

**CITY OF WILLOUGHBY
EROSION AND SEDIMENT CONTROL
REGULATIONS**

SECTION 1 PURPOSE AND SCOPE

- (a) The purpose of this regulation is to establish technically feasible and economically reasonable standards to achieve a level of erosion and sediment control that will minimize damage to property and degradation of water resources and wetlands, and will promote and maintain the health and safety of the citizens of the City of Willoughby.
- (b) This regulation will:
 - (1) Allow development while minimizing increases in erosion and sedimentation.
 - (2) Reduce water quality impacts to receiving water resources and wetlands that may be caused by new development or redevelopment activities.
- (c) This regulation applies to all parcels used or being developed, either wholly or partially, for new or relocated projects involving highways, underground cables, or pipelines; subdivisions or larger common plans of development; industrial, commercial, institutional, or residential projects; building activities on farms; redevelopment activities; general clearing; and all other uses that are not specifically exempted in Section 1(d).
- (d) This regulation does not apply to activities regulated by, and in compliance with, the Ohio Agricultural Sediment Pollution Abatement Rules.

SECTION 2 DEFINITIONS

For purpose of this regulation, the following terms shall have the meaning herein indicated:

- (a) ABBREVIATED STORM WATER POLLUTION PREVENTION PLAN (ABBREVIATED SWP3): The written document that sets forth the plans and practices to be used to meet the requirements of this regulation.
- (b) ACRE: A measurement of area equaling 43,560 square feet.
- (c) 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.

- (d) COMMUNITY: Throughout this regulation, this shall refer to the City of Willoughby, its designated representatives, boards, or commissions.
- (e) CONSTRUCTION ENTRANCE: The permitted points of ingress and egress to development areas regulated under this regulation.
- (f) DEVELOPMENT AREA: A parcel or contiguous parcels owned by one person or persons, or operated as one development unit, and used or being developed for commercial, industrial, residential, institutional, or other construction or alteration that changes runoff characteristics.
- (g) DISTURBED AREA: An area of land subject to erosion due to the removal of vegetative cover and/or soil disturbing activities.
- (h) DRAINAGE: (1) The area of land contributing surface water to a specific point. (2) The removal of excess surface water or groundwater from land by surface or subsurface drains.
- (i) 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.
- (j) EROSION AND SEDIMENT CONTROL: The control of soil, both mineral and organic, to minimize the removal of soil from the land surface and to prevent its transport from a disturbed area by means of wind, water, ice, gravity, or any combination of those forces.
- (k) FINAL STABILIZATION: All soil disturbing activities at the site have been completed and a uniform perennial vegetative cover with a density of at least 80% coverage for the area has been established or equivalent stabilization measures, such as the use of mulches or geotextiles, have been employed.
- (l) LANDSCAPE ARCHITECT: A Professional Landscape Architect registered in the State of Ohio.
- (m) 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.
- (n) MAXIMUM EXTENT PRACTICABLE: The level of pollutant reduction that site owners of small municipal separate storm sewer systems regulated under 40 C.F.R. Parts 9, 122, 123, and 124, referred to as NPDES Storm Water Phase II, must meet.

- (o) NPDES: National Pollutant Discharge Elimination System. A regulatory program in the Federal Clean Water Act that prohibits the discharge of pollutants into surface waters of the United States without a permit.
- (p) PARCEL: Means a tract of land occupied or intended to be occupied by a use, building or group of buildings and their accessory uses and buildings as a unit, together with such open spaces and driveways as are provided and required. A parcel may contain more than one contiguous lot individually identified by a 'Permanent Parcel Number' assigned by the Lake County Auditor's Office.
- (q) PERSON: Any individual, corporation, firm, trust, commission, board, public or private partnership, joint venture, agency, unincorporated association, municipal corporation, county or state agency, the federal government, other legal entity, or an agent thereof.
- (r) PHASING: Clearing a parcel of land in distinct sections, with the stabilization of each section before the clearing of the next.
- (s) PROFESSIONAL ENGINEER: A Professional Engineer registered in the State of Ohio.
- (t) QUALIFIED INSPECTION PERSONNEL: A person knowledgeable in the principles and practice of erosion and sediment controls, who possess 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 measure selected to control the quality of storm water discharges from the construction activity.
- (u) RAINWATER AND LAND DEVELOPMENT: Ohio's standards for storm water management, land development, and urban stream protection. The most current edition of these standards shall be used with this regulation.
- (v) 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.
- (w) SEDIMENT: The soils or other surface materials that are transported or deposited by the action of wind, water, ice, gravity, or any combination of those forces, as a product of erosion.
- (x) SEDIMENTATION: The deposition or settling of sediment.
- (y) SETBACK: A designated transition area around water resources or wetlands that is left in a natural, usually vegetated, state so as to protect the water resources or wetlands from runoff pollution. Soil disturbing activities in this area are restricted by this regulation.

