

AN ORDINANCE ADDING A NEW CHAPTER 15 TO THE CLAYTON MUNICIPAL CODE TO ENACT REGULATIONS RELATING TO SEDIMENT AND EROSION CONTROL AND POST CONSTRUCTION STORM WATER CONTROL FOR DEVELOPMENT PROJECTS.

WHEREAS, Effective March 10, 2003, the Missouri Department of Natural Resources (MDNR) issued Phase II Storm Water Permit MO-R040005 to sixty-one (61) co-permittees in St. Louis County. The area served by the 61 co-permittees is collectively known as the St. Louis Metropolitan Small MS4. A Storm Water Management Plan (SWMP) for the St. Louis Metropolitan Small MS4 was developed by the St. Louis Municipalities Phase II Storm Water Planning Committee in the Fall of 2002 and submitted to MDNR as part of the application for the Phase II permit. As a co-permittee under the state permit the City is bound by the commitments contained in the Plan; and

WHEREAS, All co-permittees are required to address Sediment, Erosion and Post Construction Storm Water Control minimum control measures to comply with their permit by end of permit year five, March 9, 2008; and

WHEREAS, in conjunction with the Storm Water Management Plan and the City's Storm Water Operation and Management Program, the Board of Aldermen deems it necessary to protect the public health, safety, environment, and general welfare through the regulation and prevention of sediment and erosion on development sites, by providing for uniform requirement of sediment and erosion control measures as well as detailed plans for addressing storm water conveyance on sites following construction activity throughout the City on public or private property; and preventing the desecration of the beauty and quality of life of the City and harm to the public health, safety, environment, and general welfare, including the degradation of water and aquatic resources caused by sediment and erosion; and

WHEREAS, it is the desire and intent of the Board of Aldermen to enhance and protect the public health and safety by providing additional regulations concerning sediment, erosion and post construction storm water control.

NOW THEREFORE, BE IT ORDAINED BY THE BOARD OF ALDERMEN OF THE CITY OF CLAYTON, MISSOURI, AS FOLLOWS:

Section 1.

The Clayton, Missouri, Municipal Code is hereby amended by the enactment of one new Chapter, initially to be designated as Chapter 15, entitled Storm Water Control Requirements, said new Chapter to be substantially as shown on Exhibit A. attached hereto and incorporated herein by reference, subject to non-substantive editorial, syntactical and grammatical revisions as hereinafter provided.

Section 2.

The Chapter, Article, Division and/or Section assignments designated in this Ordinance may be revised and altered in the process of recodifying or servicing the City's Code of Ordinances upon supplementation of such code if, in the discretion of the editor, an alternative designation would be more reasonable. In adjusting such designations the editor may also change other designations and numerical assignment of code sections to accommodate such changes and make syntactical and grammatical editorial changes for the sake of clarity and precision.

Section 3.

It is hereby declared to be the intention of the Board of Aldermen that each and every part, section and subsection of this Ordinance shall be separate and severable from each and every other part, section and subsection hereof and that the Board of Aldermen intends to adopt each said part, section and subsection separately and independently of any other part, section and subsection. In the event that any part of this Ordinance shall be determined to be or to have been unlawful or unconstitutional, the remaining parts, sections and subsections shall be and remain in full force and effect.

Section 4.

This Ordinance shall be in full force and effect both from and after its passage by the Board of Aldermen.

Passed by the Board of Aldermen this 13th day of March, 2007.

Mayor

Attest:

City Clerk

EXHIBIT A

Chapter 15 STORM WATER CONTROL REQUIREMENTS

ARTICLE I - Grading, Erosion and Sediment Control

Section 15-1. Introduction/Purpose

This Chapter is being enacted to comply with requirements of the Metropolitan Sewer District (MSD) related to protection of property during construction. During construction, soil is highly vulnerable to erosion by wind and water. Eroded soil endangers water resources by reducing water quality and causing siltation. In addition, clearing and grading during construction causes the loss of vegetation necessary to prevent erosion and sustain the flow of water. Finally, construction activities strip the land and generate waste which causes a cleaning nuisance on streets, sidewalks and/or adjacent properties.

This Chapter is designed to provide an adequate safeguard to assure that construction activities do not cause damage to the environment and to protect properties adjacent to the site and throughout the City of Clayton.

