TRUMBULL COUNTY
EROSION & SEDIMENT CONTROL RULES

Updated October 2012

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1. Purpose and Scope

The Trumbull County Commissioners adopts these Erosion and Sediment Control Rules, pursuant to Ohio Revised Code, Section 307.79, to establish technically feasible and economically reasonable standards to achieve a level of management and conservation practices in order to abate soil erosion and degradation of the waters of the State by soil sediment on land used or being developed for non-farm commercial, industrial, residential or other non-farm purposes, to establish criteria for determination of the acceptability of such management and conservation practices, and to promote the health, safety and well-being of the residents of Trumbull County. Specifically, the Rules are intended to protect:

1.1 Adjacent landowners from property loss due to sedimentation, erosion and flooding.

1.2 County and township ditches, culverts and storm sewers from loss of capacity due to siltation.

1.3 Water and habitat quality in streams, lakes, and wetlands.

1.4 Land development from the inconsistent application of state and regional guidance.

These Rules apply to soil-disturbing activities on land within the unincorporated area of Trumbull County used or being developed for non-farm commercial, industrial, residential, or other non-farm purposes, including, but not limited to, individual or multiple lots, subdivisions, multi-family developments, commercial and industrial developments, recreational projects, general clearing and grading projects, underground utilities, highways, building activities on farms, redevelopment of urban areas and all other uses unless expressly excluded as follows:

1.5 Activities related to producing agricultural crops or sylviculture operations or areas regulated by the Ohio Agricultural Sediment Pollution Abatement Rules.

1.6 Strip mine and surface mine operations.

1.7 An Erosion and Sediment Control Plan is not required before clearing, grading, excavating, filing or otherwise wholly or partially disturbing less than one acre of land owned by one person or operated as one development unit for the construction of non farm buildings, structures, utilities, recreational areas or other similar non farm uses; however, areas less than one continuous acre are not exempt from compliance with all other provisions of these rules.

1.8 An Erosion and Sediment Control Plan is not required for a public highway, transportation, or drainage improvement or maintenance thereof undertaken by a government agency or political subdivision in accordance with a statement of its Standard Sediment Control Policies that is approved by the Trumbull County Board of Commissioners or the Chief of the ODNR Division of Soil and Water Conservation.

Erosion and Sediment Control Inspections must be conducted at all public highway, transportation or drainage improvement projects thereof undertaken by a government agency or political subdivision.

A guidance tool for drainage design, storm water plan development and construction implementation was produced by the Trumbull County Engineers with cooperation from Trumbull

Soil and Water Conservation District titled the *Trumbull County Drainage and Erosion and Sedimentation Control Manual* to assist developers and consultants in achieving compliance with the requirements set forth in these Rules.

2. Terms Defined

2.1 INTERPRETATION OF TERMS AND WORDS

A. Words used in the present tense include the future tense and the singular include the plural, unless the context clearly indicates the contrary.

B. The term "shall" is always mandatory and not discretionary. The word "may" is permissive. The term "should" is permissive but indicates strong suggestion.

C. The word or term not interpreted or defined by this section shall be construed according to the rules of grammar and common usage so as to give these Rules their most reasonable application.

2.2 WORDS AND TERMS DEFINED

Accelerated Soil Erosion: The increased loss of the land surface that occurs as a result of human activities.

Acre: A unit of measure equaling 43,560 square feet.

Administrator: The person or entity having the responsibility and duty of administering and ensuring compliance with these Rules. The Administrator shall be the Executive Director/Administrator of the Trumbull Soil & Water Conservation District.

Best Management Practices (BMPs): Schedule of activities, prohibitions of practices, maintenance procedures, and other management practices (both structural and non-structural) to prevent or reduce the pollution of water resources and wetlands. BMPs also include treatment requirements, operating procedures, and practices to control facility and/or construction site runoff, spillage, or leaks; sludge or waste disposal; or drainage from raw material storage.

Buffer Area: A designated transitional area around a stream or wetland left in a natural, usually vegetated, state so as to protect a stream or wetland from runoff pollution. Construction activities in this area shall be restricted or prohibited based on the sensitivity of the stream or wetland and the recommendation of the Administrator.

Channel: A natural or manmade bed or ditch, existing or excavated for the conveyance of water.

Critical Area: Any portion of an area subject to this Rule the disturbance of which would cause soil erosion and sediment runoff and damage to private properties, water courses, storm sewers or public lands due to topography, soil type, hydrology or proximity to a water course. These areas include, but are not limited to, riparian areas, wetlands and highly erodible soils.

Critical Storm: A storm which is calculated by means of the percentage increase in volume of runoff by a proposed development area. The critical storm is used to calculate the maximum allowable storm water discharge rate from a developed site.

Cut: An excavation that reduces an existing elevation, as in road or foundation construction.

Detention Structure: A permanent storm water management structure whose primary purpose is to temporarily store storm water runoff and release the stored runoff at controlled rates.

Development Area: A contiguous area owned by one person or persons, or operated as one development unit, and used or being developed for non-farm commercial, industrial, residential or other institutional construction or alteration which changes the runoff characteristics of a parcel of land.

Disturbed Area: An area where any clearing, grading, excavating, filling or other alteration of land surface where natural or man-made cover is destroyed in a manner that exposes soil.

Ditch: An open channel, either dug or natural, for the purpose of drainage or irrigation with intermittent flow.

Drainage: The removal of excess surface water or groundwater from land by surface or subsurface drains.

Drainage Surface Area: An area, measured in a horizontal plane, enclosed by a topographic divide from which surface runoff from precipitation normally drains by gravity into a stream above the specified point of measurement.

Drainage Improvement: An improvement as defined in O.R.C. 6131.01(C), and/or conservation works of improvement as defined in O.R.C. 1511 and 1515.

Drainage Way: A natural or manmade channel, ditch, or waterway that conveys surface water in a concentrated manner by gravity. See also watercourse, channel, and stream.

Dumping: A grading, pushing, piling, throwing, unloading or placing.

Earth Material: The soil, sediment, rock, sand, gravel and organic material or residue associated with or attached to the soil.

Engineer: A Professional Engineer registered in the State of Ohio.

Erosion: The process by which the land surface is worn away by the action of wind, water, ice, gravity or any combination of those forces.

Erosion and Sediment Control: The control of soil material, both mineral and organic, during soil-disturbing activity to prevent its transport out of the disturbed area by means of wind, water, ice or gravity.

Erosion Sediment Control Plan: The written document meeting the requirements of Sections 5, 6 and 7 of these Rules which sets forth the plans and practices to be used to minimize soil erosion and prevent off-site disposal of soil sediment by containing sediment on-site or bypassing sediment-laden runoff through a sediment control measure during and after land development.

Erosion and Sediment Control Permit: An approved Trumbull County ESC plan shall constitute a local SWCD ESC plan permit with an assigned number.

Farm: Land or water devoted to growing crops or cultivated in connection with raising or harvesting any agricultural or horticultural commodity, including nursery stock, and the raising, shearing, feeding, caring for, training, and management of livestock and poultry.

Final Stabilization: Means that either:

1. All soil disturbing activities at the site are complete and a uniform perennial vegetative cover (e.g., evenly distributed, without large bare areas) with a density of at least 80 percent cover, in the opinion of the Administrator, for the area has been established on all unpaved areas and areas not covered by permanent structures or equivalent stabilization measures (such as the use of landscape mulches, rip-rap, gabions or geotextiles) have been employed. In addition, all temporary erosion and sediment control practices are removed and disposed of and all trapped sediment is permanently stabilized to prevent further erosion; or

2. For individual lots in residential construction by either:
    a. The homebuilder completing final stabilization as specified above; or
    b. The homebuilder establishing temporary stabilization including perimeter controls for an individual lot prior to occupation of the home by the homeowner and informing the homeowner of the need for the benefits of final stabilization, if approved by the Administrator (Homeowners typically have an incentive to put in the landscaping functionally equivalent to final stabilization as quickly as possible to keep mud out of their homes and off sidewalks and driveways.); or

3. For construction projects on land used for agricultural purposes (e.g., pipelines and other lineal projects across crop and range land), final stabilization may be accomplished by returning the disturbed land to its pre-construction agricultural use, if approved by the Administrator. Areas disturbed that were previously used for agricultural, such as buffer strips immediately adjacent to surface waters of the State and which are being returned to their pre-construction use, must meet the final stabilization criteria in (1) or (2) above.