- (z) SOIL DISTURBING ACTIVITY: Clearing, grading, excavating, filling, or other alteration of the earth's surface where natural or human made ground cover is destroyed and that may result in, or contribute to, erosion and sediment pollution.
- (aa) SOIL & WATER CONSERVATION DISTRICT: An entity organized under Chapter 1515 of the Ohio Revised Code referring to either the Soil and Water Conservation District Board or its designated employee(s). Hereafter referred to as Lake SWCD.
- (bb) STABILIZATION: The use of BMPs, such as seeding and mulching, that reduce or prevent soil erosion by water, wind, ice, gravity, or a combination of those forces.
- (cc) STORM WATER POLLUTION PREVENTION PLAN (SWP3): The written document that sets forth the plans and practices to be used to meet the requirements of this regulation.
- (dd) 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.
- (ee) UNSTABLE SOILS: A portion of land that is identified by the City of Willoughby Engineer as prone to slipping, sloughing, or landslides, or is identified by the U.S. Department of Agriculture Natural Resource Conservation Service methodology as having a low soil strength.
- (ff) WATER RESOURCE: Any public or private body of water including lakes and ponds, as well as any brook, creek, river, or stream having banks, a defined bed, and a definite direction of flow, either continuously or intermittently flowing.
- (gg) WETLAND: Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions, including swamps, marshes, bogs, and similar areas (40 CFR 232, as amended).

SECTION 3 DISCLAIMER OF LIABILITY

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

SECTION 4 CONFLICTS, SEVERABILITY, NUISANCES AND 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 the City of Willoughby to observe or recognize hazardous or unsightly conditions or to recommend corrective measures shall not relieve the site owner from the responsibility for the condition or damage resulting therefrom, and shall not result in the City of Willoughby, its officers, employees, or agents being responsible for any condition or damage resulting therefrom.

SECTION 5 DEVELOPMENT OF STORM WATER POLLUTION PREVENTION PLANS

- (a) This regulation requires that a Storm Water Pollution Prevention Plan be developed and implemented for soil disturbing activities and construction activities disturbing one (1) acre or more.
- (b) The following soil disturbing activities and construction activities disturbing less than one (1) acre shall submit an Abbreviated Storm Water Pollution Prevention Plan:
 - (1) New single-family residential construction. Additions, accessory buildings and accessory uses on single-family residential parcels are not included. If such new construction activities disturb one (1) acre or more, or are part of a larger common plan of development or site disturbing one (1) acre or more, an Ohio EPA Construction Site General Permit and a Storm Water Pollution Prevention Plan may be required.
 - (2) All non-single-family-residential construction including additions, accessory buildings and accessory uses. If such activities disturb one (1) acre or more, or are part of a larger common plan of development or site disturbing one (1) acre or more, an Ohio EPA Construction Site General Permit and a Storm Water Pollution Prevention Plan may be required.

- (3) Any soil disturbing activities not related to construction disturbing between one (1) acre and one tenth (1/10th) acre. If such activities disturb one (1) acre or more, or are part of a larger common plan of development or site disturbing one (1) acre or more, an Ohio EPA Construction Site General Permit and a Storm Water Pollution Prevention Plan may be required.
- (c) Activities disturbing 1/10th (one tenth) or less of an acre are not required to submit a Storm Water Pollution Prevention Plan or an Abbreviated Storm Water Pollution Prevention Plan, unless required by the City of Willoughby Engineer. These activities must comply with all other provisions of this regulation.

SECTION 6 APPLICATION PROCEDURES

- (a) SOIL DISTURBING ACTIVITIES SUBMITTING A STORM WATER POLLUTION PREVENTION PLAN: The applicant shall submit four (4) sets of the SWP3 and the applicable fees to the City of Willoughby as follows:
 - (1) For subdivisions: After the approval of the preliminary plans and with submittal of the improvement plans.
 - (2) For other construction projects: Before issuance of a building permit by the Chief Building and Zoning Inspector.
 - (3) For general clearing projects: Prior to issuance of a building permit.
- (b) SOIL DISTURBING ACTIVITIES SUBMITTING AN ABBREVIATED STORM WATER POLLUTION PREVENTION PLAN: The applicant shall submit four (4) sets of the Abbreviated SWP3 and the applicable fees to the City of Willoughby as follows:
 - (1) For single-family home construction: Before issuance of a building permit by the Chief Building and Zoning Inspector.
 - (2) For other construction projects: Before issuance of a building permit by the Chief Building and Zoning Inspector.
 - (3) For general clearing projects: Prior to issuance of a building permit.
- (c) The City of Willoughby shall review the plans submitted under Section 6(a) or (b) for conformance with this regulation and approve or return for revisions with comments and recommendations for revisions after receipt of the plan. A plan rejected because of deficiencies shall receive a narrative report stating specific problems and the procedures for filing a revised plan.

