

**STORM WATER POLLUTION PREVENTION
ORDINANCE**

OF THE

CITY OF BROOKHAVEN, MISSISSIPPI

Ordinance 2005 - 179

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ARTICLE I

GENERAL PROVISIONS

Section I. Findings of Fact

A. Land development projects and associated increases in impervious cover alter the hydrologic response of local watersheds and increase Storm Water runoff rates and volumes, flooding and sediment transport and deposition. This Storm Water runoff contributes to increased quantities of water-borne Pollutants.

B. During the construction process, soil is most vulnerable to erosion by wind and water. This eroded soil endangers water resources by reducing water quality and causing the siltation of aquatic habitat for fish and other desirable species. Eroded soil also necessitates repair of sewers and ditches, and the dredging of lakes. In addition, clearing and grading during construction causes the loss of native vegetation necessary for terrestrial and aquatic habitat. Storm Water runoff, soil erosion and Non-Point Source Pollution can be controlled and minimized through the regulation of Storm Water runoff from development sites. It is determined that the regulation of Storm Water runoff, soil erosion and Non-Point Source Pollution from land development projects and other Construction Activities is in the public interest and will prevent threats to public health and safety.

Section II. Purposes and Objectives

A. The purposes of this Ordinance are to protect and safeguard the general health, safety, and welfare of the public residing in or near watersheds, to protect property, prevent damage to the environment and promote the public welfare by guiding, regulating, and controlling the design, construction, use, and maintenance of any development or other activity which disturbs or breaks the topsoil or results in the movement of earth and water on land within the City of Brookhaven, Mississippi (the "City"); to establish methods for controlling the introduction of Pollutants into the municipal separate storm sewer system (MS4) in compliance with the National Pollutant Discharge Elimination System (NPDES) permit process; and to provide an overall healthy living environment for the citizens of the City.

B. This Ordinance seeks to meet these purposes through the following objectives:

1. To minimize increases in Storm Water runoff from any development in order to reduce flooding, siltation, increases in stream temperature, and streambank erosion and maintain the integrity of stream channels;
2. To minimize increases in Non-Point Source Pollution caused by Storm Water runoff from development which would otherwise degrade local water quality;
3. To minimize the total annual volume of surface water runoff which flows from any specific site during and following development to not exceed the pre-development hydrologic regime to the maximum extent practicable;
4. To reduce Storm Water runoff rates and volumes, soil erosion and Non-Point 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;
5. To regulate the contribution of Pollutants to the municipal separate storm sewer system (MS4) by Storm Water discharges by any user;
6. To prohibit illicit connections and discharges to the municipal separate storm sewer system; and

7. To establish legal authority to carry out all inspecting, surveillance and monitoring procedures necessary to ensure compliance with this Ordinance.

Section III. Coverage Area

This Ordinance covers all lands and areas located within the City; provided, however, that Articles III and V apply only to designated Construction Activities. Except as noted in Section IV below, Construction Activities, including all clearing, grading, excavating and other land disturbing activities equal to or greater than one (1) acre are designated. Construction Activities disturbing less than one (1) acre are designated if:

1. The project is part of a Larger Common Plan of Development or Sale with a cumulative planned disturbance of equal to or greater than one (1) acre (for example, individual or commercial lots that are part of a subdivision or a commercial development that initially impacts less than one (1) acre but will ultimately exceed the one (1) acre threshold) or where the impact is on less than one (1) acre when more than fifty percent of the post development ground surface will be impervious, or
2. The Building Inspector designates the Construction Activity based on the potential for contribution to a violation of a water quality standard or for significant contribution of Pollutants to waters of the City.

Section IV. Allowable Non-Storm Water Discharges

The following Non-Storm Water Discharges are authorized; provided, however, that except for flows from fire fighting activities, sources of non-Storm Water below that are combined with Storm Water discharges associated with a Construction Activity must be identified in the Erosion and Sediment Control Plan. The Erosion and Sediment Control Plan must identify and ensure the implementation of appropriate Pollution prevention measures for the non-Storm Water component(s) of the discharge. Therefore, subject to the provisions above, the following may be exempted from the requirements of this Ordinance:

1. Discharges from fire-fighting activities;
2. Fire hydrant flushing;
3. Water from non-commercial washing of vehicles where detergents are not used;
4. Water used for landscape irrigation, lawn watering or to control dust;
5. Potable water sources including water line flushing;
6. Routine external building wash down that does not use detergents;
7. Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used;
8. Uncontaminated air conditioning or compressor condensate;
9. Uncontaminated ground water, spring water or diverted stream flows;
10. Foundation or footing drains where flows are not contaminated with process materials such as solvents (not including active groundwater dewatering systems);
11. Any emergency activity, which is immediately necessary for the protection of life, property or natural resources;
12. Existing nursery and agricultural operations conducted as a permitted main or accessory use;
13. Repairs to any Storm Water treatment practice deemed necessary by the City;
14. Crawl space pumps;
15. Swimming pools (if dechlorinated-typically less than one PPM chlorine); and

16. Any other water source not containing Pollutants.

Section V. Compatibility With Other Permit And Ordinance Requirements

This Ordinance is not intended to interfere with, abrogate, or annul any other ordinance, rule or regulation, statute, or other provision of law. The requirements of this Ordinance should be considered minimum requirements, and where any provision of this Ordinance imposes restrictions different from those imposed by any other ordinance, rule or regulation, or other provision of law, whichever provisions are more restrictive or impose higher protective standards for human health or the environment shall be considered to take precedence.

ARTICLE II

DEFINITIONS

- A. Best Management Practices (BMPs)** describe schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of Pollutants to waters of the United States. BMPs also include treatment requirements, operating procedures, and practice to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.
- B. Building Inspector** means the Brookhaven Building Inspector of the City or his designee.
- C. CFR** means Code of Federal Regulations
- D. City** refers to the City of Brookhaven, Mississippi. Building Inspector or other designated representatives
- E. City Engineer** means the Engineer for the City.
- F. Clean Water Act "CWA"** refers to the Federal Water Pollution Control Act, 33 U.S.C. Section 1251 *et seq.*
- G. Clearing** is any activity which removes the vegetative surface cover.
- H. Commencement of Construction Activities** means the initial disturbance of soils associated with clearing, grading, or excavating activities or other construction-related activities.
- I. Construction Activity** includes construction projects (including, but not limited to, clearing, grubbing, grading, excavating, demolition and other land disturbing activities) equal to or greater than one (1) acre. Construction activities disturbing less than one (1) acre are designated if:
1. The project is part of a Larger Common Plan of Development or Sale with a cumulative planned disturbance of equal to or greater than one (1) acre (for example, individual or commercial lots that are part of a subdivision or a commercial development that initially impacts less than one (1) acre but will ultimately exceed the one (1) acre threshold) or where the impact is on less than one (1) acre when more than fifty percent of the post development ground surface will be impervious, or

2. The Building Inspector designates the Construction Activity based on the potential for contribution to a violation of a water quality standard or for significant contribution of Pollutants to waters of the City.

Construction Activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, and original purpose of the facility (for example, existing ditches, channels, or other similar Storm Water conveyances, as well as routine grading of existing dirt roads, asphalt overlays of existing roads, and other similar maintenance activities).

J. Control Measure as used in this Ordinance, refers to any BMP or other method used to prevent or reduce the discharge of Pollutants to waters of the United States, the State of Mississippi and the City.

K. Detention will be considered the temporary storage of water for the purpose of Storm Water management

L. Detention Basins. A surface water run-off storage facility that is normally dry but is designed to hold or detain Storm Water run-off during and immediately after a storm event. Examples of Detention basins include but are not limited to: natural swales with crosswise earthen beams, constructed or natural surface depressions, subsurface tanks, pipes, or reservoirs;

M. Developer means a person who undertakes land disturbing activities.

N. Discharge of Storm Water Associated with Construction Activity as used in this Ordinance, refers to a discharge of Pollutants in Storm Water runoff from areas where soil disturbing activities (e.g., clearing, grading, or excavation), construction materials or equipment storage or maintenance (e.g., fill piles, borrow area, concrete truck washout, fueling), or other industrial Storm Water directly related to the construction process (e.g., concrete) are located.

O. Drainage Way is any channel that conveys surface runoff throughout the site.

P. Erosion and Sediment Control Plan means a plan that includes site map(s), an identification of construction/contractor activities that could cause Pollutants in the Storm Water, and a description of measures or practices to control these Pollutants, indicating the specific measures and sequencing to be used in controlling sediment and erosion on a development site both before, during and after construction.