Grading: The excavating, filling, or stockpiling of earth material, or any combination thereof, including the land in its excavated or filled condition.

Grassed Waterway: A broad or shallow natural watercourse or constructed channel, covered with erosion-resistant grasses or similar vegetative cover, used to convey surface water.

Impervious: That which does not allow infiltration.

Landscape Architect: A Professional Landscape Architect registered in the State of Ohio.

Landslide: A rapid mass movement of soil and rock moving downhill under the influence of gravity.

Larger Common Plan of Development or Sale: A contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under one plan.

Multi-family Development: Apartments, condominiums, duplexes or other similar buildings housing more than one family.

Natural Waterway: A waterway that is part of the natural topography, which usually maintains a continuous or seasonal flow during the year and is characterized as being irregular in cross-section with a meandering course.

One Hundred Year Frequency Storm: A storm that is capable of producing rainfall expected to be equaled or exceeded on the average of once in 100 years. It may also be expressed as an exceedance probability with a 1 percent chance of being equaled or exceeded in any given year.

Permanent Stabilization: The establishment of permanent vegetation, decorative landscape mulching, matting, sod, rip-rap and landscaping techniques to provide permanent erosion control on areas where construction operations are complete or where no further disturbance is expected for at least one year.

Person: An individual, corporation, firm, trust, commission, board, public or private partnership, joint venture, agency, unincorporated association, municipal corporation, county or state agency, federal government or any combination thereof.

Post-Development: The conditions which exist following the completion of the soil-disturbing activity in terms of topography, vegetation, land use and rate, volume or direction of storm water runoff.

Pre-Construction Meeting: A meeting between the Administrator and all principal parties, prior to the start of any construction, at a site that requires an Erosion Sediment Control Plan.

Pre-Development: The conditions which exist prior to the initiation of the soil-disturbing activity in terms of topography, vegetation, land use and rate, volume or direction of storm water runoff.

Pre-Winter Stabilization Meeting: A meeting between the Administrator and all principal parties, prior to October 1, in order to plan winter erosion and sediment controls for a site that requires an Erosion Sediment Control Plan.

Qualified Inspection Personnel: A person knowledgeable in the principles and practice of erosion and sediment controls, who possesses the skills to assess all conditions at the construction site that could impact storm water quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of storm water discharges from the construction activity.

Retention Structure: A permanent structure whose primary purpose is to permanently store a given volume of storm water runoff for release by infiltration and/or evaporation.

Riparian Area: Means the transition area between flowing water and terrestrial (land) ecosystems composed of trees, shrubs and surrounding vegetation which serve to stabilize erodible soil, improve surface and groundwater quality, increase stream shading and enhance wildlife habitat.

Runoff: The portion of rainfall, melted snow, or irrigation water that flows across the ground surface and is eventually conveyed to water resources or wetlands.

Sediment: The soils or other surface materials that can be transported or deposited from its site of origin by the action of wind, water, ice or gravity as a product of erosion.

Sediment Settling Pond: A sediment trap, sediment basin or permanent basin that has been temporarily modified for sediment control, as described in the latest edition of the ODNR *Rainwater and Land Development Manual.*

Sedimentation: The deposit of sediment in water bodies.

Sediment Basin: A temporary barrier or other suitable retention structure built across an area of water flow to intercept runoff and allow transported sediment to settle and be retained prior to discharge into waters of the State.

Sediment Pollution: The degradation of waters of the State by sediment as a result of failure to apply management or conservation practices to abate wind or water soil erosion, specifically in conjunction with soil-disturbing activities on land used or being developed for commercial, industrial, residential or other non-farm purposes.

Sloughing/Slumping: A slip or downward movement of an extended layer of soil resulting from the undermining action of water or the soil-disturbing activity of man.

Soil Conservation: The use of the soil within the limits of its physical characteristics and protecting it from unalterable limitations of climate and topography.

Soil-Disturbing Activity: A clearing, grading, excavating, filling or other alteration of the earth's surface where natural or man-made ground cover is destroyed, which may result in, or contribute to, erosion and sediment pollution.

Soil and Water Conservation District: An entity organized under Chapter 1515 of the Ohio Revised Code referring either to the Soil and Water Conservation District Board or its designated employee(s), hereinafter referred to as the Trumbull SWCD.

Soil Loss: The soil moved from a given site by the forces of erosion, measured using "T."

Stabilization: The installation of vegetative and/or structural measures to establish a soil cover in order to reduce soil erosion by storm water runoff, wind, ice, and gravity.

Storm Drain: A conduit, pipe or human-made structure, which serves to transport storm water runoff.

Storm Frequency: The average period of time within which a storm of a given duration and intensity can be expected to be equaled or exceeded.

Storm Water Management: Runoff water safely being conveyed or temporarily stored and released at an allowable rate to minimize erosion and flooding.

Storm Water Runoff: The direct response of a watershed to precipitation, which includes the surface and subsurface runoff that enters a stream, ditch, storm sewer or other concentrated flow during and following the precipitation.

Stream: A body of water running or flowing on the earth's surface in which flow may be perennial and/or seasonally intermittent.

Subsoil: That portion of the soil below the topsoil or plow layer, beginning 6-12" below surface down to bedrock parent material.

Surface Waters of the State: All streams, lakes, reservoirs, marshes, wetlands, or other waterways situated wholly or partly within the boundaries of the state, except those private waters which do not combine or affect a junction with surface water. Waters defined as sewerage systems, treatment works or disposal systems in Section 6111.01 of the Ohio Revised Code are not included.

T: The soil loss tolerance expressed in tons per acre per year as determined by the USDA Revised Universal Soil Loss Equation (RUSLE).

Temporary Soil Erosion and Sediment Control Measures: Interim control measures, which are installed or constructed to control soil erosion or sedimentation until permanent soil erosion control measures are established.

Temporary Stabilization: The establishment of temporary vegetation, mulching, geotextiles, sod, preservation of existing vegetation and other techniques capable of quickly establishing cover over disturbed areas to provide erosion control between construction operations.

Ten Year Frequency Storm: A storm that is capable of producing rainfall expected to be equaled or exceeded on the average of once in 10 years. It may also be expressed as an exceedance probability with a 10 percent chance of being equaled or exceeded in any given year.

Twenty-Five Year Frequency Storm: A storm that is capable of producing rainfall expected to be equaled or exceeded on the average of once in 25 years. It may also be expressed as an exceedance probability with a 4 percent chance of being equaled or exceeded in any given year.

Two Year Frequency Storm: A storm that is capable of producing rainfall expected to be equaled or exceeded on the average of once in 2 years. It may also be expressed as an exceedance probability with a 50 percent chance of being equaled or exceeded in any given year.

Topsoil: The upper layer of soil that is usually darker in color and richer in organic matter and nutrients than the subsoil.

Unstable Soils: A portion of land surface or area which is prone to slipping, sloughing, landslides or is identified by Natural Resource Conservation Service, USDA methodology as having low soil strength.

Watercourse: A definite channel with bed and banks within which concentrated water flows, either continuously or intermittently.

Watershed: The total drainage area contributing runoff to a single point.