- (d) Soil disturbing activities shall not begin and permits shall not be issued without an approved SWP3 or Abbreviated SWP3. Issuance of a building permit does not authorize the initiation of any soil disturbing activities.
- (e) SWP3 for individual sublots in a subdivision will not be approved unless the larger common plan of development or sale containing the subplot is in compliance with this regulation.
- (f) Approvals issued in accordance with this regulation shall remain valid for one (1) year from the date of approval.

SECTION 7 COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

Approvals issued in accordance with this regulation do not relieve the applicant of responsibility for obtaining all other necessary permits and/or approvals from the Ohio EPA, the US Army Corps of Engineers, and other federal, state, and/or county agencies. If requirements vary, the most restrictive requirement shall prevail. These permits may include, but are not limited to, those listed below. Proof of compliance with the appropriate and applicable state and federal regulations shall be submitted with each Storm Water Pollution Prevention Plan and Abbreviated Storm Water Pollution Prevention Plan.

- (a) Ohio EPA NPDES Permits authorizing storm water discharges associated with construction activity or the most current version thereof: Proof of compliance with these requirements shall be a copy of the Ohio EPA Director's Authorization Letter for the NPDES Permit, or a letter from the site owner certifying and explaining why the NPDES Permit is not applicable.
- (b) Section 401 of the Clean Water Act: Proof of compliance shall be a copy of the Ohio EPA Water Quality Certification application tracking number, public notice, or project approval, or a letter from the site owner certifying that a qualified professional has surveyed the site and determined that Section 401 of the Clean Water Act is not applicable. Wetlands, and other waters of the United States, shall be delineated by protocols accepted by the U.S. Army Corps of Engineers at the time of application of this regulation.
- (c) Ohio EPA Isolated Wetland Permit: Proof of compliance shall be a copy of Ohio EPA's Isolated Wetland Permit application tracking number, public notice, or project approval, or a letter from the site owner certifying that a qualified professional has surveyed the site and determined that an Ohio EPA Isolated Wetland Permit is not required. Isolated wetlands shall be delineated by protocols accepted by the U.S. Army Corps of Engineers at the time of application of this regulation.

- (d) Section 404 of the Clean Water Act: Proof of compliance shall be a copy of the U.S. Army Corps of Engineers Individual Permit application, if an Individual Permit is required for the development project, public notice, or project approval. 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. This shall include one of the following:
- (1) A letter from the site owner certifying that a qualified professional has surveyed the site and determined that Section 404 of the Clean Water Act is not applicable.
 - (2) A site plan showing that any proposed fill of waters of the United States conforms to the general and special conditions specified in the applicable Nationwide Permit. Wetlands, and other waters of the United States, shall be delineated by protocols accepted by the U.S. Army Corps of Engineers at the time of application of this regulation.
- (e) Ohio Dam Safety Law: Proof of compliance shall be a copy of the ODNR Division of Water permit application tracking number, a copy of the project approval letter from the ODNR Division of Water, or a letter from the site owner certifying and explaining why the Ohio Dam Safety Law is not applicable.

SECTION 8 STORM WATER POLLUTION PREVENTION PLAN

- (a) In order to control sediment pollution of water resources and wetlands, the applicant shall submit a SWP3 in accordance with the requirements of this regulation.
- (b) The SWP3 shall be certified by a professional engineer, a registered surveyor, certified professional erosion and sediment control specialist, or a registered landscape architect.
- (c) The SWP3 shall incorporate measures as recommended by the most current edition of Rainwater and Land Development as published by the Ohio Department of Natural Resources and shall include the following information:
- (1) Site description: The SWP3 shall provide:
 - A. A description of the nature and type of the construction activity (e.g. residential, shopping mall, highway, etc.).
 - B. Total area of the site and the area of the site that is expected to be disturbed (i.e., grubbing, clearing, excavation, filling or grading, including off-site borrow areas).

- C. An estimate of the impervious area and percent of imperviousness created by the soil-disturbing activity.
- D. Existing data describing the soil and, if available, the quality of any known pollutant discharge from the site such as that which may result from previous contamination caused by prior land uses.
- E. A description of prior land uses at the site.
- F. An implementation schedule which describes the sequence of major soil-disturbing operations (i.e., grubbing, excavating, grading, utilities and infrastructure installation) and the implementation of erosion and sediment controls to be employed during each operation of the sequence.
- G. The location and name of the immediate receiving stream or surface water(s) and the first subsequent receiving water(s).
- H. The aerial (plan view) extent and description of wetlands or other special aquatic sites at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project.
- I. For subdivided developments where the SWP3 does not call for a centralized sediment control capable of controlling multiple individual lots, a detailed drawing of a typical individual lot showing standard individual lot erosion and sediment control practices.
- J. Location and description of any storm water discharges associated with dedicated asphalt and dedicated concrete plants associated with the development area and the best management practices to address pollutants in these storm water discharges.
- K. Site map showing:
 - (1) Limits of soil-disturbing activity of the site, including off site spoil and borrow areas.
 - (2) Soil types should be depicted for all areas of the site, including locations of unstable or highly erodible soils.
 - (3) Existing and proposed one-foot (1') contours. This must include a delineation of drainage watersheds

