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GENERAL PROVISIONS

§ 153.01 DISCLAIMER, INTERPRETATION AND OTHER GENERAL PROVISIONS.

- (A) Disclaimer. This chapter does not imply that areas within or outside of the CCWMO will be free from water related damages. This chapter does not create liability on the part of the county or its officers or employees for water related damage that may result from reliance on this chapter or any administrative decisions made under it.
- (B) Interpretation. In their interpretation and application, the provisions of this chapter shall be held to be minimum requirements and shall be liberally construed in favor of the governing body and shall not be deemed a limitation or repeal of any other powers granted by state statutes.
- (C) Supremacy. This chapter is not intended to abrogate any easements, restrictions, or covenants, relating to the use of land or imposed on lands within the community by private declaration or agreement, but where the provisions of this chapter are more restrictive than any such easement, restriction, or covenant, or the provision of any private agreement, the provisions of this chapter shall prevail.
- (D) Liability. The responsible party is responsible for safely and legally completing the project. Neither the issuance of approval under the provisions of this chapter nor the compliance with the provisions hereto or with any condition imposed by the issuing authority, shall relieve any person from responsibility for damage to persons or property resulting therefrom, or as otherwise imposed by law, nor impose any liability upon the county for damages to persons or property.

§ 153.02 DEFINITIONS.

- (A) Definitions as set forth in Appendix B of the Minnesota Permit R100001 (the General Permit Authorization to Discharge Storm Water Associated With Construction Activity Under The National Pollutant Discharge Elimination System) as amended from time to time which are hereby adopted and incorporated by reference.
- (B) Unless specifically defined below, words or phrases used in this chapter shall be interpreted so as to give them the same meaning as they have in common usage and to give this chapter its most reasonable application. The following words and terms, whenever they occur in this chapter are defined as follows:

ADDITIONS. A land altering activity where new impervious surface is being added over green space in an area where some impervious surface already exists.

APPLICATION. A completed application for activities regulated by this permit.

ATLAS 14. National Oceanic and Atmospheric Administration's (NOAA) precipitation event frequency and magnitude estimates.

BEST MANAGEMENT PRACTICE (BMP). A structural or non-structural method used to treat runoff, including methods such as ponding or infiltration or filtration through a rain garden.

BIORETENTION. The process of capturing stormwater runoff, holding it, and removing suspended particles from the runoff via plant uptake and by passing it through a porous media. Also see **FILTRATION**.

BLUFF. A topographic feature such as a hill, cliff, or embankment in which the average grade of any portion of the slope is 25% or greater and there is at least a 25-foot rise in elevation.

BLUFF TOP. The top of a bluff is a point on the upper part of a bluff where the average slope levels off to 18% or less.

CCWMO. Carver County Water Management Organization.

COMPENSATORY STORAGE. The replacement of floodplain storage lost by placement of fill below the 100-year flood elevation. Measured by the volume of material excavated below the floodplain elevation that is required to offset floodplain fill.

CONSTRUCTION ACTIVITY. A disturbance to the land that results in a change in the topography, existing soil cover (both vegetative and non-vegetative), or the existing soil topography that may result in accelerated stormwater runoff, leading to soil erosion and movement of sediment into surface waters or drainage systems. Examples of construction activity may include clearing, grading, filling, and excavating.

COUNTY. Shall refer to Carver County as the water management authority within the CCWMO.

DISCHARGE. The conveyance, channeling, runoff, or drainage of stormwater, including snow melt, from a construction site.

DOWNSTREAM CAPACITY. The ability of the natural and structural conveyance system to accommodate additional flows from the site discharge points to the nearest receiving major waterbody without causing nuisance conditions or flooding. This includes capacity of the conveyance system to accommodate additional rates, volumes, velocities and duration of flow.

DOWNSTREAM FACILITY. A constructed/alterd water body created specifically for the purpose of treating stormwater runoff which may be located off the project site and would receive runoff from the project site.

EMERGENCY WORK. Work needed to protect life, limb, and property.

EROSION. The wearing away of soil by rainfall, surface water runoff, wind, or ice movement.

EROSION CONTROL. Methods employed to prevent erosion. Examples include, but are not limited to soil stabilization practices, horizontal slope grading, temporary or permanent cover, and construction phasing.

EXISTING CONDITIONS. The condition of a site (amount of impervious, soil condition, topography, vegetative cover, etc) prior to the start of a land altering activity.

FEEDLOT. Refer to the county feedlot regulations.

FILL. The deposit of soil or other earth materials by artificial means.

FILTRATION. The process of capturing stormwater runoff, holding it, and removing suspended particles from the runoff by passing it through porous media. Also see BIORETENTION.

FLOOD. A temporary increase in the flow or stage of a stream or in the stage of a wetland or lake that results in the inundation of normally dry areas.

FLOODPLAIN. The beds proper and the areas adjoining a wetland, lake or watercourse which have been or hereafter may be covered by the regional flood.

FLOODWAY. The bed of a wetland or lake and the channel of a watercourse and those portions of the adjoining floodplain which are reasonably required to carry or store the regional flood discharge.

HIGH WATER LEVEL (HWL). The calculated peak elevation of a water body for the greater of the 100-year, 24-hour rainfall or 100-year, 10-day snowmelt event.

IMPERVIOUS. A constructed hard surface that either prevents or retards the entry of water into the soil and causes water to run off the surface in greater quantities and at an increased rate of flow than prior to development. Examples include rooftops, sidewalks, patios, driveways, parking lots, storage areas, and concrete, asphalt, or gravel roads.

INFILTRATION AREAS. A stormwater runoff impoundment designed to capture stormwater runoff volume, hold this volume and infiltrate it into subsurface soil.

LAND ALTERING ACTIVITY. Projects, permits or other activities which result in construction activity.

LINEAR TRANSPORTATION PROJECT. Construction of a new road, trail, utility, or sidewalk or reconstruction of an existing road, trail, utility, or sidewalk. May include an increase in the area of impervious surface.

LOCAL GOVERNMENT UNIT, LGU or LOCAL UNIT. Has the meaning given it in M.S. § 473.852, as it may be amended from time to time.

MAJOR WATERBODY. See PROTECTED WATERS AND WATERWAYS.

MAJOR SUBWATERSHED. Major subwatersheds within the Carver County Watershed Management Organization are defined as the drainage areas for the following waterbodies Bevens Creek, Carver Creek, East Chaska Creek, West Chaska Creek, and the South Fork of the Crow River.

MILL AND OVERLAY. A street maintenance technique that removes the top layer (typically 1-3 inches) of a street by the grinding action of a large milling machine. After the top layer is removed, a new layer of bituminous pavement is put in its place. Underlying base, subbase, and subgrade are not disturbed.

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4). A municipal separate storm sewer system is a conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, storm drains, etc.) that is also:

- owned or operated by a public entity (which can include cities, townships, counties, military bases, hospitals, prison complexes, highway departments, universities, etc.) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage districts, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the Clean Water Act that discharges to waters of the United States;
- designed or used for collecting or conveying stormwater;
- which is not a combined sewer; and
- which is not part of a publicly owned treatment works.

NEW CONSTRUCTION. A land altering activity that creates impervious surface in an area where prior to the activity there was minimal or no impervious surface.

NEW DEVELOPMENT. A land altering activity that creates impervious surface in an area where there was minimal or no impervious surface.

NEW ROAD CONSTRUCTION. Construction of a new road that creates impervious surface in an area where there was minimal or no impervious surface.

NORMAL WATER LEVEL (NWL). The elevation of water at its fixed outlet elevation

PAVEMENT RECLAMATION. A street maintenance technique that consists of uniformly crushing, pulverizing and re-mixing the pavement section of a road along with a small portion of the underlying base material and relaying it in one operation. The existing subgrade and the large majority of the subbase are left undisturbed.

PAVEMENT REHABILITATION. A street maintenance technique that consists of structural enhancements that extend the service life of an existing pavement and/or improve its load carrying capacity. Rehabilitation techniques include restoration treatments and structural overlays but do not typically involve major corrections to base or subbase.

