

**CHAPTER 1052**  
**EROSION AND SEDIMENT CONTROL**

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**1052.01 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 will promote and maintain the health and safety of the citizens of the City of Avon:
- (b) This regulation will:
  - (1) Allow development while minimizing increases in erosion and sedimentation.
  - (2) Reduce water quality impacts to receiving water resources 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 1052.01 (d).
- (d) This regulation does not apply to activities regulated by, and in compliance with, the Ohio Agricultural Sediment Pollution Abatement Rules.

**1052.02 DEFINITIONS**

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

- (a) **ABBREVIATED STORMWATER POLLUTION PREVENTON 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) **ADMINISTRATOR:** The person or entity having the responsibility and duty of administering and ensuring compliance with this regulation.
- (d) **CITY ENGINEER:** The City Engineer shall mean the City’s Engineer, its Consulting Engineer or Engineering Firm, any Engineer or Engineering Firm hired by the City to perform work for the City on any given project or any designee of one of the above, e.g., a City Building Inspector designated to perform stormwater inspections.
- (e) **COMMENCEMENT OF CONSTRUCTION:** The initial disturbance of soils associated with clearing, grubbing, grading, placement of fill, or excavating activities or other construction activities.
- (f) **CONCENTRATED STORMWATER RUNOFF:** Any stormwater runoff that flows through a drainage pipe, ditch, diversion, or other discrete conveyance channel.
- (g) **CONSTRUCTION ENTRANCE:** The permitted points of ingress and egress to development areas regulated under this regulation.
- (h) **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.
- (i) **DEWATERING VOLUME:** See current *Ohio Rainwater and Land Development Manual*.
- (j) **DISCHARGE:** The addition of any pollutant to surface waters of the state from a point source.
- (k) **DISTURBANCE:** Any clearing, grading, excavating, filling, or other alteration of land surface where natural or man-made cover is destroyed in a manner that exposes the underlying soils.
- (l) **DISTURBED AREA:** An area of land subject to erosion due to the removal of vegetative cover and/or soil disturbing activities such as grading, excavating, or filling.
- (m) **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.
- (n) **DRAINAGE WATERSHED:** For the purpose of this regulation the total contributing drainage area to a SCM i.e., the “watershed” directed to the practice. This includes offsite contributing drainage.
- (o) **DRAINAGE WAY:** A natural or manmade channel, ditch, or waterway that conveys surface water in a concentrated manner by gravity.
- (p) **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.
- (q) **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.
- (r) **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. 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. Final stabilization also requires the installation of permanent (post-construction) SCMs where applicable.

- (s) GRADING: The excavating, filling, or stockpiling of earth material, or any combination thereof, including the land in its excavated or filled condition.
- (t) GRUBBING: Removing or grinding of roots, stumps and other unwanted material below existing grade.
- (u) IMPERVIOUS: That which does not allow infiltration.
- (v) LANDSCAPE ARCHITECT: A Professional Landscape Architect registered in the State of Ohio.
- (w) 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.
- (x) MAXIMUM EXTENT PRACTICABLE (MEP): The technology-based discharge standard for Municipal Separate Storm Sewer Systems to reduce pollutants in stormwater discharges that was established by the Clean Water Act §402(p). A discussion of MEP as it applies to small MS4s is found in 40 CFR 122.34.
- (y) MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4): A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that are:
  - a. Owned or operated by the federal government, state, municipality, township, county, district, or other public body (created by or pursuant to state or federal law) including a special district under state law such as a sewer district, flood control district or drainage districts, or similar entity, or a designated and approved management agency under Section 208 of the Federal Water Pollution Control Act that discharges into surface waters of the state; and
  - b. Designed or used for collecting or conveying solely stormwater,
  - c. Which is not a combined sewer, and
  - d. Which is not a part of a publicly owned treatment works.
- (z) NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES): The national program for issuing, modifying, revoking and reissuing, termination, monitoring and enforcing permits and enforcing pretreatment requirements, under sections 307, 402, 318, 405 under the Clean Water Act.
- (aa) OWNER or OPERATOR: Any party associated with a construction project that meets either of the following two criteria:
  - i: The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or
  - ii: The party has day-to-day operational control of those activities at a project which are necessary to ensure compliance with A Stormwater Pollution Prevention Plan (SWP3) for the site or other permit conditions (e.g. they are authorized to direct workers at a site to carry out activities required by the SWP3 or comply with other permit conditions.)

- (bb) **ORDINARY HIGH WATER MARK:** Means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.
- (cc) **OWNER OR OPERATOR:** The owner or operator of any “facility or activity” subject to regulation under the NPDES program.
- (dd) **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 Lorain County Auditor’s Office.
- (ee) **PERCENT IMPERVIOUSNESS:** The impervious area created divided by the total area of the project site.
- (ff) **PERMANENT STABILIZATION:** 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.
- (gg) **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.
- (hh) **PHASING:** Clearing a parcel of land in distinct Sections, with the stabilization of each Section before the clearing of the next.
- (ii) **POINT SOURCE:** Any discernible, confined and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leach ate collection system, vessel or the floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.
- (jj) **PRE-CONSTRUCTION MEETING:** A meeting between the City Engineer and all principle parties, prior to the start of any construction, at a site that requires a Stormwater Pollution Prevention Plan.
- (kk) **PRE-WINTER STABILIZATION MEETING:** A meeting between the city engineer and all principal parties, prior to October 1, in order to plan winter erosion and sediment controls for a site that requires a Stormwater Pollution Prevention Plan.
- (ll) **PROFESSIONAL ENGINEER:** A Professional Engineer registered in the State of Ohio.
- (mm) **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 stormwater quality and to assess the effectiveness of any sediment and erosion control measure selected to control the quality of stormwater discharges from the construction activity.