- expected during and after major grading activities as well as the size of each drainage watershed in acres.
- (4) Surface water locations including springs, wetlands, streams, lakes, water wells, etc., on or within 200 feet of the site, including the boundaries of wetlands or stream channels and first subsequent named receiving water(s) the applicant intends to fill or relocate for which the applicant is seeking approval from the Army Corps of Engineers and/or Ohio EPA.
 - (5) Existing and planned locations of buildings, roads, parking facilities, and utilities.
 - (6) The location of all erosion and sediment control practices, including the location of areas likely to require temporary stabilization during the course of site development.
 - (7) Sediment ponds, including their sediment settling volume and contributing drainage area.
 - (8) Areas designated for the storage or disposal of solid, sanitary and toxic wastes, including dumpster areas, areas designated for cement truck washout, and vehicle fueling.
 - (9) The location of designated stoned construction entrances where the vehicles will ingress and egress the construction site.
 - (10) The location of any in-stream activities including stream crossings.
- (2) A soils engineering report. The City of Willoughby Engineer and/or the Chief Building and Zoning Inspector may require the SWP3 to include a Soils Engineering Report based upon his/her determination that the conditions of the soils are unknown or unclear to the extent that additional information is required to protect against erosion or other hazards. This report shall be based on adequate and necessary test borings, and shall contain all the information listed below. Recommendations included in the report and approved by the City of Willoughby Engineer shall be incorporated in the grading plans and/or other specifications for site development.
- A. Data regarding the nature, distribution, strength, and erodibility of existing soils.

- B. If applicable, data regarding the nature, distribution, strength, and erodibility of the soil to be placed on the site.
- C. Conclusions and recommendations for grading procedures.
- D. Conclusions and recommended designs for interim soil stabilization devices and measures, and for permanent soil stabilization after construction is completed.
- E. Design criteria for corrective measures when necessary.
- F. Opinions and recommendations covering the stability of the site.

SECTION 9 PERFORMANCE STANDARDS

The SWP3 must contain a description of the controls appropriate for each construction operation and the applicant must implement such controls. The SWP3 must clearly describe for each major construction activity the appropriate control measures; the general sequence during the construction process under which the measures will be implemented; and the contractor responsible for implementation (e.g., contractor A will clear land and install perimeter controls and contractor B will maintain perimeter controls until final stabilization). The SWP3 shall identify all subcontractors engaged in activities that could impact storm water runoff. The SWP3 shall contain signatures from all of the identified subcontractors indicating that they have been informed and understand their roles and responsibilities in complying with the SWP3. As additional subcontractors are identified, the SWP3 shall be revised to include signatures from additional subcontractors.

The controls shall include the following minimum components:

- (a) **NON-STRUCTURAL PRESERVATION MEASURES:** The SWP3 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, and designation of tree preservation areas or other protective clearing or grubbing practices.
- (b) **EROSION CONTROL PRACTICES:** The SWP3 must make use of erosion controls that are capable of providing cover over disturbed soils. A description of control practices designed to restabilize disturbed areas after grading or construction shall be included in the SWP3. The SWP3 must provide specifications for stabilization of all disturbed areas of the site and provide guidance as to which method of stabilization will be employed for any time of the year. Such practices may include: temporary seeding, permanent seeding, mulching, matting, sod stabilization,

vegetative buffer strips, phasing of construction operations, the use of construction entrances, and the use of alternative ground cover.

Erosion control practices must meet the following requirements:

- (1) Stabilization. Disturbed areas must be stabilized as specified in Tables 1 and 2 below.

Table 1: Permanent Stabilization

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

Table 2: Temporary Stabilization

Area requiring temporary stabilization	Time frame to apply erosion controls
Any disturbed area within 50 feet of a stream and not at final grade.	Within 2 days of the most recent disturbance if that area will remain idle for more than 21 days.
For all construction activities, any disturbed area, including soil stockpiles that will be dormant for more than 21 days but less than one year, and not within 50 feet of a stream.	Within 7 days of the most recent disturbance within the area.
Disturbed areas that will be idle over winter.	Prior to November 1.
Note: Where vegetative stabilization techniques may cause structural instability or are otherwise unobtainable, alternative stabilization techniques must be employed. These techniques may include mulching or erosion matting.	

