

**BROWN'S CREEK WATERSHED DISTRICT**  
**STATEMENT OF NEED AND REASONABLENESS**  
**PROPOSED RULES OF THE WATERSHED DISTRICT**

November 6, 1998

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The purpose of this document is to summarize the proposed Rules of the Brown's Creek Watershed District ("BCWD"), and to set forth the need for and reasonableness of these rules.

The BCWD was established by order of the Minnesota Board of Water and Soil Resources on October 22, 1997. The total area within the Brown's Creek Watershed is 28.3 square miles, which includes all or part of the municipalities of the City of Stillwater, Stillwater Township, May Township, the City of Hugo, the City of Grant, the City of Oak Park Heights, the City of Lake Elmo, and Baytown Township. The BCWD was granted all of the powers, authority, and duties provided by law. The Minnesota Watershed District Act generally provides for the creation of watershed districts "to conserve the natural resources of the State by land use planning, flood control, and other conservation projects by using sound scientific principles for the protection of the public health and welfare and the provident use of the natural resources." Minn. Stat. § 103D.201, subd. 1.

All watershed districts in Minnesota must adopt rules to accomplish the purposes of the Watershed District Act and to implement the powers of the watershed district managers. Minn. Stat. § 103D.341. The proposed BCWD Rules are intended to implement the basic policies established in the District's first generation Watershed Management Plan. The proposed Rules regulate land use and water resource activities through a permitting program, and are intended to provide notice and general guidance to the public about the substantive criteria that the Board of Managers will utilize in determining whether and under what terms to grant a permit for these regulated activities. The proposed Rules also provide guidance on the procedures to be used for permit applicants and the enforcement of permit terms and conditions.

The BCWD has developed these revisions in a process that has included regular meetings of a technical advisory committee consisting of BCWD managers and staff, representatives of municipalities within the district, the Minnesota Board of Water and Soil Resources, the Department of Natural Resources, the Metropolitan Council, development interests, trout protection interests and consulting hydrological engineers.

A more detailed explanation of the proposed Rules follows.

**1.0 Procedural Requirements.**

Proposed Rule 1.0 sets forth the general procedures which persons must follow in applying for a permit to the District. All permit applications must be signed by the property owner. Permit application forms are available at the District Office.

The BCWD affirms that the fundamental land use and zoning policies are established by municipalities. Accordingly, the BCWD Managers will only review permit applications involving land development after the municipality has provided preliminary approval of the

proposed project. In this way, the District will not undertake the evaluation of the water resources impacts from the proposed project until it is determined by the municipality that the proposed project is consistent with the municipality's comprehensive plan and zoning ordinances.

The District seeks to obtain all necessary public input concerning permit applications. Accordingly, the permit applicant must assist the District in notifying all property owners who reside within 600 feet of a proposed project.

In order to allow adequate time for proper staff and technical review of permit applications, the Board of Managers will only consider permit applications which have been received at least 28 full days prior to the scheduled meeting date. The managers will act on permit applications within 60 days of receiving a complete application.

## **2.0 Stormwater Management.**

### **Background**

Stormwater runoff from land development projects presents significant concern to the BCWD with respect to flood control, water quality protection, and thermal impacts. Roadway construction, increased pavement and other hard surfaces associated with land development, as well as agricultural practices, have meant increased problems from stormwater runoff which must be managed and controlled to prevent downstream flooding. Stormwater runoff also collects phosphorus-laden sediments that drain into the lakes, wetlands, and streams of the watershed, rather than filter through the ground. This "non-point" source of pollution, stormwater, is the leading source of water pollution in the United States.

The BCWD Water Resources Plan identifies flooding and surface water quality as two main existing and potential problems within the watershed. Regarding flooding, the Plan states: "The potential for flooding does exist in all portions of the watershed, with the most significant threat existing in the morainic topography of the western and northern areas. The potential threat exists because the current system of planning does not fully take into account the fluctuating water levels of lakes, ponds, and wetlands (which have no existing outlets) with respect to localized development and road construction." BCWD Plan at pp. 29-30. The Plan also notes that non-point sources of stormwater runoff from agricultural and urban lands are major contributors to pollution of area lakes and streams. *Id.* at p. 30. While many of the municipalities have adopted some form of flood control or stormwater management ordinances, none of the municipalities have the local water management planning process mandated by Minnesota Statutes § 103.B.235.