Wetland: Those areas that are inundated to saturated by surface or ground water at a frequency and duration sufficient to support and contain a predominance of hydric soils, and that under normal circumstances do support a prevalence of hydrophytic vegetation typically adapted for the life in saturated soil conditions, including swamps, marshes, bogs, and similar areas (40 CFR 232, as amended).

3. Disclaimer of Liability

Compliance with the provisions of this regulation shall not relieve any person from responsibility from damage to any other person otherwise imposed by law. The provisions of this regulation are promulgated to promote the health and safety of the public and are not designed for the benefit of any individual or for the benefit of any particular parcel of property.

4. Conflicts, Severability, Nuisances & Responsibility

A. Where this regulation is in conflict with other provisions of law or ordinance, the most restrictive provisions shall prevail.

B. If any clause, section, or provision of this regulation is declared invalid or unconstitutional by a court of competent jurisdiction, the validity of the remainder shall not be affected thereby.

C. This regulation shall not be construed as authorizing any person to maintain a private or public nuisance on their property, and compliance with the provisions of this regulation shall not be a defense in any action to abate such a nuisance.

D. Failure of Trumbull County Agencies to observe or recognize hazardous or unsightly conditions or to recommend corrective measures shall not relieve the owner from the responsibility for the condition or damage resulting therefrom, and shall not result in Trumbull County, its officers, employees, or agents being responsible for any condition or damage resulting therefrom.

5. Regulated Activities.

No person shall cause or allow soil-disturbing activities, land clearing, grading, excavating or filling within the scope of these Rules without full compliance with the requirements set forth in these Rules as evidenced by a permit issued by the Administrator. A denial of such permit may be appealed, within 10 days of its denial, to the Board of Supervisors of the Trumbull Soil and Water Conservation District (SWCD). Upon a written Notice of Appeal filed by the applicant, a public hearing shall be set at a mutually convenient time wherein, a reasonable opportunity to be heard shall be provided to applicant. The board of Supervisors of the SWCD shall control the conduct of the appeal but shall provide fair and impartial consideration of the issues in the appeal. The Board of Supervisors of the SWCD shall make its decision within ten (10) days of the conclusion of the appeal hearing. Any further appeal shall be filed with the common pleas court in accordance with the Ohio Revised Code.

5.1 When a proposed soil disturbing activity on land used or being developed, either wholly or partially, for non farm residential, commercial, industrial, other non farm purposes consisting of one or more contiguous acres of land owned by one person or operated as one development unit for the construction of non farm buildings, structures, utilities, recreational areas or other limited non farm uses, the owner of said land shall prepare and file with the Administrator an Erosion and Sediment Control (ESC) plan. Areas of less than one contiguous acre shall not be exempt from compliance with all other provisions of these rules.

5.2 When a proposed soil disturbing activity on land used or being developed, either wholly or partially, for non farm residential, commercial, industrial, other non farm purposes consisting of less than one contiguous acre of land owned by one person or operated as one development unit for the construction of non farm buildings, structures, utilities, recreational areas or other limited non farm use, which is part of a larger common plan of development, the owner of said land shall prepare and file with the Administrator an Erosion and Sediment Control (ESC) plan, which shall consist of a site plan showing existing grade, final grade, building, and structure locations, borrow areas, fill areas and any other pertinent contraction information; description of methods of handling on-site surface water and planned erosion control measures; and, a copy of Ohio EPA Notice of Intent or General Permit authorization.

5.3 When a residential dwelling unit on an individual lot is proposed, which is not part of a larger common plan of development, the owner of said land shall not be required to prepare and file an Erosion and Sediment Control Plan; however, said owner shall comply with all other provisions of these Rules.

5.4 The submitted ESC plan must be approved by the Administrator of these rules prior to the start of any soil-disturbing activity. The owner of land shall notify the Administrator no less than two (2) working days before the start of soil-disturbing activity. The owner of land shall also notify the Administrator no later than two (2) working days after project completion.

5.5 The ESC plan shall be submitted to the Administrator for review no less than thirty (30) working days prior to any soil-disturbing activity at the proposed site.

5.6 The ESC plan shall contain narrative and drawings that explain practices to be used to prevent soil erosion and off-site disposal of soil sediment during and after land development. (See Section 7 for plan requirements and review schedules.)

5.7 Erosion and sediment control practices used to satisfy the performance criteria of these Rules shall meet the specifications provided in the most current edition of the *Rainwater & Land Development Manual*, Ohio's Standards for Storm Water Management and Land Development, and Urban Stream Protection, published by the Ohio Department of Natural Resources, the most current edition of the *Location and Design Manual, Volume 2 Drainage Designs* as defined by the Ohio Department of Transportation and Provisions of the Trumbull County Floodplain Regulations. (See Section 6 for performance standards and requirements.)

5.8 The ESC plan shall include all items in Sections 7 and 8 of these Rules and shall be accompanied by other natural resource permits and documentation relevant to the project that may include, but is not limited to, a copy of a project approval letter, copy of the permit number, a copy of the tracking number, a copy of the site plan required for permitting, a letter from the site owner verifying certain conditions and any other documentation to verify that a permit was applied for and approved. The natural resource permits and documentation that may be relevant is listed as follows:

5.8.1 Proof of compliance with the Ohio Environmental Protection Agency (OEPA) General Storm Water National Pollution Discharge Elimination System (NPDES) Permit.

5.8.2 Proof of compliance with Section 404 administered by the U.S. Army Corps of Engineers relating to waters of the United States under its jurisdiction. Proof of compliance shall be, but is not limited to, a copy of the U.S. Army Corps of Engineers permit number if an Individual Permit is required for the development project. If an Individual Permit is not required, the site owner shall submit proof of compliance with the U.S. Army Corps of Engineer's Nationwide Permit Program.

5.8.3 Proof of compliance, if applicable, with the Ohio Dam Safety Law administered by ODNR Division of Water.

5.8.4 Proof of compliance with Section 401 of the Clean Water Act administered by the OEPA if requested by the Administrator.

5.8.5 Wetland Delineation verified by the U.S. Army Corps of Engineers if requested by the Administrator.

5.9 The ESC plan, ESC details and sediment control best management practice design calculations shall be certified by a professional engineer or landscape architect registered in the State of Ohio, or a certified professional in erosion and sediment control (CPESC) registered by EnviroCert International, Inc. A professional engineer registered in the State of Ohio shall certify all other storm water plan designs and calculations that would be considered applicable to ORC Section 4733.

5.10 The owner of said land and the developer, project consultant and contractor of the project, and other principal parties, shall meet with the Administrator or his designee and the local governing engineering entity (if applicable) for a Pre-Construction Meeting no less than seven (7) days prior to soil-disturbing activity at the site in order to ensure that erosion and sediment control devices are properly installed, limits of disturbance and buffer areas are properly delineated and construction personnel are aware of such devices and areas.

5.11 The project consultant shall perform the first inspection of erosion and sediment control devices to certify that the 'as built' condition complies with the approved plan no less than two (2) working days prior of the start of the project. An inspection report shall be sent to the Administrator and local governing engineering entity within seven (7) working days from the date of inspection.

5.12 All project activity shall be subject to monitoring. A record of site inspections and compliance and non-compliance shall be maintained by the Administrator.

5.13 Upon completion of all construction and final stabilization of the entire construction site, the owner of said land shall contact the Administrator and the local governing engineering entity through written notification that construction is complete and final stabilization has been achieved.

6. Performance Standards

All properties adjacent to the site of soil-disturbing activity shall be protected from soil erosion and sediment run-off and damage, including, but not limited to, private properties, natural and artificial waterways, wetlands, storm sewers and public lands.