Section 15-2. Definitions

For the purposes of this chapter, the following terms, phrases, words, and their derivations shall have the meanings given herein.

Best Management Practices or BMPs: Practices, procedures or a schedule of activities to reduce the amount of sediment and other pollutants in storm water discharges associated with construction and land disturbance activities. For a list of acceptable BMPs, the City of Clayton will utilize the St. Louis County Sediment and Erosion Control Manual.

Clearing: Any activity that removes the vegetative surface cover.

Construction or land Disturbance Site or Site: A parcel of land or a contiguous combination thereof, where grading work is performed as part of a single unified plan of development.

Drainage Way: Any channel that conveys surface runoff through a site.

Erosion: The wearing away of land surface through the action of wind or water.

Erosion Control: Any BMP that prevents or minimizes erosion.

Grading: Reshaping the ground surface through excavation and/or or fill of material, including the resulting conditions.

Land Disturbance activities: Any activity such as clearing, grading or any other action which results in removal of the natural site vegetation and destruction of the root zone or otherwise results in leaving the ground surface exposed to soil erosion through the action of wind or water.

Perimeter Control: A barrier that prevents sediment from leaving a site by filtering sediment-laden runoff or diverting it to a sediment trap or basin.

Phasing: Clearing a parcel of land in distinct phases, with the stabilization of each phase substantially completed before the clearing of the next.

Runoff coefficient: The fraction of total rainfall that will appear at the outfalls from a site.

Sediment Control: Any BMP that prevents eroded sediment from leaving a site.

Land Disturbance Permit: A permit issued by the municipality authorizing disturbance of the land at a specific site subject to conditions stated in the permit.

Stabilization: The use of BMPs that prevent exposed soil from eroding including improvements and structures for the control of erosion, runoff, and grading.

Start of Construction: The first land-disturbing activity associated with a development, including land preparation such as clearing, grading, and filling; installation of streets and walkways; excavation for basements, footings, piers, or foundations; erection of temporary forms; or installation of accessory buildings such as garages.

Storm Water Pollution Prevention Plan (SWPPP): A management plan, the purpose of which is to ensure the design, implementation, management and maintenance of BMPs in order to reduce the amount of sediment and other pollutants in storm water discharges associated with land disturbance activities, comply with the standards of the City of Clayton and ensure compliance with the terms and conditions of the applicable state permits, including adherence to the land disturbance program contained in the Missouri MS4 NPDES permit. This document can be in the form of either a formal plan document for the development or on one plan sheet attached to the site plan.

Water Course: A natural or artificial channel or body of water, including, but not limited to lakes, ponds, rivers, streams, ditches and other open conveyances that carry surface runoff water either continuously or intermittently.

ARTICLE II – GRADING, EROSION & SEMIDENT CONTROL

Section 15-3. Regulations for Sites Less than 1 Acre (43,560 sq. ft.)

Any entity or person who intends to disturb land of 5,000 square feet or more, but less than 43,560 square feet (one acre) must comply with site disturbance regulations of the City of Clayton. Said land disturbance mitigations must be included on the site plan submitted for review and must be in place prior to the commencement of construction. Additionally, land disturbance mitigation must be maintained in effective working order throughout the period of construction activities.

A. Application of Regulations

Generally, all new single family residences and most large additions will be the subject of this section.

Exceptions: The following land disturbance activities are not subject to the stipulations of this section:

- 1) Any emergency activity that is immediately necessary for the protection of life, property, or natural resources as determined by the City.
- 2) Existing nursery and agricultural operations conducted as a permitted main or accessory use.

3) Excavation or fill of less than fifty (50) cubic yards provided the Land Disturbance Activity is for the improvement of the property. Erosion and sediment control measures shall be provided when necessary, until grass or other vegetation is established or other approved means of ground cover means are used.

4) Land Disturbance Activities less than 5,000 square feet in area.

5) Removal of existing or dying grass or similar vegetation by disturbing not more than 10,000 square feet and re-seeding with new landscaping to include preparation of the seed bed; provided erosion and sediment control measures are provided until grass or other vegetation is established. Any cut or fill in conjunction with the preparation of the seedbed shall not exceed fifty (50) cubic yards.

6) Gardening or similar activities on property occupied by one-, two- or multi-family dwellings.