Rule 2.0 imposes requirements on the development of land within the watershed for the purpose of limiting the potential negative impact of development on stormwater flow rate and quality. In developing these revisions, the BCWD has reviewed the stormwater management ordinances of a number of cities, counties and watershed districts in other states.

### Legal Authority

The legal authority for watershed district adoption of stormwater management rules derives from Minnesota Statutes chapters 103B and 103D. Under Minn. Stat. §103D.341, subd. 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 flood control, regulation of surface water flows, water quality protection, control of erosion and siltation of water courses, and groundwater protection. Id. at § 103D.201, subd. 2. District managers further are authorized to regulate and control the use of water within the watershed district and the use of streams, ditches and water courses to prevent pollution. Id. at § 103D.335, subds. 10 and 16. Finally, watershed districts in the Twin Cities Metropolitan Area are authorized to regulate the water resources impacts of land use and development where local government units have not adopted district-approved local water management plans. Minn. Stat. § 103D.335, subd. 23; § 103B.211, subd. 1.

### The Proposed Rule

The purpose of the rule is to minimize the extent to which land development alters the pre-development runoff characteristics of the land, namely the peak flow rate, flow volume and runoff water quality. Under the rule, any person proposing to engage in “land-altering activity” above a specified threshold must submit, obtain BCWD approval of, and implement a stormwater management plan.

### *Applicability of the Rule*

“Land-altering activity” is defined as the creation of impervious surface. In determining the thresholds at which the creation of impervious surface becomes subject to the rule, the BCWD has considered both the amount and density of impervious surface that a particular activity would create and the engineering and cost burdens that the rule would impose in conjunction with that activity. Thus, residential subdivision and development are subject to the rule only when four or more lots are being created by subdivision or built on. Non-residential development on an undeveloped site is regulated if more than one acre or more than five percent of the site area is to be rendered impervious; if a site already is developed, any increase of 5,000 or more square feet of impervious surface requires compliance with the rule. If a site is undergoing substantial change so as to constitute “redevelopment” under the rule, and if the site is five acres or more, the BCWD presumes that site redesign opportunities and site area allow for the institution of measures to meet the requirements of the rule. Finally, any road, bikeway, sidewalk or other impervious linear surface of one acre or more is subject to these rules. These thresholds are comparable to those in the stormwater ordinances of some thirty other jurisdictions that the BCWD has reviewed.

### *Standards: Peak Flow, Volume and Water Quality*

The development of land for residential, commercial, industrial, institutional or other uses, by altering stormwater flow patterns and degrading stormwater quality, can result in injury to downgradient land; to the stability of the bed and banks of downstream watercourses; to the quality of downstream waters and to the habitat they provide. Terrain alteration and the replacement of natural, vegetated cover with impervious surface such as roadway, rooftop, parking area or sidewalk has several effects of concern. It increases stormwater flow velocity; reduces the proportion of

stormwater flow that infiltrates into the ground on site; and increases the transport of both sediments and man-made pollutants-- oil and grease, antifreeze, deicing materials, metal and rubber particles from motor vehicles, fertilizers and herbicides-- into downgradient surface waters. For those activities subject to the rule, stormwater management must be controlled in three respects to prevent harm from a change in surface flows: peak flow rate from the site, flow volume from the site and runoff quality.

Control of peak flow is the most important means to prevent downstream flooding, limit sedimentation and protect the physical integrity of downstream watercourses. Fundamental to nearly all of the stormwater management ordinances the BCWD has reviewed is the requirement that development not increase peak flow from a site. Under the proposed rule, development may not cause an increase in the peak flow rate from the site during a 1.5-, 10- or 100-year storm of 24-hour duration. Further, the rule requires specific attention to the impact of peak stormwater flow from a developed site on downstream lakes and wetlands. To ensure that short-term, storm-induced change in lake or wetland water level does not adversely affect the banks, vegetation or habitat of the water body, peak flow “bounce” for 1.5-, 10- and 100-year storms is required to be limited to an amount ranging from zero to no limit, depending on the vulnerability of the lake or wetland class. Lake and wetland vulnerability classes are listed in an Appendix to the rule.