- (nn) *RAINWATER AND LAND DEVELOPMENT*: Ohio's standards for stormwater management, land development, and urban stream protection. The most current edition of these standards shall be used with this regulation.
- (oo) *RIPARIAN AREA*: The transition area between flowing water and terrestrial (land) ecosystems composed of trees, shrubs and surrounding vegetation which serve to stabilize erodible soil, improve both surface and ground water quality, increase stream shading and enhance wildlife habitat.
- (pp) *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.
- (qq) *RUNOFF COEFFICIENT*: The fraction of rainfall that will appear at the conveyance as runoff.
- (rr) *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.
- (ss) *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 *Rainwater and Land Development*.
- (tt) *SEDIMENT STORAGE VOLUME*: See current edition of *Rainwater and Land Development*.
- (uu) *SEDIMENTATION*: The deposition or settling of sediment.
- (vv) *SETBACK*: A designated transition area around water resources that is left in a natural, usually vegetated, state so as to protect the water resources from runoff pollution. Soil disturbing activities in this area are restricted by this regulation.
- (ww) *SOIL DISTURBING ACTIVITY*: Clearing, grading, excavating, filling, grubbing or stump removal that occurs during clearing or timber activities 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.
- (xx) *SOIL & WATER CONSERVATION DISTRICT (SWCD)*: An entity organized under Regulation 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 Lorain SWCD.
- (yy) *STABILIZATION*: The use of SCMs such as seeding and mulching, that reduce or prevent soil erosion by water, wind, ice, gravity, or a combination of those forces.
- (zz) *STEEP SLOPES*: Slopes that are 15 percent or greater in grade. NOTE: If otherwise defined in City zoning, use City definition.
- (aaa) *STORMWATER CONTROL MEASURE (SCM)*: 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 SCMs 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.
- (bbb) *STORMWATER POLLUTION PREVENTION PLAN (SWP3)*: The written document that sets forth the plans and practices to be used to meet the requirements of this regulation.

- (ccc) **STORMWATER:** Stormwater runoff, snow melt and surface runoff and drainage.
- (ddd) **SUBDIVISIONS, MAJOR AND MINOR:** See Ohio Administrative Code 711.001 for definition.
- (eee) **SURFACE OUTLET:** A dewatering device that only draws water from the surface of the water.
- (fff) **SURFACE WATERS OF THE STATE (also WATER RESOURCE):** Any streams, lakes, reservoirs, ponds, 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.
- (ggg) **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.
- (hhh) **TOPSOIL:** The upper layer of the soil that is usually darker in color and richer in organic matter and nutrients than subsoil.
- (iii) **TOTAL MAXIMUM DAILY LOAD (TMDL):** The sum of the existing and/or projected point source, nonpoint source, and background loads for a pollutant to a specified watershed, water resource or wetland, or water resource or wetland segment. A TMDL sets and allocates the maximum amount of a pollutant that may be introduced into the water and still ensure attainment and maintenance of water quality standard.
- (jjj) **UNSTABLE SOILS:** A portion of land that is identified by the City of Avon 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.
- (kkk) **WARE QUSLITY VOLUMR (WQv):** The volume of stormwater runoff which must be captured and treated prior to discharge from the developed site after construction is complete. WQv is based on the expected runoff generated by the mean storm precipitation volume from post-construction site conditions at which rapidly diminishing returns in the number of runoff events captured begins to occur.
- (lll) **WATER RESOURCE:** (see SURFACE WATERS OF THE STATE) Any stream, lake, reservoir, pond, marsh, wetland, or waterway 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.
- (mmm) **WATERSHED:** The total drainage area contributing runoff to a single point.
- (nnn) **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).

**1052.03           DISCLAIMER OF LIABILITY**

- (a) 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 any particular parcel of property.
- (b) By approving an SWP3 under this regulation, the City of Avon does not accept responsibility for the design, installation, and operation and maintenance of stormwater management practices.
- (c) Performance Liability. No provision of this Chapter shall limit, increase or otherwise affect the liabilities of the owner nor impose any liability upon the City not otherwise imposed by law.
- (d) No release from Other Requirements. No condition of this permit shall release the owner from any responsibility or requirements under other Federal, State, or local environmental Chapters. If requirements vary, the most restrictive requirements shall prevail.
- (e) Proceeding with Activity. Soil-disturbing activities regulated under this Chapter shall not begin until all necessary State and Federal permits and appropriate approvals of the SWP3 have been granted to the site owner.
- (f) Performance Responsibility. The owner is responsible for carrying out all provisions of the approved SWP3 and for meeting all the standards and requirements of this Chapter.

**1052.04           CONFLICTS, SEVERABILITY, NUISANCES AND RESPONSIBILITY**

- (a) Where this regulation is in conflict with other provisions of law or ordinance, the Planning and Zoning Committee shall decide the best course for the City.
- (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 Avon 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 Avon, its officers, employees, or agents being responsible for any condition or damage resulting there from.