7) Land Disturbance Activities by any public utility for the installation, inspection, repair or replacement of any of its equipment or for its collection or distribution lines or piping systems; provided erosion and sediment control measures are provided until grass or other vegetation is established or other approved ground cover means are used. These exceptions do not apply to any Land Disturbance Activity associated with work that requires a building permit.

B. Site Plan Review

Every applicant for a project which will disturb 5,000 square feet or more must include the following information to be considered the SWPPP in their site plan for staff review. This information may also serve to fulfill requirements of the Post Construction provisions of this chapter. As part of the site plan review process, the following information must be provided on the site plan:

1. Existing and proposed contours;
2. Drainage facilities and methods for preserving the natural watercourse and patterns of drainage;
3. Identify limits of any areas to be disturbed by the proposed construction;
4. Amount of current impervious coverage and proposed impervious coverage;
5. Methods to mitigate additional impervious coverage and/or address drainage issues on the site;
6. Connection to storm sewer and/or method of controlling storm water run-off on-site;
7. Best Management practices to reduce sediments and other pollutants associated with construction activities;
8. Location of siltation fences, hay bales and other runoff prevention methods (as well as other items as required by the site plan review process) and plans for maintenance of these installations during construction;

9. Schedule of street and sidewalk cleaning to alleviate mud and dirt on public right-of-way;
10. Seal of a registered Professional Engineer in the State of Missouri.
11. Benchmark information from the site survey.
12. Other information as required by the Director of Planning & Development Services or the Director of Public Works.

The appropriate departments in the City of Clayton will review the site plan for compliance with the above requirements. The same or additional information will be required on the construction documents for Building Permit issuance.

C. Implementation During Construction

The installation of all required siltation fences and other required mitigation mechanisms must be in place prior to construction activity. Inspections will be conducted to assure compliance at the beginning of construction and at intervals throughout the project. These inspections will be completed by either staff of the Planning & Development Services Department or an outside contractor at the developer's expense, depending on the complexity of the mitigation required and/or workload of the department.

D. Costs for Plan Review and Implementation

Any costs incurred by the City to fulfill the intent of this section shall be paid by the applicant. The City shall secure the necessary professional services and provide an estimate of cost and scope to the applicant. This scope and cost will be approved by the applicant prior to the City contracting for these services. The estimated costs will be submitted by the applicant to the City prior to beginning any work on the project.

E. MDNR APPROVAL/PERMIT

The applicant may also be required to obtain a land disturbance permit issued by the Missouri Department of Natural Resources for any site of less than one acre that is part of a larger common plan that will ultimately disturb one acre or more, before beginning any site work authorized by a city permit.

Section 15-4. Regulations for Sites One (1) Acre or More

All construction projects of one acre or more will be subject to the regulations of this section.

A. Land Disturbance Permit

No person shall perform any land disturbance on a site one acre or greater without first obtaining a Land Disturbance Permit. The application for permit will be submitted to, reviewed by and approval by the Clayton Public Works Department, but will be issued by the Planning & Development Services Department in coordination with the Building Permit.

- 1) Each permit application shall bear the name(s) and address(es) of the owner and developer of the site, together with the principal contact and consulting firm.

2) Each Land Disturbance Permit application shall include a separate erosion control plan that includes BMPs necessary for the site conditions or include a formal Storm Water Pollution Prevention Plan, prepared for the specific site by or under the direction and sealed by a qualified professional engineer, licensed in the State of Missouri. Either submittal shall include a statement that any land clearing, construction, or development involving the movement of earth shall be in accordance with the Storm Water Pollution Prevention Plan.

3) The permit applicant will be required to file with the City of Clayton a performance bond, letter of credit, or other improvement security in an amount deemed sufficient by the City of Clayton to cover all costs of improvements, landscaping, maintenance of improvements for such period as specified by the City of Clayton.

- a) Performance and Maintenance Bond: a bond in the City's favor to ensure the restoration of the site shall be submitted prior to the issuance of the Land Disturbance Permit. The bond shall continue in full force and effect for a period of twelve (12) months following completion of the work. It is the responsibility of the Applicant to request the release of the bond in writing. The bond shall be issued by a surety with an "A" or better rating of insurance in Best's Key Rating Guide, Property/Casualty Edition, shall be subject to the approval of the City Attorney and shall contain the following endorsement:

"This bond may not be cancelled, or allowed to lapse, until sixty (60) days after receipt by the City, by certified mail, return receipt requested, of a written notice from the issuer of the bond of intent to cancel or not to renew."

