Carnelian-Marine-St. Croix Watershed District

Rules

Adopted March 1, 2010

(Public Comment Draft Redlines – September 7, 2016)

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CERTIFICATION OF RULES

I, ~~Victoria Dupre~~Kristin Tuenge, Secretary of the Carnelian-Marine-St. Croix Watershed District Board of Managers, certify that the attached is a true and correct copy of the Rules of the Carnelian-Marine-St. Croix Watershed District having been properly adopted by the Board of Managers of the Carnelian-Marine-St. Croix Watershed District.

Dated: ~~March 1, 2010~~[Date Adopted by Board]

INTRODUCTION

The Carnelian-Marine-St. Croix Watershed District (District) adopts these Rules and Regulations as required by Minnesota Statute 103D.341 to accomplish the purposes in Chapter 103D, implement the powers of the managers, and the policies of the District as contained in the District Watershed Management Plan (Plan).

The District Administrator is available to assist permit applicants. The District Administrator will work with local governments and Washington County to coordinate permit review and administration. Additional technical guidance documents are available from the District to assist applicants with design of features required under these Rules. Concept plans can also be submitted for initial review by the District to identify the specific standards and key resources that would apply for a specific project.

RELATIONSHIP TO MUNICIPALITIES

The District recognizes that the primary control and determination of appropriate land uses is the responsibility of the municipalities. Accordingly, the District will coordinate permit application reviews involving land development with the municipality where the land is located.

The District will be active in the regulatory process to ensure that its water resources are managed in accordance with District goals and policies. Municipalities have the option of assuming a more active role in the permitting process after adoption of a local water management plan approved by the District and upon adoption and implementation of local ordinances consistent with the approved plan.

The District will review projects sponsored or undertaken by municipalities and other governmental units, and will require permits for governmental projects impacting water resources of the District. These projects include but are not limited to: land development or redevelopment; road, trail, utility construction or reconstruction.

The District desires to serve as technical advisor to the municipalities in their preparation of local surface water management plans and the review of individual development proposals prior to investment of significant public or private funds. To promote a coordinated review process between the District and the municipalities, the District encourages the municipalities or townships to contact the District early in the planning process.

The District does not serve as the Local Government Unit (LGU) for administration of the Minnesota Wetland Conservation Act (WCA). Notwithstanding the above, the District, pursuant to its regulatory authority under watershed law and its BWSR Approved CWPMP, will require permits under Rule 8.0 for wetland altering activities. The District will coordinate application procedures, review and permitting of wetland-alternating activities with WCA LGUs through a memorandum of understanding or other such letter of agreement.

0.0 DEFINITIONS

For the purposes of these Rules, the following words have the meanings set forth below.

References in these Rules to specific sections of the Minnesota Statutes include any amendments, revisions or recodification of those sections.

"Agricultural activity" means the use of land for the production of agronomic, horticultural or silvicultural crops, including nursery stock, sod, fruits, vegetables, flowers, forages, cover crops, grains, hay fields, aquatic plants, and Christmas trees. Agricultural activity also includes animal husbandry and grazing.

"Basement" means any area of a structure, including crawl spaces, having its floor or base below ground level on all four sides, regardless of the depth of the excavation below ground level.

"Best Management Practices (BMPs)" means measures taken to control impacts from stormwater runoff on the receiving water or groundwater. BMP specifications for design and construction follow, in order of priority, the Minnesota Stormwater Manual (MPCA, 2005); Protecting Water Quality in Urban Areas (MPCA, 2000); and Minnesota Construction Site Erosion and Sediment Control Planning Handbook (BWSR, 1988); as amended, revised or supplemented.

"Better site design practices" means development design oriented to conserve natural areas, limit hard cover, use natural pervious areas and integrate stormwater management features to more effectively manage stormwater runoff.

"Bioengineering" means the use of vegetation and organic or inorganic materials to stabilize shorelines and streambanks.

"Biofiltration" means a series of biological and physical processes that remove particles from water.

"Bounce" means the difference in water surface elevation between the outlet or normal water elevation and the peak water surface elevation following a rainfall event.

"Buffer" means an upland area adjacent to a lake, stream or wetland that is maintained at or restored to an acceptable diversity and density of native vegetation as determined by the District.

"Critical duration flood event" means the 100-year precipitation or snow melt event with a duration resulting in the maximum 100 year return period water surface elevation. The critical duration flood event is generally either the 100-year, 24 hour rainfall event as found in NOAA Atlas 14 or the ten-day snow melt event assumed to be 7.2 inches of runoff occurring on frozen ground (CN=100); however, other durations (e.g., 6-hour) may result in the maximum 100 year return period water surface elevation.

"Dewatering" means the removal of water from an excavated or natural depression.

"Distributed CN-value approach" means an approach that assigns a curve number to each distinct land use to more accurately reflect the volume and timing of site-generated runoff. Impervious surfaces directly connected to stormwater conveyances may not be grouped with disconnected impervious and pervious areas for calculation of drainage area curve numbers.

"District" means the Carnelian-Marine-St. Croix Watershed District.

"Drainageway" means a channel or swale with intermittent, periodic, or occasional flow.

"Extended detention" means the storage of runoff in a basin, above the required (infiltration) retention pool, for the purposes of rate control, downstream channel protection and water quality treatment.

"Facility" means any part of a natural or constructed system contributing under the stormwater management plan to meeting a standard of section 2.4.

"Feasible" means technically achievable at a cost not substantially disproportionate to the stormwater management benefit to be gained, in the District's determination.

"Filtration" means a series of processes that physically removes particles from water.

"Floodplain" means the area adjoining a watercourse, or a natural or constructed water basin, including the area around lakes, rivers, wetlands, stormwater ponds, depressions, and intermittent and perennial streams, that is inundated by the ~~100-year 24-hour rainfall event or, for landlocked basins and basins that have no active outlet for the 100-year 24-hour rainfall event, the 100-year 10-day runoff event.~~critical duration flood event.

"Groundwater-Dependent Natural Resource" (GDNR) means a feature with surface emergence of groundwater at a spring or seepage area, sufficiently mineral rich to support a plant community or aquatic ecosystem listed in the Appendix to these Definitions. A map of currently identified groundwater-dependent natural resources is found in Appendix 2.1.~~ The following lakes are excepted: Big Marine Lake, Big Carnelian Lake, and Square Lake.~~

"Hot Spot" means a land use that is inherently of higher risk to become a point source for stormwater pollution. Examples of such land uses include, but are not limited to, gas stations, chemical storage facilities, industrial sites and transportation depots.

"Hydrologic regime" means the seasonal pattern of wetland water level that is like a hydrologic signature of each wetland type. It defines the rise and fall of a wetland's surface and subsurface water. Constancy of seasonal patterns from year to year ensures a reasonable stability for the wetland.

"Impervious surface" means a compacted surface or a surface covered with material (i.e., gravel, asphalt, concrete, Class 5, etc.) that increases the depth of runoff compared to natural soils and land cover. Including but not limited to roads, driveways, parking areas, sidewalks and trails, patios, tennis courts, basketball courts, swimming pools, building roofs, covered decks, and other structures.~~surface that has been compacted or covered with a layer of non-porous material, or is likely~~

~~to become compacted from expected use, so that it is highly resistant to infiltration by water. Examples of impervious surface include roads, driveways and parking areas, whether or not paved, sidewalks greater than 3 feet wide, patios, tennis and basketball courts, swimming pools, covered decks and other structures.~~

"Lake" within the District, means water bodies identified as "Public Waters" under Minn. Stat. §103G.005, subd. 15.

"Land disturbance" means any change of the land surface, including removing vegetative cover, excavation, fill, grading, stock piling soil, and the construction of any structure that may cause or contribute to erosion or the movement of sediment into waterbodies. The use of land for new or continuing agricultural activity, home gardens, and landscaping adjacent to existing structures shall not constitute a land-disturbing activity under these Rules. Also, roadway mill and overlay and routine vegetation management activities shall not constitute a land-disturbing activity under these Rules.

"Landlocked basin" means a basin or localized depression that is one acre or more in size that does not have a natural outlet at or below the water elevation of the 10-day runoff event with a 100-year return frequency (7.2-inch runoff event), using the 2000 Washington County Topographic Survey for the pre-event elevation.

"Lowest floor elevation" means the lowest floor of the lowest enclosed area including basement. An unfinished or flood resistant enclosure, used solely for parking of vehicles, building access, or storage in an area other than a basement area is not considered a building's lowest floor.

"Management Category 1" means High Quality/Highest Priority Wetlands. Refer to APPENDIX 0.2 for additional detail.

"Management Category 2" means Stream Corridor and Shoreland Wetlands that are not a Management Category 1. Refer to APPENDIX 0.2 for additional detail.

"Management Category 3" means Isolated Wetlands that are not a Management Category 1. Refer to APPENDIX 0.2 for additional detail.

"Management Category 4" means Utilized Wetlands. Refer to APPENDIX 0.2 for additional detail.

"Mapped natural community" means a natural community identified in "Natural Communities and Rare Species Map for Washington County" (Minnesota Department of Natural Resources, Natural Heritage Program, 1990), or in a natural resources inventory using the same protocol as established by the Minnesota Department of Natural Resources.

"Middle zone" is a vegetative buffer zone that extends from the upland edge of the streamside zone to the interior edge of the outer zone of a watercourse.

"Mill and overlay" means removal of the top layer of bituminous pavement of a roadway or street by the grinding action of a large milling machine, followed by the placement of a new layer of bituminous or concrete pavement.

“Multi-family residential” means apartment, townhouse, or twinhome complexes.

“Natural environment lake” means a lake so designated by the Minnesota DNR pursuant to Minn. Rules chapter 6120.3000.

“NURP standard” means the design criteria developed pursuant to the Nationwide Urban Runoff Program (U.S. EPA, 1983) and published by the Minnesota Pollution Control Agency in “Protecting Water Quality in Urban Areas 1991” (sections 4.1-4 through 4.1-7), as may be amended.

“Ordinary high-water level” or "OHWL" means the boundary of a public water or wetland, and is an elevation indicating the highest water level that has been maintained for a sufficient period of time to leave evidence on the landscape, commonly indicated by a change from predominantly aquatic to predominantly terrestrial vegetation. For watercourses, the ordinary high-water level is the elevation of the top of bank of the channel. For basins and flowages, it is the operating elevation of the summer pool. The Minnesota DNR makes all official determinations of ordinary high-water levels.

“Outer zone” is a vegetative buffer zone that extends from the upland edge of the middle zone of a watercourse to a point specified in these rules.

“Person” means any natural person, partnership, unincorporated association, corporation, limited liability company, municipal corporation, state agency, or political subdivision of the State of Minnesota.

"Public water" has the definition at Minn. Stat. §103G.005, subd. 15.

“Pre-development” means soil permeability conditions at the time preceding the proposed creation of impervious surface or substantial change in site hydrology or infiltration by alteration of site vegetation or contour, as calculated in accordance with sub-section 2.5.3.

“Receiving water” means the first of the following types of surface waters encountered by stormwater flow from the site: a lake or stream designated as a public water pursuant to Minn. Stat. §103G.005, subd. 15, as amended; or a wetland.

“Reconstruction” means the rebuilding, repair or alteration of a structure, surface, or facility for which the cost would equal or exceed 50 percent of the replacement cost.

“Recreational development lake” means a lake so designated by the Minnesota DNR pursuant to Minn. Rules chapter 6120.3000.

“Redevelopment” means any proposal to re-subdivide land, or any land-disturbing activity or addition of impervious surface to a developed site.

“Regional facility” means a stormwater management facility designed to manage the stormwater runoff from five or more parcels.

“Revegetation” means the planting of native species.

“Seasonal high water table” means the highest groundwater elevation expected on a seasonal basis.

"Shore impact zone" means land located between the OHWL of a public water and a line parallel to it at a setback of 50 percent of the structure setback applicable under the governing shoreland ordinance.

“Steep slope” means land with an average slope exceeding 12 percent over a distance of 50 feet or more upgradient of a water resource, calculated using a reasonably precise topographic surface model.

“Stream” means watercourses identified as “Public Waters” under Minn. Stat. §103G.005, Subd. 15.

“Stream buffer zone” means a streamside zone, middle zone or outer zone.

“Streamside zone” is a vegetative buffer zone that extends from the ordinary high-water mark of a watercourse to the interior edge of the middle zone.

"Structure" means anything that is constructed or placed on the ground and that is, or is intended, to remain for longer than a brief, temporary period of time.