**1052.05           DEVELOPMENT OF SWP3s**

- (a) This regulation requires that a Stormwater Pollution Prevention Plan (SWP3) be developed and implemented for all commercial and industrial site development and all development projects disturbing one (1) acre or more and on which any regulated activity of Section 1052.01(c) is proposed. The City Engineer has the discretion to require a SWP3 for projects on sites of any size.
- (b) The following activities shall submit an Abbreviated SWP3:

- (1) New single-family residential construction not part of an approved subdivision. If such activities disturb one (1) acre or more, or are part of a larger common plan of development or sale disturbing one (1) acre or more, an Ohio EPA Construction Site General Permit and a full SWP3 is required.
  - (2) Additions or accessory buildings for single-family residential construction. If such activities disturb one (1) acre or more, or are part of a larger common plan of development or sale disturbing one (1) acre or more, an Ohio EPA Construction Site General Permit and a full SWP3 is required.
  - (3) All non-residential construction on parcels of less than one (1) acre.
  - (4) General clearing activities not related to construction. If such activities disturb one (1) acre or more, or are part of a larger common plan of development or sale disturbing one (1) acre or more, an Ohio EPA Construction Site General Permit and a full SWP3 is required.
- (c) Activities disturbing 1/10th (one tenth) or less of an acre are not required to submit an SWP3 or an Abbreviated SWP3, unless required by the City Engineer. These activities must comply with all other provisions of this regulation.

**1052.06 APPLICATION PROCEDURES**

- (a) Pre-Application Meeting. The owner is encouraged to schedule a meeting with the City Engineer or his or her designated representative to:
- (1) Discuss the proposed project;
  - (2) Review the requirements of this Chapter;
  - (3) Identify unique aspects of the project that must be addressed during the review process;
  - (4) Establish a preliminary review and approval schedule.
  - (5) It is encouraged that this meeting occurs with the Planning Commission pre-application meeting as listed in Section 1244.06.
- (b) Stormwater Pollution Prevention Plan (SWP3). The owner shall submit two sets of an SWP3 and the applicable fees as set forth in Section 1052.11 to the City Planning Office in conjunction with the submittal of the final plat (see Section 1244.10 for final plat submission requirements). This Plan shall meet the requirements of Section 1052.08 and Section 1052.09, and show the property boundaries (proposed if necessary), setbacks, dedicated open space, public roads, water resources, stormwater control facilities, and blocks in sufficient detail and engineering analysis to allow the City Engineer to determine if the site is laid out in a manner that meets the intent of this Chapter and if the proposed stormwater management practices are capable of controlling runoff from the site in compliance with this Chapter. This plan shall be approved by the City Engineer prior to issuance of any building permits.
- (c) ABBREVIATED SWP3: The owner shall submit two (2) sets of the Abbreviated SWP3 and the applicable fees to the City of Avon as follows:



- (1) For single-family home construction: Before issuance of a building permit by the Chief Building Inspector.
  - (2) For other construction projects: Before issuance of a building permit by the Chief Building Inspector.
  - (3) For general clearing projects: Prior to issuance of a clearing permit by the Chief Building Inspector.
- (d) Review and Comment. The City Engineer shall review the plans submitted, and shall approve or return for revisions with comments and recommendations for revisions. A plan rejected because of deficiencies shall receive a narrative report stating specific problems and the procedures for filing a revised plan.
  - (e) Approval Necessary. Land-clearing and soil-disturbing activities shall not begin, and building permits shall not be issued without an approved SWP3 and deposits necessary as set forth in Section 1052.11 except as approved by the City Engineer.
  - (f) The developer, engineer and contractor, and other principal parties, shall meet with the City Engineer for a Pre-Construction Meeting no less than seven (7) days prior to soil disturbing activity at the site 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. Pre-Construction Meetings for Abbreviated SWP3s may be waived at the discretion of the City Engineer.
  - (g) Valid for Two Years. Approvals issued in accordance with this Chapter shall remain valid for two years from the date of approval.

**1052.07 COMPLIANCE WITH STATE AND FEDERAL REGULATIONS**

Approvals issued in accordance with this regulation do not relieve the owner 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. All submittals required to show proof of compliance with these state and federal regulations shall be submitted with SWP3s or Abbreviated SWP3s.

- (a) Ohio EPA NPDES Permits authorizing stormwater discharges associated with construction activity or the most current version thereof: Proof of compliance with these requirements shall be the owner's Notice of Intent (NOI) number from Ohio EPA, 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, 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 an application is made under 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, project approval, or a letter from the

site owner certifying that a qualified professional has surveyed the site and determined that Ohio EPA's Isolated Wetlands Permit is not applicable. Isolated wetlands shall be delineated by protocols accepted by the U.S. Army Corps of Engineers at the time an application is made under 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, public notice, or project approval, 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. This shall include one of the following:
- (1) A letter from the site owner certifying that a qualified professional has evaluated the site and determined that Section 404 of the Clean Water Act is not applicable, and provide documentation.
  - (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 an application is made under 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.

#### **1052.08        STORMWATER POLLUTION PREVENTION PLAN (SWP3)**

- (a) In order to control sediment pollution of water resources, the owner shall submit a SWP3 in accordance with the requirements of this regulation.
- (b) The SWP3 shall be certified by a Professional Engineer, a Registered Professional Surveyor, Certified Professional Erosion and Sediment Control, or a Registered Landscape Architect.
- (a) The SWP3 shall be amended whenever there is a change in design, construction, operation or maintenance, which has a significant effect on the potential for the discharge of pollutants to surface waters of the state or if the SWP3 proves to be ineffective in achieving the general objectives of controlling pollutants in stormwater discharges associated with construction activity.
- (b) The SWP3 shall incorporate measures as recommended by the most current edition of *Rainwater and Land Development* as published by the Ohio Environmental Protection Agency and shall include the following information:
- (1) 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 responsible for authorizing and amending the SWP3, preparation date, and the estimated start and completion dates for construction.
  - (2) A copy of the permit requirements (attaching a copy of the current Ohio EPA NPDES Construction General Permit is acceptable).
  - (3) 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 land disturbance.
- D. A calculation of the run-off coefficients for both the pre-construction and post-construction site conditions.
- E. 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.
- F. A description of prior land uses at the site.
- G. 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. The SWP3 shall clearly describe for each major construction activity (a) appropriate control measures and the general timing (or sequence) during the construction process that the measures will be implemented; and (b) which contractor is responsible for implementation (e.g., contractor A will clear land and install perimeter controls and contractor B will maintain perimeter controls until final stabilization).
- H. The location and name of the immediate receiving stream or surface water(s) and the first subsequent receiving water(s).
- I. For discharges to a municipal separate storm sewer system (MS4), the point of discharge to the MS4 and the location where the MS4 ultimately discharges to a water resource shall be indicated.
- J. List TMDLs applicable for the site and demonstrate that appropriate **BMPs** SCMs or stormwater control measures (SCMs) have been selected to address these TMDLs. *[Exhibit A identifier table for Northeast Ohio]*
- K. For subdivided developments 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 SWP3 for areas such as steep slopes, stream banks, drainage ways, and riparian zones.
- L. Location and description of any stormwater discharges associated with dedicated asphalt and dedicated concrete plants associated with the development area and the best management practices to address pollutants in these stormwater discharges.