Construction site erosion and sediment control practices used to satisfy this requirement shall conform, at a minimum, to State of Ohio standards as set forth in the most-current edition of the *Rainwater and Land Development Manual* and as defined by the Ohio Department of Natural Resources Division of Soil and Water Conservation and Natural Resource Conservation Service, the most current edition of the *Location and Design Manual, Volume 2 Drainage Designs* as defined by the Ohio Department of Transportation and shall conform to the most current Ohio Environmental Protection Agency, Ohio Revised Code Chapter 6111, requirements.

Erosion and sediment control plan approvals issued in accordance with these Rules do not relieve the owner of responsibility for obtaining all other necessary permits and/or approvals from federal, state and/or local agencies. If requirements vary, the most stringent requirement shall be followed.

6.1 Minimum Standards

In order to control sediment pollution of water resources, the owner or person responsible for the development area shall use conservation planning and practices to maintain, as identified in the ESC plan, the level of conservation established in the following standards:

6.1.1 An approved: Erosion and Sediment Control Plan or approval letter from the Administrator shall be posted in a clear, visible location at the site.

6.1.2 Limits: to clearing and grading shall be shown on ESC plans. Limits to clearing and grading shall be clearly marked on-site with signage, flagging and/or fencing.

6.1.3 The plan: shall include measures that control the flow of runoff from disturbed areas so as to prevent soil erosion from occurring.

6.1.4 Structural Practices: shall be used to control erosion and trap sediment from areas remaining disturbed for more than fourteen (14) days.

6.1.5 Sediment Barriers: Sheet flow runoff from denuded areas shall be intercepted by Filter Socks, Silt Fence or Diversions to protect adjacent properties and water resources from sediment. Where intended to provide sediment control, Silt Fence shall be placed on a level contour. The relationship between the maximum drainage areas to Silt Fence for a particular slope is shown in the following table.

Table 1: Silt Fence Applicability

Maximum drainage area (in acres) to 100 linear feet of Silt Fence	**Range of slope for a particular drainage area (in percent)**
0.5	< 2%
0.25	≥ 2% but < 20%
0.125	≥ 20% but < 50%

Table 2: Filter Socks - Maximum Slope Length Above Filter Sock and Recommended Diameter

Slope	Ratio (H:V)	8”	12”	18”	24”
0% - 2%	10% - 20%	125	250	300	350
10% - 20%	50:1 – 10:1	100	125	200	250
2% - 10%	10:1 – 5:1	75	100	150	200
20% - 30%	5:1 – 2:1		50	75	100
>50%	>2:1		25	50	75

Typically, filter socks can handle the same water flow or slightly more than silt fence. For most applications, standard silt fence is replaced with 12" diameter filter socks.

This does not preclude the use of other sediment barriers designed to control sheet flow runoff. The total runoff flow treated by a sediment barrier shall not exceed the design capacity for that sediment barrier. Placing filter socks or silt fence in parallel series does not extend the size of the drainage area.straw bale barriers are not an acceptable sediment control.

6.1.6 Storm Water Diversion Practices: Storm water diversion practices shall be used to keep runoff away from disturbed areas and steep slopes where practicable. Such practices, which include Swales, Dikes or Berms, Pipe Slope Drains and Diversions, may receive storm water runoff from areas up to ten (10) acres. Storm water diversion practices alone are not considered a sediment control practice unless those are used in conjunction with a sediment settling pond.

6.1.7 All sediment control practices must be capable of ponding runoff and releasing it in a controlled and non-erosive way in order to be considered functional.

6.1.8 Clearing and Grubbing will be done in two (2) or more phases. The first phase will include only those locations necessary to install the perimeter soil erosion, sediment and storm water control BMPs. After the perimeter controls are in place and functioning, the remaining phase(s) of clearing and grubbing may continue.

6.1.9 Timing of Sediment Trapping Practices: Sediment control practices shall be functional throughout all phases of up slope earth disturbing activity. Settling facilities, perimeter controls and other practices intended to trap sediment shall be implemented **prior** to grading and within seven (7) days from the start of grubbing. They shall continue to function until the up slope development area is permanently restabilized. As construction progresses and the topography is altered, appropriate controls must be constructed or existing controls altered to address the changing drainage patterns.

6.1.10 Stabilization of Denuded Areas: Disturbed areas must be stabilized as specified in the tables below, or according to the Ohio EPA NPDES Storm Water Permit Rules, whichever is most restrictive:

Table 2: Permanent Stabilization

Area requiring permanent stabilization	Time frame to apply erosion controls
Any areas that will lie dormant for one (1) year or more	Within seven (7) days of the most recent disturbance
Any areas within fifty (50) feet of a stream and at final grade	Within two (2) days of reaching final grade
Any other areas at final grade	Within seven (7) days of reaching final grade within that area

Table 3: Temporary Stabilization

Area requiring temporary stabilization	Time frame to apply erosion controls
Any disturbed areas within fifty (50) feet of a stream and not at final grade	Within two (2) days of the most recent disturbance if the area will remain idle for more than twenty-one (21) days
For all construction activities, any disturbed	Within seven (7) days of the most recent disturbance

areas that will be dormant for more than twenty-one (21) days but less than one (1) year, and not within fifty (50) feet of a stream	within the area For residential subdivisions, disturbed areas must be stabilized at least seven (7) days prior to transfer of NPDES permit coverage for the individual lot(s). Proof of permit coverage transfer from Ohio EPA must be submitted to the Administrator of these rules. The Administrator shall then inspect the lot to ensure that the Temporary seeding has been done.
Disturbed areas that will be idle over winter	Prior to the onset of winter weather

Where vegetative stabilization techniques may cause structural instability or are otherwise unobtainable, alternative stabilization techniques must be employed.

6.2 Sediment Settling Ponds

Storm water runoff that exceeds the design capacity of sediment barriers and concentrated storm water flows shall pass through a sediment settling pond(s).

6.2.1 Where drainage areas include ten (10) or more acres disturbed at one time, a temporary (or permanent) sediment settling pond(s) must be provided until final stabilization of the site. A sediment settling basin shall be required at any single uncontrolled discharge point with a drainage area (entirely or partially disturbed) greater than ten (10) or more acres. In single-family residential construction, final stabilization is after the houses are built and permanent landscaping is done.

6.2.1a Alternative equivalent controls may be used if the owner can show, in writing, that the Ohio EPA approved the use of the alternatives in the (Ohio EPA NPDES Permit for Construction Activity) Storm Water Pollution Prevention Plan (SWP3) for the site.

6.2.1b It is recommended, but may be required by the Administrator, that for drainage locations of less than ten (10) acres, smaller sediment settling ponds (including basins or traps) be used.

6.2.2 Each sediment settling pond storage capacity shall consist of both a dewatering zone and a sediment storage zone. The volume of the dewatering zone shall be a minimum of 1800 cubic feet (ft^3) per acre of drainage (67 yd^3/acre of drainage) with a minimum 48-hour drain time for sediment basins serving a drainage area over 5 acres. The volume of the sediment storage zone shall be calculated by one of the following methods: Method 1: The volume of the sediment storage zone shall be 1000 ft^3 per disturbed acre within the watershed of the basin. OR Method 2: The volume of the sediment storage zone shall be the volume necessary to store the sediment as calculated with the Revised Universal Soil Loss Equation (RUSLE) or a similar generally accepted erosion prediction model. The storage volume will be measured from the bottom of the basin to the top of the primary (principle) spillway.

6.2.3 Permanent storm water management ponds that are designed to trap sediment during construction shall be designed to provide for a slow release of sediment-laden water. The draw down time must meet the criteria in the most recent edition of the Ohio's *Rainwater and Land Development Manual*.

6.2.4 The design configuration between inlet(s) and the outlet of sediment settling ponds must provide at least two units of length for each one unit of width (> 2:1 length to width ratio). However, a length to width ratio of 4:1 is recommended.