PERVIOUS. A surface that is readily penetrated or permeated by rainfall or runoff resulting in infiltration and reduced runoff.

POND. A graded area which collects and stores water.

PRETREATMENT. Sediment removal designed to capture or trap coarse sediments to preserve storage, prevent clogging and extend the life of facilities. Pretreatment may include but is not limited to vegetated filter strips, small sedimentations basins, forebays, and grit chambers.

PROPERTY OWNER. The person or party possessing the title of the land on which the construction activities will occur; or if the construction activity is for a lease holder, the party or individual identified as the lease holder; or the contracting government agency responsible for the construction activity.

PROTECTED WATERS AND WATERWAYS. Water bodies or watercourses so identified on the Public Waters Wetlands Inventory Map published by the Department of Natural Resources, State of Minnesota or watercourses determined by the county to have a watershed of two square miles or more.

PUBLIC WATER. See PROTECTED WATERS AND WATERWAYS.

REDEVELOPMENT. A land altering activity that creates new or replaces existing impervious surface on a parcel that is fully or partially occupied by buildings and/or other impervious surface.

RECEIVING WATERBODY. A body of water such as a stream, river, lake, or wetland which receives stormwater.

RESPONSIBLE PARTY. The property owner or his or her agent.

RIGHT-OF-WAY (R-O-W). A strip of land acquired by reservation, dedication, prescription, or condemnation and intended to be occupied or used by a road, street, trail, water line, sewer line, electrical transmission line or similar public and/or utility service. Unless otherwise specified, the term RIGHT-OF-WAY (R-O-W) as used in this chapter refers to road or street right-of-way.

ROAD RECONSTRUCTION. Full removal reconstruction of the road bed and road surface (including pavement structure, base, and subbase). May or may not include an increase in the amount of impervious surface.

SEDIMENT. The product of an erosion process; solid material both mineral and organic that is in suspension, is being transported, or has been moved by water, air or ice, and has come to rest on the earth's surface either above or below water level.

SEDIMENT CONTROL. Methods employed to prevent sediment from leaving the site. Sediment control practices include, but are not limited to silt fences, sediment traps, earth dikes, drainage swales, check dams, subsurface drains, pipe slope drains, storm drain inlet protection and temporary or permanent sedimentation basins.

SENSITIVE AREAS. Areas within 150 feet of DNR protected waters; areas within 150 feet of watercourses as defined; a designated floodplain; bluffs and areas within 100 feet of the bluff top; Wellhead Protection Areas as adopted by LGU; areas within 100 feet of a delineated wetland boundary or wetlands as shown on the National Wetland Inventory (NWI); areas within 100 feet of protected properties such as DNR wildlife areas, USFW property, and parkland.

SOIL. The unconsolidated mineral and organic mineral material on the immediate surface of the earth.

STABILIZED. The exposed ground surface has been covered by staked sod, riprap, wood fiber blanket, or other material which prevents erosion from occurring. Grass seed is not stabilization.

STORM EVENT. As defined in Technical Paper 40 from NOAA, Rainfall Frequency Atlas of the United States for Durations from 30 minutes to 24 Hours and Return Periods from 1 to 100 Years (1961).

STRUCTURE. Anything constructed or erected on or connected to the ground.

SWCD. The Carver County Soil and Water Conservation District.

TEAR DOWNS. A land altering activity where existing impervious surface is being replaced with new impervious surface.

TOPSOIL. The uppermost layer of soil, containing organic matter and micro-organisms.

WATERBODY. All waterbasins, watercourses, and wetlands as defined in these rules.

WATERBASIN. An enclosed natural depression with definable banks capable of containing water which may be partly filled with waters.

WATERCOURSE. Any channel having definable beds and banks capable of conducting generally confined runoff from adjacent lands. During floods water may leave the confining beds and banks but under low and normal flows water is confined within the channel. A watercourse may be perennial or intermittent.

WATERS OF THE STATE. All streams, lakes, ponds, marshes, wetlands, watercourses, waterways, drainage systems and all other bodies or accumulations of waters, natural or artificial, public or private, which are contained within, flow through, or border upon the state or any portions thereof. WATERS OF THE STATE do not include stormwater detention basins, or wetlands constructed for the purposes of treating stormwater, which do not discharge to surface waters. (Includes, but not limited to, any lake, stream or wetland; any natural or artificial water diversion or detention area; any surface or subsurface drainage facility or stormwater conveyance).

WATERSHED. The drainage area under the jurisdiction of a watershed management organization.

WETLANDS. All wetlands identified as wetlands under M.S. § 103G.005, subd 19. The term does not include "public waters wetlands" as defined under M.S. § 103G.005, subd 15a.

WETLAND CONSERVATION ACT (WCA). As defined by Minnesota Wetland Conservation Rules, Minn. Rules Ch. 8420, as it may be amended from time to time.

- (C) All distances, unless otherwise specified, shall be measured horizontally.
- (D) Any words not defined in this section shall have the meanings given them in Merriam-Webster's Collegiate Dictionary, 11th Edition.

§ 153.03 STATUTORY AUTHORIZATION AND PURPOSE.

- (A) This chapter is adopted pursuant to M.S. §§ 103B.211 through 103B.255 and Minn. Rules 8410, as they may be amended from time to time.
- (B) The overall purpose of this chapter is to protect, preserve and manage natural surface and groundwater systems within Carver County in the face of rapid urban growth and intensive agricultural activity. The chapter also presents sustainable and equitable means to effectively reach those goals by providing guidance and specific standards for decision-makers, residents, landowners, educators, and implementing staff at the local level.

GENERAL REQUIREMENTS AND REVIEW PROCESS

§ 153.10 GENERAL REQUIREMENT FOR COMPLIANCE.

- (A) Effective date. This chapter shall take effect immediately upon its passage and publication according to law.

- (B) The standards contained in this chapter shall be the minimum standards for the issues covered by this chapter for any land altering activity in the CCWMO. All land altering activities shall conform to the standards in this chapter unless specifically exempted below. For long term land altering activity that does not have a defined start and stop timeframe (such as routine agricultural activity), standards under other state and federal programs may apply. Some projects or activities fall below the thresholds that require formal review and approval process. The fact that formal review and approval is not required does not excuse these activities from compliance with this chapter.
- (C) The following activities shall not be subject to the requirements of this chapter or to the specific requirement as shown below:
- (1) Routine agricultural activity. Tilling, planting, harvesting, and associated activities. Other agricultural activities are not exempt such as feedlots, storage sheds;
 - (2) Emergency work to protect life, limb, or property;
 - (3) Installation of fence, sign, telephone, electric or other kinds of posts or poles;
 - (4) Downstream Facility Exemption. A project is exempt from the rate control, water quality, and volume control standards of this chapter upon determination by the county that a downstream facility is in place or has been ordered and the facility is designed with adequate capacity to meet the treatment requirements for the project.
 - (5) Road projects consisting of mill and overlay activities, pavement rehabilitation, pavement reclamation, and normal maintenance are exempt from the rate control, water quality, and volume control requirements of this chapter;
 - (6) New trails or sidewalk projects that create impervious surfaces 12 feet or less in width, are created independently from road projects, and will be bordered on the downgradient side(s) by a pervious buffer averaging at least one-half the width of the sidewalk or trail are exempt from requirements;
 - (7) Redevelopment projects that reduce cumulative site impervious by 10% or more are exempt from the rate control, water quality, and volume control requirements of this chapter; and
 - (8) Individual residential lots that are part of a common plan of development with an approved stormwater or erosion and sediment control permit shall not require an individual permit unless an individual permit was required under the approval conditions for the common plan of development.
- (D) For previously approved projects, the conditions which require permit review and reapproval are described below:
- (1) If the amount of impervious surface approved in the stormwater permit increases, a new combined erosion control and stormwater permit shall be required and the project shall meet the rules in place at the standards in place at the time of re-application;
 - (2) If 18 months have passed since the date of approval without construction activity on the site or if 18 months have passed since the last construction activity on the site, permit review and reapproval are required;
 - (3) Common Plan of Development. Individual commercial or industrial lots or phases of a residential development that are part of a common plan of development that has received an approved combined erosion control and stormwater permit from the county on or before the effective date of this chapter shall be required to obtain a permit as described below:

- (a) If previously approved stormwater infrastructure has been fully constructed and or alterations will not result in reductions in approved treatment amounts, a new erosion control permit shall be obtained. Verification that the stormwater treatment infrastructure is functioning shall be required.
 - (b) If previously approved stormwater treatment infrastructure has not been constructed, a new combined erosion control and stormwater permit shall be obtained. The project shall meet standards in place at the time of re-application.
- (4) Projects Proposed for Replatting. Projects with a previously approved combined erosion control and stormwater permit that are proposed for replatting shall be required to obtain a permit as described below:
- (a) If previously approved stormwater treatment infrastructure has been fully constructed or alterations will not result in reductions in approved treatment amounts, if the stormwater treatment infrastructure is functioning as designed, and the amount of proposed impervious surface remains the same or decreases, the project will be considered exempt from the current stormwater treatment requirements and a new erosion control permit shall be obtained.
 - (b) If previously approved stormwater treatment infrastructure has not been constructed, a new combined erosion control and stormwater permit shall be obtained. The project shall meet standards in place at the time of re-application.

§ 153.11 REVIEW PROCESS.

Carver County shall have the authority to administer and enforce this chapter.

(A) Thresholds and requirements for review and approval. The need for review and approval and procedures will be dependent on the scale of the project and its location relative to sensitive areas. Regardless of whether or not an activity meets a threshold for review, all land altering activities shall take appropriate erosion control measures to prevent the sedimentation of receiving waterbodies or discharges of sediment onto neighboring properties.

(1) Activities requiring an Erosion Control Permit.

(a) Any of the following activities shall require an Erosion Control Permit:

1. Projects with one to less than five acres of construction activity and not in a sensitive area; or
2. Projects with less than one acre of construction activity that are part of a larger common plan of development or sale if the larger common plan ultimately has construction activity equal to or greater than one and less than five acres; or
3. Projects with less than one acre of construction activity within a sensitive area; or
4. Projects which require the release of material off-site or into waters of the state; or
5. Projects which create new crossings, culverts, alterations of flows or other obstructions to waters of the state with flows over ten cubic feet per second (cfs); or
6. Projects which create new culverts or other discharges with flows over ten cubic feet per second (cfs).

- (b) Activities described in § 153.11(A)(1)(a)1-4 require review and approval by the county based on standards in § 153.55.
 - (c) Activities described in §153.11(A)(1)(a)5-6 require review and approval by the county based on standards in § 153.55 and § 153.56(G).
- (2) Activities requiring a combined Erosion Control and Stormwater Permit.
- (a) Any of the following activities shall require a combined Erosion Control and Stormwater Permit:
 - 1. Projects with five acres or more of construction activity; or
 - 2. Projects with less than five acres of construction activity that is part of a larger common plan of development or sale if the larger common plan ultimately has construction activity of five acres or more; or
 - 3. Projects with one to less than five acres of construction activity occurring within a sensitive area; or
 - 4. Projects with one acre or more of cumulative impervious surface constructed after September 1, 2002; or
 - 5. Projects with 10,000 square feet or more of cumulative impervious surface constructed after September 1, 2002 and located within a sensitive area; or
 - 6. Projects which include structural stormwater treatment.
 - (b) These activities require review and approval by the county based on standards in §§ 153.55 through 153.60.
- (B) General review process. The following steps are recommended prior to LGU preliminary plat approval in order to expedite the review process.
- (1) Determination of project level. Project level shall be determined based on thresholds described above. Projects that meet the thresholds described above shall continue with the process described below.
 - (2) Pre-application meeting. An initial development review team (DRT) meeting between the responsible party, SWCD, county and LGU should be held as early as possible in the process. Typically submittal of a concept plan for review initiates this process.
 - (3) Application submittal. A permit application which includes all required exhibits described in § 153.40 shall be submitted to the county. This should occur in conjunction with an application to the LGU.
 - (4) Application review and determination of completeness. The county shall make a determination regarding the completeness of an application within ten business days of the receipt of the application and notify the applicant if the application is not complete. The county will make its decision in accordance with M.S. § 15.99, as it may be amended from time to time.
 - (5) Approval. The responsible party shall not commence any construction activity subject to this chapter until approval has been given by Carver County. If the county determines that the application meets the requirements of this chapter, the county may issue approval which authorizes the project or activity.

- (a) Time period of approval. Construction activity must commence within 18 months of the date of approval, or permit reapproval or reverification is required.
 - (b) Form of approval. Approval will typically be in the form of a letter from the county to the applicant.
 - (c) Incomplete/insufficient applications. If the application does not meet the requirements, the county may issue approval contingent upon compliance with this chapter. If non-compliance is substantial, the county may require a re-application.
 - (d) Permit modifications. An approved application may be modified following review and approval by the county. In reviewing the modifications, the county may require additional submittals may be required.
- (6) Denial. If the responsible party fails to meet requirements the county may deny the application. Reason for denial shall be in writing.

APPLICATION REQUIREMENTS

§ 153.40 FEES.

Responsible parties for approval of a project shall provide a fee as set forth in the Carver County fee schedule.

§ 153.41 SUBMITTAL REQUIREMENTS.

An application containing the following information shall be submitted by the responsible party of a site or an authorized representative. The responsible party must sign the application and cannot transfer authority. An application will typically include the following information. At county discretion, less information may be required to constitute a complete application.

- (A) Location map. The map shall show the site location with property lines in relation to surrounding roads, other geographic features, buildings and other structures.
- (B) Topography. Topography showing two-foot contours for the site, invert elevations of existing storm sewer, and/or spot elevations of the conveyance system from drainage discharge points to the nearest receiving waterbody and for a minimum of 100 feet beyond the site boundary. Topography showing ten-foot contours for subwatersheds upstream and downstream of the project site. Where topography in the region is characteristically flat or hydrologic flow path is undetermined, two-foot contours may be required.
- (C) Vegetation map. In areas where there has been a natural resource or similar inventory, the map shall show the location of trees and vegetation on-site, with identification of those trees and vegetation intended to be retained.
- (D) Stormwater management plan. The stormwater management plan shall contain the following:

- (1) Existing and proposed sub-watershed boundaries, upstream and downstream hydrologic flow paths, all on-site water features (including waters of the state), drainage patterns, flow directions, floodplain, and shoreland shown on separate figures;
 - (2) Location and amount of existing and proposed impervious area including roads, trails, parking areas, and building areas;
 - (3) Location, alignment and elevation of existing and proposed stormwater facilities;
 - (4) Construction plans and specifications for all proposed facilities designed to meet requirements of §§ 153.55 – 153.60;
 - (5) Hydrologic calculations for runoff volume, velocities, and peak flow rates using Atlas 14 precipitation depths and storm distributions for the 2-year rainfall event; 10-year, 24-hour storm event; 100-year, 24-hour storm event; and 100-year, 10-day snowmelt event for existing and proposed conditions;
 - (6) All hydrologic, hydraulic, and water quality computations completed to design the proposed facilities, including a demonstration of conformance with the water quality and volume control requirements of § 153.56;
 - (7) Curve numbers used to calculate runoff; Curve numbers used to calculate runoff shall be based on TR 55, Second Edition, June 1986, Table 2 2a with the following changes:
 - (a) Cover type “open space” will be based on the amount of top soil as well as grass cover. Less than six inches of top soil equals poor condition; and more than six inches of topsoil equals good condition;
 - (b) Curve numbers used for cover types “urban districts” and “residential districts” assume at least six inches of topsoil and six inches of non-compacted subsoil soil based on the standards in § 153.60 Topsoil management.
 - (8) Existing and proposed normal water level, high water level, and emergency overflow elevations for the site;
 - (9) For sites requiring extended detention, calculations showing the 2-year storm discharge reduced by 50 percent of existing conditions to demonstrate compliance with the extended detention requirement. The minimum outlet diameter shall be 6 inches;
 - (10) Plans, specifications and computations for stormwater management facilities submitted for review shall be signed by a professional engineer licensed in the State of Minnesota.
- (E) Erosion and sediment control plan shall have both existing and final proposed conditions drawn to scale, shall be consistent with the manual Protecting Water Quality in Urban Areas (Minnesota Pollution Control Agency, 2000) as revised, and shall include the following:
- (1) Proposed area of grading or other land-disturbing activities and delineation of the limits of disturbance including areas of grubbing, clearing, tree removal, grading, excavation, fill and other disturbance;
 - (2) Quantity of soil or earth material to be removed, placed, stored or otherwise moved on site;
 - (3) Locations and descriptions of proposed runoff control, erosion prevention, sediment control and temporary and permanent soil stabilization measures;