- M. A log documenting grading and stabilization activities as well as amendments to the SWP3, which occur after construction activities commence.
- N. Each temporary and permanent stormwater practice shall be designated with an individual identification number.
- O. Site map showing:
  - i. Limits of soil-disturbing activity of the site, including off site spoil and borrow areas.
  - ii. Soils types should be depicted for all areas of the site, including locations of unstable or highly erodible soils.
  - iii. 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.
  - iv. 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 owner intends to fill or relocate for which the owner is seeking approval from the Army Corps of Engineers and/or Ohio EPA.
  - v. Existing and planned locations of buildings, roads, parking facilities, and utilities.
  - vi. 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.
  - vii. Sediment and stormwater management basins including their sediment settling volume and the maximum expected disturbed area that will be directed to the sediment pond during construction. The plan should include a summary of the following:
    - i. The required sediment storage and dewatering volumes
    - ii. The provided sediment storage and dewatering volumes
    - iii. The weir length or skimmer size, as applicable
    - iv. The weir length or skimmer size provided
  - viii. Data sheets for all sediment traps, sediment basins, and SCMs that identify contributing drainage area, disturbed area, water quality volume, sedimentation volume, dewatering volume, practice surface area, facility discharge and dewatering time, outlet type and dimensions, and any other relevant parameters for each practice.
  - ix. A separate plan and profile view of each individual sediment settling pond and its outlet structure. Detail drawings of the outlet structure shall indicate the following elevations:
    - i. Pond bottom
    - ii. Elevation required to store the required sediment storage volume
    - iii. For sediment basins, the elevation at which the skimmer is

- attached
  - iv. For sediment traps, the top and bottom of the stone outlet section
  - v. Elevation required to store the dewatering volume, exclusive of the sediment storage volume
  - vi. Elevation of the top of embankment
  - vii. Crest of the emergency spillway
- x. Where used as a sediment-settling pond during construction, the plan shall include a detail drawing of the temporary outlet configuration of the permanent stormwater basin with the following information specified:
  - i. Storage volume provided below the elevation at which the skimmer or other surface dewatering device is attached
  - ii. Elevation at which the skimmer or other surface dewatering device is attached
  - iii. Elevation at which the full dewatering zone is stored above the skimmer invert
  - iv. Any temporary modification to permanent outlet orifices or weirs required to ensure no discharge below the skimmer invert and only the skimmer controls the discharge up to the top of the dewatering volume
  - v. Calculations of the sediment storage volume, dewatering volume and skimmer drawdown time shall also be provided
- xi. The location of permanent SCMs to be used to control pollutants in stormwater after construction operations have been completed.
- xii. 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.
- xiii. Methods to minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, and sanitary waste to precipitation, stormwater runoff, and snow melt.
- xiv. Measures to prevent and respond to chemical spills and leaks. Owners may also reference the existence of other plans (i.e., Spill Prevention Control and Countermeasure (SPCC) plans, spill control programs, Safety Response Plans, etc.) provided that such plan addresses this requirement and a copy of such plan is maintained on site.
- xv. Methods to minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. No detergents may be used to wash vehicles. Wash waters shall be treated in a sediment basin or alternative control that provides equivalent treatment prior to discharge.
- xvi. The location of designated stoned construction entrances where the vehicles will ingress and egress the construction site.
- xvii. The location of any in-stream activities including stream crossings.

- (4) A soils engineering report. The City Engineer 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 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.

#### **1052.09 PERFORMANCE STANDARDS**

The SWP3 must contain a description of the controls appropriate for each construction operation and the owner 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 approved SWP3, and the sediment and erosion controls, and non-sediment pollution controls contained therein, shall be implemented upon the commencement of construction. Perimeter controls must be installed two working days prior to commencement of construction. The approved plan must be implemented until the site reaches final stabilization. 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.

It is the owner's responsibility to maintain current records of contractor(s) responsible for implementation the SWP3 and providing that information to the City Engineer. The SWP3 shall identify all subcontractors engaged in activities that could impact stormwater 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. The owner shall review the SWP3 with the primary contractor prior to commencement of construction activities and keep a SWP3 training log to demonstrate that this review had occurred.

The SWP3 Typical General Notes, SWP3 Typical Details, Abbreviated SWP3 shall be made available from the City Engineer, or an approved equal, shall be utilized in the preparation of the SWP3.