6.2.5 The depth of the sediment settling pond must be less than or equal to five (5) feet.

6.2.6 Accumulated sediment shall be removed from the sediment storage zone once it's full.

6.2.7 Public safety, especially as it relates to children, must be considered in the design. Alternative sediment controls must be used where site limitations would preclude a safe design.

6.2.8 Temporary sediment settling ponds will not be constructed in any stream channel.

6.3 Storm Sewer Inlet Protection:

6.3.1 All storm sewer inlets that accept water runoff from the development area shall be protected so that sediment-laden water will not enter the storm sewer, unless the storm drain system drains to a sediment settling pond. In areas where construction will be ongoing, such as subdivisions, the storm sewer protection shall be maintained until all up slope areas reach final stabilization, as determined by the Administrator.

6.3.2 At the end of this period, the site owner or other persons hydraulically cleaning the storm sewers shall not allow sediments from the system to be flushed downstream.

6.3.3 Inlet protection shall not have a drainage area of greater than one (1) acre unless it drains to a sediment settling pond.

6.4 Storm Sewer & Other Drainage Outlets

All storm sewers, footer drains, roof gutter drains and all other drains will be outletted at the bottom of the slope. The slope below the outlet will be able to control the water being drained through the storm sewer or other drains without causing erosion of the stream or channel banks or channel bottom or other areas that the water is outletted on.

6.5 Working Near, Or Crossing Streams and Wetlands

6.5.1 Construction vehicles shall avoid water resources, wetlands, riparian areas, and their setbacks. If construction vehicles must cross these areas during construction, an approved temporary crossing shall be constructed. Streams, including intermittent streams with a defined bed and banks, shall be restabilized immediately after in-channel work is completed, interrupted, or stopped. Erodible materials will not be used in making stream crossings.

6.5.2 No soil, rock, debris, or any other material shall be dumped or placed into a water resource or into such proximity that it may slough, slip, or erode into a water resource unless such dumping or placing is authorized by the approving authority and, when applicable, the US Army Corps Of Engineers and Ohio EPA, for such purposes as, but not limited to, constructing bridges, culverts, and erosion or sediment control structures.

6.5.3 If construction activities disturb areas adjacent to streams, structural practices shall be designed and implemented on site to protect the adjacent streams from the impacts of sediment runoff.

6.5.4 No temporary or permanent sediment controls will be constructed in a stream channel.

6.5.5 Stream and wetland setbacks must be clearly marked on-site with signage, flagging and/or fencing.

6.6 Construction Entrance

Measures shall be taken to prevent soil transport onto public roads, or surfaces where runoff is not checked by sediment controls.

6.6.1 Stone with geotextile construction entrance(s) shall be implemented as required by the Administrator and the Ohio EPA. These will be planned and installed according to the requirements in the most recent edition of the Ohio's *Rainwater and Land Development Manual*.

6.6.2 Where soil is transported onto a public road surface, the roads shall be cleaned thoroughly at the end of each day, or more frequently, in order to ensure public safety. Soil shall be removed from paved surfaces by shoveling or sweeping. Street washing shall be allowed only after shoveling or sweeping has removed most of the sediment and street sewer inlet protection is properly installed unless end of sewer sediment settling pond(s) exist and are properly functioning.

6.6.3 Erodible material ramps in streets will not be used to enable equipment to cross curbs. Non-erosive materials (e.g. wood and stone) can be used.

6.7 Unstable Soils

6.7.1 Unstable soils will be as determined by the local county Soil Survey or by a detailed soils report.

6.7.2 The Administrator may require detailed soil reports when deemed necessary.

6.7.3 Unstable soils prone to slipping or land sliding shall not be graded, excavated, filled or have loads imposed upon them unless the work is performed in accordance with a qualified professional engineer's recommendations to correct, eliminate, or adequately address the problems.

6.8 Cut And Fill Slopes

Cut and fill slopes shall be designed and constructed in a manner that will minimize erosion and slippage. Consideration shall be given to the length and steepness of the slope, soil type, up slope drainage area, groundwater conditions and slope stabilization. The minimum final unreinforced soil slopes will have a horizontal to vertical ratio of 2:1 (the horizontal will be two (2) times the vertical).

6.9 Stabilization of Outfalls and Channels

Outfalls and constructed or modified channels shall be designed and constructed to withstand the expected velocity of flow from the planned post-development frequency storm without eroding. The planned post-construction velocity and flow shall include the entire contributing watershed.

6.10 Establishment of Vegetation Cover

Adequate vegetative cover shall be established on denuded areas not otherwise stabilized. Temporary and/or permanent stabilization shall not be considered established until a uniform vegetative cover (e.g., evenly distributed, without large bare areas) is achieved which, in the opinion of the Administrator, has a coverage density of 80 percent over the disturbed area and is mature enough to satisfactorily control soil erosion and survive adverse weather conditions.

6.11 Disposition of Temporary Practices

All temporary soil erosion and sediment control practices shall be disposed of immediately after final site stabilization is achieved or after the temporary practices are no longer needed, unless otherwise required by the Administrator. Trapped sediment shall be permanently stabilized to prevent further erosion.

6.12 Underground Utility Construction

The construction of underground utility lines, pipes, etc. shall be subject to the following criteria:

6.12.1 Trenches shall remain open for no more than five days.

6.12.2 There shall be no turbid discharges to surface waters resulting from dewatering activities. If trench or ground water contains sediment it must pass through a sediment settling pond or other equally effective sediment control device, deemed appropriate by the Administrator, prior to being discharged from the construction site or to waters of the state.

6.12.3 When discharging clean ground water care must be taken to ensure that it does not become pollutant laden by crossing over disturbed soils or other pollutant sources.

6.13 Internal Inspections

6.13.1 The site shall be inspected for soil erosion, sediment control and other environmental concerns, at a minimum of, every seven (7) calendar days, and within twenty-four (24) hours after a 0.5 inch or greater rainfall event. The inspection frequency may be reduced to at least once every month if the entire site is temporarily stabilized or runoff is unlikely due to weather conditions (e.g., site is covered in snow, ice, or the ground is frozen). A waiver of inspection requirements is available until one month before thawing conditions are expected to result in the discharge or after a 0.5 inch or greater rain event, whichever comes first, if all of the following conditions are met: the project is located in an area where frozen conditions are anticipated to continue for extended periods of time (i.e., more than one month); land disturbance activities have been suspended; and the beginning and ending dates of the waiver period are documented in the ESC Plan.

6.13.2 The owner shall assign “qualified inspection personnel” to conduct these inspections to ensure that control practices are functional and to evaluate whether the ESC Plan is adequate and properly implemented in accordance with the schedule proposed in Section 7.5.14 of these rules or whether additional control measures are required.

6.13.3 The owner, or his designated representative, shall keep a written log of each inspection and any subsequent improvements to the soil erosion, sediment control or other environmental controls. At a minimum, the inspection report shall include:

6.13.3a The inspection date.

6.13.3b Names, titles and qualifications of personnel making the inspection.

6.13.3c Weather information for the period since the last inspection, including a best estimate of the beginning of each storm event, duration of each storm event and approximate amount of rainfall for each storm event in inches, and whether any discharges occurred.

6.13.3d Weather information and a description of any discharges occurring at the time of inspection.

6.13.3e Locations of:

1. Discharges of sediment or other pollutants from site.

2. BMPs that need to be maintained.

3. BMPs that failed to operate as designed or proved inadequate for a particular location.

4. Corrective action required including any necessary changes to the ESC Plan and implementation dates.

6.13.4 Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system.

6.13.5 Erosion and sediment controls identified in the ESC Plan shall be observed to ensure that they are operating correctly.

6.13.6 Discharge locations shall be inspected to ascertain whether erosion and sediment control measures are effective in preventing significant impacts to the receiving water resource or wetland.