Q. Erosion Control are measures that prevent erosion.

R. -Facility or Activity means any NPDES "point source" or any other facility or activity (including land or appurtenances thereto) that is subject to regulation under the NPDES program.

S. Flooding Problem, for the purpose of this Ordinance, is defined as any one of the following:

1. A building or structure where the pre-development 100-year flood elevation is more than 1 foot below finished floor elevation and the post-development 100-year flood elevation is less than 1 foot below finished floor elevation;
2. A road, street, or Storm Water conveyance for which the pre-development 100-year flood elevation did not overtop the facility and the post-development 100-year flood elevation is above the elevation of the sub grade;

3. A road, street, or Storm Water conveyance for which the pre-development 100-year flood elevation did not overtop the facility and the post-development 100-year flood elevation does overtop the facility;
4. A building or structure where the pre-development 100-year flood elevation was below the finished floor elevation and the post-development 100-year flood elevation is above the finished floor elevation.
5. A building, structure, road, street, or driveway where the pre-development 100-year flood elevation was less than 2 feet deep and the post-development 100-year flood elevation is greater than 2 feet deep; or
6. A building, structure, road, street, or driveway where the pre-development 100-year flow velocity was less than 2 feet per second in the pre-developed condition and is greater than 2 feet per second in the post-developed condition.

T. Grading is excavation or fill of material, including the resulting conditions thereof.

U. Hazardous Materials are any materials, including any substance, waste, or combination thereof, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, a substantial present or potential hazard to human health, safety, property, or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

V. Illegal Discharges are any direct or indirect non-Storm Water discharge to the storm drain system, except as exempted in Article I, Section IV of this Ordinance.

W. Illicit Connections are defined as either:

1. Any drain or conveyance, whether on the surface or subsurface, which allows an Illegal Discharge to enter the storm drain system, including but not limited to any conveyances which allow any non-Storm Water discharge including sewage, process wastewater, and wash water to enter the storm drain system and any connections to the storm drain system from indoor drains and sinks, regardless of whether said drain or connection had been previously allowed, permitted, or approved by the City; or
2. Any drain or conveyance connected from a commercial or industrial land use to the storm drain system which has not been documented in plans, maps, or equivalent records and approved by the City.

X. Industrial Activity means any activities subject to NPDES Industrial Permits as defined in 40 CFR § 122.26(b)(14). See Appendix 1.

Y. -Larger Common Plan of Development or Sale means a contiguous area where multiple separate and distinct construction activities are occurring under one plan. The plan in a common plan of development or sale is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, sales pitch, advertisement, drawing, application, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating that construction activities may occur on a specific plot.

Z. Maintenance Agreement is a legally recorded document that acts as a property deed restriction, and which provides for long-term maintenance of Storm Water management practices.

AA. National Pollutant Discharge Elimination System (NPDES) Storm Water Discharge Permit means a permit issued by the EPA (or by a State under authority delegated pursuant to 33 USC § 1342(b))

that authorizes the discharge of Pollutants to waters of the United States, whether the permit is applicable on an individual, group, or general area-wide basis.

BB. Non-Point Source Pollution means pollution from any source other than from any discernable, confined, and discrete conveyances, and shall include, but not be limited to, Pollutants from agricultural, silvicultural, mining, construction, subsurface disposal, and urban runoff sources.

CC. Non-Storm Water Discharge is discharge to the storm drain system that is not composed entirely of Storm Water.

DD. Operator for the purpose of this Ordinance and in the context of Storm Water associated with Construction Activity, means any party associated with a construction project that meets either of the following two criteria:

1. The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or
2. The party has day-to-day operational control of those activities at a project which are necessary to ensure compliance with a Erosion and Sediment Control Plan 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 Erosion and Sediment Control Plan or comply with other permit conditions). This definition is provided to inform permittees of the City's interpretation of how the regulatory definitions of "Owner or Operator" and "facility or activity" are applied to discharges of Storm Water associated with Construction Activity.

EE. Owner or Operator means the Owner or Operator of any "facility or activity" subject to regulation under the NPDES program.

FF. Perimeter Control is a barrier that prevents sediment from leaving a site either by filtering sediment-laden runoff, or diverting it to a sediment trap or basin.

GG. Person means any individual, association, organization, partnership, firm, corporation or other entity recognized by law and acting as either the Owner or as the Owner's agent.