- (2) Permanent stabilization of conveyance channels. Applicants shall undertake special measures to stabilize channels and outfalls and prevent erosive flows. Measures may include seeding, dormant seeding, mulching, erosion control matting, sodding, riprap, natural channel design with bioengineering techniques, or rock check dams, all as defined in the most recent edition of Rainwater and Land Development or the Field Office Technical Guide available at www.nrcs.usda.gov/technical/efotg/.

- (c) **RUNOFF CONTROL PRACTICES.** The SWP3 shall incorporate measures that control the flow of runoff from disturbed areas so as to prevent erosion. Such practices may include rock check dams, pipe slope drains, 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.
- (d) **SEDIMENT CONTROL PRACTICES.** The SWP3 shall include a description of, and detailed drawings for, all structural practices that shall store runoff, allowing sediments to settle and/or divert flows away from exposed soils or otherwise limit runoff from exposed areas. Structural practices shall be used to control erosion and trap sediment from a site remaining disturbed for more than 14 days. Such practices may include, among others: sediment settling ponds, silt fences, storm drain inlet protection, and earth diversion dikes or channels which direct runoff to a sediment settling pond. All sediment control practices must be capable of ponding runoff in order to be considered functional. Earth diversion dikes or channels alone are not considered a sediment control practice unless used in conjunction with a sediment settling pond.

Sediment control practices must meet the following requirements:

- (1) Timing. Sediment control structures shall be functional throughout the course of earth disturbing activity. Sediment basins and perimeter sediment barriers 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 restabilized. As construction progresses and the topography is altered, appropriate controls must be constructed or existing controls altered to address the changing drainage patterns.
- (2) Sediment settling ponds. A sediment settling pond, or equivalent best management practice upon approval from the City Engineer, is required for any one of the following conditions:
 - A. Concentrated storm water runoff.
 - B. Runoff from drainage areas that exceeds the design capacity of silt fence or inlet protection, as determined in Table 3 below.
 - C. 10-acres of disturbed land.

The sediment-settling pond shall provide both a sediment storage zone and a dewatering zone. The volume of the dewatering zone shall be at least 67 cubic yards of storage per acre of total contributing drainage area and have a minimum of 48-hour drain time for sediment basins serving a drainage area over 5 acres.

When post-construction detention/water quality ponds are to be used as temporary sediment trapping BMP, a skimmer discharge

device consistent with the Ohio Rainwater Manual shall be utilized during construction phase and until the site is deemed permanently stabilized by the administrator.

The volume of the sediment storage zone shall be calculated by one of the following methods:

- A. The volume of the sediment storage zone shall be 1,000 ft³ per disturbed acre within the watershed of the basin.
- B. The volume of the sediment storage zone shall be the volume necessary to store the sediment as calculated with a generally accepted erosion prediction model.

When determining the total contributing drainage area, off-site areas and areas which remain undisturbed by construction activity must be included unless runoff from these areas is diverted away from the sediment settling pond and is not co-mingled with sediment-laden runoff. The depth of the dewatering zone must be less than or equal to five (5) feet. The configuration between the inlets and the outlet of the basin must provide at least two units of length for each one unit of width (> 2:1 length: width ratio), however a length to width ration of 4:1 is recommended. Sediment must be removed from the sediment-settling pond when the design capacity has been reduced by 40 percent. This limit is typically reached when sediment occupies one-half of the basin depth. When designing sediment settling ponds, the applicant must consider public safety, especially as it relates to children, as a design factor for the sediment basin and alternative sediment controls must be used where site limitations would preclude a safe design. The use of a combination of sediment and erosion control measures in order to achieve maximum pollutant removal is encouraged.

- (3) Silt fence and diversions. Sheet flow runoff from denuded areas shall be intercepted by silt fence or diversions to protect adjacent properties, water resources, and wetlands from sediment transported via sheet flow. Where intended to provide sediment control, silt fence shall be placed on a level contour and shall be capable of temporarily ponding runoff. The relationship between the maximum drainage area to silt fence for a particular slope range is shown in Table 3 below. Storm water diversion practices shall be used to keep runoff away from disturbed areas and steep slopes. Such devices, which include swales, dikes or berms, may receive storm water runoff from areas up to 10 acres. Placing silt fence in

parallel does not extend the permissible drainage area to the silt fence.

Table 3: Maximum Drainage Area to Silt Fence

Maximum Drainage Area (acres) to 100 linear feet of silt fence	Range of Slope for a drainage area (%)
0.5	<2%
0.25	≥ 2% but < 20%
0.125	≥ 20% but < 50%

- (4) Inlet protection. Erosion and sediment control practices, such as boxed inlet protection, shall be installed to minimize sediment-laden water entering active storm drain systems. All inlets receiving runoff from drainage areas of one or more acres will require a sediment settling pond. Straw or hay bales are not acceptable forms of inlet protection.