- b) Certificate of Insurance: All ROW Users shall maintain, for the duration of any ROW Permit the following minimum liability insurance coverage: worker's compensation and employer liability insurance to meet all requirements of Missouri law and commercial general liability insurance with respect to the construction, operation, and maintenance of the Facilities, and the conduct of the ROW User's business in the City, in the amounts specified by the Director of Finance.

- i. \$2,000,000 for property damage resulting from any one accident;
- ii. \$2,000,000 for personal bodily injury or death resulting from any one accident;
- iii. \$2,000,000 for all other types of liability.

All insurance policies shall be with sureties qualified to do business in the State of Missouri, with an "A" or better rating of insurance by Best's Key Rating Guide, Property/Casualty Edition. All general liability insurance policies shall name "**The City, its officers, boards, board members, commissions, commissioners, agents, and employees as additional insureds**" and shall further provide that any cancellation or reduction in coverage shall not be effective unless thirty (30) days prior written notice thereof has been given to the City Clerk.

4) The permit applicant may also be required to obtain a land disturbance permit issued by the Missouri Department of Natural Resources for any site where one acre or more of land will be disturbed, before beginning any site work authorized by a city permit. This requirement also applies to sites of less than one acre that are part of a larger common plan that will ultimately disturb one acre or more.

B. Design Requirements

The following are guidelines that shall be followed in the design and/or must be depicted on the plans:

- 1) Grading, erosion control practices, sediment control practices, and water course crossings shall be adequate to prevent transportation of sediment from the site to the satisfaction of the Department of Public Works.
- 2) Cut and fill slopes shall be *no greater than 3:1*, except as approved by the Department of Public Works to meet other community or environmental objectives.
- 3) Clearing and grading of natural resources, such as forests and wetlands, shall not be permitted, except when in compliance with all other chapters of the City Code of Ordinances.
- 4) Clearing techniques that retain existing vegetation to the maximum extent practicable shall be used and the time period for disturbed areas to be without vegetative cover shall be minimized to the extent practical, to the satisfaction of the Department of Public Works.
- 5) Clearing, except that necessary to establish sediment control devices, shall not begin until all sediment control devices have been installed and have been stabilized.
- 6) Phasing shall be required on all sites deemed appropriate at plan review and as approved by the Department of Public Works.
- 7) Erosion control requirements shall include the following:
 - a) Soil stabilization shall be completed within five days of clearing or inactivity in construction.
 - b) If seeding or another vegetative erosion control method is used, it shall become established within two weeks or the Department of Public Works may require the site to be reseeded or a non-vegetative option employed.
 - c) Techniques shall be employed to ensure stabilization on steep slopes and in drainage ways.
 - d) Soil stockpiles must be stabilized or covered at the end of each workday.
 - e) The entire site must be stabilized, using a heavy mulch layer or another method that does not require germination to control erosion, at the close of the construction season.
 - f) Techniques shall be employed to prevent the blowing of dust or sediment from the site.
 - g) Techniques shall be employed to divert upland runoff past disturbed slopes.
- 8) Sediment control requirements shall include:
 - a) Settling basins, sediment traps, or tanks and perimeter controls.