“Subdivision” means the separation of an area, parcel, or tract of land under single ownership into two or more parcels, tracts, lots, or long-term leasehold interests where the creation of the leasehold interest necessitates the creation of streets, roads, or alleys, for residential, commercial, industrial, or other use or any combination thereof, except those separations: where all the resulting parcels, tracts, lots, or interests will be 20 acres or larger in size and at least 500 feet in width for residential uses and five acres or larger in size for commercial and industrial uses; creating cemetery lots; resulting from court orders, or the adjustment of a lot line by the relocation of a common boundary.

“Subwatershed” means the drainage area of the receiving water for the site.

“Utility” means a service, or part thereof, that conveys water, wastewater, steam, gas, electricity, telephone, or a similar commodity or service, including but not limited to cable access television and data transmission lines, but excluding stormwater management facilities.

“Waterbody” means a watercourse or waterbasin.

“Waterbasin” means an enclosed natural depression with definable banks, capable of retaining water.

“Watercourse” means a natural channel that has definable beds and banks capable of conducting confined runoff from adjacent land.

“Wet detention” means the storage of runoff in a basin, in the permanent pool below the outlet control structure, to allow for settling of particles.

"Wetland" means land transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. A wetland (a) is predominated by hydric soils; (b) is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions; and (c) under normal circumstances, supports a prevalence of hydrophytic vegetation. A wetland is a waterbasin if it meets the definition of that term.

"Wetland treatment system" means a constructed basin designed to replicate the physical and biological mechanisms for nutrient and sediment removal inherent of a natural wetland.

APPENDIX 0.1
Groundwater-Dependent Natural Resource Types

(Following Minnesota Land Cover Classification System protocol)

Cold water trout stream

Spring creek

Groundwater-dependent lake

Tamarack swamp seepage subtype

Tamarack swamp minerotrophic subtype

Tamarack swamp sphagnum subtype

White cedar swamp seepage subtype

Black spruce bog

Black spruce bog intermediate subtype

Black spruce bog raised subtype

Black ash swamp seepage subtype

Mixed hardwood swamp seepage subtype

Scrub tamarack poor fen

Birch bog, spiraea temporarily flooded shrubland

Shrub fen

Poor fen shrub subtype

Rich fen shrub subtype

Wet brush-prairie seepage subtype

Shrub swamp seepage subtype

Alder swamp - saturated soils

Birch bog, spiraea shrubland - saturated soils

Alder swamp

Birch bog, spiraea shrubland - seasonally flooded

Birch bog, spiraea shrubland - semipermanently flooded

Wet prairie seepage subtype - saturated soils

Calcareous seepage fen

Calcareous seepage fen boreal subtype

Calcareous seepage fen prairie subtype

Poor fen

Poor fen sedge subtype

Poor fen patterned fen subtype

Rich fen

Rich fen sedge subtype

Rich fen floating-mat subtype - saturated soils

Rich fen patterned fen subtype

Open bog Open sphagnum bog schlenke subtype

Graminoid bog

Wet meadow floating mat subtype

Rich fen floating-mat subtype - semipermanently flooded

Rich fen floating-mat subtype - intermittently exposed

Rich fen floating-mat subtype - permanently flooded

Talus slope algific subtype

Seepage meadow

Wet cliff

Moderate cliff

Midwest sedimentary dripping cliff

Saline spring mud flats

APPENDIX 0.2
Wetland Management Category Details

"Management Category 1" means High Quality/Highest Priority Wetlands. The District Wetland Management Plan includes a map showing the classification of wetlands identified to date. The Minnesota Routine Assessment Method (MnRAM) should be used to classify wetlands not yet classified. Wetlands classified as High Quality/Highest Priority have at least one of the following characteristics:

- Wetlands rated with exceptional vegetative diversity/integrity, which may include wetlands with natural communities not significantly impacted by invasive species or other human-induced alterations, wetlands harboring endangered or threatened plant species, or rare wetland habitats classified as imperiled (S1) or critically imperiled (S2) by the state rankings.
- Wetlands that have groundwater dependent plant communities and have a vegetative diversity/integrity rating of medium or higher are also placed in this category. These wetlands may have suffered some degradation from human influences due to their heightened sensitivity.
- Wetlands with a high vegetative diversity/integrity rating and a high rating for hydrologic regime. The vegetative community in these wetlands typically has been only slightly affected by humans and still maintains high functioning levels for hydrologic regime, which is critical to wetland sustainability.
- Wetlands with a high vegetative diversity/integrity rating and a high rating for wetland water quality; OR wetlands with a high vegetative diversity/integrity rating and a high rating for downstream water quality. The vegetative community in these wetlands typically has been only slightly affected by humans and still maintains high function to maintain water quality, which is critical to wetland sustainability.
- Wetlands rated as exceptional for wildlife habitat. These include wetlands known to harbor endangered or threatened animal species, rare communities, or wildlife refuges and fish and wildlife management areas whose purpose is maintaining suitable habitats for wildlife.

"Management Category 2" means Stream Corridor and Shoreland Wetlands that are not a Management Category 1. The District Wetland Management Plan includes a map showing the classification of wetlands identified to date. The Minnesota Routine Assessment Method (MnRAM) should be used to classify wetlands that are not included in the current classification. Wetlands classified as Stream Corridor and Shoreland Wetlands have at least one of the following characteristics:

- All Stream Corridor and Shoreland Wetlands not already classified as Management Category 1.
- Wetlands rated as high for amphibian habitat.
- Wetlands rated as exceptional or high for fish habitat. These wetlands include those specifically managed for fish management; designated trout streams, lakes or adjacent wetlands; and known spawning habitat for game fish.
- Wetlands with a medium vegetative diversity/integrity rating and a high rating for hydrologic regime. The vegetative community in these wetlands has only been moderately affected by humans and still maintains high functioning levels for hydrologic regime, which is critical to wetland sustainability. These wetlands would likely benefit from active management.

- Wetlands that are highly sensitive to stormwater impacts and have a vegetative diversity/integrity rating of medium or high were also placed in this category.
- Wetlands with a medium vegetative diversity/integrity rating and a high rating for wetland water quality. The vegetative community in these wetlands has only been moderately affected by humans and still maintains high functioning levels for water quality, which is critical to wetland sustainability.

"Management Category 3" means Isolated Wetlands that are not a Management Category 1. These wetlands include all other isolated wetlands not already classified as Management Category 1 or 2. The District Wetland Management Plan includes a map showing the classification of wetlands identified to date. The Minnesota Routine Assessment Method (MnRAM) should be used to classify wetlands that are not included in the current classification.

"Management Category 4" means Utilized Wetlands. These wetlands include pre-existing basins used heavily as livestock watering wetlands, stormwater ponds dug out from existing wetland, and other severely degraded wetlands (degraded as defined by WCA). The District Wetland Management Plan includes a map showing the classification of wetlands identified to date. The Minnesota Routine Assessment Method (MnRAM) should be used to classify wetlands that are not included in the current classification.

1.0 PROCEDURAL REQUIREMENTS

1.1 Application Required. Any person undertaking any activity for which a permit is required by these Rules shall first submit for review a permit application, engineering design data and such other information to the District as may be required by these Rules to determine whether the improvements are in compliance with the criteria established by these Rules. All permit applications must bear the original signature of the landowner.

1.2 Forms. Permit applications shall be submitted using forms provided by the District. Forms are available from the District office or on the District's website. Permit applications shall be addressed to the District office.

1.3 Action by Board of Managers. The Board of Managers shall act, generally within 60 days of receipt of a complete application and complete set of required exhibits, in accordance with Minnesota Statutes, Section 15.99. as amended. No application is considered complete unless all required items listed in each applicable rule are submitted in the form acceptable to the District. The District shall, within fifteen (15) business days from receipt of a permit application, provide written notice to the applicant of any items needed to complete the application. Permit decisions will be made by the Board except as delegated to the Administrator by written resolution. Delegation authority may include permit issuance by the Administrator, without case-by-case Board action, for a subset of regulated activities defined by the Board.

1.4 Issuance of Permits. The permit will be issued only after applicant has satisfied all requirements and conditions for the permit, has paid all required District fees, and the District has received any required surety.

1.5 Conditional Approval. The District may conditionally approve an application, but such approval will not result in the issuance of a permit until all conditions precedent to the approval have been resolved. All conditions must be satisfied within twelve (12) months of the date of conditional approval. If a permit is not issued within the 12-month period, the applicant may reapply for a permit and pay applicable permit fees.

1.6 Conformity with Local Requirements. The District will review applications for permits involving land development and land disturbance concurrently with municipal or county review. The permit will be issued only after the applicant demonstrates that the plan has received preliminary approval from each local government in which development is to take place and completion of the Wetland Conservation Act (WCA) process. The requirement of preliminary approval shall mean:

(a) Preliminary plat approval if required for the development; or

(b) If plat approval is not required, issuance of a local government permit for the project.

The applicant is encouraged to submit a concept plan and supporting documentation for a pre-permit review by the District prior to initiating the formal permit review process.

1.7 Inter-governmental Coordination. The District will work with municipalities and government agencies on a case-by-case basis to develop a memorandum of understanding to reduce overlapping regulatory authority.

1.8 Time for Submittal. A permit application which includes all required exhibits shall be received by the District at least 28 days prior to the scheduled meeting date of the Board of Managers. Late submittals or submittals with incomplete exhibits will be scheduled to a subsequent meeting date pending receipt of a complete submittal.

1.9 Compliance & Modifications. Issuance of a permit based on plans, specifications or other data shall not prevent the District from thereafter requiring the correction of errors in the approved plans, specifications and data, or from preventing any activity being carried on in violation of these Rules. The permittee shall not modify the approved activity or deviate from the plans and specifications on file with the District without the prior approval of District staff. Significant modifications to the approved plans and specifications shall require Board approval.

1.10 Inspection & Monitoring. After issuance of a permit, the District may perform such field inspections and monitoring of the approved activity as the District deems necessary to determine compliance with the conditions of the permit and these Rules. Any portion of the activity not in compliance shall be promptly corrected. In applying for a permit, the applicant consents to District entry upon the land for field inspections and monitoring, or for performing any work necessary to bring the activity into compliance at the permittee's expense.

1.11 Suspension or Revocation. The District may suspend or revoke a permit issued under these Rules if the permit was issued in error or on the basis of incorrect or incomplete information supplied, or in violation of any provision of these Rules, or if the preliminary and final subdivision approval received from a municipality or county is not consistent with the conditions of the permit.

1.12 Permit Renewals and Transfers. A permit is valid for a period of ~~one~~2-years from the date of issuance subject to suspension or revocation as provided under these Rules. ~~If the work is commenced within one year from the date of permit issuance, the permit is valid as long as the project is actively progressing toward completion.~~ To renew or transfer a permit, the permittee must notify the District in writing, prior to the permit expiration date, of the reason for the renewal or transfer request. The request will be reviewed by the Board of Managers at the next available board meeting provided all information submitted to the District is current.

1.13 Permit Fees. The District will charge permit fees in accordance with a schedule that will be maintained and may be revised from time to time by the Board of Managers to ensure that permit fees cover the District's actual costs of administrating and enforcing permits. The current fee schedule may be obtained from the District office or the District website. An applicant must submit the required permit fee to the District at the time it submits its permit application. The Board reserves the right to increase the permit fee, in accordance with the approved fee schedule, as a penalty for work without a permit. No permit fee will be charged to the federal government, the State of Minnesota or a political subdivision of the State of Minnesota.

In cases where the permit approved by the District requires extended or supplementary monitoring of the project by District staff or consultants, the District shall notify the applicant of the monitoring fee due. The fee shall be paid to the District within thirty (30)

days from the date of notice and failure to pay the fee shall constitute a violation of the permit terms and the District may rescind the permit.

1.14 Performance Surety.

(a) Policy: It is the policy of the Board of Managers to conserve the District's water resources by assuring compliance with its rules. The District assures compliance by requiring a bond or other surety to secure performance of permit conditions and compliance with District rules, as well as protection of District water resources in the event of noncompliance with permit conditions and/or rules. A project for which the permittee is the federal government, the State of Minnesota or a political subdivision of the State of Minnesota is exempt from surety requirements.

(b) Performance Surety Requirement: A surety or sureties, when required, must be submitted in a form acceptable to the District. The District will require applicants to submit a surety or sureties in accordance with a schedule of types and amounts that will be maintained and may be revised from time to time by the Board of Managers. The current schedule of surety amounts and acceptable forms and sources may be obtained from the District office or the District website.

An applicant may submit to the District a performance bond or an irrevocable letter of credit in terms satisfactory to the District to secure performance of permit conditions for activities for which the required surety amount as determined above is in excess of $5,000. The performance bond or letter of credit must be submitted before the permit is issued.

(c) Form and Contents of Performance Bond or Letter of Credit:

(1) The performance bond or irrevocable letter of credit must be in a form acceptable to the District and from a surety licensed to do business in Minnesota.

