**

### *Procedures – Rule 1.0*

A primary goal of the procedural requirements in Rule 1.0 is harmonization with city and other watershed district procedural requirements. This effort was undertaken to facilitate streamlined compliance with the District's substantive rules.

The recommendation in section 1.2 to project developers to avail themselves of a no-fee meeting with District staff early in the development process reflects an effort by the Board of Managers to effectuate its goals, as articulated in the watershed plan, without intruding unproductively into its member cities' purview as primary land-use authorities. Evaluation of a nascent development or redevelopment project with District staff can inform future applicants' site-design decisions, allowing them to consider ways to minimize impervious surface, to fully integrate infiltration features and route runoff to such features, and to identify other potential project components that provide stormwater management benefits. Early review, comment and discussion can save significant resources that might otherwise have to be expended to bring a

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<sup>2</sup> See Minn. Stat. § 103G.271 and Minn. R. 6115.0670 (establishing a permitting regime for appropriations of public waters in amounts greater than 10,000 gallons per day or 1 million gallons per year).

completed design into compliance with District permitting requirements – especially those for stormwater management.

The provision in section 1.2.2 requiring at least preliminary city approval ensures that the District formally reviews a project only after it has undergone whatever changes may be required to comply with municipal codes and regulations, acknowledging cities' primary land-use authority. Some members of the TAC expressed concern that some of their land-development projects do not warrant or require municipal consent. In the absence of an exception to municipal consent, though, the District prefers to err toward ensuring that a particular project is in conformance with watershed municipalities' plans and controls.

The District also fielded concerns about the requirement that the WCA process, proceed to completion before the District acts on a permit. The District maintains that a bright-line rule here provides the best-possible protection of the watershed's critical remaining wetlands, and is worth the longer planning horizon necessarily imposed on implicated development projects.

Section 1.2.4 (like several other provisions in other rules) exemplifies the District's interest in the use of electronic communications systems to save time and effort for staff and applicants.

The rule's conditional approval provision, section 1.3, will allow certain submittal requirements or necessary design changes to be fulfilled after the Board of Managers approves an application. As such, conditional approval will be granted only when relatively ministerial, administrative or minor compliance matters remain to be completed. Sureties, for example, very frequently will be secured and provided only after permit approval. The key to the efficacy of such a provision is that the permit itself will not be issued – and work subject to the permit may not commence – until the designated conditions are satisfied. For example, a government entity often will not have hired a contractor at the time of permit application, and therefore will not yet have identified the site manager responsible for inspection and maintenance of erosion control at the project site. The District's conditional approval process will allow government projects to proceed with bidding, contracting and other preparatory efforts as long as a site manager is identified before actual land disturbance commences.

An important aspect of sections 1.3 and 1.4 is that permitted projects which will remain under way longer than the original permit period (one year by default) must file

for renewal prior to the expiration of the permit. Permittees failing to do so must reapply for a permit and pay applicable fees (i.e., as if applying for the first time). Permit renewal prior to expiration will require only a nominal fee.

#### *Variances and exceptions – Rule 10.0*

The District's variance process is straightforward and very much in line with statutory and municipal variance criteria. The Board considered a supermajority requirement for granting variances, but concluded that, with only five managers on the Board, such a requirement did not provide meaningful advantage.

Given the primacy of the District's natural resources management mandate, the exception provision in section 10.2 is consistent with similar provisions utilized by other watershed districts and allows for the creativity of applicants wrestling with difficult or particularly advantageous site-specific conditions.

#### *Fees – Rule 11.0*

The District intends the fee requirement to reimburse its administrative, inspection and enforcement expenses as provided for by statute (Minn. Stat. § 103D.345, subd. 2).

Fee amounts will be set by Board resolution annually, and a schedule of applicable fees will be maintained on the District's web site, as well as at the District offices. The District intends to implement and maintain a simple fee structure, with only as much variation and detail as is necessary to ensure that actual costs of administration and enforcement are collected.

#### *Sureties – Rule 12.0*

The District is formalizing and adding structure to its surety requirements. Like permit fees, surety amounts will be set annually by Board resolution and published via the District's web site. The rule establishes structure under which sureties can be required at the outset of permitting and released upon completion of work. Previously the District required a surety if the Board determined, upon advice of staff and the District engineer, that a project presented a particular risk to a specific resource, especially a sensitive one.

In determining whether it will be appropriate to hold sureties for single-family home developments and redevelopments and other small projects, the District will weigh whether the cost to the applicant of securing a surety is proportionate to the risk to water resources presented.

Per section 12.4, the District will require that an applicant demonstrate, by means acceptable to the District engineer, that stormwater facilities are functioning before the surety will be released.

The District will work in harmony with the six watershed cities to ensure appropriate coordination of surety requirements. Where the District shares regulatory responsibility with a city or cities – such as for erosion and sediment control – adequate sureties may be held in joint tenancy when possible.