- (5) Off-site tracking of sediment and dust control. Best management practices must be implemented to ensure sediment is not tracked off-site and that dust is controlled. These best management practices must include, but are not limited to, the following:
 - A. Construction entrances shall be built and shall serve as the only permitted points of ingress and egress to the development area. These entrances shall be built of a stabilized pad of aggregate stone or recycled concrete or cement sized greater than 2” in diameter, placed over a geotextile fabric, and constructed in conformance with specifications in the most recent edition of the Rainwater and Land Development Manual.

 - B. Streets directly adjacent to construction entrances and receiving traffic from the development area, shall be cleaned daily to remove sediment tracked off-site. If applicable, the catch basins on these streets nearest to the construction entrances shall also be cleaned weekly.

Based on site conditions, the City of Willoughby Engineer may require additional best management practices to control

off site tracking and dust. These additional BMPs may include:

- C. Silt fence or construction fence installed around the perimeter of the development area to ensure that all vehicle traffic adheres to designated construction entrances.
- D. Designated wheel-washing areas. Wash water from these areas must be directed to a designated sediment trap, the sediment-settling pond, or to a sump pump for dewatering in conformance with Section 9(g) of this regulation.
- E. Applicants shall take all necessary measures to comply with applicable regulations regarding fugitive dust emissions, including obtaining necessary permits for such emissions. The City of Willoughby Engineer may require dust controls including the use of water trucks to wet disturbed areas, tarping stockpiles, temporary stabilization of disturbed areas, and regulation of the speed of vehicles on the site.

(6) Surface Waters of the State Protection. Construction vehicles shall avoid water resources and wetlands. If the applicant is permitted to disturb areas within 50 feet of a water resource or wetland, the following conditions shall be addressed in the SWP3:

- A. All BMPs and stream crossings shall be designed as specified in the most recent edition of the Rainwater and Land Development Manual.
- B. Structural practices shall be designated and implemented on site to protect water resources or wetlands from the impacts of sediment runoff.
- C. No structural sediment controls (e.g., the installation of silt fence or a sediment settling pond in-stream) shall be used in a water resource or wetland.
- D. Where stream crossings for roads or utilities are necessary and permitted, the project shall be designed such that the number of stream crossings and the width of the disturbance are minimized.
- E. Temporary stream crossings shall be constructed if water resources or wetlands will be crossed by construction vehicles during construction.
- F. Construction of bridges, culverts, or sediment control structures shall not place soil, debris, or other particulate

material into or close to the water resources or wetlands in such a manner that it may slough, slip, or erode.

- (7) Modifying controls. If periodic inspections or other information indicates a control has been used inappropriately or incorrectly, the applicant shall replace or modify the control for site conditions.
- (e) **NON-SEDIMENT POLLUTANT CONTROLS:** 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. These practices shall include but are not limited to the following:
- (1) Waste Materials: A covered dumpster shall be made available for the proper disposal of garbage, plaster, drywall, grout, gypsum, and other waste materials.
 - (2) Concrete Truck Wash Out: The washing of concrete material into a street, catch basin, or other public facility or natural resource is prohibited. A designated area for concrete washout shall be made available.
 - (3) Fuel/Liquid Tank Storage: All fuel/liquid tanks and drums shall be stored in a marked storage area. A dike shall be constructed around this storage area with a minimum capacity equal to 110% of the volume of all containers in the storage area.
 - (4) Toxic or Hazardous Waste Disposal: Any toxic or hazardous waste shall be disposed of properly.
 - (5) Contaminated Soils Disposal and Runoff: Contaminated soils from redevelopment sites shall be disposed of properly. Runoff from contaminated soils shall not be discharged from the site. Proper permits shall be obtained for development projects on solid waste landfill sites or redevelopment sites.
- (f) **COMPLIANCE WITH OTHER REQUIREMENTS.** The SWP3 shall be consistent with applicable State and/or local waste disposal, sanitary sewer, or septic system regulations, including provisions prohibiting waste disposal by open burning, and shall provide for the proper disposal of contaminated soils located within the development area.
- (g) **TRENCH AND GROUND WATER CONTROL.** There shall be no sediment-laden or turbid discharges to water resources or wetlands 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, prior to being discharged from the

construction site. Alternatively, sediment may be removed by settling in place or by dewatering into a sump pit, filter bag or comparable practice. Ground water dewatering which does not contain sediment or other pollutants is not required to be treated prior to discharge. However, care must be taken when discharging ground water to ensure that it does not become pollutant-laden by traversing over disturbed soils or other pollutant sources.