(2) The performance bond or irrevocable letter of credit must be in favor of the District and conditioned upon the performance of the party obtaining the performance bond or letter of credit for the activities authorized in the permit, and compliance with all applicable laws, including the District's rules, the terms and conditions of the permit and payment when due of any fees or other charges required by law or by the District's rules. The performance bond or irrevocable letter of credit must provide that if the conditions are not met, the District is entitled to full payment of the performance bond or letter of credit.

(3) The surety must be valid and in force for ~~at least 1-year period from completion of~~ the duration of the project and shall contain a provision that it may not be canceled or released except pursuant to the terms of sub-section 1.14(d).

(4) Interest will not be paid on a cash surety.

(d) Release of Performance Surety. Upon written notification from permittee of completion of the permitted project, the District will inspect the project to determine if it is constructed in accordance with the terms of the permit and District rules. If

the project is completed in accordance with the terms of the permit and District rules and the party providing the performance surety does not have an outstanding balance of money owed to the District for the project, including but not limited to unpaid permit fees, legal fees, and engineering fees associated with site compliance and satisfaction of permit terms and conditions, the District will release the performance bond or letter of credit, or return the cash surety if applicable. Final inspection compliance for approval of a Certificate of Completion includes, but is not limited to, confirmation that all disturbed soil is adequately stabilized, all erosion and sediment control BMPs and stormwater management features have been constructed or installed as designed and are functioning properly, and completion of all required monitoring of wetland mitigation areas. The District may return a portion of the surety if it finds that a portion of the surety is no longer required to assure compliance with District rules.

1.15 Appellate Procedure and Review. Any person aggrieved by enforcement of these Rules and Regulations or by any Order of the District may appeal therefrom in accordance with the appellate procedure and review as provided in Minnesota Statutes Chapter 103D.

1.16 Regular Meetings. Regular meetings of the Board of Managers are held at the Scandia City Hall, 14727 - 209th Street N., Scandia, MN, unless otherwise noticed. Meeting schedules and agendas may be obtained by contacting the District office.

2.0 STORMWATER MANAGEMENT

2.1 Purposes and Policy. It is the policy of the District to:

2.1.1 Preserve natural infiltration, groundwater recharge and subsurface flows that support groundwater dependent resources including lakes, streams, wetlands, plant communities and drinking water supplies;

2.1.2 Work toward restoration of natural hydrology by preventing transfer of surface water runoff across subwatershed boundaries and by limiting peak off-site stormwater flow to pre-settlement rates;

2.1.3 Limit off-site stormwater volume to prevent flooding and thermal impacts to groundwater dependent resources;

2.1.4 Require management of stormwater to limit the conveyance of sediment, phosphorus and other pollutants to ground and surface waters and promote water quality; and

2.1.5 Minimize drainage from impervious surfaces to stormwater conveyance systems and preserve the natural hydrology of landlocked basins to minimize basin and downgradient flood risk.

2.2 Applicability. Subject to an exception in section 2.7, the requirements of this Rule apply to:

(a) Residential subdivision of four or more lots;

(b) Any project (including linear projects such as road, bikeway, sidewalk, etc.) creating impervious surface that exceeds either one acre or five percent of a site, whichever is less; or

(c) Land disturbance of 5,000 square feet or more that includes creating impervious surface within 1,000 feet of and tributary to a groundwater-dependent natural resource or public water. Appendix 2.1 identifies areas subject to this ~~criteria~~criterion. The amount of land disturbance shall be estimated as 3 times the amount of impervious surface unless otherwise delineated and calculated by the applicant.

(d) New or continued m~~M~~ining operations.

(e) Projects requiring a variance from the applicable shoreland or St. Croix Riverway ordinance relating to structure setback from the property line adjacent to the resource or impervious surface percentage.

(f) Redevelopment activity. If the proposed activity ~~will~~ disturbs more than 50 percent of the existing impervious surface and results in a net increase in impervious surface, the criteria of section 2.4 will apply to all impervious surface on the project site. Otherwise, the criteria will apply only to ~~net additional~~the new and reconstructed impervious surface. Notwithstanding, for road and other linear projects, only the net ~~additional~~ increase in impervious surface will be considered.

2.3 Regulation. Before any activity described at section 2.2 commences, a stormwater management plan shall be submitted to the District in conformity with the requirements of this Rule, and a permit shall be secured from the District. The managers will review a stormwater management plan; however, the permit will be issued only after the applicant demonstrates that the project has received preliminary approval from the local land use authority, in accordance with section 1.6 of these Rules, indicating compliance with existing local requirements and completion of the Wetland Conservation Act (WCA) process. The applicant is encouraged to submit a concept plan and supporting documentation for a pre-permit review by the District prior to initiating the formal permit review process.

2.4 Standards.

2.4.1 Management Standards. An applicant for a stormwater management permit must demonstrate to the District that the proposed land-altering activity:

(a) Will not increase peak stormwater flow rate from the site, as compared with the peak stormwater flow rate calculated in accordance with sub-section 2.5.3, for a 24-hour precipitation event with a return frequency of 2, 10, and 100 years for all points where discharges leave a site.

(b) Will not increase stormwater flow volume from the site, as compared with the stormwater flow volume calculated in accordance with sub-section 2.5.3, for a 24-hour precipitation event with a return frequency of 2 years, or 10 years within a landlocked basin or a subwatershed draining to a landlocked basin.

(c) Will provide water quality Best Management Practices (BMPs) sized to infiltrate and/or retain the runoff volume generated on the site by the 2 year, 24-hour event under the developed condition for all points where discharges leave a site. For that portion of the 2 year, 24-hour event runoff volume that is not required to be infiltrated under paragraph 2.4.1(b), water quality BMPs or additional infiltration will be incorporated. The order of preference for water quality BMPs is biofiltration, filtration, wetland treatment system, extended detention, and wet detention in accordance with NURP standards.

(d) Will not increase the bounce in water level or duration of inundation, for a 24-hour precipitation event with a return frequency of 2, 10, and 100 years in the subwatershed in which the site is located, for any downstream lake or wetland beyond the limit specified in Appendix 2.2.

An applicant for a residential project, including subdivision of less than 4 lots, that creates ¼ acre or less of impervious surface may demonstrate alternative compliance with the management standards via completion of the District's *Small Residential Project Stormwater Worksheet,* available from the District office or on the District's website.

2.4.2 Obligation to Ensure Performance. Before work under the permit is deemed complete, the permittee must submit as-built plans and complete the requested assessment consistent with the standards of the *Assessment of*

Stormwater Best Management Practices Manual demonstrating that at the time of final stabilization, stormwater facilities conform to design specifications. At the discretion of the Board, a final inspection by the District may be accepted in lieu of as-built plans. As a specific condition to a permit, the District may impose monitoring, performance evaluation, additional compliance measures or other requirements for the purpose of meeting management standards.

2.4.3 Assurance of Downgradient Capacity. An applicant may be required to demonstrate that downgradient stormwater conveyance structures and features will be adequate to handle proposed increased peak flow or flow volume from the site.

2.4.4 Waste Disposal. No refuse, garbage, or noxious materials shall be dumped in any public waters or where surface runoff could directly carry materials to public waters.

2.5 Management.

2.5.1 Sequence of Management Methods. To meet the standards of section 2.4, site-based stormwater management methods shall be used in the following sequence. A preferred method shall be used to the degree feasible before a less-preferred method is used. Treatment in a regional facility shall be governed not by this sub-section, but by sub-section 2.7.4.

(a) Better Site Design practices

(b) On-site infiltration

(c) Off-site regional infiltration

(d) Biofiltration

(e) Filtration

(f) Wetland treatment system

(g) Extended detention

(h) Wet detention in accordance with NURP standards

(i) Other methods

2.5.2 Better Site Design Practices. Activity creating impervious surface must explicitly address the use of Better Site Design (BSD) techniques as outlined in Chapter 4, “Minnesota Stormwater Manual“ (Minnesota Pollution Control Agency, 2006 and subsequent revisions). Better Site Design involves techniques applied early in the design process to reduce impervious cover, conserve natural areas and use pervious areas to more effectively treat stormwater runoff and promote a sequential treatment or “treatment train” approach to runoff management. An applicant must show that BSD techniques were evaluated in developing the design of a proposed project and demonstrate the infeasibility or inapplicability of techniques that were rejected.

2.5.3 Stormwater Management Plan Modeling Requirements.

(a) A hydrograph method or computer program based on Natural Resources Conservation Service Technical Release #20 (TR-20) and subsequent guidance must be used to analyze stormwater runoff for the design or analysis of flows, volumes and water levels within and off the project site.

(b) Curve numbers (CN-values) used to calculate the pre-development rate and volume control standard for the site for upland areas will be as follows:

Hydrologic Soil Group	Curve Number
A	30
B	58
C	71
D	78

A CN-value of 98 may be utilized for the existing impervious surface of public roadways.

(c) All assumptions for CN-values and impervious surface area estimates must be clearly stated. A distributed CN-value approach shall be used to calculate runoff flows.

(d) For modeling of stormwater runoff in the post-development condition, the Hydrologic Soil Group (HSG) and corresponding CN-value of areas within the construction limits is to be shifted down one classification for HSG B & C and ~~(or~~ ½ classification for HSG A~~)~~ to account for the impacts of grading on soil structure unless the plan specifies a District-approved method to restore soil structure.

(e) The analysis of flood levels, storage volumes, and discharge rates for waterbodies and stormwater management basins must include the NOAA Atlas 14 values, as amended, for the 2 year, 10 year and 100 year return period, 24-hour rainfall events and the 10-day snowmelt event (Curve Number 100), in order to identify the critical duration flood event.

The District Engineer may require analysis of additional precipitation durations to determine the critical duration flood event. Analysis of the 10-day snowmelt event is not required for stormwater management detention basins with a defined outlet elevation at or below the 100 year return period, 24-hour rainfall event elevation.

2.5.4 Acquisition of Property or Contract Rights. An applicant relying on on- or off-site facilities for complying with the standards of section 2.4 must possess all land access rights necessary for design, construction, and long-term operation and maintenance of the facilities. This sub-section does not apply to treatment in a regional facility pursuant to paragraph 2.7.4(a).

2.5.5 Infiltration Pretreatment. Flows to infiltration facilities must be pretreated for long-term removal of at least 50 percent of sediment loads. In the event an infiltration facility is constructed in the vicinity downstream of a potential Hot Spot, a skimmer shall be installed to facilitate clean-up.

2.5.6 Basin in Contributing Area to Groundwater-Dependent Natural Resource. A stormwater basin within the surface contributing area to a groundwater-dependent natural resource must contain and infiltrate the volume generated by a two-year, 24-hour storm event over the disturbed area, if feasible. The basin bottom must be at least three feet above the seasonally high water table, bedrock or other impeding layer. If this infiltration standard is not met, basin outflow must be non-erosive and routed through a subsurface system, flow spreader or other device that discharges water through or across the ground to lower discharge temperature to that of the ambient soil.

2.5.7 Stormwater Management Facility Maintenance. All stormwater management structures and facilities constructed in order to meet the requirements of this Rule must be designed for maintenance access and must be properly maintained in perpetuity to assure that they continue to function as designed. The maintenance responsibility must be memorialized in a document executed by the property owner in a form acceptable to the District and recorded on the deed. Alternatively, a public permittee may meet its perpetual maintenance obligation by executing a programmatic or project-specific maintenance agreement with the District. The executed maintenance document shall be recorded with the County before permit issuance or immediately after plat approval and filing, if applicable, and prior to the sale of lots.

2.5.8 Form of Recording. Rights under sub-section 2.5.4, a maintenance instrument under sub-section 2.5.7, and any commitment of indefinite duration that is a condition of a District permit shall be recorded with the County as an easement or declaration in a form acceptable to the District.

2.5.9 Platting or Easement Documents. Applicant must provide platting or easement documents showing conveyance to the local land use authority of drainage and ponding/flowage easements over all stormwater management facilities, stormwater conveyances, wetlands, and on-site floodplain up to the 100-year event. Said easements must provide for adequate access to maintain stormwater management facilities and stormwater conveyances.

2.5.10 Conformance to Floodplain and Drainage Alteration Requirements. In addition to all other legal requirements that may apply, all land-altering and related stormwater management activity pursuant to Rule 2.0 shall comply with building elevation requirements of Rule 7.0.

2.5.11 Infiltration Facilities and Vulnerable Wellhead Protection Areas. Infiltration practices must be designed and placed in accordance with the current version of the Minnesota Department of Health guidance called “Evaluating Proposed Stormwater Infiltration Projects in Vulnerable Wellhead Protection Areas.”