Erosion and sediment controls shall be designed, installed and maintained effectively to minimize the discharge of pollutants during the course of earth disturbing activities. 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, minimizing disturbance of steep slopes, 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. The amount of soil exposed during construction activity shall be minimized. A description of control practices designed to re-stabilize 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 surface water of the State and at final grade.	Within 2 days of reaching final grade.
Any other areas 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 surface water of the State and not at final grade.	Within 2 days of the most recent disturbance if that area will remain idle for more than 14 days.
For all construction activities, any disturbed area, including soil stockpiles that will be dormant for more than 14 days but less than one year, and not within 50 feet of a surface water of the State.	Within 7 days of the most recent disturbance within the area. For residential subdivisions, disturbed areas must be stabilized at least 7 days prior to transfer of ownership or operational responsibility.
Disturbed areas that will be idle over winter.	Prior to November 1 or the onset of winter weather, whichever occurs first.
<b>Note:</b> Where vegetative stabilization techniques may cause structural instability or are otherwise unobtainable, alternative stabilization techniques must be employed.	

- (2) Permanent stabilization of conveyance channels. Owners 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/](http://www.nrcs.usda.gov/technical/efotg/).

- (c) **RUNOFF CONTROL PRACTICES.** The SWP3 shall incorporate measures that control the volume and velocity of stormwater runoff within the site to prevent erosion. Peak flow rates and total stormwater volume shall be controlled to minimize erosion and outlets, downstream channel and streambank 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. Velocity dissipation 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 water course so that the natural physical and biological characteristics and functions are maintained and protected.
- (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 to minimize sediment discharges from the site. 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. The design, installation and maintenance of erosion and sediment controls shall address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site. 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.
- (e) 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 of Avon Engineer, is required for any one of the following conditions:
    - A. Concentrated stormwater runoff.
    - B. Runoff from drainage areas that exceeds the design capacity of silt fence (see Table 3), inlet protection, or other sediment barriers.
    - C. Runoff from common drainage locations with 10 or more acres of disturbed land.
    - D. Sediment settling ponds shall be provided in the form of a sediment trap or sediment basin as defined in the latest edition of *Rainwater and Land Development*. The maximum allowable contributing drainage area to a sediment trap shall be limited to less than 5 acres. Contributing drainage areas of 5 acres or more shall be treated with a sediment basin. An equivalent SCM may be utilized upon approval from the City Engineer.



- E. 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 1800 cubic feet 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 utilizing sediment basins (not traps), or permanent stormwater facilities that have been retrofit to serve as temporary sediment basins, outlet structures that withdraw water from the surface of the water shall be utilized, unless unfeasible (i.e., time periods with extended cold weather during winter months). As such, a skimmer discharge device consistent with *Rainwater and Land Development* shall be provided to dewater sediment basins. While the site is under construction, there shall be no discharge of runoff below the elevation required for the sediment storage zone and the discharge of stormwater within the dewatering zone shall only occur through the skimmer. If it has been determined that it is unfeasible to meet this requirement, documentation shall be provided in the SWPPP to support that determination.

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

1. The volume of the sediment storage zone shall be 1000ft<sup>3</sup> per disturbed acre within the watershed of the basin.
2. The volume of the sediment storage zone shall be the volume necessary to store the sediment as calculated with RUSLE or other generally accepted erosion prediction model.

- G. 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 commingled 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 sediment-settling pond must provide at least two units of length for each one unit of width (> 2:1 length: width ratio), however a length to width ratio of 4:1 is recommended. Sediment must be removed from the sediment-settling pond when the design capacity of the sediment storage zone has been completely filled by sediment accumulations. This limit is typically reached when sediment occupies one-half of the basin depth. When designing sediment settling ponds, the owner 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 and water resources, 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. Stormwater 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 stormwater 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 Based on Slope**

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) Alternative perimeter controls for sheet flow discharges may be considered by the City Engineer, but their use shall not exceed the limitations indicated in Table 3 above. Detail drawings and plan notes shall specify the diameter of filter socks, compost berms and other such alternative perimeter controls if used instead of silt fence.
- (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. The maximum contributing drainage area shall not exceed one (1) acre. Straw or hay bales are not acceptable forms of inlet protection.
- (6) 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 and protected from sediment-laden runoff, if feasible without posing a public safety hazard.

Based on site conditions, City Engineer may require additional best management practices to control off site tracking and dust. These additional SCM’s 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 vehicle and wheel-washing areas. Wash water from these areas must be directed to a designated sediment trap, a sediment-settling pond, or to a sump pump for dewatering in conformance with Section 1052.09(h) of this regulation. No surfactants or detergents may be used to wash vehicles.
- E. Owners shall take all necessary measures to comply with applicable regulations regarding fugitive dust emissions, including obtaining necessary permits for such

emissions. The City 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.

- (7) Surface Waters of the State Protection. Construction vehicles shall avoid water resources. If the owner is permitted to disturb areas within 50 feet of a water resource, the following conditions shall be addressed in the SWP3:
- A. All SCMs and stream crossings shall be designed as specified in the most recent edition of the *Rainwater and Land Development*.
  - B. Structural SCMs shall be designated and implemented on site to protect water resources 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 water resources.
  - 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.
  - G. Concentrated stormwater runoff from SCMs to natural wetlands shall be converted to diffuse flow through the use of level spreaders or other such appropriate measure before the runoff enters the wetlands. The flow should be released such that no erosion occurs downslope. Level spreaders may need to be placed in series to ensure non-erosive velocities.
  - H. Protected areas or critical areas, including wetlands and riparian areas shall be physically marked in the field prior to earth disturbing activities.
- (8) Modifying controls. If periodic inspections or other information indicates a control has been used inappropriately or incorrectly, the owner shall replace or modify the control for site conditions.
- (f) **NON-SEDIMENT POLLUTANT CONTROLS:** No solid or liquid waste, including building materials, shall be discharged in stormwater runoff. The owner must implement site SCMs to prevent toxic materials, hazardous materials, or other debris from entering water resources or the MS4. 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) Wastewater: Contaminated washout from stucco, paint, form release oils, curing compounds, and other construction materials shall not be discharged directly into a water resource or storm sewer.