6.13.7 Locations where vehicles enter or exit the site shall be inspected for evidence of off-site vehicle tracking.

6.13.8 If inspections or other information indicates a control has been used inappropriately or incorrectly or it has failed, it must be replaced or modified for the site conditions.

6.13.9 If the inspection reveals that a control practice is in need of repair or maintenance, with the exception of sediment settling ponds, it must be repaired or maintained within three (3) days of the inspection. Sediment settling ponds must be repaired or maintained within ten (10) days of the inspection.

6.13.10 If any inspection reveals that a control practice fails to perform its intended function and that another, more appropriate control practice is required, the Erosion and Sediment Control Plan must be amended and the new control practice must be installed within ten (10) days of the inspection.

6.13.11 If the inspection reveals that a control practice has not been implemented in the time required by this ordinance it must be installed within ten (10) days from the date of inspection.

6.13.12 If the inspection reveals that a planned control practice is not needed, the record must contain a statement of explanation as to why the control practice is not needed.

6.13.13 The applicant shall maintain for three (3) years following final stabilization the results of these inspections, the names and qualifications of personnel making the inspections, the dates of inspections, major observations relating to the implementation of the ESC Plan, a certificate as to whether the facility is in compliance with the ESC Plan, and information on any incidents of non-compliance determined by these inspections.

6.14 Control of Materials and Debris

No solid or liquid waste, including building materials, shall be discharged in storm water runoff. The applicant must implement site best management practices to prevent toxic materials, hazardous materials, or other debris from entering water resources or wetlands. All additional requirements of the local and state fire authorities must be adhered to. This section applies only to sites that meet the requirements for this regulation as detailed in Section 1. Should any toxic or hazardous waste releases occur the operator must contact the local fire department and the Trumbull County HazMat. All on-site releases must then be recorded on a spill report form and kept on-site. These practices shall include, but are not limited to, the following:

6.14.1 A covered dumpster shall be made available for the proper disposal of construction site waste materials, garbage, plaster, drywall, grout, gypsum and etc. A second covered dumpster will be provided for the proper disposal of toxic and hazardous wastes.

6.14.2 The washing of excess concrete material into a street, catch basin, or other public facility or natural resource shall not occur. A designated area for concrete washouts shall be made available and used for all concrete washouts.

6.14.3 All fuel and hazardous liquid tanks and drums stored on-site shall be in a marked storage area. It is recommended to provide a physical barrier surrounding the storage area to reduce accidental impalement of the tank from vehicular equipment. The physical barrier can consist of F-Shape pre-cast concrete barriers, large on-site rocks or other available heavy on-site material. Secondary containment is required for fuel and hazardous liquid storage area(s) or tank(s) and must have one of the following regardless of size:

6.14.3a An earthen dike constructed around the containment area with a capacity equal to 110% of the volume of all containers in the storage area.

6.14.3b A self contained structural dike with a minimum capacity equal to 110% of the volume of all containers in the storage area. The plug for these systems must be kept in the dike tank at all times.

6.14.3c A properly functional double walled tank for all fuel and hazardous liquid storage containers.

6.14.4 Any toxic or hazardous wastes and/or contaminated soils must be disposed of according to all applicable environmental laws and statutes. At the discretion of the Administrator, records of such permits and/or disposal locations must be provided. Local health districts and Ohio EPA can provide guidance on these issues.

6.14.5 On a site with a prior industrial landuse or a site that is contaminated with gasoline, fuel oil, hydrocarbon based chemicals or other Ohio EPA regulated contaminates, the storm water is considered wastewater. A permit from Ohio EPA is required to address these sites.

6.14.6 Proper permits shall be obtained for development projects on solid waste landfill sites.

6.14.7 Paint, paint washing liquids, excess paints and other paint wastes are considered solid wastes and shall be disposed of in accordance with applicable state regulations. Appropriate handling of these wastes shall occur at the site so as to prevent the discharge of these wastes into surface or ground waters.

6.14.7a Water based paint washing liquids and small quantities of excess water based paints may be disposed of by flushing down a connected sanitary sewer but may not be disposed of in an on-lot disposal system.

6.14.7b All other paints, paint thinners, and paint cleaning materials will be disposed of in the site's hazardous waste disposal dumpster.

6.14.8 Restroom facilities will be provided for site workers at all times that workers are present on the site and during all phases of the construction.

6.14.9 All required permits from appropriate federal, state, or local agencies are required to develop land with a previous industrial or commercial use or another use that may have led to soil contamination by a regulated pollutant.

6.15 Non-Structural Preservation Measures

The ESC Plan must make use of practices that preserve the existing natural condition to the maximum extent practicable. Such practices may include preserving riparian areas, preserving existing vegetation and vegetative buffer strips, phasing of construction operations in order to minimize the amount of disturbed land at any one time, the designation of tree preservation areas or other protective clearing or grubbing practices. All state and/or local ordinance requirements and/or permit conditions relating to non-structural preservation measures must be indicated on the ESC Plan.

6.16 Runoff Control Practices

The ESC Plan shall incorporate measures which control the flow of runoff from disturbed areas so as to prevent erosion from occurring. Such practices may include, but are not limited to, rock check dams, pipe slope drains, and diversions to direct flow away from exposed soils and protective grading practices. These practices shall divert runoff away from disturbed areas and steep slopes where practicable. Velocity dissipations devices shall be placed at discharge locations and along the length of any outfall channel to provide non-erosive flow velocity from the structure to a watercourse so that the natural physical and biological characteristics and functions are maintained and protected.

6.17 Compliance with Other Requirements

The ESC Plan shall be consistent with applicable state and/or local preservation measures, waste disposal, fire code, Spill Prevention, Control and Countermeasure regulations, sanitary sewer, or septic system regulations, including provisions prohibiting waste disposal by open burning, and shall provide for the proper disposal of contaminated soils within the development.

6.18 Pre-winter Stabilization

If the development area will, or is planned to remain, active through the winter months, the owner of the development area shall hold a Pre-Winter Stabilization Meeting. The meeting will be held before October 1st. The owner shall invite the operator, developer, project consultant, contractor, Administrator and anyone else requested by the Administrator to the meeting.

7. Application Procedures for ESC Plan

The ESC Plan shall be submitted to the Administrator after the approval of the preliminary plans and prior to the approval of Improvement Plans or Drawings by the Trumbull County Planning Commission in the case of subdivisions; concurrently with the submittal of construction drawings to the local governing engineering entity in the case of other construction projects; and thirty (30) working days prior to any soil-disturbing activity for general clearing projects.

The Administrator or his designee shall review the ESC plan and approve, or return for revision with comments and recommendations for revision, within twenty-one (21) working days after receipt of said plan. A plan rejected because of deficiencies shall receive a narrative report stating specific problems and the procedure for filing a revised plan. At the time of receipt of a revised plan, another twenty-one (21) day review period shall be commenced.

The administrator may allow electronic submittal of any document required to be submitted. If the director allows electronic submittal, the director may allow the pemittee to submit only one electronic copy of the document, even if the permittee would be required to submit more than one copy in non-electronic form by this rule.

Approved plans with permit number shall remain valid for three years from the date of approval. Approved plans may request to renew an approved plan for an additional three-year period if the approved project has not been started or will not be completed in the allocated three-year period. Renewal requests must be proved to the Administrator prior to expiration of the approved plan. Failure to submit the plan prior to expiration of the approved plans shall require submittal of a new application and fee and plans designed with the most recently adopted standards set forth by these Rules. A copy of the approved plan and its review report shall be forwarded by the Administrator to the owner, developer, project consultant, local governing engineering entity and local zoning entity..

Development Sites One (1) Acre In Size or Larger: All developments that have a larger common plan of development or sale equal to or larger than one (1) acre in size of disturbed area are subject to these rules and shall follow all of the requirements set forth in these rules.