2.6 Required Exhibits. The following items, submitted in duplicate and certified by a professional engineer registered in the State of Minnesota, registered land surveyor, or other appropriate professional shall accompany all permit applications submitted to the District pursuant to Rule 2.0. Required exhibits may be waived at the discretion of the District Administrator if the exhibit is not needed for the evaluation of a specific project.

2.6.1 Property lines and delineation of lands under applicant's ownership and location of the site with respect to known groundwater dependent natural resources;

2.6.2 For existing and proposed conditions, topography showing all on- and off-site subwatersheds contributing to surface flows onto or from the site;

2.6.3 The location, alignment and elevation of proposed and existing stormwater facilities;

2.6.4 Delineation of existing on-site wetland, shoreland, draintiling and floodplain areas as defined in the current Federal Emergency Management Agency (FEMA) study;

2.6.5 Existing and proposed normal and 100-year water elevations on site;

2.6.6 Existing and proposed site contour elevations at two-foot intervals, related to NGVD 1929 datum or NAVD 1982 or 1984 datum;

2.6.7 Elevation of the OHWL of each public water on the site, if determined by the Minnesota Department of Natural Resources;

2.6.8 Construction plans, specifications and a maintenance schedule for all proposed facilities;

2.6.9 Stormwater runoff rate analyses for the 2, 10, and 100 year critical events and runoff volume for the 2-year event (or 10-year event for a landlocked basin) under off-site flow and volume standard condition and proposed conditions, using Appendix 2.3 to simulate infiltration losses in designed practices, or the District's *Small Residential Project Stormwater Worksheet,* if applicable per sub-section 2.4.1;

2.6.10 All hydrologic, water quality, and hydraulic computations completed to design the proposed facilities, including a demonstration of conformance, in the site aggregate, to water quality requirements of paragraph 2.4.1(c), or the District's *Small Residential Project Stormwater Worksheet,* if applicable per sub-section 2.4.1;

2.6.11 Documentation of conformance with an existing local stormwater management plan, or in cases where such a plan does not exist, documentation that the local government has reviewed the project;

2.6.12 Delineation of any flowage and drainage easements and other property interests dedicated to stormwater management purposes, including, but not limited to, county or judicial ditches;

2.6.13 Documentation as to the status of a National Pollutant Discharge Elimination System stormwater permit for the project from the Minnesota Pollution Control Agency and provide the Storm Water Pollution Prevention Plan (SWPPP) as it becomes available;

2.6.14 Geotechnical information including soil maps, borings, site-specific recommendations and other information needed to evaluate the proposed stormwater management design;

2.6.15 Thermal impact analysis demonstrating compliance with sub-section 2.5.6, if applicable;

2.6.16 Soil structure restoration plan demonstrating compliance with sub-section 2.5.3, if applicable;

2.6.17 Hydrologic and hydraulic computations completed to determine if a basin is landlocked; and

2.6.18 Delineation and determination of groundwater dependent natural resources present on the site.

2.7 Exceptions.

2.7.1 Infeasibility of On-Site Infiltration. If the District finds that Better Site Design practices and on-site infiltration, applied to the extent feasible, are insufficient to maintain stormwater flow volume off-site at the level specified in paragraph 2.4.1(b), the applicant will be excepted from strict compliance with that paragraph. The use of Better Site Design practices, on-site infiltration and off-site regional infiltration shall be required to the extent feasible to reduce flow volume to the level specified in paragraph 2.4.1(b) before discharge into a receiving water. Compliance with paragraph 2.4.1(c) must be specifically demonstrated. Where infiltration is not feasible, water quality treatment sized for the 2-year, 24-hour event must be provided in accordance with the sequencing standards of sub-section 2.5.1. Infiltration is considered not feasible where documented soil contaminants preclude the use of infiltration practices or there is inadequate separation from the water table, bedrock, or other impeding layer.

2.7.2 Exception to Sequencing. The District may grant an exception to the sequencing requirements of paragraphs 2.5.1(d) through (i) on an applicant's demonstration that an alternative management technology or method would achieve the same levels of performance and reliability as the method specified at paragraph 2.5.1(d).

2.7.3 Large Lot Gravel Drives. The applicability sections 2.2(b) and 2.2(c) and the management standards of sub-section 2.4.1 are waived for private gravel and paved drives on residential lots at least 10 acres in size if the drive is bordered downgradient by vegetated open space or a vegetated filter strip with a minimum width of 5 feet and runoff from the drive does not discharge directly to a wetland, groundwater-dependent natural resource or public water.

2.7.4 Regional Treatment. Management of site stormwater in a regional facility constitutes compliance with Rule 2.0 in any of the following circumstances:

(a) Management is pursuant to and in accordance with a local water management plan approved by the District under Minnesota Statutes §103B.235.

(b) An applicant has demonstrated infeasibility of on-site and off-site infiltration under sub-section 2.7.1 and the District, in writing, finds that the proposed method of management would meet all standards of section 2.4 except for paragraph 2.4.1(b).

(c) Management is pursuant to and in accordance with a District-approved Comprehensive Stormwater Management Plan and corresponding ~~a cooperative agreement~~memorandum of understanding with the ~~District~~ local government that explicitly recognizes alternative compliance with Rule 2.0 under specified conditions.

2.7.5 Basin Outlet. Rule 2.0 does not apply to a capital project in a watershed management or approved local water management plan intended to create an outlet for a landlocked basin that conforms with Rules 7.0 & 8.0, as applicable.

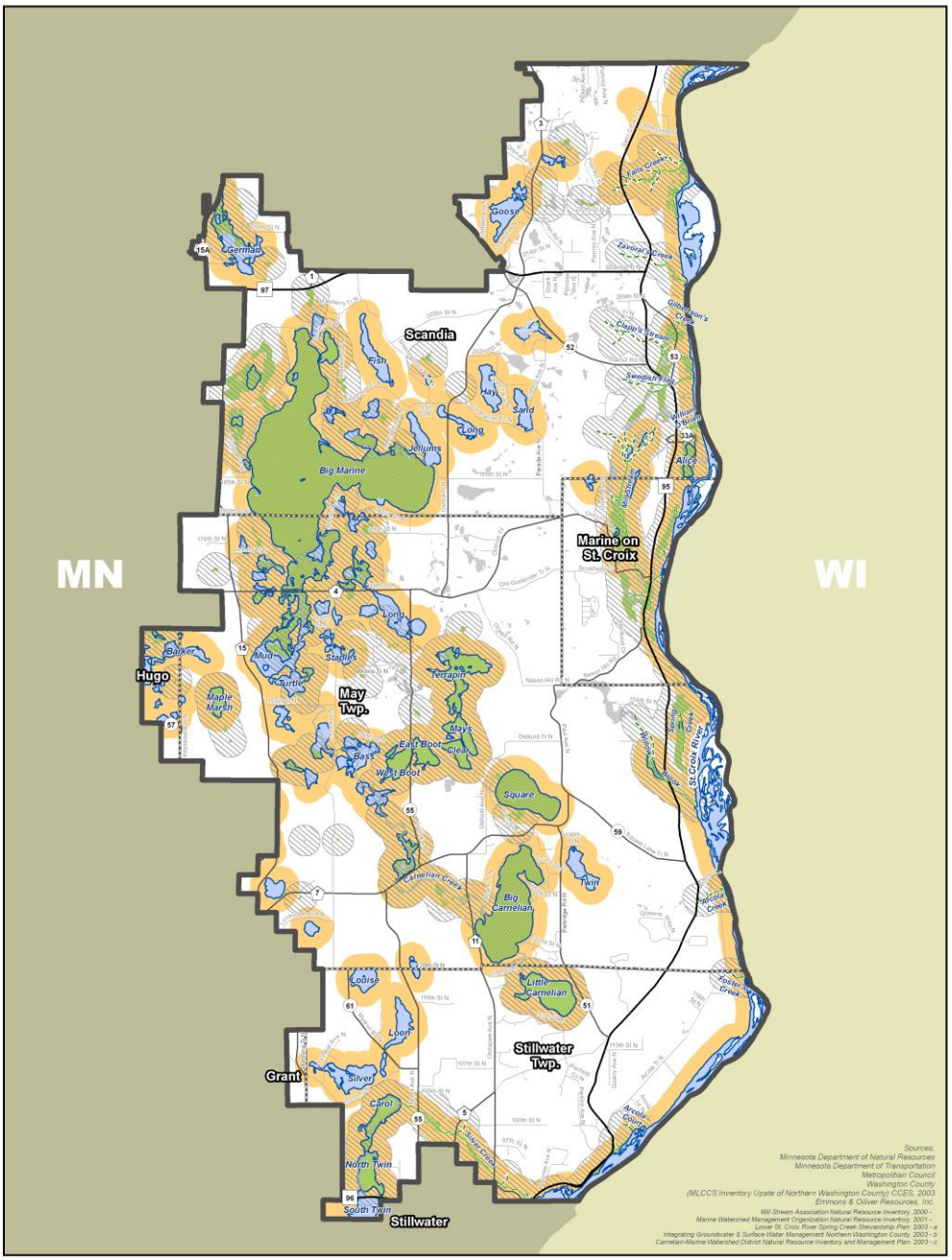
2.7.6 Master Plans. A permit is not required for construction on an individual lot within a residential subdivision if it conforms to a master development plan approved by the District that addresses all standards and conditions of Rule 2.0.

2.7.7 Exception to Platting or Easement Documents. The District may waive the requirements of sub-section 2.5.9 for single-family residential lot improvements provided stormwater facility maintenance responsibility is memorialized in accordance with sub-section 2.5.7.

2.7.8 Variance. The District may grant a variance to any requirement of Rule 2.0 under Rule 9.0.

2.8 Groundwater-Dependent Natural Resource Management Plans. Standards established in District approved management plans for individual groundwater dependent natural resources will supersede other District Rules as indicated in the approved management plan. All applicable District Rules not superseded by the approved management plan will still apply to the proposed project.

APPENDIX 2.1
Groundwater-Dependent Natural Resources & Public Waters Management Zones



APPENDIX 2.2
Bounce and Inundation Period Standards*

Wetland Susceptibility Class	Permitted Storm Bounce	Inundation Period for Two-Year event	Inundation Period for 10-Year or Greater Event
Highly susceptible	Existing	Existing	Existing
Moderately susceptible	Existing plus 0.5 feet	Existing plus 1 day	Existing plus 7 days
Slightly susceptible	Existing plus 1.0 feet	Existing plus 2 days	Existing plus 14 days
Least susceptible	No limit	Existing plus 7 days	Existing plus 21 days

* Adapted from "Stormwater and Wetlands Planning and Evaluation Guidelines for Addressing Potential Impacts of Urban Stormwater and Snowmelt Runoff on Wetlands," (Minnesota Stormwater Advisory Group, June 1997). Wetland susceptibility classification is determined based on wetland type:

- Highly susceptible wetland types include: sedge meadows, bogs, coniferous bogs, open bogs, calcareous fens, low prairies, coniferous swamps, lowland hardwood forests, and seasonally flooded basins.
- Moderately susceptible wetland types include: shrub-carrs, alder thickets, fresh (wet) meadows, and shallow & deep marches.
- Slightly susceptible wetland types include: floodplain forests and fresh wet meadows or shallow marches dominated by cattail giant reed, reed canary grass or purple loosestrife.
- Least susceptible wetland includes severely degraded wetlands. Examples of this condition include cultivated hydric soils, dredge/fill disposal sites and some gravel pits.

APPENDIX 2.3
Design Infiltration Rates

Hydrologic Soil Group	Soil Textures*	Corresponding Unified Soil Classification**	Infiltration Rate [inches/hour]
A	Gravel, Sandy Gravel, Silty Gravel	**GW** - Well-graded gravel or well-graded gravel with sand **GP** – Poorly graded gravel or poorly graded gravel with sand **GM** - Silty gravel or silty gravel with sand **SW** - Well-graded sand or well-graded sand with gravel	1.6
	Sand, Loamy Sand, Sandy Loam	~~**GM** - Silty gravel or silty gravel with sand~~ ~~**SW** - Well-graded sand or well-graded sand with gravel~~ **SP** – Poorly graded sand or poorly graded sand with gravel	0.8
B	Loam, Silt Loam	**SM** - Silty sand or silty sand with gravel	0.~~6~~45
		MH – Elastic silt or elastic silt with sand or gravel~~**ML – Silt**~~ ~~**OL** – Organic silt or organic silt with sand or gravel or gravelly organic silt~~	0.3
C	Sandy Clay Loam	**ML** – Silts, very fine sands, silty or clayey fine sands~~**GC** – Clayey gravel or clayey gravel with sand~~ ~~**SC** – Clayey sand or clayey sand with gravel~~	0.2
D	Clay Loam Silty Clay Loam Sandy Clay Silty Clay Clay	**GC** – Clayey gravel or clayey gravel with sand **SC** – Clayey sand or clayey sand with gravel **CL** – Lean clay or lean clay with sand or gravel or gravelly lean clay **OL** – Organic silt or organic silt with sand or gravel or gravelly organic silt **CH** – Fat clay or fat clay with sand or gravel or gravelly fat clay **OH** – Organic clay or organic clay with sand or gravel or gravelly organic clay ~~**MH** – Elastic silt or elastic silt with sand or gravel~~	~~< 0.2~~0.06

Source: Adapted from the "Design infiltration rates" table from the Minnesota Stormwater Manual, MPCA, (January 2014).~~Minnesota Stormwater Manual (2005)~~

*U.S. Department of Agriculture, Natural Resources Conservation Service, 2005. National Soil Survey Handbook, title 430-VI. (Online) Available: http://soils.usda.gov/technical/handbook/.