- (4) A sequence of land alteration activity and corresponding implementation of erosion control practices, monitoring, maintenance and removal of erosion and sediment control measures; and permanent site stabilization measures. Prior to commencing activity (following all necessary approvals), the responsible party shall provide the SWCD with a construction schedule which will include approximate dates for the following:
 - (a) Completion of installation of perimeter erosion and sediment controls;
 - (b) Completion of required seeding and mulching activities;
 - (c) Completion of land-disturbing activities and putting into place measures for final soil stabilization and revegetation;
 - (d) When the site will be permanently stabilized and re-vegetated;
 - (e) When all temporary erosion and sediment controls will be removed from the site.
- (F) SWPPP. The Stormwater Pollution Prevention Plan (SWPPP) developed for the site to meet National Pollution Discharge Elimination System/State Disposal System (NPDES/SDS) Phase II requirements shall be submitted as part of the applications.
- (G) Wetland protection. The plan shall have both existing and final proposed conditions drawn to scale and shall contain the following:
 - (1) Delineated boundaries of wetlands as determined under the Wetland Conservation Act;
 - (2) Boundaries of wetland transition setbacks, if applicable per § 153.57;
 - (3) Computations/calculations used to design the wetland transition setback;
 - (4) Upon request, evidence of permits and process required under the Wetland Conservation Act (WCA).
- (H) Topsoil Management Plan.
- (I) Additional information as relevant and necessary to evaluate an application may be required. Requests for additional information shall be submitted in writing to the responsible party and shall specify requirements for submittal to the county.

STANDARDS

§ 153.55 EROSION AND SEDIMENT CONTROL DESIGN AND OPERATIONAL STANDARDS.

- (A) Carver County adopts and incorporates by reference the erosion and sediment control design and operational standards as set forth in Minnesota Permit R100001 (the General Permit Authorization to Discharge Storm Water Associated With Construction Activity Under The National Pollutant Discharge Elimination System), as amended from time to time.
- (B) Land altering activity shall not result in the detrimental deposition of sediment or construction materials into the waters of the state or onto neighboring property. Erosion and sediment control facilities must be installed prior to commencing any construction activity.

(C) Erosion and sediment control measures must be designed and maintained to prevent the detrimental deposition of sediment or construction materials into the waters of the state or onto neighboring property. There are a variety of publications available that describe BMP's that can be used to meet these standards. Examples of BMP's can be found in:

- (1) Minnesota Stormwater Manual, Minnesota Pollution Control Agency, as amended from time to time;
- (2) Erosion Control Handbook, Minnesota Department of Transportation, 2006.

§ 153.56 STORMWATER MANAGEMENT STANDARDS.

(A) Stormwater BMPs must be designed and maintained to meet these standards. Examples of BMP's can be found in:

- (1) Minnesota Stormwater Manual, Minnesota Pollution Control Agency, as amended from time to time;
- (2) Appendix A: Volume and Water Quality Calculations;
- (3) Carver County Water Management Ordinance and BMP Guidelines, Carver County Water Management Department, as amended from time to time.

(B) Summary of stormwater management requirements by project type

(1) New development.

- (a) New development sites adding 1 acre or more of new impervious must meet the treatment requirements described below for rate, water quality, and volume.
- (b) In sensitive areas, new development sites creating 10,000 square feet or more of new impervious would have to meet the treatment requirements described below for rate, water quality, and volume for new impervious created as part of the project.

(2) Redevelopment.

(a) Additions.

1. Sites adding 1 acre or more of new impervious must meet the treatment requirements described below for rate, water quality, and volume for new impervious created as part of the project.
2. In sensitive areas, sites adding 10,000 square feet or more of new impervious would have to meet the treatment requirements described below for rate, water quality, and volume for all impervious created as part of the project.
3. Treatment areas must be designed for the volume of water draining to the feature.

(b) Tear downs.

1. Tear down sites replacing 1 acre or more of existing impervious must meet the treatment requirements described below for rate, water quality, and volume for all impervious created as part of the project.

2. In sensitive areas, tear down sites replacing 10,000 square feet or more of existing impervious would have to meet the treatment requirements described below for rate, water quality, and volume for all impervious created as part of the project.
3. Tear down sites that reduce existing impervious by 10% or more are exempt from the treatment requirements described below for rate, water quality, and volume.
4. Treatment areas must be designed for the volume of water draining to the feature.

(c) Combination Sites.

1. Combination sites must meet the requirements for tear down sites as described in part §153.56(B)(2)(c) above.

(3) Linear Transportation Projects

(a) Linear Project Permit Thresholds and Treatment Requirements.

1. **New Road Construction.** Linear transportation projects adding 1 acre or more of new impervious (10,000 square feet in a sensitive area) must meet treatment requirements described below for rate, water quality, and volume for all new impervious created as part of the project.
2. **Road Reconstruction.** Linear transportation projects fully reconstructing the road bed and surface must meet the treatment requirements described below.
 - (a) **Decrease in impervious surface.** Projects that reconstruct 1 acre or more of existing impervious (10,000 square feet in a sensitive area) but that reduce impervious by 10% or more are exempt from the treatment requirements described below for rate, water quality, and volume.
 - (b) **No change in impervious surface.** Projects that reconstruct 1 acre or more of existing impervious (10,000 square feet in a sensitive area) but result in no net change in impervious surface must provide treatment that results in a 10% reduction from pre-project conditions (for a 1.0 inch storm) for water quality (total suspended solids and total phosphorus), and volume.
 - (c) **Increase in impervious surface.** Projects that reconstruct or create 1 acre or more of impervious (10,000 square feet in a sensitive area) and result in an increase in impervious surface (e.g. an expansion of an existing roadway) must meet the following treatment requirements:
 - (i) **New impervious:** must meet treatment requirements described below for rate, water quality, and volume for all new impervious created as part of the project.
 - (ii) **Existing impervious:** must provide treatment that results in a 10% reduction from pre-project conditions (for a 1.0 inch storm) for water quality (total suspended solids and total phosphorus), and volume for impervious areas reconstructed as part of the project.

3. Exemptions for linear transportation projects

- (a) Mill & overlay, pavement rehabilitation, and pavement reclamation projects are exempt from the rate control, water quality, and volume control requirements of this chapter.
- (b) New trails or sidewalk projects that create impervious surfaces 12 feet or less in width, are created independently from road projects, and will be bordered on the downgradient side(s) by a pervious buffer averaging at least one-half the width of the sidewalk or trail are exempt from requirements.

(b) Treatment Locations/Sequencing.

1. Treatment Locations.

- (a) Water quality treatment must be provided prior to discharging stormwater runoff to a receiving waterbody. If it is not feasible to provide full water quality treatment prior to discharge to a receiving waterbody, structural treatment for TSS removal must be provided at a minimum. Full water quality treatment shall then be provided at a 2:1 ratio at a discharge point to a different receiving waterbody within the project area.
- (b) Volume control can be provided at any feasible location within the same major watershed of the project.

