4.0 LAKE, STREAM, AND WETLAND BUFFER REQUIREMENTS

4.1 Purposes and Policy. The purpose of Rule 4.0 is to establish, maintain, and protect buffers adjacent to water resources in order to protect and improve the water quality, flow regime and habitat of the water resources in the Comfort Lake - Forest Lake Watershed District, consistent with the interest in avoiding undue disturbance to established public and private activities in littoral and riparian zones. Natural vegetation bordering the bed and banks of lakes, streams and wetlands serves a critical role in maintaining the ecological function of and societal 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 any lot containing land within the buffer zone of any General Development Lake, Recreational Development Lake, Natural Environment Lake, stream or wetland within the watershed; and

(a) that results from subdivision of land into two or more buildable lots on or after February 1, 2009; or

(b) that is subject to land disturbance for the purpose of a new primary use for which (i) a rezoning or (ii) a land use variance for lot hard surface percentage or structure setback from a wetland or surface water resource has been approved on or after February 1, 2009.

A “new primary use” under this paragraph is defined as a change from one use category (single-family residential, multi-family residential, institutional, commercial, industrial or agricultural) to another; or a change of use within the same use category that, due to the new location or intensity of use, is likely in the Board of Managers’ determination to have a measurable adverse impact on downgradient lake, stream or wetland function. Construction of a structure or hard surface on an unimproved lot of record, or on an improved lot of record following removal of all or the essential part of an existing main structure, is a “new primary use” without a Board determination of adverse impact.

4.2.2 Within 45 days of plat recordation under paragraph 4.2.1(a), and before a land disturbance under paragraph 4.2.1(a) or (b), a buffer permit shall be obtained from the District and an instrument incorporating the requirements of Rule 4.0 and approved by the District shall be recorded with the County.

4.2.3 A buffer shall be indicated by permanent, free-standing markers at the buffer's upland edge, with a design and text approved by Municipality and District staff in writing in order to maintain consistency throughout the community. A marker shall be placed at each lot line, with additional markers at an interval of no more than two hundred (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 City and District staff in writing in order to maintain consistency throughout the community.

4.2.4 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 subsections 4.3.2 through 4.3.6, stream, wetland and lake buffer zones are as follows:

(a)	Stream (measured from top of bank)	75 feet
(b)	Lakes (measured from delineated OHWL)	
	(1) Natural environment lake	100 feet
	(2) Recreational development lake	50 feet
	(3) General development lake	25 feet
(c)	Wetlands; Based on the wetland function and value assessment the following will be buffer requirement (measured from delineated wetland edge)	
	(1) Preserve	100 feet
	(2) Manage 1	75 feet
	(3) Manage 2	50 feet
	(4) Manage 3	25 feet

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

4.3.2 Where a mapped natural community is associated with a stream, lake or wetland, the upland edge of the middle zone shall be as specified in subsection 4.3.1 or contiguous with the upland edge of the natural community area, whichever is greater.

4.3.3 Where a buffer zone encompasses all or part of a steep slope, the zone or buffer shall extend to the distance specified in subsection 4.3.1 or to the top of the slope, whichever is greater.

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 as specified in subsection 4.3.1, the zone or buffer shall extend to the upland edge of the floodplain.

4.3.5 Where a lake or wetland is encompassed within or contiguous to a stream or lake to which Rule 4.0 applies, the most protective lake, stream, or wetland buffer shall apply.

4.3.6 The District may find compliance with the Rule if the wetland buffer, on average, meets the requirements of the Rule and is no less than fifty (50) percent of the required buffer width at any point. Only buffer up to two hundred (200) percent of the required width will be counted in determining average buffer. The averaged buffer must be at least as protective of the water resources as the non-averaged buffer.

For example, a recreational development lake with a required fifty (50) foot buffer zone width would have a minimum twenty-five (25) foot buffer zone width and a maximum one hundred (100) foot buffer zone width that would count to the determined average. The total area of the averaged buffer zone must meet or exceed the total area of the required buffer zone.

4.4 Required Exhibits. The following items shall accompany all permit applications submitted to the District pursuant to Rule 4.0:

4.4.1 Property lines and delineation of lands under applicant's ownership;

4.4.2 Delineation of existing on-site wetland, shoreland, and floodplain areas;

4.4.3 Elevation of the OHWL of each public water on the site, if determined by the Minnesota Department of Natural Resources and of any legally established buffer associated with the public water;

4.4.4 Existing and proposed site contour elevations at two-foot intervals, related to NGVD, 1929 datum;

4.4.5 Wetland function and value assessment for all wetlands subject to buffer pursuant to Minnesota Routine Assessment Method (MnRAM) 3.2 (including groundwater function) or other method approved by the District;

4.4.6 Site plan indicating location of applicable buffer zone; Buffer zone location exhibits shall be submitted as shapefiles.