Research has led to the generalized conclusion that coverage of ten percent or more impervious surface within a watershed degrades receiving waters, their beds, their banks and the habitat within them. Allowing for a margin of scientific uncertainty and the greater sensitivity of particular areas, the proposed rule permits flow volume increases associated with five percent impervious coverage of a site before flow volume management is required. The increase in flow volume associated with five percent impervious coverage is calculated on the assumption that the permeability of the soil underlying the impervious surface is average for the site. Beyond this “five-percent” allowance, on-site infiltration must be used so that there is, as compared with the pre-development state, no increase in off-site flow volume for up to a 1.5-year storm of 24-hour duration. A limited exception to the rule is granted where on-site infiltration is used to the degree feasible but still does not secure compliance with the flow volume standard. In this case, off-site infiltration must be used to meet the flow volume standard, to the degree off-site treatment is feasible.

Regulation of flow volume serves somewhat different purposes in landlocked and non-landlocked areas of the watershed. In landlocked areas, an increase in off-site flow caused by land alteration will create impacts on down-gradient water tables and land already experiencing problematically high water. In non-landlocked areas, flow volume is regulated as well to prevent injury to downstream owners. In addition, allowing stormwater that, in the pre-development state, infiltrated to groundwater to flow to Brown’s Creek overland and by way of wetland, lake or other surface water increases the temperature of the stormwater as it discharges into the creek. Preserving the pre-development rate of on-site stormwater infiltration (excepting the five-percent impermeability allowance), and thereby maintaining the pre-development proportion of ground-to surface water discharge to Brown’s Creek and its tributaries, is critical to avoiding thermal impacts to the trout habitat of the creek.

Stormwater contains a variety of constituents deleterious to receiving waters. Phosphorus and nitrogen accelerate eutrophication of surface waters and increase surface algal scums, algal blooms, water discoloration and depressed oxygen levels. Stormwater carries heavy metals, oils and grease from roads and parking lots and toxic organic compounds from herbicides, pesticides

and wood preservatives. It carries fecal coliform that may impair recreational and harvesting uses of receiving waters and sediments that degrade aquatic habitats.

Development of a site increases the pollution threat to downgradient waters by: increasing the intensity of use, and thus in most cases the generation of pollutants, on the site; increasing the flow volume and thus overall pollutant loading from the site; and increasing peak flow rates, with a corresponding reduction in effectiveness of natural pollutant control mechanisms such as on-site infiltration to groundwater and vegetative filtering. The proposed rule relies largely on control of peak flows and flow volume as a means to prevent an increase in stormwater pollutant concentrations from the pre-development state. In addition, the rule contemplates that certain site design practices that may have only a minor impact on peak flow or flow volume—such as the use of filter strips along receiving waters and drainage swales -- will be used to achieve compliance with the water quality standard of the rule. Phosphorus loading at the downgradient property boundary is restricted to the phosphorus concentration limit of the first receiving water (lake, stream or wetland) encountered, as that limit is specified in North American Lake Management Society. Total suspended solids, total nitrogen and heavy metals loadings must not increase from the pre-development state.

#### *Stormwater Management Preferences*

The rule specifies an order of preference for the use of stormwater management techniques. In accordance with the requirement to limit total flow volume from the site, an applicant first must apply site design practices and on-site infiltration to the degree feasible. Site design practices, which are enumerated in an Appendix to the rule and for which the BCWD intends to develop further guidance, are largely non-engineering approaches to the design and placement of development on a site in ways that preserve as much as possible the pre-development stormwater flow patterns and on-site rates of infiltration. Practices range from preserving drainage swales and filter strips and building on least-pervious soils to minimizing impervious surface by limiting driveway lengths, road widths and turnaround areas. Where existing zoning or subdivision ordinances do not allow for particular practices, an applicant must provide evidence that permission to implement those practices was reasonably sought. An applicant need not pursue an obviously futile special approval or variance process to its conclusion, but must at least submit documentation from the local government that the granting of an approval or variance would be substantially unlikely. The literature suggests that site design practices are the least expensive and can be the most effective stormwater management methods. By imposing a regulatory preference for these practices, the rule intends both to foster their use and to encourage further development and innovation by both applicants and local governments.