2. Treatment areas must be designed for the volume of water draining to the feature.

- (c) Alternative Compliance for Linear Projects. Specific site conditions may make volume control difficult, undesirable, or impossible. Linear projects are eligible for alternative compliance for volume control as described in §153.56(E)(3).

(C) Rate control standard.

- (1) Peak rates. The peak rates shall not increase from existing conditions for the 2-, 10-, 100-year storm events, and the 100-year, 10-day snowmelt event. Peak rates shall be calculated using Atlas 14 precipitation depths and storm distributions.
- (2) Conveyance System. At a minimum, the storm sewer conveyance system shall be designed for a 10-year, 24-hour storm event. The pond and pond outlet structure shall handle the 100-year, 24-hour storm event. An emergency overflow structure, downstream drainage route and capacity shall be submitted for review.
- (3) Extended Detention. To protect receiving channels, extended detention must be provided for the runoff generated from the 2-year event for sites with direct discharges to streams. To demonstrate compliance with the extended detention requirement, calculations showing the 2-year storm discharge reduced by 50 percent of existing conditions shall be submitted. The minimum outlet diameter shall be 6 inches.

(D) Water quality standard.

- (1) Design Storm Event. The stormwater management plan must provide water quality treatment for 1.0 inches of rainfall from the site's new impervious surface as described in parts (2) and (3) below.
- (2) Phosphorus Removal Standards.

- (a) The stormwater management plan must remove 90% of the phosphorus generated by the site under developed conditions.
 - (b) Treatment areas must be sized appropriately for the area draining to the feature.
 - (3) Total Suspended Solids (TSS) Removal Standards.
 - (a) The stormwater management plan must remove 90% of the total suspended solids generated by the site under developed conditions.
 - (b) Treatment areas must be sized appropriately for the area draining to the feature.
 - (4) Design Standards. BMPs shall be designed according to the design standards included in Appendix A: Volume and Water Quality Calculations. Compliance with the water quality treatment standard will be calculated by the applicant using Appendix A: Volume and Water Quality Calculations or industry standard water quality models.
 - (5) Credit Banking. Water quality treatment provided in excess of the 1.0 inch requirement may be banked for use on another project. Excess banked water quality credit amounts shall not exceed the volume of two inches over the impervious surfaces of the drainage area to the BMP or the volume provided within the BMP, whichever is less. Transfer of banked water quality credits between applicants is allowed within the same major subwatershed. Applicants shall submit a letter to the county outlining the conditions of the transfer and confirming the volume of the transfer. The county must review and approve all credit transfers
- (E) Volume Control Standard.
- (1) Volume Control Standards
 - (a) The stormwater management plan must provide volume control for 1.0 inches from the impervious surface.
 - (b) Treatment areas must be sized appropriately for the watershed area tributary to the feature.
 - (2) BMP Volume Calculations. Compliance with the 1.0 inch volume control standard will be calculated by the applicant using Appendix A: Volume and Water Quality Calculations or an approved equivalent.
 - (3) Site Conditions Eligible for Alternative Compliance. Specific site conditions may make volume control difficult, undesirable, or impossible. Some of these conditions are listed in Table 1 and may qualify the applicant for Alternative Compliance Sequencing. The applicant may also submit a request to the County for Alternative Compliance Sequencing for site conditions not listed below. All requests for alternative compliance shall indicate the specific site conditions present and include a grading plan, utility plan, and the submittal requirement listed in Table 1.

Table 1. Alternative Compliance Site Conditions

Type	Specific Site Condition	Volume Reduction Limitation	Submittal Requirement
Potential Contamination	Potential stormwater hotspots/industrial facilities	Infiltration prohibited	
	Contaminated soils	Infiltration prohibited	Soil analysis
	Vehicle fueling and maintenance areas	Infiltration prohibited	Site map with vehicle fueling/maintenance areas shown
Physical Limitations	Low permeability soils	Infiltration restricted	1) Carver County Soil Survey data showing greater than 50% of site is hydrologic group C and D soils; or 2) Carver County Soil survey data showing greater than 50% of site has the following Unified Soil Classifications: MH, ML, GS, SC, CL, OL, CH, OH 3) Documentation that site has been previously disturbed by construction activity; or 4) Documentation of field infiltration tests showing infiltration rate of less than 0.3 inches per hour.
	Bedrock or groundwater within 3 vertical feet of bottom of volume control practice	Infiltration restricted	Soil borings required
Land Use Limitations	Wellhead Protection Areas	Infiltration restricted	Site map with wellhead protection areas shown

(4) Alternative Compliance Sequencing for Volume Control. To the maximum extent practicable, the volume control standard shall be fully met onsite. If it is not possible because of site conditions listed above, Alternative Compliance may be achieved by any combination of the methods described below.

(a) First, the applicant shall provide 0.5 inches volume control on-site through volume reduction methods as listed in Appendix A: Volume and Water Quality Calculations or in the application guidance materials. If the applicant meets the 0.5 inch volume control requirement on-site, the project is compliant, and no further sequencing steps are necessary.

- (b) Second, if the applicant is unable to provide 0.5 inches of volume control on-site, the applicant shall comply by providing on-site volume control to the maximum extent practicable and then shall provide the remainder through one or both of the methods described below. Once the applicant meets the 0.5 inch volume control requirement through a combination of on-site and off-site practices, the project is compliant, and no further Sequencing steps are necessary.
1. Off-site Treatment. Volume reduction may be accomplished at another site as long as it yields the same volume reduction benefit, and is approved by the county prior to construction. Offsite compliance shall be achieved in the same major subwatershed as the project site.
 2. Banking. For the remaining volume reduction required, the applicant shall comply with the volume control standard through the use of qualified banking credits. Volume reduction may be accomplished through the use of banked credits as long as it yields the same volume reduction benefit, and is approved by the county prior to construction. Banking credits shall be achieved in the same major watershed as the project site.
- (5) Credit Banking. Volume control provided in excess of the 1.0 inch requirement may be banked for use on another project. Excess banked volume reduction amounts shall not exceed the volume provided within the BMP. Transfer of banked volume credits between applicants is allowed. Applicants shall submit a letter to the county outlining the conditions of the transfer and confirming the volume of the transfer. The county must review and approve all credit transfers.
- (F) High Water Elevation Standard.
- (1) As described below, all applications shall provide vertical separation between low openings of new and existing structures and the 100-year, 24-hour high water elevations or 100-year, 10-day high water elevations of facilities constructed as part of the project, whichever is greater. Emergency overflows are required for all ponds.
 - (a) Low opening of new and existing structures must have a minimum of 2 feet of separation from pond high water level.
 - (b) Low floor of new and existing structures must have a minimum of 1 foot of vertical separation from pond high water level.
 - (c) In rare cases where an emergency overflow (overland or pipe) is not feasible, the low opening vertical separation is increased to 3 feet.
 - (2) The requirements described above can be waived for non-habitable structures if an LGU allows for less vertical separation from high water elevations based on flood-proofing standards included in a building code.
 - (3) If side or rear yard overflow swales are constructed, the cities should document through the building permitting and inspection process that high water levels for side or rear yard overflow swales are below the low openings of structures.
- (G) Upstream and Downstream Impacts.
- (1) Upstream. Drainage flowing onto the site from upstream areas must be managed and accommodated. Alterations to flow paths which impound or slow down water will not be allowed unless it can be shown that the upstream system can accommodate the change. Proposed rates,

volumes, velocities and duration of flow may be requested in order to document that any impacts are nonexistent or insignificant.

(2) Downstream.