- (3) Vehicle fluids: No pollutants from vehicle fuel, oils, or other vehicle fluids can be discharged to surface waters of the State.
- (4) Concrete Truck Wash Out: The washing of concrete material into a street, catch basin, or other public facility, or a natural resource or water of the State is prohibited. A designated area for concrete washout shall be made available.
- (5) Disposal of Other Wastewaters: The discharge of washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials to a street, catch basin, other public facility, natural resource or waters of the state is prohibited. The discharge of soaps or solvents used in vehicle and equipment washing is also prohibited. If generated, these wastewaters must be collected and disposed of properly.
- (6) 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 the largest container in the storage area and/or a spill kit shall be provided to clean up spills. The ESC Plan shall contain spill prevention and response procedures and these procedures shall be discussed at the pre-construction meeting.
- (7) Toxic or Hazardous Waste Disposal: Any toxic or hazardous waste shall be disposed of properly. The discharge of fuels, oils, and other pollutants used in vehicle and equipment operation and maintenance is prohibited.
- (8) Contaminated Soils Disposal and Runoff: Discovery of previously unknown contaminated soils onsite shall be self-reported to Ohio EPA and local authorities. 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. Where construction activities are to occur on sites with contamination from previous activities, operators shall be aware that concentrations of materials that meet other criteria (i.e. not considered a Hazardous Waste, meeting Voluntary Action Program (VAP standards)) may still result in stormwater discharges in excess of Ohio Water Quality Standards. Such discharges are not authorized by this code. Control measures which may be utilized to meet this requirement include, but are not limited to:
  - A. Use berms, trenches, pits or tanks to collect contaminated runoff and prevent discharge.
  - B. Pump runoff from contaminated soils to the sanitary sewer with the prior approval of the sanitary sewer system operator, or pump into a container for transport to an appropriate treatment or disposal facility; and
  - C. Cover areas of contamination with tarps, daily cover or other such methods to prevent stormwater from coming into contact with contaminated materials.

The SWP3 must include methods to minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, and sanitary waste to precipitation, stormwater runoff, and snow melt. The SWP3 shall include measures to prevent and respond to chemical spills and leaks. Owners may also reference the existence of other plans (i.e., Spill Prevention Control and Countermeasure (SPCC) plans, spill control programs, Safety Response

Plans, etc.) provided that such plan addresses this requirement and a copy of such plan is maintained on site.

- (g) **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.
- (h) **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.
- (i) **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.
  - (4) For sites that will not be completed by October 1, a Pre-Winter Stabilization Meeting shall be held by the landowner and the developer, engineer and contractor of the project and the City Engineer prior to October 1, in order to plan and approve winter erosion and sediment controls as defined in the most current edition of *Rainwater and Land Development Manual*.
- (j) The owner 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. Qualified inspection personnel are individuals with knowledge and experience in the installation and maintenance of sediment and erosion controls. Certified inspection reports shall be submitted to the City Engineer within seven (7) working days from the inspection and retained at the development site.

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 owner shall utilize an inspection form provided by the City of Avon or an alternate form acceptable to the City Engineer. The inspection form shall include:
- 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. SCMs that need to be maintained.
    - 3. SCMs that failed to operate as designed or proved inadequate for a particular location.
    - 4. Where additional SCMs 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 owner 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.
- (k) **MAINTENANCE.** The SWP3 shall be designed to minimize maintenance requirements. All SCMs 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 owner 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 Engineer.

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

- (1) When SCMs require repair or maintenance. If an internal inspection reveals that a SCM 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 SCMs fail to provide their intended function. If an internal inspection reveals that a SCM 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 SCMs depicted on the SWP3 are not installed. If an internal inspection reveals that a SCM 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.
- (1) FINAL STABILIZATION. Final stabilization shall be determined by the City Engineer. Once a definable area has achieved final stabilization, the owner may note this on the SWP3 and no further inspection requirement applies to that portion of the site. Final stabilization also requires the installation of permanent (post-construction) stormwater control measures (SCMs). Obligations under this ordinance shall not be completed until installation of post-construction SCMs are verified.

#### **1052.10 ABBREVIATED SWP3.**

- (a) In order to control sediment pollution of water resources, the owner 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 Professional Surveyor, Certified Professional Erosion and Sediment Control, or a Registered Landscape Architect.
- (a) The Abbreviated SWP3 shall include a minimum of the following SCMs. The City may require other SCMs 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 *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 indicated on the plan. Use for other waste and wastewater is prohibited.
  - (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 surface water of the State and not at final grade.	Within 2 days of the most recent disturbance if that area will remain idle for more than 14 days
For all construction activities, any disturbed area, including soil stockpiles, that will be dormant for more than 14 days but less than one year, and not within 50 feet of a surface water of the State.	Within 7 days of the most recent disturbance within the area
Disturbed areas that will be idle over winter	Prior to November 1
<b>Note:</b> 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, including rear yard inlets. Straw or hay bales are not acceptable forms of inlet protection.
- (6) Silt fence: Silt fence and other perimeter controls approved by the City Engineer shall be used to protect adjacent properties and water resources from sediment discharged via sheet (diffused) flow. Silt fence shall be placed along level contours and the permissible drainage area is limited to those indicated in Table 3 in **1052.09** of these regulations.
- (7) Temporary sediment traps: Where site conditions exceed the capabilities of silt fence, sediment traps shall be implemented as the primary means of sediment control along the perimeter of disturbed areas. Temporary diversions shall be used as necessary to route sediment-laden runoff to the trap.
- (8) Temporary mulching: Due to its' ease of implementation, relatively low-cost and high-effectiveness at abating erosion, periodic applications of straw mulch or equivalent materials, should be planned for on every site.
- (9) Rock check dams: Check dams shall be utilized in areas of concentrated flow during active construction periods so as to minimize scouring of the bottom of swales and ditches.
- (10) Erosion control matting: Matting shall be used in areas of concentrated flow (e.g. ditches, side and rear yard swales, etc.) where flow will exceed 3.5 fps for a 10 year, 24-hr. design storm. It shall only be utilized at the time of final stabilization.
- (11) 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 SCMs require repair or maintenance. If the internal inspection reveals that a SCM 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 SCMs fail to provide their intended function. If the internal inspection reveals that a SCM 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 SCMs depicted on the Abbreviated SWP3 are not installed. If the internal inspection reveals that a SCM 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.