To the degree that feasible site design practices do not alone suffice for compliance with peak flow, flow volume and stormwater quality standards, engineered on-site infiltration such as infiltration trenches and dry wells and off-site infiltration are specified. Only once all feasible means of preserving pre-development ground- to surface water proportions are exhausted may an applicant turn to above-ground means of detaining and treating stormwater. Of these, wet detention in accordance with NURP (Nationwide Urban Runoff Program) design standards is preferred for its demonstrated effectiveness in both controlling peak flow and securing relatively substantial removal of phosphorus, suspended sediments and other pollutants from runoff. Nonetheless, the rule permits use of another method without first demonstrating the infeasibility of NURP-specified wet detention where the applicant can demonstrate to the BCWD that the performance and reliability of the method are equivalent to that of a NURP facility.

In every case, an applicant must provide evidence that the legal rights have been or, before land-altering activity is commenced, will be secured for construction, operation and maintenance of the proposed facilities. For off-site facilities, this may include flowage or access easements; for on-site facilities, it may include the conveyance of easements to another party or the imposition of restrictive covenants on the property to ensure that the stormwater management facilities, whether engineered or as features of the natural topography, continue to function as designed. The applicant also must submit for BCWD approval, and must record, a maintenance agreement establishing responsibility for maintenance of the stormwater management facilities.

#### *Treatment in a Regional Facility*

Finally, the rule allows for stormwater management in a regional facility in place of site-specific on- or off-site treatment. To qualify for regional treatment, one of two conditions must be met. First, the regional facility and its use for treatment of stormwater from the site in question are pursuant to and in accordance with a local water management plan approved by the BCWD. Or, second, the applicant demonstrates that on-site and off-site infiltration, used to the extent feasible, do not suffice to meet the flow volume standard of the rule and the BCWD finds in writing that the proposed method of management would meet peak flow, water quality and bounce standards.

### **3.0 Erosion Control.**

Sediments smother fish larvae and eggs and clog fish gills; turbidity reduces light penetration of water, hinders sight-feeding fish and increases the cost of providing drinking water. Sedimentation reduces water quality for recreational uses, lowers the value of adjoining lands, and increases public costs to maintain waterways and stormwater conveyances. Soil particles carry nutrients, trace metals and hydrocarbons into receiving waters and foster algae and weed growth. Runoff from construction sites is the largest source of sediments in urban areas undergoing development such as the watershed. Uncontrolled runoff from agricultural crop production also can contribute greatly to sedimentation problems.

In addition to the statutory authority to regulate stormwater management, regulation of erosion and sedimentation is authorized by the specific watershed district purpose “to control or elevate soil erosion and siltation of water courses or water basins.” Minn. Stat. § 103D.201, subd. 2(10).

Proposed Rule 3.0 requires all developers of land moving more than 50 cubic yards of earth or removing more than 1,000 square feet of vegetative cover to obtain an erosion control permit. The permit is issued on an applicant’s submission of an erosion control plan setting forth measures to control erosion and sedimentation that conform to the practices and specifications contained in “Protecting Water Quality in Urban Areas,” the Minnesota Pollution Control Agency’s 1989 manual setting forth best practices for managing non-point source pollution in the urban environment. The plan must include measures to permanently restabilize disturbed soils and a schedule by which the work will be accomplished. In addition, given the importance of groundwater recharge within the Brown’s Creek Watershed and the potential impact of land alterations to the waters of Brown’s Creek, land-altering activities within the ordinary high-water boundaries of a groundwater recharge area are not permitted unless the applicant can demonstrate that the alterations will not adversely affect the recharge area.

Agricultural activity is excepted from the requirements of the rule, provided that a natural vegetation buffer of 16 feet or the width of the shore impact zone, whichever is wider, is maintained along each watercourse.