- (a) To the extent possible, existing drainage areas and discharge points from the site should be maintained post-development and concentrated flows onto neighboring properties should be avoided or mitigated. The downstream conveyance system (natural or structural) must be able to accommodate, to the nearest major receiving waterbody, increased volumes caused by development.
- (b) If diversions from existing drainage areas and alterations to discharge points are proposed, the responsible party shall provide additional documentation (rates, volumes, velocities, duration of flow, etc.) to demonstrate that the downstream conveyance system can accommodate the change. The responsible party shall provide evidence of easements or other agreements concerning water flow if a plan involves increased impervious or directing concentrated runoff from onto a neighboring property.
- (c) If diversions from existing drainage areas, alterations to discharge points, increased duration of flow, or additional runoff volumes are proposed, the responsible party shall provide additional documentation (rates, volumes, velocities, duration of flow, etc.) to demonstrate that the downstream conveyance system can accommodate the change. The responsible party shall provide evidence of mitigation, easements or other agreements concerning water flow if a plan involves increased impervious or directing concentrated runoff from onto a neighboring property.

(H) Requirements for Maintenance and Access.

- (1) Maintenance of stormwater facilities. All stormwater management structures and facilities must be designed to allow access for maintenance and must be properly maintained in perpetuity to ensure that they continue to function according to the approved design.
- (2) Maintenance Agreement. No stormwater plan may be approved unless a maintenance agreement is provided that defines maintenance responsibilities following completion of the project, specifies types and frequency of inspection and maintenance activities, and specifies who will conduct inspections and maintenance activities. A sample agreement and list of inspection/maintenance activities are included in the Carver County Water Resource Management Ordinance and BMP Guidelines.
 - (a) Prior to project close out return of the financial security, an agreement shall be in place regarding maintenance responsibilities.
 - (b) Maintenance responsibilities must be assumed by either the local government unit (LGU) or by the responsible party.
 - (c) If the Local Government Unit (LGU) is assuming maintenance responsibilities, a single Memorandum of Agreement for each LGU may be used to cover all stormwater management structures and facilities required by this ordinance within the LGU's jurisdiction.
 - (d) The agreement must be executed and recorded in a format acceptable to the county. The recordable executed agreement must be submitted to the county prior to release of financial security for the project.

§ 153.57 WETLAND PROTECTION.

(A) Wetland Conservation Act Implementation. Carver County adopts and incorporates by reference the Minnesota Wetland Conservation Act and its implementing rules as set forth in Minn. Rules chapter 8420, as amended periodically.

(B) Wetland Transition Setbacks

(1) Requirement. Establishment or preservation of an unmanicured, vegetated, transition setback is required adjacent and contiguous to wetlands is required for projects meeting the thresholds described in §153.11(A)(2)(a). Activities meeting the exemption requirements of Minnesota Rule 8420 are exempt from these requirements. Wetlands or portions of wetlands impacted and mitigated through Minnesota Rule 8420 are exempt from these setback requirements.

(2) Determining setback widths.

(a) Base Width. The Base Width for a wetland transition setback is 20 feet.

(b) Minimum Width. The minimum width for a wetland transition setback is 20 feet.

(c) Applied Width. The setback width shall be adjusted to reflect site conditions based on the criteria below. The maximum Applied Width is 50 feet.

1. Stormwater treatment. The Base Width must be increased by 10 feet in areas where untreated stormwater runoff from impervious surfaces is directed to the wetland and not treatment facilities.
2. Slopes. For every 5 percent increase in average setback slope from 5 percent, the Base Width must be increased 5 feet in the area where the slope increase exists.

Average Setback Slope	Increase in Setback Width
0-5% slope	No increase
5-10% slope	Add 5 feet to Base Width
10-15% slope	Add 10 feet to Base Width
>15% slope	Add 15 feet to Base Width

3. High quality wetland. If the wetland received a ranking of “High” value in the Carver County Wetland Function and Value Assessment or an equivalent wetland function and value assessment, the Base Width must be increased 10 feet (provide link to map of Wetland Function and Value Assessment).

(d) Flexibility in Applied Width. The CCWMO retains the right to allow the setback width to vary and the minimum width to be reduced based on demonstrated site constraints, to allow unique BMPs, or to allow other activities that protect and enhance the wetland. Adjustments to the Applied Width may not result in a reduction to the total setback area and the adjusted setback must provide wetland protection at least equivalent to a setback of uniform width (e.g. the setback area may be reduced in one area of the wetland if the area is replaced at a 1:1 ratio elsewhere around the same wetland).

(e) Setback Area Transfers. The total setback area may be reduced on a wetland if the area is replaced at a 2:1 ratio around another wetland on site.

- (f) For linear projects, non-impervious portions of the right of way are allowed within the setback.
- (3) Setback vegetation requirements.
- (a) Setback vegetation shall not be cultivated, cropped, pastured, mowed, fertilized, subject to the placement of mulch or yard waste, or otherwise disturbed, except for:
 - 1. Periodic cutting or burning that promotes the health of the setback or to maintain the proposed natural community,
 - 2. Removal of trees, limbs, or branches that are dead, diseased, or pose safety hazards,
 - 3. Actions to address disease or invasive species,
 - 4. Mowing for purposes of public safety,
 - 5. Mowing or clearing of trees and shrubs from a path no more than 12 feet in width to allow access to the wetland,
 - 6. Temporary disturbance for placement or repair of buried utilities, or
 - 7. Other actions to maintain or improve setback quality, each as approved by the WMO.
 - (b) Pesticides and herbicides may be used in accordance with Minnesota Department of Agriculture rules and guidelines.
 - (c) Once vegetation is established in a setback, no fill, debris or other material shall be excavated from or placed within a setback.
 - (d) Areas of the transition setback that will be disturbed by grading activities during construction, shall be planted according to the following standards:
 - 1. Soils must be decompacted to a depth of 18 inches and organic matter must be incorporated into soils before seeding or planting. Decompaction shall be accomplished solely by incorporation of organic matter within the drip line or critical root zone of trees or within 10 feet of underground utilities.
 - 2. Transition setback areas shall be planted with a native seed mix and/or native plantings approved by the WMO.
- (4) Recording of Setback. The setback shall be documented by a declaration or other document approved by the WMO or municipality and recorded in the office of the County Recorder before the permit will be issued.
- (5) Monumentation. The setback shall be indicated by permanent, free-standing markers at the setback's upland edge, with a design and text approved by the WMO in writing. A marker shall be placed where each lot line crosses the setback, with additional markers at major points of deflection.
- (6) Maintenance. The setback shall be maintained in accordance with the provisions outlined in the Carver County Water Management Ordinance and BMP Guidelines.

§ 153.58 SHORELANDS.

- (A) This chapter applies only in situations where a protected water exists but the LGU responsible for land use planning and zoning has not adopted a DNR-approved shoreland ordinance.
- (B) All development and land use changes shall meet the setback requirements of Minn. Rules Parts 6120.3300 and 6120.3400, as they may be amended from time to time.

§ 153.59 FLOODPLAIN.

- (A) This section applies in situations where the floodway and 100-year flood elevation have been defined by the Federal Emergency Management Agency (FEMA).
- (B) Regulation.
 - (1) Fill in the floodway. Placement of fill in the floodway shall not be allowed.
 - (2) Fill in the 100-year flood elevation.
 - (a) Placement of up to 50 cubic yards of fill below the 100-year flood elevation for the purposes of restoring or stabilizing soils, banks, or slopes shall be allowed.
 - (b) Placement of more than 50 cubic yards of fill below the 100-year flood elevation for the purposes of restoring or stabilizing soils, banks, or slopes OR any amount of fill placed below the 100-year flood elevation for other purposes shall not be allowed unless it is shown that the proposed fill can be mitigated through provision of compensatory storage, or will not cause a net decrease in flood storage.
 - (c) Placement of fill for the construction of linear public projects that are necessary in order to meet state or federal safety standards or requirements are NOT required to provide compensatory storage but must demonstrate that the fill will not cause a net decrease in flood storage.
- (C) Requirements for compliance.
 - (1) Fill placed below the 100-year flood elevation must not hydraulically separate one area of the floodplain from another.
 - (2) Demonstration that the placement of fill will not cause a net decrease in storage must be provided by a professional engineer licensed in the State of Minnesota.
 - (3) Compensatory storage must be created prior to or concurrent with the placement of fill.
 - (4) Siting of compensatory storage must follow this priority order:
 - (a) on the same property as the affected floodplain;
 - (b) on properties adjacent to the affected floodplain;
 - (c) in the same major watershed as the affected floodplain.
 - (5) Meeting the requirements of this section does not constitute compliance with an existing DNR-approved local floodplain ordinance.