**ASTM standard D2487-00 Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System).

3.0 EROSION AND SEDIMENT CONTROL

3.1 Policy. It is the policy of the Board of Managers to require erosion and sediment control for land disturbing activities to prevent the siltation and sedimentation of streams, lakes, wetlands, and groundwater recharge areas in the District.

3.2 Applicability. All persons shall submit an erosion and sediment control plan to the District, and secure a permit from the District approving the erosion control plan for any grading, filling, or other land disturbing activities which involve:

(a) Land disturbance of one acre or more;

(b) Land disturbance of ¼ acre or more, if any part of the disturbed area is within 1,000 feet of and tributary to a groundwater-dependent natural resource or public water; or

(c) Any ~~land disturbance~~activity that requires a District permit under a rule other than Rule 3.

A person disturbing between 5,000 square feet and ¼ acre, if any part of the disturbed area is within 1,000 feet of and tributary to a groundwater-dependent natural resource or public water, but not requiring a permit under the criteria of this Rule, must submit a notice of intent on a form provided by the District and conform the activity to standard best practices published by the District.

3.3 Regulation. The plan must meet the following standards:

3.3.1 An erosion and sediment control plan must be prepared by a qualified individual showing proposed methods of retaining waterborne sediments on site during the period of construction and showing how the site will be restored, covered, or revegetated after construction, including a timetable for completion;

3.3.2 The erosion and sediment control plan shall be consistent with the specifications of the Minnesota Pollution Control Agency (MPCA) manual "Protecting Water Quality in Urban Areas" and its current revisions, and specifically shall conform to manual recommendations on the following subjects, as applicable:

(a) Implementation schedule and construction sequencing

(b) Critical erosion areas

(c) Limits of disturbed areas

(d) Stabilizing exposed and soil stockpile areas

(e) Stabilizing waterways and outlets (including managing five-year, 24-hour event)

(f) Protecting adjacent properties from erosion

(g) Storm sewer inlet protection

(h) Riprap at culvert outfalls

(i) Rock construction entrances

(j) BMP construction details

(k) Horizontal slope grading

(l) Permanent erosion control;

3.3.3 Sites with high erosion potential characterized by steep slopes or erodible soils may require the permit applicant to post a surety pursuant to Rule 1.0.

3.4 Site Maintenance Practices

3.4.1 All erosion and sediment control measures shall be installed, and the District shall be given three business days' notice in writing, before land disturbance commences.

3.4.2 The permittee is responsible at all times for the maintenance and proper operation of all erosion and sediment control facilities. On any property on which land-disturbing activity has occurred pursuant to a permit issued under this rule, the permittee shall, at a minimum, inspect, maintain and repair all disturbed surfaces and all erosion and sediment control facilities and soil stabilization measures every day work is performed on the site, and at least weekly, until land-disturbing activity has ceased. Thereafter, the permittee shall perform these responsibilities at least weekly until vegetative cover is established.

3.4.3 All exposed soil areas and soil stockpiles within 200 lineal feet of a wetland, a waterbody, a discernable surface drainage feature or a stormwater system inlet, and with a continuous downhill slope to that water feature, must be stabilized with erosion control measures, or temporary or permanent cover, within the indicated time after final grade is established:

Slope	Time
Steeper than 3:1	7 days
10:1 to 3:1	14 days
Flatter than 10:1	21 days

If an area is not permanently stabilized, it shall be managed in accordance with sub-section 3.4.4, below.

3.4.4 The weekly inspection requirement of sub-section 3.4.2, above, may be reduced to monthly between November 15 and snowmelt if site management conforms to the following:

(a) Exposed soils are stabilized with established vegetation, straw or mulch, matting, rock or other approved product such as rolled erosion control product. Seeding is encouraged, but alone is not sufficient.

(b) Temporary and permanent ponds and sediment traps are graded to capacity before spring snowmelt. This does not include infiltration/filtration facilities, which must be kept free of sediment until the site is fully stabilized.

(c) Sediment barriers are properly installed at necessary perimeter and sensitive locations.

(d) Slopes and grades are properly stabilized with approved methods. Rolled erosion control products must be used on slopes greater than 3:1 (Horizontal:Vertical) and where erosion conditions dictate.

(e) Stockpiled soils and other materials subject to erosion are protected by established vegetation, anchored straw or mulch, rolled

erosion control product or other durable covering; a barrier prevents movement of eroded materials from the location.

(f) All construction entrances are properly stabilized.

(g) Snow management protects erosion and sediment control measures.

3.4.5 If a site is actively worked after November 15, all steep slope measures, downgradient and perimeter sediment controls, stockpile stabilization and sediment control measures, swales, channels, culvert outfalls and storm sewer inlets must be maintained in proper working condition at the end of each work day.

3.4.6 After construction is complete, design contours must be established for permanent wet detention basins used as sediment basins during construction.

3.4.7 Erosion control measures such as silt fences and inlet protection shall not be removed until after the project is complete and the District determines that all disturbed areas have been fully stabilized, and shall be removed within 14 days thereafter.

3.5 Exceptions.

3.5.1 Agricultural Practices. A Rule 3.0 permit is not required for agricultural activity, provided that a grass or natural vegetation buffer zone extending one rod (16.5 feet) or the width of an applicable shore impact zone, whichever wider, is maintained along any waterbody, wetland or surface drainage conveyance. The buffer zone shall be maintained to effectively control sediment migration to surface waters and no fertilizer is to be used in the zone except during buffer establishment and/or when a soil test deems it necessary. Excluding areas constructed specifically for livestock watering, the practice of rearing livestock near streams, lakes and wetlands, and allowing livestock to walk on embankments and enter streams, lakes and wetlands is discouraged. Steep slopes disturbed by livestock access within the buffer zone do not qualify as a buffer under this exemption.

3.5.2 Large Lot Driveways. Private drives on residential lots at least 10 acres in size are excepted from paragraphs (a) and (b) of Section 3.2 Applicability if the drive is bordered downgradient by vegetated open space or a vegetated filter strip with a minimum width of 5 feet and does not discharge directly to wetland, groundwater-dependent natural resource or public water.

4.0 LAKE, RIVER, STREAM AND WETLAND BUFFER REQUIREMENTS

4.1 Purposes and Policy. The purpose of Rule 4.0 is to afford the greatest possible protection to buffers, and to the water quality and habitat of District water resources, consistent with the interest in avoiding undue disturbance to established public and private activities adjacent to lakes and streams.

Natural vegetation bordering the bed and banks of lakes, streams and wetlands serves a critical role in maintaining the ecological function of and community benefits deriving from those water resources. Purposes served by vegetative buffers include bank and shoreline stabilization; erosion prevention; filtration of nutrients, sediments and other pollutants from storm flows; protection of stream beds and banks and mitigation of downstream flooding through moderation of peak flows both into and within the resource; regulation of in-stream temperatures; preservation of aquatic and terrestrial habitat; protection of scenic resources; and maintenance of property values.

4.2 Applicability.

4.2.1 Rule 4.0 applies to land:

(a) Adjacent to a stream designated as a public water pursuant to Minn. Stat. §103G.005, subd. 15, as amended; a recreational development or natural environment lake designated as a public water under Minn. Stat. §103G.005, subd. 15, as amended; a groundwater-dependent natural resource, a wetland, or the St. Croix River; and

(b) That is (i) subdivided; or (ii) subject to a variance from the applicable shoreland or St. Croix Riverway ordinance relating to structure setback from the property line adjacent to the resource or impervious surface percentage; on or after March 1, 2010.

4.2.2 Rule 4.0 applies in addition to, and not in place of, any local shoreland ordinance.

4.3 Zone Widths.

4.3.1 Subject to the special provisions in sub-sections 4.3.2 through 4.3.7, buffer zones are as follows~~ as measured from the OHWL, delineated wetland edge, or top of bank as applicable to the resource~~:

(a) ~~Stream/Tributary/~~St. Croix River:

(1) Streamside zone: 25 feet from the Bluff Line or OHWL, whichever governs the Structure Setback set by the Lower Saint Croix National Scenic Riverway (LSCNSR) Management Rules

(2) Middle zone: 50 feet from upland edge of streamside zone

(3) Outer zone: from upland edge of middle zone to S~~s~~tructure S~~s~~etback set by the LSCNSR Management Rules~~under applicable shoreland ordinance~~

(b) Streams, Creeks & tributaries thereof:

(1) Streamside zone: 25 feet

(2) Middle zone: 50 feet from upland edge of streamside zone

(3) Outer zone: from upland edge of middle zone to structure setback under applicable shoreland ordinance

(~~b~~c) Natural Environment lake: 75 feet

(~~c~~d) Recreational Development lake: 50 feet

(~~d~~e) Manage 1 wetland: 100 feet

(~~e~~f) Manage 2 wetland: 75 feet

(~~f~~g) Manage 3 wetland: 50 feet

(~~g~~h) Manage 4 wetland: 50 feet

If a lake or wetland is a groundwater-dependent natural resource, the buffer will be 100 feet. If a stream is a groundwater-dependent natural resource, the streamside zone will be 50 feet, and the middle zone 100 feet.

4.3.2 Where a mapped natural community is associated with a stream or lake subject to Rule 4.0, the upland edge of the buffer or, for a stream, the middle zone shall be as specified in sub-section 4.3.1 or contiguous with the upland edge of the mapped natural community, whichever is greater.

4.3.3 Where a lake or wetland buffer, or a streamside or middle zone of a stream buffer, encompasses all or part of a steep slope, the zone or buffer shall extend to the distance specified in sub-section 4.3.1 or to the top of the slope, whichever is greater. A contour alteration or artificial structure on a steep slope constitutes a break in slope only if it indefinitely will dissipate upgradient velocity and trap upgradient pollutant loadings.

4.3.4 Where the 100-year floodplain extends further than the upland edge of the middle zone, the lake buffer or the wetland buffer specified in sub-section 4.3.1, the zone or buffer shall extend to the upland edge of the floodplain.

4.3.5 Where a drainageway conveying flow through the buffer extends outside the buffer width specified in sub-section 4.3.1, the buffer shall be extended along the drainageway with a width equal to that of the drainageway.

4.3.6 Where a lake or wetland of any size is encompassed within or contiguous to a stream to which Rule 4.0 applies, the lake or wetland buffer specified in sub-section 4.3.1 or Rule 8.0 shall apply in addition to, and not in place of, the applicable stream or lake buffer.

4.3.7 Buffer width may vary where the applicant can clearly demonstrate the need to vary from the District's Rule or when there is a potential to provide benefits to the resources of the District, provided that the average width at least equals the applicable width of sub-section 4.3.1, the buffer is at least half of that width or a minimum of 25 feet at all points, and the buffer provides water resource and habitat protection at least equivalent to that of a uniform buffer of the required width. Buffer area calculation will exclude any part of the buffer exceeding twice the width specified in sub-section 4.3.1.

4.4 Declaration and Delineation of Buffer Zones.

4.4.1 Before any disturbance of ground vegetation or contour, or placement of any structure on the ground, a declaration, easement, or other instrument incorporating the applicable requirements of Rule 4.0 shall be recorded with the County in perpetuity on the property title by the property owner.

4.4.2 A buffer shall be indicated by either permanent, flush to the ground markers or permanent, 4 ft post markers at the buffer's upland edge, with a design and text approved by District staff in writing. A marker shall be placed at each lot line, with additional markers at an interval of no more than 200 feet. If a District permit is sought for a subdivision, the monumentation requirement will apply to each lot of record to be created. On public land or right-of-way the monumentation requirement may be satisfied by the use of markers flush to the ground, breakaway markers of durable material, or a vegetation maintenance plan approved by District staff in writing.