#### **4.0 Lake, Stream and Wetland Buffers**

##### Background

A vegetative buffer adjacent to a stream, lake or wetland serves a number of purposes critical to the protection of that water resource and, indeed, properly is considered an integral part of it. Buffers moderate flow rates of stormwater runoff into receiving waters, stabilize banks and shorelines, filter nutrients and sediments from runoff, provide habitat and visually screen aesthetically unappealing uses. A critically important function of vegetative buffer, particularly with respect to Brown's creek and its tributaries, is its role in regulating stream temperatures and, therefore, maintaining the resource as a trout habitat. Buffer width is the most important determinant of buffer effectiveness; soils, slope and the types and condition of plant communities within the buffer also are relevant to buffer function.

Rule 4.0 requires the maintenance of vegetated buffer strips along streams, recreational development and natural environment lakes, and public waters wetlands (as that term is defined at Minn. Stat. 103G.005) within the watershed for the purpose of protecting the function and integrity of these water resources.

##### Legal Authority

The legal authority for watershed district adoption of stream, lake and wetland buffer rules derives from Minnesota Statutes chapters 103B and 103D. Under Minn. Stat. §103D.341, subd. 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 conservation of water for public uses, controlling erosion and siltation of lakes, streams and wetlands; protecting water quality in these bodies; and other related purposes. *Id.* at § 103D.201, subd. 2. District managers further are authorized to regulate and control the use of water within the watershed district and regulate the use of streams, ditches and water courses to prevent pollution. *Id.* at § 103D.335, subds. 10 and 16. Finally, watershed districts in the Twin Cities Metropolitan Area are authorized to regulate the water resources impacts of land use and development where local government units have not adopted district-approved local water management plans. Minn. Stat. § 103D.335, subd. 23; § 103B.211, subd. 1.

##### The Proposed Rule

The purpose of the rule is to preserve natural vegetation bordering the bed and banks of streams, recreational development and natural environment lakes, and public waters wetlands in order to maintain the ecological functions of and societal benefits deriving from these water resources. Vegetated buffer zones of specified widths are established and disturbance of the vegetation within those zones is restricted. The District has sought to develop a rule that protects the valuable water resources of the watershed without placing undue burdens on affected landowners.

##### *Addressing Gaps in Water Resource Protection*

Under Minnesota Statutes §§ 103F.201 to 103F.221, Washington County and the City of Stillwater, pursuant to a Minnesota Department of Natural Resources model ordinance, have adopted DNR-approved shoreland ordinances that regulate building lot sizes, the placement of structures and sewage disposal systems, and other land uses within the shorelands of public waters—defined as within 1000 feet of the ordinary high water mark of a lake, pond or flowage and within 300 feet of the ordinary high water of a river, stream or floodplain. While these ordinances have the effect of securing certain protections for riparian and littoral areas, they are not explicitly directed toward protection of vegetative buffers for the benefits those buffers provide. The District has examined these local ordinances carefully for two purposes.

First, the District wishes to avoid duplication of local shoreland ordinances. Thus, the proposed rule does not expressly restrict the placement of structures, decks and sewage treatment systems, subjects that are the focus of local ordinances. Similarly, local ordinances regulate agricultural and silvicultural activities within buffer areas in a manner that does not necessitate further express treatment by the District.

Secondly, the District seeks to address gaps in the protection of buffer vegetation resulting from the fact that shoreland ordinances are not specifically directed to buffer protection. Most broadly, although the County ordinance applies to lakes, streams and wetlands, the Stillwater ordinance does not expressly apply to public waters wetlands. The District's proposed rule applies to streams, to recreational development and natural environment lakes, and to all public waters wetlands within the watershed.

Further, in contrast to the County and municipal ordinances, the District's rules extend the specified protected area to include steep slopes, the 100-year floodplain, and DNR-mapped natural communities associated with a water resource. With regard to restrictions on activities within buffer zones, the rule regulates specifically to protect vegetative cover. Thus, it places restrictions on impervious cover, excavation, the placement of fill or other materials, vegetative alteration, and the use of pesticides or phosphorus-containing fertilizers within designated zones. As well, although it recognizes the necessity for roads, paths and utilities to intrude into buffer zones—either in crossing the associated water resource or to give access to water-related uses—it places reasonable bounds on the scope of these exceptions from the general rule.

#### *Buffer Zone Framework*

The rule rests on a framework consisting of the designated protected zones.