§ 153.60 TOPSOIL MANAGEMENT.

(A) Requirement. A minimum of 6 inches of topsoil must be provided in all green space areas of the project. Topsoil shall meet one of the topsoil standards described in §153.60(1) below. When available onsite, topsoil shall be managed to protect and/or restore soil permeability to non-compacted soil conditions following construction.

(1) Topsoil Standards.

(a) Carver County Topsoil Standard

Table 2. Carver County Topsoil Standard

Requirement	Range	Test Method
Material Passing the ¾ in [19 mm]	100 %	ASTM D 422
Material passing No 4 in [4.75 mm]	≥ 85%	-
Clay	5% – 30%	ASTM D 422
Silt	5% - 35%	ASTM D 422
Sand	38% - 75%	ASTM D 422
Organic matter	3% – 15%	ASTM D 2974
pH	6.1 – 7.5	ASTM G 51
Compaction	-1,400 kilopascals (kPa) / 200 pounds per square inch (psi) in the upper 12 inches of soil, or -bulk density of less than 1.4 grams per cubic centimeter (g/cm ³) in the upper 12 inches of soil	Field test

(b) Match Existing Soils. For sites that have not been previously graded, a site specific topsoil standard can be developed using one of the methods described below.

1. Soil Survey Data. A site specific topsoil standard can be developed using information on physical soil properties from the Natural Resource Conservation Service’s Web Soil Survey for Carver County. The proposed site specific standard must be submitted prior to permit approval.
2. Onsite Testing. A site specific topsoil standard may be developed using onsite sampling results. One (1) sample shall be collected of the top 12 inches of soil from each soil map unit within the disturbed area of the project. Samples shall be collected and analyzed for percent clay, percent sand, percent silt, organic matter content, and pH. A site specific standard shall then be developed using a weighted average of the samples collected on site. Sample results and the proposed site specific standard must be submitted prior to permit approval.
3. Organic Matter, pH, and Compaction Standards. All site specific standards shall include the ranges described in the Carver County Topsoil Standard for organic matter, pH, and compaction.

(2) Topsoil Replacement Methods.

(a) Stockpile Existing Material and Respread. When available, on site topsoil (A soil horizon) shall be stripped and stockpiled for later reapplication. Stockpiled topsoil shall meet the standard selected for the project. If stockpiled material does not meet the selected standard for the project, the material shall be amended to meet the selected standard or topsoil meeting the selected standard shall be imported to the site.

1. Stockpile Testing. The stockpile shall be tested prior to resspreading. Sample results must be submitted to County staff a minimum of 2 business days prior to resspreading.

(b) Import Material and Spread. If topsoil is not available on-site due to previous construction activity and existing material cannot be amended to meet the Carver County Topsoil Standard, topsoil meeting the standard shall be imported to the site.

(B) Submittal Requirements. A "Topsoil Management Plan" shall be submitted and shall include information on the topsoil management strategies to be utilized to maintain soil permeability at or above required standards.

ENFORCEMENT

§ 153.70 AUTHORITY/RESPONSIBILITY.

The county shall have the overall authority to enforce the provisions of this chapter. If the LGU has an approved and adopted Local Water Plan and elects to take on principal responsibility for enforcement of this chapter, an individual agreement will be negotiated to determine principal review and enforcement responsibility based on the LGU's ability to implement this chapter.

§ 153.71 METHOD OF ENFORCEMENT.

The county may take the following actions as appropriate:

- (A) Issue stop work orders;
- (B) Issue a notice of violation;
- (C) Issue an order for correction;
- (D) Withhold the scheduling of inspections and/or the issuance of a certificate of occupancy;
- (E) Revoke any approval issued by the county to the responsible party for the site in question;
- (F) Take such action as necessary in a court of competent jurisdiction to attain compliance;
- (G) Use financial security as provided under § 153.74;
- (H) Institute appropriate actions or proceedings, including injunctive relief to prevent, restrain, correct or abate such violations or threatened violations. The county may recover costs incurred for corrective action in a civil action in any court of competent jurisdiction and such costs may be certified by court order to the County Auditor as a special tax against the real property.

§ 153.72 INSPECTIONS.

- (A) After issuance of a permit, the county or SWCD may perform such field inspections and monitoring of the approved activity as the county or SWCD deems necessary to determine compliance with the conditions of the permit and this ordinance. Any portion of the activity not in compliance shall be promptly corrected. In applying for a permit, the applicant consents to the county or SWCDs entry upon the land for field inspections and monitoring.

§ 153.73 FINANCIAL SECURITY.

- (A) Purpose. The purpose of the financial security is to ensure installation and maintenance of erosion and sediment control measures and installation of practices intended to meet the filtration/bioretenion/infiltration requirement. The responsible party will provide a financial security for projects requiring an Erosion and Sediment Control Permit per 153.11(A)(1) or a Stormwater Permit per 153.11(A)(2). Federal, state, county, city, and township governments will not be required to provide financial security.

- (B) Form and amount.

- (1) The responsible party shall provide security for the performance of the work described and delineated on the approved erosion and sediment control plan and/or the approved stormwater management plan and any related remedial work.

(a) Security for Erosion Control Permit. Security in the amount of \$1,000 per acre disturbed shall be provided.

(b) Security for Combined Erosion Control and Stormwater Permit. Security in the amount of \$5,000 per acre disturbed shall be provided.

(c) Minimum Amount.

1. The minimum security required for an Erosion Control permit is \$1,000.

2. The minimum security required for a Combined Erosion Control and Stormwater Permit is \$5,000.

(d) Maximum Amount. For projects disturbing up to 40 acres, the maximum combined security required of an individual responsible party is \$25,000. For projects disturbing 40 or more acres, the maximum combined security required of an individual responsible party is \$50,000.

- (2) The form and conditions of the securities:

(a) Deposit, either with the county, a responsible escrow agent, or trust company, at the option of the county, irrevocable letter of credit, cash escrow, or other assurance. The financial assurance must be in a form acceptable to the county and from a surety licensed to do business in the State of Minnesota.

(b) The financial assurance shall be in favor of the county and conditioned upon the applicant's performance of the authorized activity in compliance with the permit and applicable laws, including this Chapter, and the payment when due of any fees or other charges authorized or required by the permit and this Chapter. The financial assurance shall state that in the

event the conditions of the financial assurance are not met, the county may make a claim against it. The county shall be authorized to make a claim or draw against the security after any default by the responsible party under the permit or these rules.

(C) Maintaining the financial security.

- (1) If at any time during the course of the work the financial security amount falls below 50% of the required deposit, the responsible party shall make another deposit in the amount necessary to restore the cash deposit to the required amount.
- (2) If the responsible party does not bring the financial security back up to the required amount within seven days after notification by the county that the amount has fallen below 50% of the required amount the county may take such legal action as specified in § 153.74.

(D) Action against the financial security.

- (1) The county shall be authorized to make a claim or draw against the security after any default by the responsible party under the permit or this chapter.
- (2) The county may use funds from this security to finance remedial work undertaken by the county or a private contractor and to reimburse the county for all costs incurred in the process of remedial work including, but not limited to, staff time and attorney's fees under the following circumstances:
 - (a) The responsible party ceases land altering activities and abandons the work site prior to completion of the grading plan.
 - (b) The responsible party fails to conform to the erosion and sediment control plan and/or the approved stormwater management plan as approved by the county.
 - (c) The erosion and sediment control techniques utilized under the erosion and sediment control plan and/or the approved stormwater management plan are not maintained during site construction.
 - (d) The responsible party fails to reimburse the county for corrective action.

(E) Returning the financial security. The security deposited with the county for faithful performance of the erosion and sediment control plan and any related remedial work to finance necessary remedial work shall be released after construction is complete, the site has been re-vegetated, all erosion and sediment measures have been removed, the practices identified in the approved stormwater management plan has been installed and are working as designed, and a final inspection has been completed by the county.