A plan is considered complete when it contains **one (1) set**, unless otherwise requested by the Administrator, of the following:

7.1 Site construction plans intended for contractor's bid.

7.2 Contact information for the owner of the land, the developer and project consultant or any other person responsible for the implementation of the Erosion and Sediment Control Plan; project consultant's certification; project name; and, project vicinity map. Identification of all subcontractors engaged in activities that could impact storm water runoff. The ESC Plan shall contain signatures from all the identified subcontractors indicating that they have been informed and understand their roles and responsibilities in complying with the ESC Plan.

7.3 <u>Permit Verification</u>

7.3.1 Jurisdictional Wetlands and Watercourses: In areas where jurisdictional wetlands or waterways as defined by an on-site delineation verified by the United States Army Corps of Engineers will be affected, a copy of the environmental delineation report shall be submitted with the ESC Plan. If an Individual Permit is required, a copy of that Permit, showing project approval and any restrictions that apply to site activities, shall also be submitted. If an Individual Permit is not required for the proposed project, the site owner shall submit proof of compliance with the Nationwide Permit Program as detailed under Section 5.8. If an Ohio EPA Section 401 Water Quality Certification and/or Isolated Wetland Permit is required the site owner shall submit proof of compliance with the Ohio EPA Water Quality and/or Isolated Wetland Permit program as detailed in Section 5.8.

7.3.2 An Ohio Environmental Protection Agency (OEPA) <u>National Pollutant Discharge Elimination System</u> General Construction Permit with a verification number or Notice of Intent shall be submitted with the ESC Plan.

7.4 Site Description

The following information shall be included in the Construction Site Erosion and Sediment Control (ESC) Plan:

7.4.1 A description of the prior land uses of the site.

7.4.2 A description of the nature and type of construction activity (e.g., low density residential, shopping mall, highway, etc.).

7.4.3 A description of the total area of the site and the area of the site that is expected to be disturbed (i.e., grubbing, clearing, excavating, filling or grading, including off-site borrow, fill or spoil areas and off-site utility installation areas).

7.4.4 An estimate of the impervious area and percent imperviousness created by the construction activity.

7.4.5 The types of soils within, or affected by, the development area, and the location of all highly erodible or unstable soils as determined by the most current edition of the soil survey of the county, by the Natural Resources Conservation Service (NRCS).

7.4.6 An onsite, detailed Soils Engineering Report if required by the Administrator.

7.4.7 The name and/or location of the immediate receiving stream or surface water(s) and the first subsequent named receiving water and the major river watersheds in which it is located.

7.4.8 A calculation of the runoff coefficients for both the pre-construction and post-construction site conditions.

7.4.9 A cover page or title identifying the name and location of the site, the name and contact information of all construction site operators, the name and contact information for the person(s) responsible for authorizing and amending the ESC Plan, preparation date, and the estimated dates that construction will start and be complete.

7.4.10 A log documenting grading and stabilization activities as well as amendments to the ESC Plan, which occur after construction activities commence.

7.4.11 For subdivided developments where the ESC Plan does not call for a centralized sediment control capable of controlling multiple individual lots, a detail drawing of a typical individual lot showing standard individual lot erosion and sediment control practices. This does not remove the responsibility to designate specific erosion and sediment control practices in the ESC Plan for critical areas such as steep slopes, stream banks, waterways and riparian zones.

7.5 A vicinity sketch locating

7.5.1 The larger common plan of development or sale

7.5.2 The development area

7.5.3 All pertinent surrounding natural features within 200 feet of the development site including, but not limited to:

7.5.3a Water resources such as wetlands, springs, lakes, ponds, rivers and streams (including intermittent streams with a defined bed and bank)

7.5.3b Conservation Easements
7.5.3c Other sensitive natural resources
7.5.3d The sensitive areas receiving runoff from the development

7.5.4 All off-site borrow or spoil areas.

7.5.5 All off-site utility installation areas that are related to the planned project.

7.5.6 The existing and proposed topography shown in a maximum scale of 1"=200' and 2' contour intervals.

7.5.7 The location and description of existing and proposed drainage patterns and facilities, including any allied drainage facilities beyond the development area and the larger common plan of development or sale.

7.5.8 Existing and proposed watershed boundary lines, direction of flow and watershed acreage.

7.5.9 The person or entity responsible for continued maintenance of all vegetative and/or mechanical BMPs for both the construction and post-construction phases of the development.

7.5.10 During construction maintenance inspection schedules.

7.5.11 The person or entity financially responsible for conducting the inspections of, and the maintenance of, permanent storm water conveyance and storage structures and all other conservation practices.

7.5.12 The method of ensuring that funding will be available to conduct the long-term maintenance and inspections of all permanent storm water, soil erosion and sediment control and water quality practices.

7.5.13 The location of any existing or planned riparian and/or wetland setback areas on the property.

7.5.14 The plan must clearly describe, for each major construction activity, the appropriate BMPs and the general timing (or sequence) during the construction process of when the measures will be implemented; and, who (which contractor) will be responsible for implementation (e.g., Contractor A will clear, grub and install perimeter controls; Contractor B will maintain perimeter controls until final stabilization; Contractor C will conduct and document the scheduled inspections; etc.)

7.5.15 Location and description of any storm water discharges associated with dedicated asphalt and concrete plants covered by this regulation and the Best Management Practices to address pollutants in these storm water discharges.

7.6 Post-Construction Operation and Maintenance Requirements

Detail drawings and maintenance plans must be provided for all post-construction BMPs. Maintenance plans shall be provided by the permittee to the post-construction operator of the site upon completion of construction activities. To ensure that storm water management systems function as they are designed and constructed, the long term post-construction operation and maintenance plan must be a stand-alone document, which contains:

7.6.1 A designated entity for storm water inspection and maintenance responsibilities.

7.6.2 The routine and non-routine maintenance tasks to be undertaken.

7.6.3 A schedule for inspection and maintenance.

7.6.4 Any necessary legally binding maintenance easements and agreements.

7.6.5 A map showing all access and maintenance easements

8. Construction Site Erosion and Sediment Control (ESC) Plan

The Construction Site Erosion and Sediment Control Plan shall include, at a minimum, the following information:

8.1 A map showing the location of:

8.1.1 The limits of earth disturbing activity including excavations, filling, grading or clearing.

8.1.2 Drainage patterns during major phases of construction.

8.1.3 The location of each proposed soil erosion and sediment control BMP, including:

8.1.3a Permanent soil erosion control practices to be left in place after construction operations have been completed (e.g. level spreaders, permanent erosion control matting, gabions, rock lined channels, etc.),

8.1.3b Areas likely to require temporary stabilization during the course of site development,

8.1.3c Designated construction entrances where vehicles access the construction site,

8.1.3d In-stream activities including stream crossings,

8.1.3e Areas designated for the storage or disposal of solid, sanitary and toxic wastes,

8.1.3f Dumpsters,

8.1.3g Cement truck washout,

8.1.3h Fuel tanks,

8.1.3i BMPs that divert runoff away from disturbed areas and steep slopes where practicable including rock check dams, pipe slope drains, diversions to direct flow away from exposed soils, and protective grading practices,

8.1.3j Sediment settling ponds drawn to scale.

8.1.4 Existing and proposed locations of buildings, roads, parking facilities and utilities.

8.1.5 Boundaries of wetlands and stream channels the owner intends to fill or relocate for which the owner is seeking approval from the US Army Corps of Engineers and/or Ohio EPA.

8.1.6 Soil types should be depicted for all areas of the site, including locations of unstable or highly erodible soils.

8.1.7 Existing and proposed contours. A delineation of drainage watersheds expected during and after major grading activities as well as the size of each drainage watershed, in acres.