4.5 Limitations in Buffer Zones.

4.5.1 At the time a buffer is created under Rule 4.0, the District will require a planting or landscaping plan and the implementation of that plan to establish adequate native vegetative cover for buffer areas that:

(a) Are disturbed; and

(b) Have vegetation composed more than 30 percent of undesirable plant species (including, but not limited to turf grass, reed canary grass, common buckthorn, purple loosestrife, leafy spurge, bull thistle, and other noxious or invasive weeds); or

(c) Consist of more than 10 percent of bare soil or turf grass.

4.5.2 Lake Buffers; Wetland Buffers; Streamside Zone of Stream or River Buffer. The following activities are prohibited within a lake buffer, and within the streamside zone of a stream or river buffer:

(a) Creating impervious cover except as allowed by sub-section 4.9.2.

(b) Excavating fill or placing fill or debris, except for temporary placement of fill or debris pursuant to duly-permitted work in the associated watercourse, in compliance with all conditions of the permit, and in compliance with section 4.7.

(c) Altering vegetation, except for (i) vegetative enhancements, as approved in writing by staff; and (ii) the removal of invasive exotic species or of trees for disease control or revegetation. A tree larger than six inches in diameter at a point two feet above the ground may be removed only on written authorization from District staff on a determination that the function of the buffer will not be diminished.

(d) Locating roads or utilities, except pursuant to a crossing of the associated watercourse in accordance with section 4.7. Structures and appurtenances associated with the road or utility shall not be located within the streamside zone unless no feasible alternative exists. Outlet, flood control and stormwater treatment facilities may be located within the zone if so approved under Rule 2.0, except that a stormwater basin is not permitted:

(i) Within the streamside zone of a stream buffer; or

(ii) Within the buffer of a groundwater-dependent natural resource, unless the basin bottom is at least three feet above the seasonal high water table, bedrock or other impeding layer and

the basin and associated facilities are designed and maintained to infiltrate the two-year, 24-hour precipitation event.

4.5.3 Middle Zone of Stream Buffer. The streamside zone prohibitions of sub-section 4.5.2 apply in the middle zone of a stream buffer, except that dead trees, limbs or branches may be removed from the buffer for any reason and without District approval.

4.5.4 Outer Zone of Stream Buffer. The following are prohibited in the outer zone of a stream buffer:

(a) Creating impervious cover except as allowed by sub-section 4.9.2.

(b) Placing fill or excavation, except in accordance with section 4.7 and other applicable law.

(c) Locating roads or utilities that involve the creation of impervious surface within the outer zone, except pursuant to a crossing of the watercourse and in accordance with section 4.7. Structures and appurtenances associated with the road or utility shall not be located within the outer zone unless no feasible alternative exists. Outlet, flood control and stormwater treatment facilities may be located within the zone if so approved under Rule 2.0.

4.6 Shoreline and Bank Stabilization. A measure to stabilize a shoreline or bank otherwise regulated under Rule 5.0 must comply with sub-section 4.7.1 but otherwise is excepted from the prohibitions of section 4.5.

4.7 Temporary Alterations.

4.7.1 Compliance with Rule 3.0 is required, irrespective of the area or volume of earth to be disturbed.

4.7.2 Buffer zones and the location and extent of vegetation disturbance shall be delineated on the erosion control plan.

4.7.3 Alterations must be designed and conducted to ensure only the smallest amount of disturbed ground is exposed for the shortest time possible. Mulches or similar materials must be used for temporary soil coverage and permanent native vegetation established as soon as possible.

4.7.4 Fill or excavated material shall not be placed to create an unstable slope.

4.7.5 When construction, land disturbance, fill or excavation activity occurs within the outer zone, the boundary between the outer and middle zones shall be demarcated with siltation or other fencing to prevent disturbance of vegetation within the middle zone. When construction, land disturbance, fill or excavation activity occurs within the middle zone, the boundary between the middle and streamside zones shall be demarcated with siltation or other fencing to prevent disturbance of vegetation within the streamside zone.

4.8 Roads and Utilities.

4.8.1 A structure, impervious cover or right-of-way maintained permanently in conjunction with a crossing of the waterbody or wetland shall minimize the area of permanent vegetative disturbance to the degree feasible. Minimization includes, but is not limited to, approach roads and rights-of-way that are

perpendicular to the crossing and of a minimum width consistent with use and maintenance access needs.

4.8.2 All work shall be in accordance with section 4.7.

4.9 Exceptions.

4.9.1 An impervious surface, road or utility in existence on March 1, 2010, its maintenance (including mill and overlay), reconstruction, and maintenance of its existing right-of-way are excepted from the operation of Rule 4.0 unless the impervious surface area increases. Any increase in area of a surface, road or utility excepted under this sub-section is subject to the Rule. A public road or a utility may be located within a buffer zone on a finding that avoiding the buffer is infeasible and in accordance with the standards of section 4.8.

4.9.2 Access to a waterbody or wetland for a lawful private or public use of the resource may be created and maintained. All access surfaces within the buffer zone, other than stairs, lifts, and docks allowed under the applicable shoreland ordinance, must be pervious. Permanent vegetative disturbance shall be limited to that necessary for access in light of the nature and extent of the permitted use. For the purpose of this exception, porous paving systems are not considered a pervious use. No facility, other than a footpath or a facility accessory to a permitted use of the waterbody and required by its nature to be adjacent to the water such as stairs, lifts, and docks allowed under the applicable shoreland ordinance, may be located within the buffer zone. Paved recreational trails must be located outside the buffer zone. The access zone must not exceed 50 feet in width or half the lot width, whichever is less.

4.9.3 The District may grant a variance from any requirement of Rule 4.0 pursuant to Rule 9.0 of these Rules. In determining the appropriateness of a variance, the District shall consider, among other factors, the parcel or lot of record as of the date Rule 4.0 was adopted; the common ownership of the property in question and adjacent property; and the availability of clustering, density compensation, variances and other means under applicable land use law that would allow desired uses to be located on portions of the parcel or lot not within buffer zones. An exception shall be limited to the extent necessary to put the property to a reasonable or economically viable use.

4.9.4 For properties where the existing primary structure location does not conform to the setback under the applicable shoreland ordinance and the structure location is not required to be brought into conformance with the applicable setback, the buffer width shall be 50% of the existing distance between the structure and the OHWL, bluff line, delineated wetland edge, or top of bank as applicable to the resource.

4.9.5 A 30-ft clear zone from primary structures may be maintained within the Outer zone of a stream buffer.

4.10 Required Exhibits. In addition to the District's standard application form, fees and sureties, the following exhibits shall accompany a permit application (one full-size; one set-reduced to maximum size of 11" x 17"):

4.10.1 Complete set of project plans that details project setting in relation to adjacent water body;

4.10.2 Plan indicating OHWL or delineated wetland edge of adjacent water body and applicable buffer width;

4.10.3 Buffer averaging justification if averaging requested under sub-section 4.3.7;

4.10.4 Evaluation of existing buffer vegetation and density in compliance with sub-section 4.5.1. Planting plan, planting list with species and planting density, and specifications and inspection and maintenance schedule to ensure project success if needed to comply with sub-section 4.5.1.

5.0 SHORELINE & STREAMBANK ALTERATIONS

5.1 Policy. It is the policy of the District to:

5.1.1 Limit alteration of a shoreline or streambank ~~under Rule 5.0~~ to instances where erosion of the shoreline or streambank is occurring or likely to occur.

5.1.2 Assure that improvements or alterations of shoreline and streambank areas comply with accepted engineering principles to prevent erosion; and

5.1.3 Preserve and, wherever feasible, enhance the ecological integrity and natural appearance of shoreline and streambank areas.

5.2 Regulation. No person shall disturb the natural shoreline or streambank partially or wholly below the ordinary high water mark of a waterbody, without first securing a permit from the District and posting a surety. ~~Disturbance of a shoreline or streambank wholly above the ordinary high water mark of a waterbody may require a permit under Rule 7.0. Disturbance above the ordinary high water mark may also require a permit under Rule 8.0 if disturbed area is wetland.~~

A permit will be issued only ~~on a demonstration~~if it is demonstrated that erosion is occurring or likely to occur.

~~Projects may only use riprap if it is demonstrated that bioengineering is infeasible. Construction of retaining walls is only allowed by variance.~~

~~A permit issued under this Rule may be valid for up to 5 years to allow for the completion of regular maintenance of District approved bioengineering, riprap and retaining wall shoreline projects or projects completed prior to March 1, 2010 if a maintenance plan is submitted and approved by the District.~~

5.3 Criteria for Bioengineering. Bioengineering ~~techniques~~ shall be used for shoreline and streambank restoration unless it is demonstrated that it is infeasible to repair the erosion problem using bioengineering techniques. The following criteria apply to bioengineering projects:

5.3.1 The resultant project shall be structurally stable. Special emphasis shall be given to the stability of the toe of slope where traditional engineering techniques may be more appropriate.

5.3.2 Native vegetation shall be used in all cases. Preferable species include those that form dense root systems or can be planted from cuttings.

5.3.3 ~~Bioengineering projects shall include a~~A long-term maintenance plan ~~which will~~is included to ensure that small erosion spots are corrected and native plant materials are successful.

5.4 Criteria for Riprap Placement. Riprap placement is allowed only when bioengineering ~~has been~~is demonstrated to be infeasible ~~as a solution to the erosion problem~~. Riprap placement shall comply with the following criteria:

5.4.1 Riprap material should be durable, natural stone common to the setting and of a gradation that will result in a stable shoreline embankment able to withstand ice and wave action.

5.4.2 ~~The~~ Typical finished slope ~~of the rock fragments, boulders and/or cobbles~~ should not be steeper than a ratio of 3~~ feet horizontal to~~ 1 ~~foot vertical~~ (horizontal: vertical~~1~~) under normal conditions. ~~Steeper slopes will generally~~

~~require larger sized riprap. The finished slope shall be no steeper than 2:1 (horizontal:vertical).~~ A~~ny rock~~riprap/boulder stabilization project with a proposed finished slope steeper than 2:1 (horizontal: vertical) shall be evaluated in accordance with the ~~conditions~~ criteria for retaining walls.

5.4.3 No riprap or filter materials shall be placed more than 6 feet waterward of the shoreline measured from the ordinary high water level (OHWL) elevation.

5.4.4 A transitional layer consisting of graded gravel, at least 6 inches deep, and an appropriate geotextile filter fabric shall be placed between the soil material of the existing shoreline and the riprap to prevent erosion of the embankment and to prevent settlement.

5.4.5 Riprap placement shall not be attempted when underlying soils are not capable of supporting resulting loads. In these cases, a professional engineer registered in Minnesota should be consulted.

5.4.6 The thickness of the riprap layers shall be at least 1.25 times the maximum stone diameter, exclusive of toe boulders at least 50 percent buried.

5.4.7 The riprap shall conform ~~with~~to the natural alignment of the shoreline (i.e., maintaining an undulating or meandering shoreline).

5.4.8 The design must reflect the engineering properties of the underlying soils and any soil corrections or reinforcements. For a shoreline, the design must conform to engineering principles for wave energy dispersion and resistance to deformation from ice pressure and movement. For a streambank, the design shall conform to engineering principles for the hydraulic behavior of open channel flow and shall consider upstream and downstream impacts.

5.4.9 Riprap placement projects shall contain a native vegetation planting element equal to at least five percent of the overall cost of the project.

5.4.10 Represent the "minimal impact" solution to a specific need with respect to all other reasonable alternatives.

5.5 Criteria for Retaining Walls. Retaining walls are allowed only when bioengineering and riprap are demonstrated to be infeasible. In addition to the criteria for riprap, retaining wall installation shall comply with the following criteria:

~~5.5.1 A shoreline or streambank structure with a finished slope steeper than 2:1 (horizontal:vertical), including but not limited to a rock, boulder or masonry installation, seawall, sheetpile structure or gabion basket, is considered a retaining wall. A single course of riprap or other permanent material less than 18 inches in height is excepted.~~

5.5.1~~2~~ ~~A new retaining~~Whether new ~~wall,~~ or repair/reconstruction, ~~of an existing~~the retaining wall ~~that increases~~shall not increase floodplain encroachment beyond that required by technically sound and accepted repair/reconstruction methods~~, is permitted only pursuant to a variance. The applicant must demonstrate there is no adequate stabilization alternative~~.

5.5.~~3~~2 The applicant must file with the District a certificate of survey prepared by a registered land surveyor locating the finished wall.