With respect to Brown's Creek and its tributaries, the buffer has three elements: a streamside, a middle and an outer zone. The streamside zone, extending 25 feet from the ordinary high water mark of the water body, protects the physical and ecological integrity of the stream ecosystem. The middle zone, 50 feet in width, protects key stream components and provides a further separation between upland development and the stream. Activities are highly restricted in these zones to protect mature riparian forest and vegetation that can provide shade, leaf litter, woody debris and erosion protection for the stream. No impervious cover is permitted; pesticides and phosphorus-containing fertilizers may not be used; and neither terrain nor vegetation may be altered except to remove invasive or diseased species or, in the middle zone, to remove trees less than six inches in diameter at a point two feet above the ground. Revegetation with native species is encouraged and is not within the prohibition of the rule. Roads and utilities, whether crossing the stream or providing access to a lawful water-related use, are restricted to the minimal



necessary disturbance of the vegetative buffer and subject to Rule 3.0 of these rules with respect to temporary erosion control during construction. All roads and paths within these zones providing access to water-related uses must be pervious.

The outer zone extends from the middle zone to the upland edge of the structure setback under the applicable local shoreland ordinance. The District believes that the setbacks provided for under local ordinances are adequate for stream protection and that consistency between the District rule and the local ordinance is beneficial to those subject to regulation. This zone is, in essence, a buffer of the buffer. Impervious surface is not permitted within the outer zone, including impervious roads and utility-related structures, except pursuant to a stream crossing. The District contemplates that residential backyard will comprise much of the outer zone of Brown's Creek and tributaries; turf, lawn and similar cultivation is permitted, as is the typical use of fertilizers, herbicides and other preparations. Although maintenance and restoration of native cover are encouraged, no restrictions on vegetative disturbance within this zone are imposed by the rule. Excavation and filling activity may occur within the zone, provided there is compliance with the erosion control requirements of Rule 3.0 of these rules.

Wetland buffer widths recommended by the Natural Resource Conservation Service are from 100 to 200 feet for high quality wetlands (Interim Conservation Practice Standard for CRP, Code 393, NRCS, 1996). A review of requirements in other states suggests 100 feet to be a minimum for high-quality, sensitive wetlands. While the appropriate buffer width depends on site-specific conditions such as slope, soils, vegetative composition and adjacent land uses, it is clearly infeasible to determine width on a site-by-site basis. As a reasonable means of differentiation, however, the rule groups lakes and wetlands by susceptibility class on the basis of plant community type, resource sensitivity and quality. Lakes and wetlands are protected by a single buffer zone of a width that ranges from 25 to 100 feet, depending on the susceptibility class (these same classifications are used in Rule 2.0 of these rules for regulating stormwater peak flows). Restrictions within a wetland or lake buffer zone are the same as those within a streamside zone.

### *Exceptions*

Several general exceptions to these prohibitions are specified. Most significantly, the buffer zone requirements apply only to property that is subject to a use for which subdivision, landowner-initiated rezoning, a special use permit or a variance was required on or after the date of adoption of this rule. (The fact that a property lies within an area that has been subject to general rezoning by the local government unit would not trigger the application of the requirements.) The purpose of this limitation is two-fold.

- o First, it seeks to avoid inordinate injury to the settled uses and expectations of numerous residential landowners located along the banks and shorelines subject to the rule. By imposing these requirements in conjunction with property development and the public processes that accompany it, the MCWD will allow for landowners to become fully aware of the requirements and incorporate them into their plans for use of their properties.
- o Secondly, broad application of the requirement to the many residential and other properties within the watershed that border on streams, lakes and wetlands would raise substantial practical issues with respect to enforcement, including potentially substantial issues of entry onto residential lands for compliance monitoring and violation

inspections; problems in documenting the pre-existing condition of properties and the occurrence of acts in violation of the rule; and the sheer number of properties that would become subject to the rule. The rule is drafted with the intent of directing limited District resources to the most important threats to the ecological health of the watershed.

Also importantly, any impervious surface, road or utility in existence on the date of the rule's adoption, and its maintenance within existing dimensions, are excepted from the operation of the rule.