(F) Partial return of the financial security. The county may return a portion of the financial security submitted to assure performance if the county determines that the entire amount is no longer required to ensure compliance with permit conditions and rules.

§ 153.74 RELIEF.

Any request for relief from a standard of this chapter must be decided by the Carver County Board of Adjustment. The standards and procedures set forth in §§ 152.214 through 152.218 shall apply to any request for relief in this chapter

- (A) Carver County Board of Adjustment cannot grant relief from any Minnesota Permit R100001 (the General Permit Authorization to Discharge Storm Water Associated With Construction Activity Under The National Pollutant Discharge Elimination System) requirements. Such requests for relief must be heard by the Minnesota Pollution Control Agency (MPCA).
- (B) Carver County Board of Adjustment cannot grant relief which is in conflict with or violates the Water Management Plan.
- (C) In cases where an LGU has a similar standard, the Carver County Board of Adjustment cannot grant relief in instances where the LGU has not granted similar relief.
- (D) Notice must also be given to the following:
 - (1) Property owners located adjacent to the applicant property,
 - (2) Property owners located downstream of the applicant property to the nearest receiving waterbody, and
 - (3) Property owners located upstream affected by the project.

Chapter 153 Water Resource Management

Appendix A: Volume and Water Quality Calculations

10/15/2016

A. Purpose

This appendix provides assistance to applicants in calculating volume and water quality credits for best management practices (BMPs) to meet the requirements outlined in Carver County Ordinance Chapter 153. For additional information on designing BMPs, please see the Carver County Water Resource Management Ordinance and BMP Guidelines.

B. Calculation for Volume and Water Quality Treatment Volume

The treatment volume is a storm event of 1.0 inches. The treatment is divided into volume reduction and water quality treatment as described below.

1. Volume Reduction. The volume to be controlled on site is 1.0 inches from the site impervious.
2. Water Quality Treatment. The water quality treatment volume is calculated as 1.0 inches from the site impervious.

C. Volume Credits

Practices that can be used to meet the 1 inch volume requirement are described below. Methods for calculating the volume retained are included for each practice.

1. Amended Soils. The volume retained is calculated using 0.5 inches over the amended area.
2. Bioretention basins. The volume retained is calculated as 40% of the ponded volume. No volume credit will be given for bioretention practices within 3 feet of vertical separation from the seasonally high groundwater or sited immediately adjacent to wet ponds and/or bioretention practices controlled by the same outlet as a wet pond (e.g. bioretention shelves or benches).
3. Dry Swale. The volume retained is calculated as 40% of the ponded volume. No volume credit will be given for bioretention practices within 3 feet of vertical separation from the seasonally high groundwater or sited immediately adjacent to wet ponds and/or bioretention practices controlled by the same outlet as a wet pond (e.g. bioretention shelves or benches).
4. Stormwater Reuse (irrigation). To meet the volume requirement, the volume to be retained onsite must be utilized on site once per week for a period of 20 weeks during the growing season. The volume reduction for stormwater reuse is calculated by the area irrigated times the irrigation rate.
5. Preservation or Restoration of Upland Vegetation.
 - a. Volume Retained. The volume retained is calculated using 0.5 inches over the area preserved.
 - b. The area to be preserved should consist of existing trees or predominantly native vegetation. Areas to be restored must be restored to predominantly native vegetation.
 - c. The area to be preserved must be placed under easement to ensure that it continues to provide treatment in perpetuity.
6. Green Roof. The area of the green roof is excluded from the total impervious calculation, thereby reducing the total treatment volume.

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7. Pervious Pavement. The volume reduction for pervious pavement is calculated as 50% of the volume below the tile outlet elevation (assumes 50% pore space below tile). The area of pervious pavement is also excluded from the total impervious calculation.
8. Infiltration. The volume retained is calculated as 80% of the ponded volume.
9. Bioretention Shelf/Bench. No volume credit will be given for bioretention practices sited immediately adjacent to wet ponds and/or bioretention practices controlled by the same outlet as a wet pond (e.g. bioretention shelves or benches).
10. Disconnecting Impervious Surfaces. Volume reduction for disconnecting impervious surface is dependent upon the pervious area being routed and must have amended soils to receive volume reduction credits. Volume reduction is 0.5 inches over the area of amended soils. Impervious areas must be discharging to the amended soils as a uniform sheet flow, with a max flow path of 100 feet.

D. Water Quality Credits

Practices that can be used to meet the water quality treatment requirement are described below. Methods for calculating the amount of water quality treatment provided are included for each practice. In order to be eligible for the water quality credit described below, BMPs must meet the design standards in the Carver County BMP guidelines.

1. Removal Requirements. The following removal percentages are required for the site.
 - a. 90% Total Phosphorus (TP) removal for 1.0 inches off site impervious.
 - b. 90% Total Suspended Sediment (TSS) removal for 1.0 inches off site impervious.
2. TP and TSS Removal Percentages. The CCWMO assumes the following removal percentages for total phosphorus:
 - a. Stormwater Pond. For stormwater ponds designed to meet NURP design criteria, 60% TP removal can be assumed and 80% TSS removal can be assumed.
 - b. Bioretention Basin. For bioretention basins designed to meet the design criteria in the Carver County BMP Guidelines, 75% TP removal can be assumed and 90% TSS removal can be assumed.
 - c. Iron-enhanced Sand Filter. For iron-enhanced sand filter systems designed to meet design criteria in the Carver County BMP Guidelines, 90% TP removal can be assumed and 90% TSS removal can be assumed.
 - d. Hydrodynamic Separator. TSS removal is 50% of the watershed being treated by the device. No credit is given for TP removal.
 - e. Disconnecting Impervious Surfaces. 45% TP reduction and 75% TSS reduction with a maximum area equal to the area of impervious area discharging to the area. Discharge must be uniformed sheet flow with a max flow path of 100 feet.
 - f. Volume Practices.

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- i. Stormwater Reuse. 50% TP and 50% TSS requirements can be met through reuse when treating 1 inch of stormwater.
- ii. Infiltration. 100% TP and TSS removal can be assumed for the volume naturally infiltrating.

E. Alternative Design Approaches

1. *Alternative Designs.* Alternative designs may be approved if, upon review, the county determines the design will provide treatment equal to or greater than the practices described in this appendix. Applicants wishing to utilize an alternative design must submit plans and specifications for the proposed design along with calculations showing compliance with the stormwater standards of Carver County Ordinance Chapter 153. Calculations should be generated using industry standard models. In order to be eligible for the volume credit described below, BMPs must meet the design standards in the Carver County BMP guidelines.
2. *Site Specific Soil Determinations.* On-site information may be accepted in lieu of the Hydrologic Soil Group determinations found in the Carver County Soil Survey. The on-site determination must be completed by a state- licensed soil scientist. Information submitted must present a detailed soil profile description including, but not limited to, horizon depths, Munsell colors, USDA textural classifications, bulk density analysis, and saturated hydraulic conductivity tests to a minimum depth of eight feet. Geotechnical soil borings alone are not acceptable. If requested, an on-site meeting can be held for further determination. If the initial determination is disputed, the applicant must submit a minimum number of soil profile locations in the disputed area based on one per soil group and one per five acres or as agreed upon between the county and the applicant in the disputed area. A final determination of on-site soils will be made by a consensus of the county, Carver SWCD and the LGU following review by state soil licensed staff and/or consultant.
3. *Infiltration Rates.* Design infiltration rates from the most recent version of the Minnesota Stormwater Manual shall be used to calculate the area and draw-down time period for infiltration BMPs. Percolation tests can be conducted and submitted to determine the actual rate of infiltration after the sub-grading is established.

F. References

Additional information and design guidelines are available in the following documents:

1. "Carver County Water Resource Management Ordinance and BMP Guidelines", as amended from time to time.
2. MPCA's "Minnesota Stormwater Manual", as amended from time to time.