~~**5.6 Criteria for Laying Sand along Shorelines and Streambanks.**~~

~~5.6.1 Laying sand along shorelines and streambanks (a sandblanket) is permitted only pursuant to a variance and is not allowed along streams or rivers.~~

~~5.6.2 The sand or gravel used must be clean prior to being spread. The sand must contain no toxins or heavy metal, as defined by the Minnesota Pollution Control Agency (MPCA), and must contain no weed infestations such as, but not limited to, purple loosestrife, glossy buckthorn, reed canary grass and Eurasian watermilfoil, or animal life infestations such as, but not limited to, zebra mussels or their larva.~~

~~5.6.3 The sand layer must not exceed six inches in thickness, 30 feet in width along the shoreline, or one-half the width of the lot, whichever is less, and may not extend more than ten (10) feet waterward of the ordinary high water mark.~~

~~5.6.4 Beaches that are operated by governmental entities, and available to the public, shall be exempted from the following restrictions: (i) that sandblankets be no more than 30 feet in width.~~

~~5.6.5 A natural zone of native shoreline plants of the same depth and equal to 20 percent of the width of the sandblanket shall be maintained adjacent to the sandblanket. An aquatic vegetation management permit may also be required from the DNR.~~

~~5.6.6 Represent the "minimal impact" solution to a specific need with respect to all other reasonable alternatives.~~

5.~~7~~ 6 Required Exhibits. In addition to the District's standard application form, fees and sureties, the following exhibits shall accompany a permit application (one full-size; one set-reduced to maximum size of 11" x 17"):

5.6.1 A bioengineering application must ~~contain~~ include~~the following~~:

(a) Site plan and project plans that detail the project setting in relation to adjacent water body;

(b) Information sufficient to demonstrate ability of installation to withstand wind fetch-induced waves and current, including orientation of installation relative to fetch distance and current;

(c) Planting plan, planting list with species and planting density, and specifications;

(d) Project timeframe and schedule, including any work contingencies or restrictions due to high water;

(e) Inspection and maintenance schedule to ensure project success; and

(f) A p~~P~~lan for long-term maintenance ~~of bioengineering shoreline stabilization, if a long-term permit is desired as indicated under section 5.2~~.

5.~~7~~6.2 A riprap application must include ~~the following~~:

(a) An analysis of alternative solutions demonstrating infeasibility of bioengineering;

(b) Site plan showing property lines, delineation of lands under ownership of the applicant; delineation of the existing shoreline;

delineation of wetland within the project area; existing contour elevations (if available); and locations and lineal footage of the proposed riprap treatment;

(~~b~~c) Cross-section detailing the proposed riprap, drawn to scale, with the horizontal and vertical scales noted on the drawing. The detail should show the finished riprap slope, transitional layer design and placement, distance lakeward of the riprap placement, ordinary high water level elevation and material specifications;

(~~c~~d) Description of the underlying soil materials that will support the riprap and, if the underlying soils will not support the riprap, the recommendations of a professional engineer registered in the State of Minnesota;

(~~d~~e) Gradation, average diameter, quality and type of riprap material to be used (need must be demonstrated for use of rock larger than a Class III gradation, other than for buried toe boulders);

(~~e~~f) Gradation, quality and type of filter blanket material to be used (normally, Type I gradation is sufficient);

(~~f~~g) Manufacturer's material specifications for proposed geotextile fabric(s);

(~~g~~h) Verification that materials used shall be non-polluting;

(~~h~~i) Detailed planting plan for native vegetation planting element of the project; and

(~~i~~j) A plan for long-term maintenance~~, if a long-term permit is desired as indicated under section 5.2~~.

5.6.3 In additional to the required exhibits for a riprap application, a retaining wall application must include:

(a) An analysis of alternative solutions demonstrating infeasibility of riprap;

(b) A structural/geotechnical analysis prepared by a professional engineer, practicing in civil engineering and registered in the State of Minnesota, showing that the design conforms to accepted engineering principles and will withstand expected ice and wave action and earth pressures; and

(c) A certificate of survey prepared by a registered land surveyor locating the proposed wall.

5.~~7~~6.~~4~~2 In addition to the above required exhibits, an application for~~An application for a~~ restoration of a streambank ~~structure or installation~~ must contain the following:

(a) Site plan prepared by a qualified professional registered in the State of Minnesota showing property lines; the ordinary high water level (OHWL) elevation and 100-year floodplain elevation; and existing streambank and contour elevations up to the 100-year elevation, for at least 50 feet upstream and downstream of the project location or for the

reach for which the project will affect flow conditions, whichever greater, or as otherwise required by District staff;

(b) Cross-section of proposed project including slope dimensions (length, width, height) and distance waterward;

(c) Material specifications including plant species and whether species are rooted, seed or cuttings; and

(d) Design calculations and documentation of structural stability, accounting for physical and flow characteristics of the watercourse, by a professional engineer registered in the State of Minnesota~~;~~.

~~(e) Detail of proposed site-specific erosion and sediment control practices; and~~

~~(f) Plan for maintenance of shoreline structure and shoreline stabilization, if a long-term permit is desired as indicated under section 5.2.~~

~~5.7.4 A variance application for retaining wall installation must contain a analysis of alternative solutions in addition to the structural/geotechnical analysis prepared by a professional engineer, practicing in civil engineering and registered in the State of Minnesota, showing that the design conforms to accepted engineering principles and will withstand expected ice and wave action and earth pressures. Recording the location of the retaining wall on the title of the property is required. Submittal of a plan for maintenance of the retaining wall is required.~~

~~5.7.5 A sandblanket application must contain the following:~~

~~(a) Site plan showing property lines, delineation of the work area, existing elevation contours of the adjacent upland area, delineation of wetland within the project area, ordinary high water elevation, and regional flood elevation (if available), with all elevations reduced to National Geodetic Vertical Datum (NGVD) (1929 datum);~~

~~(b) Profile, cross-sections and topographic contours (intervals no more than two feet) showing existing and proposed elevations and proposed side slopes in the work area; and~~

~~(c) Planting plan and site plan indicating area to be maintained in native shoreline plants.~~

5.~~8~~ 7 Exceptions. A permit is not required under this rule for the following activities if the stated conditions are met.

5.7.1 R~~for r~~emoval of an ice ridge resulting from ice action within the last year if:

(a) No~~t~~ more than 200 feet of shoreline is affected;

(b) All ice ridge material that is composed of muck, clay or organic sediment is deposited and stabilized at an upland site above the OHWL;

(c) All ice ridge material that is composed of sand or gravel is removed as provided above or graded to conform to the original cross-section and alignment of the lakebed, with a finished surface at or below the OHWL;

(d) No additional excavation or replacement fill material occurs on ~~the~~ site;

(e) All exposed areas are immediately stabilized as needed to prevent erosion and sedimentation; and

(f) At least seven days notice is provided to the District.

5.7.2 Laying sandblankets along shorelines if:

(a) The sandblanket is not along the bank of a stream, creek or river.

(b) The sand must be free of toxins or heavy metals, as defined by the Minnesota Pollution Control Agency (MPCA), and must contain no weed infestations such as, but not limited to, purple loosestrife, glossy buckthorn, reed canary grass and Eurasian watermilfoil, or animal life infestations such as, but not limited to, zebra mussels or their larva.

(c) The sand layer must not exceed six inches in thickness, 30 feet in width along the shoreline, or one-half the width of the lot, whichever is less, and may not extend more than ten (10) feet waterward of the ordinary high water mark.

(d) Beaches that are operated by governmental entities, and available to the public, shall be exempted from the width restriction.

(e) A natural zone of native shoreline plants of the same depth and equal to 20 percent of the width of the sandblanket shall be maintained adjacent to the sandblanket.

~~**5.9 Guidelines.** The engineer shall publish or make available to interested persons a typical riprap cross-section for shoreline protection in compliance with this Rule.~~

~~**5.10 Other Shoreline Improvements**. Shoreline improvements not specifically addressed by Rule 5.0 shall comply with accepted engineering principles.~~

6.0 WATERCOURSE AND BASIN CROSSINGS

6.1 Policy. It is the policy of the District to discourage the use of lake beds and beds of waterbodies for the placement of roads, ~~highways~~trails, and utilities. This policy is intended to avert the transport of pollutants into the waterbody, minimize flood damage, and limit disturbance of the lake or streambed.

6.2 Regulation. No person shall use the beds of any waterbody within the District for agricultural activity or for any other activity including, but not limited to the placement of roads, ~~highways~~ trails and utilities without first securing a permit from the District. ~~Watercourse and basin crossing activities may also require a permit under Rule 7.0.~~

6.3 Criteria. Use of the bed shall:

6.3.1 Meet a demonstrated public benefit;

6.3.2 Retain adequate hydraulic capacity;

6.3.3 Retain adequate recreational navigation capacity;

6.3.4 Not adversely affect water quality;

6.3.5 Represent the "minimal impact" solution to a specific need with respect to all other reasonable alternatives; and

6.3.6 Maintain the natural substrate of the stream bed.

6.4 Required Exhibits. The following exhibits shall accompany the permit application (one set - full size; one set - reduced to maximum size of 11"x17"):

6.4.1 Construction plans and specifications;

6.4.2 Analysis prepared by a professional engineer or qualified hydrologist showing the effect of the project on hydraulic capacity and water quality;

6.4.3 An erosion control plan; and

6.4.4 A restoration and mitigation plan.

6.5 Maintenance. An instrument stating terms for maintenance of hydraulic and navigational capacity and approved by the District shall be recorded in the office of the county recorder or registrar before permit issuance. In place of recording, a public permittee or a permittee without a property interest sufficient for recording may assume the maintenance obligation by means of a written agreement with the District. The agreement shall state that if the ownership of the structure is transferred, the owner shall obtain agreement by the transferee to assume all duties and responsibilities of the transferor, that the person's predecessor in interest.

7.0 FLOODPLAIN AND DRAINAGE ALTERATIONS

7.1 Policy. It is the policy of the District to:

7.1.1 Promote the reasonable use of water resources, such that a landowner may dispose of surface water only in a manner that does not unreasonably burden downstream landowners;

7.1.2 Preserve existing water storage capacity in the 100-year floodplain of all waterbodies and wetlands in the watershed to minimize the frequency and severity of high water;

7.1.3 Promote land development that protects property investments by managing development within and adjacent to the 100-year floodplain; and

7.1.4 Preserve the natural hydrology of landlocked basins to minimize flooding risks to structures and ecological impacts within or downgradient of those basins.

7.2 Regulation. No person shall complete a subdivision of land or alter or fill land below the 100-year flood elevation of any waterbody, wetland, or stormwater management basin, or place fill below the 100-year flood elevation of a landlocked basin, without first obtaining a permit from the District. No person shall alter stormwater flows at a property boundary by changing land contours, diverting or obstructing surface or channel flow, or creating a basin outlet, without first obtaining a permit from the District.

7.3 Criteria for Floodplain or Drainage Alterations.

7.3.1 Floodplain filling must be accompanied by a replacement of floodplain storage volume between the ordinary water level and the 100 year flood elevation except for bioengineering and riprap projects permitted under Rule 5.0. The floodplain mitigation area shall be calculated by a professional engineer registered in the State of Minnesota or by a qualified hydrologist.

7.3.2 The construction of a stormwater basin or open stormwater conveyance, and of any residential, commercial, industrial or institutional building, shall maintain:

(a) A separation of at least two feet between the lowest basement floor elevation and the 100 year high water elevation; and

(b) A separation of at least one foot between the lowest basement floor elevation and an emergency overflow.

7.3.3 Within a landlocked basin, the separation cited in paragraph 7.3.2(a), above, shall be at least three feet, unless the building is at least one foot above the basin overflow.

7.3.4 The separation required by sub-sections 7.3.2 and 7.3.3 may be measured to the lowest grade elevation in contact with the structure rather than the lowest basement floor elevation if the following criteria are met:

(a) Geologic mapping and all available data sources indicate the adjacent waterbody is not a surface expression of a regional water table but is a perched groundwater system;

(b) The basement floor elevation will be four (4) feet above the currently observed ground water elevations in the area as demonstrated

by two borings or observation wells located between each structure and the waterbody or basin; and

(c) The basement floor elevation will be two (2) feet above the elevation of any known historic high groundwater elevation for the area.

7.3.5 A landlocked basin may be provided an outlet only if it:

(a) Retains a hydrologic regime that complies with Rule 8.0, as applicable;

(b) Provides sufficient dead storage volume to retain back-to-back 100-year, 24-hour rainfalls and runoff; and

(c) Does not create adverse downstream flooding or water quality conditions as a result of increased discharge rate or volume, or other factors.

7.3.6~~5~~ The District will issue a permit to alter surface flows under section 7.2, above, only on a finding that the alteration will not have an unreasonable impact on an upstream or downstream landowner and will not adversely affect flood risk, basin or channel stability, groundwater hydrology, stream baseflow, water quality or aquatic or riparian habitat.

8.0 WETLAND MANAGEMENT

8.1 Purposes and Policy. It is the policy of the District to:

8.1.1 Protect and improve the functions and diversity of the District's wetlands and lay the groundwork to improve these resources.