(h) INTERNAL INSPECTIONS. All controls on the site shall be inspected at least once every seven calendar days and within 24 hours after any storm event greater than one-half inch of rain per 24 hour period. 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 with 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 a discharge if prior written approval has been attained from the City Engineer and all of the following conditions are met:

- (1) The project is located in an area where frozen conditions are anticipated to continue for extended periods of time (i.e. more than one (1) month).
- (2) Land disturbance activities have been suspended, and temporary stabilization is achieved.
- (3) The beginning date and ending dates of the waiver period are documented in the SWP3.

The applicant shall assign qualified inspection personnel to conduct these inspections to ensure that the control practices are functional and to evaluate whether the SWP3 is adequate, or whether additional control measures are required.

These inspections shall meet the following requirements:

- (1) 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.
- (2) Erosion and sediment control measures identified in the SWP3 shall be observed to ensure that they are operating correctly. The applicant shall prepare and utilize an inspection form acceptable to the City Engineer. The inspection form shall include, at a minimum:

A.The inspection date.

B.Names, titles and qualifications of personnel making the inspection.

C.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.

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

E.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. Where additional BMPs are needed that did not exist at the time of inspection.

F.Corrective action required including any necessary changes to the SWP3 and implementation dates.

(3) Discharge locations shall be inspected to determine whether erosion and sediment control measures are effective in preventing significant impacts to the receiving water resource or wetlands.

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

(5) 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 SWP3, a certification as to whether the facility is in compliance with the SWP3, and information on any incidents of non-compliance determined by these inspections.

(i) MAINTENANCE. The SWP3 shall be designed to minimize maintenance requirements. All control practices shall be maintained and repaired as needed to ensure continued performance of their intended function until final stabilization. All sediment control practices must be maintained in a functional condition until all up slope areas they control reach final stabilization. The applicant shall provide a description of maintenance procedures needed to ensure the continued performance of control practices and shall ensure a responsible party and adequate funding to conduct this maintenance, all as determined by the City of Willoughby Engineer.

When inspections reveal the need for repair, replacement, or installation of erosion and sediment control BMPs, the following procedures shall be followed:

(1) When practices require repair or maintenance. If an internal inspection reveals that a control practice is in need of repair or

maintenance, with the exception of a sediment-settling pond, 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.

(2) When practices fail to provide their intended function. If an internal inspection reveals that a control practice fails to perform its intended function as detailed in the SWP3 and that another, more appropriate control practice is required, the SWP3 must be amended and the new control practice must be installed within ten (10) days of the inspection.

(3) When practices depicted on the SWP3 are not installed. If an internal inspection reveals that a control practice has not been implemented in accordance with the schedule, the control practice must be implemented within ten (10) days from the date of the inspection. If the internal inspection reveals that the planned control practice is not needed, the record must contain a statement of explanation as to why the control practice is not needed.

(j) FINAL STABILIZATION. Final stabilization shall be determined by the City Engineer. Once a definable area has achieved final stabilization, the applicant may note this on the SWP3 and no further inspection requirement applies to that portion of the site.

SECTION 10 ABBREVIATED STORM WATER POLLUTION PREVENTION PLAN

(a) In order to control sediment pollution of water resources and wetlands, the applicant shall submit an Abbreviated SWP3 in accordance with the requirements of this regulation.

(b) The Abbreviated SWP3 shall be certified by a professional engineer, a registered surveyor, certified professional erosion and sediment control specialist, or a registered landscape architect.

(c) The Abbreviated SWP3 shall include a minimum of the following BMPs. The City of Willoughby may require other BMPs as site conditions warrant.

(1) Construction Entrances: Construction entrances shall be built and shall serve as the only permitted points of ingress and egress to the development area. These entrances shall be built of a stabilized pad of aggregate stone or recycled concrete or cement sized greater than 2" in diameter, placed over a geotextile fabric, and constructed in conformance with specifications in the most recent edition of the Rainwater and Land Development Manual.

- (2) Concrete Truck Wash Out. The washing of concrete material into a street, catch basin, or other public facility or natural resource is prohibited. A designated area for concrete washout shall be made available.
- (3) Street Sweeping. Streets directly adjacent to construction entrances and receiving traffic from the development area, shall be cleaned daily to remove sediment tracked off-site. If applicable, the catch basins on these streets nearest to the construction entrances shall be cleaned weekly.
- (4) Stabilization. The development area shall be stabilized as detailed in Table 4.

Table 4: Stabilization

Area requiring stabilization	Time frame to apply erosion controls
Any disturbed area within 50 feet of a stream and not at final grade.	Within 2 days of the most recent disturbance if that area will remain idle for more than 21 days
For all construction activities, any disturbed area, including soil stockpiles, that will be dormant for more than 21 days but less than one year, and not within 50 feet of a stream.	Within 7 days of the most recent disturbance within the area
Disturbed areas that will be idle over winter	Prior to November 1.
Note: Where vegetative stabilization techniques may cause structural instability or are otherwise unobtainable, alternative stabilization techniques must be employed. These techniques may include mulching or erosion matting.	