(12) Final Stabilization: Final stabilization shall be determined by the City Engineer.

(b) The City of Avon Engineer may require the following items be included on the site plan for each Abbreviated SWP3:

- (1) Construction & SWP3 SCM implementation schedule.
- (2) Limits of soil-disturbing activity of the site, including off site spoil and borrow areas.
- (3) Existing and proposed contours at 1-ft intervals.
- (4) Location of all SWP3 SCMs.
- (5) Footprint of building and site improvements.
- (6) Areas to be marked off and left undisturbed.
- (7) Location of topsoil and/or basement excavation stockpiles.
- (8) Areas requiring temporary and/or permanent stabilization.

#### **1052.11 FEES & DEPOSITS**

(a) The SWP3 and Abbreviated SWP3 review, filing, and inspection fee is part of a complete submittal and is required to be submitted to the City of Avon before the review process begins. The schedule of fees shall be posted at the applicable City offices. Until all applicable fees, charges and expenses have been paid in full, no action shall be taken on any application or appeal. See Section 210.01(f) for all fees and deposits pertaining to plan review, including engineering fees incurred during plan review. All required fees and deposits shall be met upon final review and approval of all building plans and SWPPPs, and prior to the commencing of earth-disturbing activities.

(b) Stabilization deposit.

(1) A stabilization deposit set forth in Section 1052.11(a) will be due at the following time:

- A. Residential home construction. Upon the initial building permit.

- B. Residential subdivisions or commercial/industrial sites. Final plat acceptance.
- (2) The stabilization deposit is to ensure that final stabilization occurs on all residential, commercial, or industrial sites. If final stabilization does not occur, the City has the right to use this deposit to perform the needed work.
  - (3) If a SWPPP is required by this chapter, soil-disturbing activities shall not be permitted until all stabilization and inspection deposits have been deposited with the Planning Office. These fees/deposits shall be posted for the City to perform the obligations otherwise to be performed by the owner of the development area as stated in this chapter and to allow all work to be performed as needed in the event that the owner fails to comply with the provisions of this chapter. Stabilization deposits will be returned when the following three criteria are met:
    - A. After 80% of the lots of the project have been complete or 100% of the total project has been permanently stabilized or three years from the time of permanent stabilization have passed.
    - B. As applicable, an as-built inspection of all stormwater management practices is conducted by the owner and reviewed and approved by the City Engineer per Chapter 1050.12(b).
    - C. As applicable, an Inspection and Maintenance Agreement is accepted by the City Engineer per Chapter 1050.08(d)(10).
  - (4) Once these criteria are met, the owner shall be reimbursed all stabilization deposits that were not used for any part of the project. If all of these criteria are not met after three years of permanent stabilization of the site, the City may use the bond monies to fix any outstanding issues with all stormwater management structures on the site and the remainder of the bond shall be given to the private lot owner/homeowners association for the purpose of long-term maintenance of the project.
  - (5) For residential construction, the stabilization deposit will be refunded at the time of final certificate of occupancy.
- (c) Inspection Fee:
- (1) An inspection fee set forth in Section 1052.11(a) will be due at the following time:
    - A. Residential home construction. Upon the initial building permit.
    - B. Residential subdivisions or commercial/industrial sites. Final plat acceptance.
  - (2) The inspection fee listed here is to cover the costs for all stormwater/erosion control inspection occurring throughout the construction of the property.

**1052.12 ENFORCEMENT**

- (a) All development sites are subject to inspections by the Cities authorized agent(s) under the direction of the City Engineer to ensure compliance with the approved Site Development Plan or SWP3.

- (b) The written status report prepared by the City and approved by the City Engineer shall be distributed to the permittee, the contractor if applicable, and the professional engineer of record.
- (c) If it is found that the operations are being conducted in violation of this Chapter and is considered a major violation (per the City Engineer), a stop-work order may be issued by the City until the identified violations cease. See Section 1052.991, below.
- (d) Following the issuance of a stop work order, the City shall determine if and when the development may proceed. Any determination by the City pursuant to this Section is a final order for purposes of judicial review.
- (e) Any other violations shall be handled in the following manner:
  - (1) A letter from the office of the City Engineer to the violator.
  - (2) A secondary inspection performed of the site.
  - (3) If compliance has not been achieved, a second letter from the Law Director shall be submitted to the violator.
  - (4) A tertiary inspection will be performed of the site.
  - (5) If compliance has not been completed, then a summons and complaint will be issued to the violator.