Other exceptions are as follows:

- o As indicated, a road or utility may be located within a buffer zone in conjunction with a water crossing. Impervious surface and vegetative cover disturbance shall be limited to that necessary for the crossing. Structures associated with the road or utility shall not be located within the zone unless no feasible alternative exists.
- o Access to a lawful private or public use of the water resource may be created and maintained. Access surfaces must be pervious and vegetative disturbance must be limited to that needed in light of the nature and extent of the permitted use.
- o Subject to specified conditions, fill or debris may be placed within a streamside, middle or lake or wetland buffer zone pursuant to lawful work in the associated water resource.
- o Pervious footpaths are permitted within all buffer zones.
- o Outlet, flood control and stormwater treatment facilities may be located within any buffer zone when approved under section 2.0 of the rules.
- o A project to stabilize a shoreline or bank regulated under section 4.0 of the rules is required to comply with erosion control requirements of the rule (sections 3.0 and 4.9.7.1) but otherwise is excepted from the rule's prohibitions.

## **5.0 Shoreline and Stream Bank Alterations.**

Another source of erosion is the improper installation of shoreline and stream bank improvements. Watershed districts are authorized to "regulate improvements by riparian property owners of the beds, banks, and shores of lakes, streams, and wetlands for preservation and beneficial public use." Minn. Stat. § 103D.201, subd. 2(11).

Proposed Rule 5.0 requires that shoreline riprap installation conforms with generally accepted engineering principles to assure that the shoreline installation has the proper slope, variable gradation of material, and minimizes encroachment into the lake bed. Proposed Rule 5.0 also provides that the applicant for a shoreline or stream bank improvement must post a bond or letter of credit to guarantee that the work is constructed in accordance with District requirements.

## **6.0 Stream and Lake Crossings.**

In conjunction with the flood control and erosion protection concerns identified in the BCWD Water Management Plan, proposed Rule 6.0 reflects a policy of discouraging the placing of roads, highways or utilities within lake or stream beds. To obtain a permit to do so, an applicant must demonstrate that the project will provide a public benefit; that hydraulic and navigational capacities will be maintained; that water quality will not be adversely affected; and that the proposed crossing is the minimal-impact alternative.

#### **7.0 Floodplain and Drainage Alterations.**

Proposed Rule 7.0 addresses the flood control and drainage concerns reflected in the BCWD Water Management Plan by requiring a permit for any alteration or filling of land below the 100-year floodplain elevation of any wetland, any public water, or any water body within a landlocked subwatershed. As well, a permit is required before obstructing the natural flow of any surface water or artificially diverting that flow across downgradient land. To obtain a permit for floodplain fill or alteration, an applicant must demonstrate that the proposed activity will not decrease flood storage capacity within the floodplain. Installation of culverts or drainage tiles, as well as other surface water diversions and obstructions, will be permitted only on a finding that downstream landowners will not be adversely affected.

#### **8.0 Fees.**

Proposed Rule 8.0 provides pursuant to Minn. Stat. § 103D.345, subd. 2, that the District's cost for inspection and analysis of project sites in conjunction with permit applications are assessed to the permit applicant. Pursuant to a statutory exemption, government agencies are exempt from these fees.

#### **9.0 Performance Bonds or Letters of Credit.**

Pursuant to Minn. Stat. § 103D.345, subd. 4, the Board of Managers may require a permit applicant to post a bond or other surety to assure performance by the applicant of the activities authorized by the terms of the permit. Proposed Rule 9.0 provides the form, conditions, and procedures for the posting of the surety bond.

#### **10.0 Variances.**

Proposed Rule 10.0 authorizes the Board of Managers to grant variances from its rules according to standard land use variance criteria. An applicant for a variance must demonstrate that because of circumstances unique to the property, the rule strictly applied would create a hardship and that granting of the variance would not violate the spirit or intent of the rules. The hardship may not be the result of the landowner's own actions and may not be merely economic in nature.

#### **11.0 Enforcement.**

Proposed Rule 11.0 sets forth the enforcement powers of the BCWD pursuant to Minn. Stat. § 103D.545. The district is empowered to issue cease and desist orders for threats to water resources from flooding, soil erosion, sedimentation, water pollution or any other cause. Any violation of the BCWD rules, or of a permit, order or agreement under these rules, may be

prosecuted as a misdemeanor. Finally, the BCWD may seek an order compelling abatement, restoration or other appropriate action.