- b) Settling basins shall be provided for each drainage area with 10 or more acres disturbed at one time and shall be sized to contain 0.5 inch of sediment from the drainage area and be able to contain a 2-year, 24-hour storm. If the provision of a basin of this size is impractical, other similarly effective BMPs, as evaluated and specified the SWPPP, shall be provided.
 - c) Settling basins shall be designed in a manner that allows adaptation to provide long-term storm water management, as required by the Department of Public Works.
 - d) Settling basins shall have stabilized spillways to minimize the potential for erosion of the spillway or basin embankment.
 - e) Protection for adjacent properties by the use of a vegetated buffer strip in combination with perimeter controls.
- 9) Water course protection requirements shall include:
- a) Encroachment into or crossings of active water courses/riparian areas and wetlands shall be avoided to the maximum extent practicable. Where applicable, all local, state and federal permits and approvals shall be provided to the Department of Public Works prior to the issuance of a site disturbance permit.
 - b) Stabilization of any water course channels before, during, and after any in-channel work.
 - c) If a defined water course is to be re-aligned or reconfigured, clearing and grubbing activities within 50 feet of the water course shall not begin until all materials and equipment necessary to protect the water course and complete the work are on site. Once started, work shall be completed as soon as possible. Areas within 50 feet of the water course shall be recontoured and revegetated, seeded or otherwise protected within five working days after grading has ceased.
 - d) All storm water conveyances shall be designed according to the criteria of the Metropolitan St. Louis Sewer District (MSD) and the necessary MSD permits obtained.
 - e) Stabilization adequate to prevent erosion shall be provided at the outlets of all pipes and paved channels.
- 10) Construction site access requirements shall include:
- a) A temporary access road provided at all sites including a wash-down area supporting all active sites,
 - b) Other measures required by Department of Public Works in order to ensure that sediment is not tracked onto public streets by construction vehicles or washed with wash effluent channeled directly into storm drains.
- 11) Control requirements for construction materials, construction wastes and other wastes generated on site shall include provisions, satisfactory to the Department of Public Works, for:

- a) Spill prevention and control facilities for materials such as paint, solvents, petroleum products, chemicals, toxic or hazardous substances, substances regulated under the Resource Conservation and Recovery Act (RCRA) or the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and any wastes generated from the use of such materials and substances, including their containers. Any containment systems employed to meet this requirement shall be constructed of materials compatible with the substances contained and shall be adequate to protect both surface and ground water.
- b) Collection and disposal of discarded building materials and other construction site wastes.
- c) Litter control.
- d) Control of concrete truck washouts.
- e) Assurance that on-site fueling facilities will adhere to applicable federal and state regulations concerning storage and dispensers.
- f) Provision of sufficient temporary toilet facilities to serve the number of workers on site.

C. Storm Water Pollution Prevention Plan (SWPPP)

- 1) The design requirements in Subsection B shall be taken into consideration when developing the Storm Water Pollution Prevention Plan. The SWPPP shall be integrated into the required site plan and will be reviewed as part of that submission. The site plan shall include the following:
 - a) Name, address and telephone number of the site owner and the name, address and telephone number of the individual who will be in overall responsible charge of construction/development activities at the site.
 - b) Site address or location description.
 - c) A site map showing the outlines of the total project area, the areas to be disturbed, existing land uses, locations and names of surface water bodies, locations of temporary and permanent BMPS and such other information as the Department of Public Works may require.
 - d) Existing contours of the site and adjoining strips of off-site property and proposed contours after completion of the proposed grading and development, based on United States Geological Survey datum, with established elevations at buildings, walks, drives, street and roads; and information on necessary clearing and grubbing, removal of existing structures, excavating, filling, spreading and compacting.
 - e) A natural resources map identifying soils, forest cover, and resources protected by the State of Missouri or St. Louis County.
 - f) An estimate of the runoff coefficient of the site prior to disturbance and the runoff coefficient after the construction addressed in the permit application is completed.

- g) Estimated grading quantity.
- h) Details of the site drainage pattern both before and after major grading activities.
- i) Construction access to site.
- j) Description of BMPs to be utilized to control erosion and sedimentation during the period of land disturbance.
- k) Description of BMPs to be utilized to prevent other potential pollutants such as construction wastes, toxic or hazardous substances, petroleum products, pesticides, herbicides, site litter, sanitary wastes and other pollutants from entering the natural drainage ways during the period of construction and land disturbance.
- l) Description of BMPs that will be installed during land disturbance to control pollutants in storm water discharges that will occur after land disturbance activity has been completed.
- m) Location of temporary off-street parking, and wash down area for related vehicles.
- n) Sources of off-site borrow material or spoil sites, and all information relative to haul routes, trucks and equipment.
- o) The anticipated sequence of construction and land disturbance activities, including installation of BMPs, removal of temporary BMPs, stripping and clearing; rough grading; construction of utilities, infrastructure, and buildings; and final grading and landscaping. Sequencing shall identify the expected date(s) on which clearing will begin, the estimated duration of exposure of cleared areas, areas of clearing, installation of temporary erosion and sediment control measures, and establishment of permanent vegetation.
- p) All erosion and sediment control measures necessary to meet the objectives of this chapter throughout all phases of construction and after completion of site development. Depending upon the complexity of the project, the drafting of intermediate plans may be required at the close of each season.
- q) Seeding mixtures and rates, types of sod, method of seedbed preparation, expected seeding dates, type and rate of lime and fertilizer application, and kind and quantity of mulching for both temporary and permanent vegetative control measures.
- r) Provisions for maintenance of control facilities.
- s) Plans for responding to any loss of contained sediment to include the immediate actions the permittee will take in case of a containment failure. This plan must include a plan for documentation of actions and reporting to the Department of Public Works during the project.
- t) Schedules and procedures for routine inspections of any structures provided to prevent pollution of storm water or to remove pollutants from storm water and of the site in general to ensure all BMPs are continually implemented and are effective.