**1052.13 VIOLATIONS**

No person shall violate, or knowingly cause or permit to be violated, any of the provisions of this Chapter or fail to comply with any of such provisions or with any lawful requirements of any public authority made pursuant to this Chapter. No person shall knowingly use or cause or permit the use of any lands in violation of this Chapter or in violation of any permit granted under this Chapter. The timeline for corrective actions that do not present an immediate threat to the public health, safety or welfare shall be as follows:

<b>Table 5: Timeline for Corrective Actions</b>	
<b>Nature of Violation</b>	<b>Number of Days from Inspection To Correct Functioning of Control Practice</b>
Silt fence	Within 3 days
Outlet control structure	Within 3 days
Temporary or permanent stabilization within 50 feet of drainage channels.	Within 3 days
Temporary or permanent stabilization for all other disturbed areas	Within 3 days
Stabilized construction entrance	Within 3 days
Pumping sediment-laden discharge into drainage channel	Immediately upon notice
Sediment settling pond	Within 10 days

Illicit discharge	Immediately upon notice
Any other control practice not addressed in this table	Within 3 days

**1052.99 PENALTY**

- (a) Any person, firm, entity, or corporation who violates or fails to comply with any provision of Sections 1052.05 or 1052.06 is guilty of a misdemeanor of the second degree and shall be subject to a maximum fine of seven hundred fifty dollars (\$750.00) and imprisonment for up to 90 days or both per violation. A separate offense shall be deemed committed each day during or on which a violation occurs or continues. The violator shall also pay for the cost of all repairs needed for the stormwater conveyance system to function at expected capacity.
- (b) Any person, firm, entity or corporation, including but not limited to the owner of the property, his agents and assigns, occupant, property manager, and any contractor or subcontractor who violates or fails to comply with any provision of Section 1052.07, 1052.09, and 1052.10, of this Chapter is guilty of a misdemeanor of the fourth degree and shall be subject to a maximum fine of two hundred fifty dollars (\$250.00) and imprisonment for up to 30 days, or both, for each offense. A separate offense shall be deemed committed each day during or on which a violation or noncompliance occurs or continues.
- (c) Any person, firm, entity or corporation; including but not limited to, the owner of the property, his agents and assigns, occupant, property manager, and any contractor or subcontractor who violates or fails to comply with any provision of this Chapter for which no specific penalty is listed, is guilty of a minor misdemeanor and shall be subject to a maximum fine of one hundred fifty dollars (\$150.00) for each offense. A separate offense shall be deemed committed each day during or on which a violation or noncompliance occurs or continues.
- (d) The City may recover all attorneys' fees, court costs, and other expenses associated with enforcement of this Chapter, including sampling and monitoring expenses.
- (e) The penalties and/or remedies listed in this Chapter are not exclusive of any other penalties and/or remedies available under any applicable Federal or State laws, and it is within the discretion of the City to seek cumulative penalties and/or remedies.
- (f) If a company or individual continually violates Sections of this Chapter (minimum of three separate occasions), in addition to all other penalties provided herein, the City has the right to revoke the contractor registration for an indefinite amount of time. At a time, no later than two years following the revoking of the contractor registration, may the company or individual appeal to the City for the renewal of the contractor registration. The City Engineer must approve of the renewal if it is revoked through this Chapter.
- (g) In addition to the enforcement processes and penalties provided in this Section, any condition caused or permitted to exist in violation of any of the provisions of this Chapter are considered a threat to public health, safety, and welfare, and are declared and deemed a nuisance, and may be summarily abated or restored at the violator's expense, in a civil action to abate, enjoin, or otherwise compel the cessation of such nuisance.

**1052.991 STOP-WORK ORDER.**

- (a) It shall be unlawful for any person to violate any provision, or fail to comply with any of the requirements of this Chapter. If a person has violated or continues to violate the provisions of this Chapter, the Stormwater Manager, through the Law Department, may petition for a preliminary or permanent injunction restraining the person from activities which would create further violations, or compelling the person to perform abatement or remediation of the violation.
- (b) Issuance of Stop-Work Order. Upon notice from the City and/or its authorized agent that work is being done contrary to this Chapter, such work shall immediately stop. Such notice shall be in writing and shall be given to the owner, and shall state the conditions under which such work may resume; provided, however, in instances where immediate action is deemed necessary for the public safety or the public interest, the City and/or its authorized agent may require that work be stopped upon verbal order pending issuance of the written order.
- (c) Subsequent to the issuance of a stop-work order, one or more of the following penalties may be imposed.
  - (1) If the earth-disturbing activity involves a subdivision, the applicable penalties (including fines) provided for in the subdivision Chapters of the City shall apply.
  - (2) The City Engineer and/or his or her authorized agent, on behalf of the City, may enter the site and make any modifications necessary to correct the situation(s) involving excessive erosion or sedimentation, and place the cost of such corrective actions on the tax duplicate of the developer/owner.
  - (3) The City Engineer and/or his or her authorized agent, on behalf of the City, may request the legal representative of the City to seek an injunction or other appropriate relief to abate excessive erosion or sedimentation and secure compliance with this Chapter. In granting such relief the court may order the construction of sediment control improvements and/or the implementation of other control measures and/or fines as identified in Section 1052.99 or any other relief the court determines.
  - (4) After the issuance of a stop work order provided for below, but before the imposition of any fines, the owner shall have the opportunity to request a meeting with the Law Director and the City Engineer to show because why work should not be stopped.
  - (5) Following the issuance of a stop-work order, the City shall determine if and when the development may proceed. Any determination by the City pursuant to this Section is a final order for purpose of judicial review.
- (d) The imposition of any other penalties provided herein shall not preclude the City instituting an appropriate action or proceeding in a Court of proper jurisdiction to prevent an unlawful development, or to restrain, correct, or abate a violation, or to require compliance with the provisions of this Chapter or other applicable laws, ordinances, rules, or Chapters, or the orders of the City.