8.1.2 Educate property owners and the community on the value of water resources.

8.1.3 Limit altering the natural hydrology of wetland basins.

8.1.4 Utilize buffer strips of vegetation around wetlands as a management tool for protecting wetland systems.

8.2 Applicability. The District does not serve as the Local Government Unit (LGU) for administration of the Minnesota Wetland Conservation Act (WCA). Notwithstanding the above, the District, pursuant to its regulatory authority under watershed law and its BWSR-Approved CWPMP, will require permits under Rule 8.0 for wetland-altering activities regulated by the Wetland Conservation Act (WCA) and activities regulated by the District Wetland Management Plan. Municipalities have the option of implementing Rule 8.0 after adoption of a local water management plan approved by the District and adoption and implementation of local ordinances consistent with this rule and the standards of the District Watershed Management Plan.

8.2.1 WCA Regulated Activities. Draining or filling of wetlands, wholly or partially, and excavation in the permanently and semipermanently flooded areas of type 3, 4, or 5 wetlands, and in all wetland types if the excavation results in filling, draining, or conversion to nonwetland.

8.2.2 District Wetland Management Plan Regulated Activities:

(a) Excavation in all Management Category (1 through 4) wetlands.

(b) Alteration of existing upland buffer associated with other activities regulated under this Rule.

(c) Livestock access within all Management Category wetlands.

(d) Water appropriation and/or dewatering of Management Categories 1, 2 and 3 wetlands.

~~(d)~~(e) Any other activity that alters the character or hydrology of a wetland.

8.3 Regulation. Before any activity described in section 8.2 commences, a wetland management plan shall be submitted to the District in conformity with the requirements of this Rule, and a permit shall be secured from the District. This Rule is written in recognition of WCA and shall serve as a supplement to this legislation. All current WCA rules and regulations not specifically modified under this Rule remain unchanged.

8.4 Wetland Delineations.

8.4.1 Delineation Method. Wetland Delineations must be performed according to the joint BWSR/Corps 1996 guidance document "Guidelines for Submitting Wetland Delineations in Wisconsin to the St. Paul District Corps of Engineers" (Public Notice, 96-01078-SDE, May 22, 1996). Applicants are encouraged to consult with the LGU prior to the wetland delineation, especially in atypical

situations, problem areas, and/or delineations based on inconclusive hydrology. It is incumbent upon the applicant to provide satisfactory documentation to support wetland boundaries, and that level of documentation is generally greater in atypical situations and/or seasonal wetlands, particularly relating to hydrology. The LGU will have final say as to the appropriate level of documentation.

8.4.2 Delineation Submittal Timing. Delineations should be submitted to the LGU with ample growing season remaining for review. This decision is at the discretion of the LGU, and therefore delineations MAY be reviewed outside of the official growing season if conditions allow for ample review of the data relevant to the wetland determination/delineation. The definition of "growing season" is as defined in the joint BWSR/Corps 1996 guidance document.

8.5 Wetland Impact Avoidance, Minimization & Replacement.

8.5.1 Impact Sequencing. Impacts to existing wetland areas must meet the sequencing requirements as outlined under Minnesota Rules 8420.0520 "Sequencing." In addition, applicants must adequately explain and justify each individual area of wetland alteration in terms of impact avoidance and minimization alternatives considered.

8.5.2 De minimis. This exemption as set forth in Minnesota Rules 8420.0420 Subp. 8, is incorporated as part of this Rule with the following amendment:

(a) The maximum de minimis for District Wetland Management Category 1 and 2 wetlands, regardless of impact location and wetland type, is 20 square feet.

8.5.3 Location of Replacement. Replacement must be located within the District and as close as possible to the site of impact. Qualifying township, city, or county road impacts may be mitigated outside the District via the BWSR road replacement bank up to the ratios required by WCA. However, the balance of replacement required by sub-section 8.5.4 must be located within the District.

8.5.4 Replacement Ratios. Full replacement of all wetland functions is required at the following ratios (new wetland area:impacted wetland area):

(a) 6:1 for impacts to wetlands in Management Category 1

(b) 4:1 for impacts to wetlands in Management Category 2

(c) 3:1 for impacts to wetlands in Management Category 3

(d) 2:1 or minimum required by Minnesota Rules 8420.0522, whichever is greater for impacts to wetlands in Management Category 4

When wetland is impacted and replaced, the impacted existing upland buffer area must also be replaced via buffer establishment or by payment into the Restoration Fund at a 1:1 ratio if buffer establishment is not reasonably available.

8.5.5 Eligible Replacement Activities & Priorities. The following activities, listed in order of priority, are eligible for replacement credit. Applicant must first consider replacement of unavoidable impacts by restoring or, if wetland restoration opportunities are not reasonably available, creating replacement wetland areas having equal or greater function. Restoration and creation activities eligible for replacement credit include those detailed in Minnesota Rules 8420.0526 and listed (as prioritized per District local values) below:

(a) Protection of wetlands previously restored via conservation easements

(b) Restoration and protection of exceptional natural resource value

(c) Restoration of completely drained or filled wetland areas

(d) Restoration of partially drained or filled wetland areas

(e) Upland buffer areas (established or preserved)

(f) Vegetative restoration of farmed wetlands

(g) Wetland creations

If the above activities are not reasonably available to satisfy the entire replacement required by sub-section 8.5.4, the following additional activities, where they protect or improve the functions of wetlands shall be considered for replacement that exceeds the minimum replacement required by WCA:

(a) Specified activities from the Spring Creek Corridor & Lower St. Croix River Stewardship Plans, CMWD Natural Resource Inventory, and MWMO Natural Resource Inventory

(b) Protection and restoration of Groundwater Dependent Natural Resource recharge areas

(c) Protection of high quality upland

(d) Protection of landlocked basins

(e) Protection and restoration of corridor connections

Those activities preserving wetland functions are eligible for 25% replacement credit on an area basis. Those activities restoring and preserving wetland functions are eligible for 50% replacement credit on an area basis.

If all above activities have been explored but are not reasonably available to meet, in full or in part, the replacement required by sub-section 8.5.4 that exceeds the minimum required by WCA, applicants must make payment into the Restoration Fund.

8.5.6 Restoration Fund. Landowners needing to replace wetland impacts that have exhausted exploration of the replacement credit activities of sub-section 8.5.5, may make a payment into the Restoration Fund to meet in full or part the replacement required by sub-section 8.5.4 that exceeds the minimum required by WCA. The Restoration Fund payment rate is determined and set by the Board of Managers by formal resolution.

Contributions to the Restoration Fund will be paid to, administered by, and held by the District, and will be used by the District for wetland restoration activities and other natural resource improvements that would restore, protect, and/or improve wetland function. Administration of the Restoration Fund is detailed in the District's Plan.

8.6 Buffer Standards.

8.6.1 Buffer Widths. Buffers are required around all preserved and replacement wetlands, with the average and minimum widths summarized in Appendix 8.1 or as required by WCA, whichever is greater.

8.6.2 Buffer Creation. Wetland shall not be filled merely for the purpose of buffer creation.

8.6.3 Buffer Delineation. A buffer shall be indicated by permanent markers at the buffer's upland edge, with a design and text approved by District staff in writing.

8.6.4 Recreation Standards. Existing trails used for landowner access to wetlands are allowed to remain per Rule 4.9.2. However, continued use of existing trails is not allowed if the trail is causing erosion or inhibiting the growth of vegetation. All new surfaces within the buffer zone must be pervious. Paved recreational trails must be located outside the buffer zone.

8.7 Required Exhibits. The following items, submitted in duplicate, shall accompany all permit applications submitted to the District pursuant to Rule 8.0:

8.7.1 Wetland Delineation report prepared in accordance with section 8.4.

8.7.2 Site Plan showing:

(a) Property lines and corners and delineation of lands under ownership of the applicant.

(b) Location of all onsite and adjacent wetlands and water features, including the Management Category for each wetland according to the District Wetland Management Plan.

(c) Existing and proposed elevation contours, including the existing overflow elevation and flow capacity of the wetland outlet, and spoil disposal areas.

(d) Area of existing wetland and upland buffer to be filled, drained, excavated, or otherwise altered.

(e) Location of all proposed wetland buffers and wetland replacement.

8.7.3 Wetland Assessment data for each wetland according to the District Wetland Management Plan. If these data do not exist, then a Functions and Values Assessment is required according to the protocol described in the District Wetland Management Plan.

8.7.4 Detailed explanation of the wetland buffer quality and buffer plans.

8.7.5 Replacement Plan, if required, outlining the steps followed for the sequencing process and including documentation supporting the proposed replacement plan.

8.7.6 Erosion Control Plan.

8.7.7 Detail plan for proposed replacement activities.

8.7.8 Detailed monitoring plan for proposed replacement activities.

8.8 Exceptions.

8.8.1 Normal maintenance of stormwater ponds, existing ditches and channels is exempt from the requirements of sub-section 8.5.4 if the maintenance activity meets the criteria of No Loss, per Minnesota Rules 8420.0415.

8.8.2 State roads and highways are exempt from Rule 8.0, however, the District strongly encourages MnDOT to comply with the conditions and intent of the District Wetland Management Plan.

8.8.3 Excavation in a Management Category 4 wetland may be allowed if the activity meets the criteria of No Loss, per Minnesota Rules 8420.0415.

8.8.4 Existing livestock access may continue as livestock access to the wetland, regardless of wetland Management Category.

8.8.5 New livestock access is not allowed in Management Categories 1, 2, and 3 wetlands. New livestock access to a Management Category 4 wetland is allowed so long as the function, value, and quality of the wetland are not degraded.

8.8.6 Any type of ongoing water appropriation and/or dewatering practice is not allowed in Management Categories 1, 2, and 3 wetlands. A variance for temporary dewatering impacts may be permitted if all other options have been exhausted.

8.8.7 An impervious surface, road or utility in existence on March 1, 2010, its maintenance (including mill and overlay), reconstruction, and maintenance of its existing right-of-way are excepted from section 8.6.1 Buffer Widths unless the impervious surface area increases. Any increase in area of a surface, road or utility excepted under this sub-section is subject to the Rule. A public road or a utility may be located within a buffer zone on a finding that avoiding the buffer is infeasible and in accordance with the standards of section 4.8.

Appendix 8.1

Summary of Minimum Buffer Standards

Wetland Management Category	Average Buffer Width (feet)	Minimum Buffer Width (feet)
1	100	100
2	75	50
3	50	25
4	50	25

9.0 VARIANCES

9.1 Variances Authorized. The Board of Managers may hear requests for variances from the provisions of these Rules in instances where their strict enforcement would cause undue hardship because of circumstances unique to the property under consideration. The Board of Managers may grant variances where it is demonstrated that such action will be in keeping with the spirit and intent of these Rules. A variance shall contain conditions to prevent or mitigate adverse impacts from the activity.

9.2 Standard. In order to grant a variance, the Board of Managers shall determine that the special conditions that apply to the structure or land in question do not apply generally to other land or structures in the District, that the granting of the variance will not merely serve as a convenience to the applicant, and that the variance will not impair or be contrary to the intent of these Rules. A hardship cannot be created by the landowner, the landowner's agent or representative, or a contractor, and must be unique to the property. Economic hardship alone is not grounds for issuing a variance***.***

9.3 Term. A variance shall become void one year after it is granted if the activity requiring a variance is not initiated during that period, unless the Board grants an extension of the variance. After the action requiring a variance is complete, the variance applies to the completed action in perpetuity.

9.4 Violation. A violation of any condition set forth in a variance shall be a violation of the District's Rules and shall automatically terminate the variance.

9.5 Procedures. Procedures are as identified under Rule 1.0.

10.0 ENFORCEMENT

10.1 Violation of Rules a Misdemeanor. Violation of these Rules, a stipulation agreement made, an order or a permit issued by the Board of Managers pursuant to these Rules is a misdemeanor.

10.2 District Court Action. The Board of Managers may exercise all powers conferred upon it by Minnesota Statutes Chapter 103D in enforcing these Rules, including criminal prosecution, injunction, action to compel performance, restoration, abatement, or other appropriate action.

10.3 Administrative Order. The District may issue a cease and desist order when it finds that a proposed or initiated project presents a serious threat of flooding, soil erosion, sedimentation, or adverse effect on water quality or otherwise violates any Rule of the District.

10.4 Liability for Enforcement Costs. The permittee or owner of a property that is the subject of District enforcement efforts will be liable for associated costs incurred by the District, including but not limited to the costs of inspection and monitoring of compliance, engineering and other technical analysis, legal fees and costs, and administrative expenses. Said costs may be deduced from performance surety.

In any civil action arising from or related to these Rules, an order or a stipulation agreement made or a permit issued or denied by the managers under these Rules, the court may award the prevailing party reasonable attorneys' fees and costs.