2) Amendment of Plan: The permittee shall amend the Storm Water Pollution Prevention Plan whenever:

- a) Design, operation or maintenance of BMPs is changed;
 - b) Design of the construction project is changed that could significantly affect the quality of the storm water discharges;
 - c) Site operator's inspections indicate deficiencies in the SWPPP or any BMP;
 - d) Inspections by the City or by the Missouri Department of Natural Resources indicate deficiencies in the SWPPP or any BMP;
 - e) The SWPPP is determined to be ineffective in significantly minimizing or controlling erosion or excessive sediment deposits in streams or lakes;
 - f) The SWPPP is determined to be ineffective in preventing pollution of waterways from construction wastes, chemicals, fueling facilities, concrete truck washouts, toxic or hazardous materials, site litter or other substances or wastes likely to have an adverse impact on water quality;
 - g) Total settleable solids from a storm water outfall exceeds 0.5 ml/L/hr if the discharge is within the prescribed proximity of a "Valuable Resource Water" as defined by the MDNR;
 - h) Total settleable solids from a storm water outfall exceeds 2.5 ml/L/hr for any other outfall; or
 - i) The City of Clayton or the Missouri Department of Natural Resources determines violations of water Quality Standards may occur or have occurred.
- 3) Construction Responsibilities:
- a) Notify all contractors and other entities (including utility crews, city employees, or their agents) who will perform work at the site, of the existence of the SWPPP and what actions or precautions shall be taken while on site to minimize the potential for erosion and the potential for damaging any BMP;
 - b) Determine the need for and establish training programs to ensure that all site workers have been trained, as a minimum, in erosion control, material handling and storage, and housekeeping; and
 - c) Provide copies of the SWPPP to all parties who are responsible for installation, operation or maintenance of any BMP.
 - d) Maintain a current copy of the SWPPP on the site at all times.

C. Inspections During Construction

- 1) The Department of Public Works shall make inspections as needed and shall notify the permittee wherein the work fails to comply with the Grading, Erosion and Sediment Control Plan as approved. Plans for grading, stripping, excavating, and filling work bearing the stamp of approval of the Department of Public Works shall be maintained at the site during the progress of the work. Inspections may be made at

random times or upon permittee notification to the Department of Public Works at least two working days before the following:

- a) Start of construction
- b) Installation of sediment and erosion measures
- c) Completion of site clearing
- d) Completion of rough grading
- e) Completion of final grading
- f) Close of the construction season
- g) Completion of final landscaping

2) The permittee or his/her agent shall make regular inspections of the land disturbance site, including all erosion and sediment and other pollutant control measures, outfalls and off-site receiving waters in accordance with the inspection schedule outlined in the approved SWPPP. Inspections must be scheduled at least once every two weeks and no later than 72 hours after heavy rain. The purpose of such inspections will be to ensure proper installation, operation and maintenance of BMPs and to determine the overall effectiveness of the SWPPP and the need for additional control measures. All inspections shall be documented in written form on bi-weekly reports with copies submitted to the Department of Public Works at the time interval specified in the permit. The inspection reports are to include the following minimum information:

- a) Inspector's name and signature;
- b) Date of inspection;
- c) Observations relative to the effectiveness of the BMPs;
- d) Actions taken or necessary to correct deficiencies; and
- e) A listing of areas where land disturbance operations have permanently or temporarily stopped.

In addition, the permittee shall notify the site contractor(s) responsible for any deficiencies identified so that deficiencies can be corrected within seven calendar days of the weekly inspection report.

3) The Department of Public Works shall make inspections as deemed necessary to ensure proper installation, operation and maintenance of storm water BMPs and to determine the overall effectiveness of the SWPPP and the need for additional control measures.