4.4.7 Survey of existing buffer vegetation in accordance with subsection 4.5.2; and

4.4.8 Buffer Planting Plan in accordance with subsection 4.5.3.

4.5 Limitations in Buffer Zones.

4.5.1 Lake, Stream, and Wetland Buffers;. The following activities are prohibited within a lake, stream, or wetland buffer:

(a) Creating impervious cover.

(b) Excavation or placing fill or debris, except for approved shoreline or streambank stabilization activities and temporary placement of fill or debris pursuant to duly- permitted work in the associated waterbody or wetland, in compliance with all conditions of the permit, and in compliance with section 4.6.

(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, removal of safety hazards or revegetation. A tree larger than six inches in diameter at a point fifty-four (54) inches 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) Applying phosphorus-containing fertilizers, except on written authorization from District staff on a determination that phosphorus application is appropriate and will not injure the waterbody.

(e) 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 buffer unless no feasible alternative exists.

(f) Outlet, flood control and stormwater treatment facilities may be located within the buffer if so approved under Rule 2.0, except that a stormwater basin is not permitted within the buffer of a groundwater-dependent natural resource, unless the basin bottom is at least three (3) feet above the seasonal high water table, and the basin and associated facilities are designed and maintained to infiltrate the two-year, 24-hour precipitation event.

4.5.2 At the time a buffer is created under Rule 4.0, the District may, depending on site specific conditions, require a planting or landscaping plan to establish adequate native vegetative cover for an area that:

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

(b) Consists more than ten (10) percent of bare or disturbed soil or turf grass.

4.5.3 Buffer areas described in this rule are to be maintained indefinitely. Where a planting or landscaping plan is required under subsection 4.5.2 or is otherwise needed, the buffer strip plantings must be identified on the site plan and shall comply with the following standards:

(a) Buffer strips shall be planted with a site appropriate native seed mix as specified by BWSR, MnDOT, NRCS or SWCD, with the exception of a one-time planting with an annual nurse or cover crop such as oats or rye. Native trees and shrubs may be added to supplement ground cover.

(b) The seed mix shall be broadcast according to BWSR, MnDOT, NRCS or SWCD specifications of the selected mix. The annual nurse or cover crop shall be applied at a minimum rate of thirty (30) pounds per acre. The seed mix selected for permanent cover shall be appropriate for soil site conditions and free of invasive species. BWSR, MnDOT, NRCS or SWCD approved mixtures appropriate for specific soil and moisture conditions can be used to meet these requirements.

(c) The buffer revegetation plan shall specify the method for the seeding or planting of the grasses, shrubs, and forbs.

(d) No fertilizer shall be used in establishing new buffer strips, except when necessary to establish acceptable buffer strip vegetation and then limited to amounts indicated by an accredited soil testing laboratory.

(e) All disturbed areas shall be mulched and stabilized immediately. Mulch shall be anchored with a disk or tackifier.

(f) Buffer strips (both natural and created) shall be protected by erosion and sediment control measures during construction in accordance with Rule 3.0.

4.5.4 Applicant may apply to District for grant monies or other District funds, when available, to offset a portion of the cost of re-stabilizing riparian buffer zones.

4.6 Temporary Alterations.

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

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

4.6.3 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 natural vegetation established as soon as possible.

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

4.6.5 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.

4.7 Roads and Utilities.

4.7.1 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.

4.7.2 All work shall be in accordance with section 4.6.

4.8 Access to Waterbody or Wetland.

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 must be pervious and permanent vegetative disturbance shall be limited to that necessary for access in light of the nature and extent of the permitted use. No facility, other than a footpath or streambank/shoreline stabilization or a facility accessory to a permitted use of the waterbody or wetland and required by its nature to be adjacent to the water, may be located within the buffer zone. The access area must not exceed thirty (30) feet or fifty (50) percent of the lot width along the shoreline or streambank, whichever is less. The access area width should be only as wide as that needed for the intended purpose.

4.9 Trails in Buffer Zone.

The buffer may enclose a trail or a water quality facility on a demonstration that doing so will not significantly reduce the protection afforded the waterbody or wetland. A trail no more than ten (10) feet in width bordered by a pervious buffer of at least five (5) feet on each side is deemed to meet this requirement. The trail or water quality feature shall not count toward buffer width. A non-linear facility for general public use that is required by its nature to be adjacent to the water may be allowed in the buffer on a case-by-case basis if the impact to the buffer is minimized and the project will not negatively impact the lake, stream, or wetland.