- (5) Inlet Protection. Erosion and sediment control practices, such as boxed inlet protection, shall be installed to minimize sediment-laden water entering active storm drain systems. Straw or hay bales are not acceptable forms of inlet protection.
- (6) Internal Inspection and Maintenance. All controls on the development area shall be inspected at least once every seven calendar days and within 24 hours after any storm event greater than one-half inch of rain per 24 hour period. Maintenance shall occur as detailed below:
 - A. When practices require repair or maintenance. If the internal inspection reveals that a control practice is in need of repair or maintenance, with the exception of a sediment-settling pond, 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.

B. When practices fail to provide their intended function. If the internal inspection reveals that a control practice fails to perform its intended function and that another, more appropriate control practice is required, the Abbreviated SWP3 must be amended and the new control practice must be installed within ten (10) days of the inspection.

C. When practices depicted on the Abbreviated SWP3 are not installed. If the internal inspection reveals that a control practice has not been implemented in accordance with the schedule, the control practice must be implemented within ten (10) days from the date of the inspection. If the inspection reveals that the planned control practice is not needed, the record must contain a statement of explanation as to why the control practice is not needed.

(7) Final Stabilization. Final stabilization shall be determined by the City of Willoughby Engineer.

SECTION 11 FEES

The Storm Water Pollution Prevention Plan and Abbreviated Storm Water Pollution Plan review, filing, and inspection fee is part of a complete submittal and is required to be submitted to the City of Willoughby before the review process begins. Please consult with the Chief Building and Zoning Inspector for the current fee schedule as adopted by Resolution of the City of Willoughby.

SECTION 12 BOND

(a) If a Storm Water Pollution Prevention Plan or Abbreviated Storm Water Pollution Prevention Plan is required by this regulation, soil disturbing activities shall not be permitted until a cash bond of \$500 per acre, and each fraction thereof, has been deposited with the City of Willoughby's Finance Department. Soil disturbing activities and construction activities disturbing one (1) acre or less shall require a minimum cash bond deposit of \$500. This bond shall be posted for the City of Willoughby to perform the obligations otherwise to be performed by the owner of the development area as stated in this regulation and to allow all work to be performed as needed in the event that the applicant fails to comply with the provisions of this regulation. The cash bond shall be returned, less the City of Willoughby administrative fees as detailed in Chapter 1335 of the Codified Ordinances of the City of Willoughby, after all work required by this regulation has been completed and final stabilization has been reached, all as determined by the City of Willoughby's Engineer.

- (b) No project subject to this regulation shall commence without a SWP3 or Abbreviated SWP3 approved by the City of Willoughby Engineer. Issuance of a building permit is not approval to commence soil disturbing activities.

SECTION 13 AMENDMENT TO REGULATIONS

These Regulations may be amended as follows:

- (a) Minor Changes. A minor change can be made to a specific Regulation by concurrence of the City Engineer, the Service Director, and the Law Director. Minor changes are defined as changes to the settling basin volume calculations, the basin length to width ratio, allowable silt fence coverage areas and other engineering criteria.

- (b) Major Changes. Major changes that modify or change intent or implementation of the Regulations previously approved by Council must be approved by a majority vote of Council at a regular meeting.

SECTION 14 ENFORCEMENT

- (a) All development areas may be subject to external inspections by the City of Willoughby to ensure compliance with the approved SWP3 or Abbreviated SWP3.

- (b) After each external inspection, the City of Willoughby shall prepare and distribute a status report to the applicant.

- (c) If an external inspection determines that operations are being conducted in violation of the approved SWP3 or Abbreviated SWP3, the City of Willoughby may take action as detailed in Section 15 of this regulation.

SECTION 15 VIOLATIONS

- (a) No person shall violate or cause or knowingly permit to be violated any of the provisions of this regulation, or fail to comply with any of such provisions or with any lawful requirements of any public authority made pursuant to this regulation, or knowingly use or cause or permit the use of any lands in violation of this regulation or in violation of any permit granted under this regulation.

- (b) Upon notice, the Mayor and/or designee may suspend any active soil disturbing activity for a period not to exceed ninety (90) days, and may require immediate erosion and sediment control measures whenever he or she determines that such activity is not meeting the intent of this regulation. Such notice shall be in writing, shall be given to the applicant,

and shall state the conditions under which work may be resumed. In instances, however, where the Mayor and/or designee finds that immediate action is necessary for public safety or the public interest, he or she may require that work be stopped upon verbal order pending issuance of the written notice.

SECTION 16 APPEALS

Any person aggrieved by any order, requirement, determination, or any other action or inaction by the City of Willoughby in relation to this regulation may appeal to the court of common pleas. Such an appeal shall be made in conformity with Chapter 2506 of the Ohio Revised Code.

Erosion & Sediment Control Regulations