D. Costs for Plan Review and Implementation

Any costs incurred by the City to fulfill the intent of this section shall be paid by the applicant. The City shall secure the necessary professional services and provide an estimate of cost and scope to the applicant. This scope and cost will be approved by the applicant prior to the City contracting for

these services. The estimated costs will be submitted by the applicant to the City prior to beginning any work on the project.

Section 15-5. Enforcement

A) Stop-Work Order; Revocation of Permit

In the event that any person holding a site disturbance permit violates the terms of the permit or implements site development in such a manner as to materially adversely affect the health, welfare, or safety of persons residing or working in the neighborhood or development site so as to be materially detrimental to the public welfare or injurious to property or improvements in the neighborhood, the Department of Planning and Development or Department of Public Works may suspend or revoke the building permit or land disturbance permit.

B) Violation and Penalties

No person shall construct, enlarge, alter, repair, or maintain any grading, excavation, or fill, or cause the same to be done, contrary to or in violation of any terms of this chapter. Any person violating any of the provisions of this chapter shall be deemed guilty of a misdemeanor and each day during which any violation of any of the provisions of this chapter is committed, continued, or permitted, shall constitute a separate offense. Upon conviction of any such violation, such person, partnership, or corporation shall be punished by a fine of not more than \$ 1,000 for each offense. In addition to any other penalty authorized by this section, any person, partnership, or corporation convicted of violating any of the provisions of this chapter shall be required to bear the expense of such restoration.

C) Project Closure requirements

Any site development escrows or bonds will not be fully released to the site operator or permittee until all of the following have been completed:

- 1) All temporary storm water control BMPs have been removed and the site has been fully stabilized.
- 2) All permanent storm water control BMPs have been completed
- 3) All final inspections/certifications have been completed by each of the government jurisdictions involved in authorizing the project.

ARTICLE III – POST CONSTRUCTION STORM WATER CONTROL

SECTION 15-10. Findings of Fact

Land development projects and associated increases in impervious cover alter the hydrologics of local watersheds and increase storm water runoff rates and volumes, flooding, stream channel erosion, and sediment transport and deposition. This storm water runoff contributes to increased quantities of water-borne pollutants, and storm water runoff, soil erosion and nonpoint source pollution can be controlled and minimized through the regulation of storm water runoff from development sites.

The Metropolitan St. Louis Sewer District (MSD) has established a set of water quality and quantity policies applicable to all development in the MSD service area, including the City of Clayton, to provide reasonable guidance for the regulation of storm water runoff for the purpose of protecting local water resources from degradation. It has been determined that the regulation of storm water runoff discharges from land development projects and other construction activities in order to control and minimize increases in storm water runoff rates and volumes, soil erosion, stream channel erosion, and nonpoint source pollution associated with storm water runoff is in the public interest and will prevent threats to public health and safety.

SECTION 15-11. Purpose

The purpose of this article is to protect and safeguard the general health, safety, and welfare of the public residing in watersheds within the City of Clayton, which is included in the MSD service area. In general the City of Clayton seeks to meet that purpose through the following objectives:

- (1) minimize increases in storm water runoff from any development in order to reduce flooding, siltation and erosion;
- (2) minimize increases in nonpoint source pollution caused by storm water runoff from development which would otherwise degrade local water quality
- (3) reduce storm water runoff rates and volumes, soil erosion and nonpoint source pollution, wherever possible, through storm water management controls and to ensure that these management controls are properly maintained and pose no threat to public safety or adjacent properties.

SECTION 15-12. Applicability

This section shall be applicable to all site plan applications where an MSD permit is required and a City permit is needed for the construction.

SECTION 15-13. Storm Water Design

The City of Clayton specifies the MSD Rules and Regulations and Engineering Design Requirements for Sanitary and Storm water Drainage Facilities as originally adopted February 2006, or latest version, as the applicable document for the proper implementation of the requirements of this article. In addition, the City of Clayton's Citywide Storm Water Study, dated August 2006, includes details of several BMP's for addressing specific needs in the City of Clayton such as rain gardens, bioswales, pervious concrete, pervious paver systems and storm water planters.