8.2 The Construction Site Erosion and Sediment Control (ESC) Plan shall include a list of soil erosion and sediment control BMPs being used and **the standards and specifications**, including detailed drawings, for each BMPs. This list shall include:

8.2.1 Methods of controlling the flow of runoff from disturbed areas so as to prevent or minimize erosion.

8.2.2 Identification of the Structural Practices to be used to control erosion and trap sediment from a site remaining disturbed for more than fourteen (14) days. A description shall be included of how each selected control will store runoff so as to let sediments settle out and/or divert flows away from exposed soils or act to limit runoff from exposed areas.

8.2.3 Identification for each Structural Practice of its size, detail drawings, maintenance requirements and design calculations.

8.2.4 The type and amount of plant seed, live plants, fertilizer, agricultural ground limestone and mulch to be used. Specification of soil testing requirements for fertility and lime

requirements will be included. Specification for the use of perennial grass seed will also be included.

8.2.5 Sediment settling ponds will be identified with basic dimensions and the calculations for size and volume.

8.2.6 Detailed drawings and installation requirements of all other structural control BMPs.

8.2.7 Any other soil erosion and sediment control related BMPs and items that are required by the Administrator.

8.2.8 For developments where the overall plan does not call for centralized sediment control capable of controlling multiple individual lots, a detail drawing of a project specific typical individual lot showing standard individual lot soil erosion and sediment control practices and the sequence and timing of BMP installation for the individual lots. This does not remove or eliminate the responsibility to designate and install specific soil erosion and sediment control practices for the storm water discharges.

8.3 The Construction Site Erosion and Sediment Control (ESC) Plan shall include the scheduling, phasing, and coordination of construction operations and erosion and sediment control BMPs, including vegetative plantings and mulch.

8.4 The administrator may impose such special terms and conditions as are appropriate or necessary to ensure compliance with the applicable laws and rules and to protect human health or the environment.

8.5 Incomplete permit applications shall not be considered. Failure to provide a complete application or to respond to requests by the agency for additional information will result in denial of the application.

9. Monitoring for Compliance

Following the initial inspection of erosion and sediment control devices by the project consultant, regular inspections will be performed by the Administrator or their designee for compliance with these Rules. Inspections completed by the Administrator or their designee shall not be a substitute of the Internal Inspection requirements outlined in Section 6 of these Rules.

(A) If the board of county commissioners or the administrator determines that a violation of the Rules adopted under this section exists, the board or administrator may issue an immediate stop work order if the violator failed to obtain any federal, state, or local permit necessary for sediment and erosion control, earth movement, clearing, or cut and fill activity. In addition, if the board or administrator determines such a rule violation exists, regardless of whether or not the violator has obtained the proper permits, the board or representative may authorize the issuance of a notice of violation (NOV). The owner and/or developer will be notified of such violation(s) in writing by certified mail, return receipt requested; ordinary U.S. mail at the last known address of the owner or developer; or by posting the NOV at the site of the alleged violation; or a combination of any of the foregoing. If, after a period of not less than thirty (30) days has passed following the issuance of the NOV, the violation continues, the board or the Administrator shall issue a second NOV. After a period of not less than fifteen (15) days has elapsed following the issuance of the second notice of violation, the violation continues, the board or Administrator may issue a stop work order after first obtaining written approval of the county prosecutor if, in the opinion of the county prosecutor, the violation is egregious.

(Note: No stop work order shall be issued against any public highway, transportation, or drainage improvement or maintenance project undertaken by a government agency or political subdivision in accordance with a statement of its standard sediment control policies that is approved by the board or the chief of the division of soil and water resources in the department of natural resources.)

Once a stop work order is issued, the board or the administrator shall request, in writing, the county prosecutor to seek an injunction or other appropriate relief in the court of common pleas to abate excessive erosion or sedimentation and secure compliance with these rules. The prosecuting attorney may seek injunction, other appropriate relief including a court order for the construction of sediment control improvements or implementation of other control measures and, the assessment of a civil fine of not less than one hundred or more than five hundred dollars. Each day of violation of a rule or stop work order issued hereunder shall be considered a separate violation subject to a civil fine.

The person to whom a stop work order is issued hereunder may appeal the order to the court of common pleas.

(B) As an alternative to, or concurrent with, (A) above: following the initial inspection of erosion and sediment control devices by the project consultant, regular inspections will be performed by the Administrator for a compliance with these Rules has occurred, the owner and/or developer will be notified of deficiencies or noncompliance in writing by certified mail, return receipt requested; by ordinary U.S. mail at the last known address of the owner or developer; or by posting a notice of violation (NOV) at the site of the alleged violation; or a combination of the foregoing. If within fourteen (14) days after receipt of the notice or NOV, the owner or developer has not rectified the deficiency or received approval of plans for its correction, the deficiency or noncompliance shall be reported to the Board of Trumbull County Commissioners for consideration of a "finding of violation".

If the Board of Trumbull County Commissioners determines that a violation exists, such board may request in writing, for the Prosecuting Attorney to seek an injunction or other appropriate relief in the court of common pleas to abate excessive erosion or sedimentation and secure compliance with these rules or order. In granting relief, the common pleas court may order the construction of sediment control improvements or implementation of other control measures and may access a civil fine of not less than one hundred or more than five hundred dollars. Each day of violation of a rule adopted or administrative order issued under this section shall be considered a separate violation subject to a civil fine.

10. Variances to Rules

In the event that a practice, activity or other action is in violation of these Rules, the Trumbull County Board of Commissioners acting through the Administrator of these Rules or other designated agent and after public hearing and notice (as described hereunder) to interested persons including applicant, abutting landowners, the political subdivision wherein the real property subject to the variance is located, and any other person whose property would be substantially affected by the granting of the variance (the determination of the meaning of "substantially affected by" to be the sole decision of the Administrator or other Board designee whose decision is final), may grant a variance to these Rules if all of the following are found to exist:

(a) There are exceptional or extraordinary circumstances or conditions applying to the land;

(b) Owing to special conditions, literal enforcement of the Rules would cause unnecessary hardship and the spirit of these Rules would be observed and substantial justice done;

(c) The exceptional or extraordinary circumstances or conditions and the unnecessary hardship were not the result of any prior actions of the owner (or applicant) of the land;

(d) The variance is necessary for the preservation and enjoyment of substantial property rights of the owner of the land;

(e) The variance will not be a substantial detriment to adjacent land and will not materially impair the purposes of these Rules;

(f) Adverse economic conditions shall not be a valid reason to grant a variance;

(g) A request for a variance shall be in writing and shall be in a form or manner approved by the Administrator/designee and shall state specifically the reasons for the request and shall include all data and information in support of the request. The Administrator/designee shall fix a time and date for the public hearing, give at least a ten (10) day notice in writing to the parties in interest, give notice of such public hearing by publication in a general circulation newspaper in the County at least ten (10) days prior to such hearing. The request shall be reviewed and approved, disapproved or approved with modifications within thirty (30) working days unless extended by the Board for a reasonable time not to exceed an additional thirty (30) days;

(h) Any appeals of the final decision of a variance shall be made to the Board of Supervisors of Trumbull Soil & Water Conservation District;

(i) Variance requests, that involve tasks under the jurisdiction of the local governing engineering entity, whether fully or jointly, must separately obtain approval (if applicable) from said entity prior a variance of these Rules being granted

(j) A variance may not allow applicants to fall below the minimum standards of the Environmental Protection Agency (EPA)

11. Fees

Fees shall be required as established by resolutions adopted by the Trumbull SWCD Board. The fees shall defray the cost for the review of preliminary plans, ESC Plans, permits, renewals and site inspections. The review fee shall be paid in legal tender or by check or money order payable to Trumbull SWCD. Plans will not be approved until all fees are paid in full.