The MSD regulations include a list of acceptable storm water treatment practices, including the specific design criteria for each storm water practice. The manual may be updated and expanded from time to time, at the discretion of MSD, based on improvements in engineering, science, monitoring and local maintenance experience. Storm water treatment practices that are designed and constructed in accordance with these design and sizing criteria will be presumed to meet the minimum water quality performance standards.

Developers shall include storm water control measures on the site plan submitted for the Department of Planning of Development review of proposed construction in addition to submittal to MSD for appropriate permits.

ARTICLE IV. Permit Procedures and Requirements

SECTION 15-20. Permit Required

No land owner or land operator shall receive a building, demolition, grading or right of way permit governed by these regulations without first securing the necessary approvals of MSD prior to commencing the proposed activity. Verification of this approval will be a set of plans approved by MSD including a valid MSD project number.

ARTICLE V. Inspections of Storm Water Facilities

SECTION 15.30. Inspection of Storm Water Facilities

Inspection of facilities may be made on a reasonable basis, including but not limited to: routine inspections; random inspections; inspections based upon complaints or other notice of possible violations or inspection of drainage features. Inspections may include, but are not limited to: reviewing maintenance records; sampling discharges, surface water, groundwater, and material or water in drainage control facilities; and evaluating the condition of drainage control facilities and other storm water treatment practices.

SECTION 15-31. Right-of-Entry for Inspection

When any new drainage control facility is installed on private property, or when any new connection is made between private property and a public drainage control system, sanitary sewer or combined sewer, the property owner shall grant to the City of Clayton's Public Works and/or Planning Department and/or MSD the right to enter the property at reasonable times and in a reasonable manner for the purpose of inspection. This includes the right to enter a property when there is a reasonable basis to believe that a violation of this chapter is occurring or has occurred, and to enter when necessary for abatement of a public nuisance or correction of a violation of this chapter.

SECTION 15-32. Failure to Maintain Practices

If the property owner fails or refuses to meet the requirements of the maintenance covenant, the City of Clayton, after reasonable notice, may issue violation notices. In the event that the storm water management facility becomes a danger to public safety or public health, MSD and/or City of Clayton Public Works or Planning Department shall notify the party responsible for maintenance of the storm water management facility in writing. Upon receipt of that notice, the responsible person shall have 30 days to effect maintenance and repair of the facility in a manner acceptable to the City or legal action may be pursued.

SECTION 15-33. Storm Water Management Plan Components To The Site Plan

EXAMPLE (Use items below that are applicable to the site proposed)

- _____ Applicant information
- _____ Name, legal address, and telephone number
- _____ Common address and legal description of site
- _____ Vicinity map

Existing and proposed mapping and plans (recommended scale of 1" = 50'.) which illustrate at a minimum:

- _____ Site Plan sealed by a registered Professional Engineer in the State of Missouri
- _____ Existing and proposed topography (minimum of 2-foot contours recommended)

- _____ Perennial and intermittent streams
- _____ Mapping of predominant soils from soil surveys
- _____ Boundaries of existing predominant vegetation and proposed limits of clearing
- _____ Location and boundaries of resource protection areas such as wetlands, lakes, ponds, and other setbacks
- _____ Location of existing and proposed roads, buildings, and other structures
- _____ Existing and proposed utilities (e.g., water, sewer, gas, electric) and easements
- _____ Location of existing and proposed conveyance systems such as grass channels, swales, and storm drains
- _____ Flow paths
- _____ Location of floodplain/floodway limits and relationship of site to upstream and downstream properties and drainages (if applicable)
- _____ Location and dimensions of proposed channel modifications, such as bridge or culvert crossings (if applicable)
- _____ Location, size, and limits of disturbance of proposed structural storm water management practices

Hydrologic and hydraulic analysis including:

- _____ Existing condition analysis for runoff rates, volumes, and velocities presented showing methodologies used and supporting calculations
- _____ Proposed condition analysis for runoff rates, volumes, and velocities showing the methodologies used and supporting calculations
- _____ Analysis of potential downstream impact/effects of project, where necessary
- _____ Selection and rationale for structural or non-structural storm water facilities and best management practices
- _____ Sizing calculations for structural or non-structural storm water facilities and best management practices including, contributing drainage area, storage, and outlet configuration
- _____ Landscaping plans for structural or non-structural storm water facilities and best management practices and any site reforestation or revegetation
- _____ Erosion and sediment control plan.