HH. Phasing is Clearing a parcel of land in distinct phases, with the stabilization of each phase before the clearing of the next.

II. Planning and Design Manual for the Control of Erosion, Sediment & Storm Water (also referred to as "Storm Water Design Manual"). The planning and design manual can be obtained by calling (601) 961-5171 or may be found electronically at Mississippi State's educational web site at <http://abe.msstate.edu/csd/p-dm/>. In addition, Mississippi's "Erosion and Sediment Control Plan Guidance Manual for Construction Activities" is available by calling (601) 961-5171 or on the MDEQ website at www.deq.state.ms.us

JJ. Pollutant is anything, which causes or contributes to pollution or which is defined as a pollutant by any state or federal law or regulation, including 40 CFR § 122.2. Pollutants include, but are not limited to: plants, varnishes, and solvents; oil and other automotive fluids; dredged spoil; non-hazardous liquid and solid waste and yard wastes; chemical wastes; refuse, rubbish, garbage, litter, or other discharged or abandoned objects, and accumulations, so that same may cause or contribute to pollution; floatables: pesticides, herbicides, and fertilizers; hazardous substances and wastes; sewage, biological materials, fecal coliform and pathogens; dissolved and particulate metal; animal wastes; wastes and residues that result from constructing a building or structure; wrecked or discarded equipment, rock, sand, sediment, silt, cellar dirt, and industrial or municipal waste and noxious or offensive matter of any kind.

- KK.** Premises are any building, lot, parcel of land, or portion of land whether improved or unimproved including adjacent sidewalks and parking strips.
- LL.** Retention will be considered the permanent storage of water.
- MM.** Sediment Control as used herein, refers to any measures that prevent eroded sediment from leaving the site.
- NN.** Site is parcel of land, or a contiguous combination thereof, where grading work is performed as a single unified operation.
- OO.** Site Development Permit is a permit issued by the City for which the construction or alteration of ground improvements and structures for the control of erosion, runoff and grading.
- PP.** Stabilization is the use of practices that prevent exposed soil from eroding.
- QQ.** Start of Construction is 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; and installation of accessory buildings such as garages.
- RR.** Storm Water Drainage System (also known as Storm Water Conveyance System) as referred to herein means Publicly-owned facilities by which Storm Water is collected and/or conveyed, including but not limited to any roads with drainage systems, municipal streets, gutters, curbs, inlets, piped storm drains, pumping facilities, Retention and Detention basins, natural and human-made or altered drainage channels, reservoirs, and other drainage structures.
- SS.** Storm Water means rainfall runoff, snowmelt runoff, and surface runoff.
- TT.** Storm Water Management Concept Plan is a plan submitted with preliminary plats or site plans that sets forth Storm Water management practices in a conceptual manner. This plan must be in accordance with Article V, Section 7 of this Ordinance.
- UU.** Storm Water Pollution Prevention Plan is a document which describes the BMPs and activities to be implemented by any person or business to identify sources of Pollution or contamination at a site and the actions to eliminate or reduce Pollutant discharges to Storm Water, Storm Water Drainage Systems, and/or any receiving waters to the maximum extent practicable.
- VV.** Storm Water Treatment Practices (STPs) means measures, either structural or nonstructural, that are determined to be the most effective, practical means of preventing or reducing point source or nonpoint source pollution inputs to Storm Water runoff and water bodies.
- WW.** Successful Completion of all permanent erosion and sediment controls means when land disturbing construction activities have been completed and disturbed areas have been stabilized with no significant erosion occurring.
- XX.** Wastewater is any water or other liquid, other than uncontaminated Storm Water, discharged from a facility.
- YY.** Watercourse means any body of water, including but not limited to lakes, ponds, rivers, streams, and bodies of water which are delineated by the City.

ZZ. **Waterway** means a channel that directs surface runoff to a watercourse, or to the public.

AAA. **Wet Pond** will be used to mean the Retention portion of the basin.

ARTICLE III

EROSION, SEDIMENT CONTROL AND GRADING

Section I. Applicability and Authorization

A. Covered Discharges. This Article III covers all discharges from Construction Activities designated in Article I, Section III. Additionally, the Building Inspector shall review every application for a building permit to determine the potential for contribution to a violation of a water quality standard or for significant contribution of Pollutants to waters of the City and shall designate the BMPs to be used during construction or may require an Erosion and Sediment Control Plan to be developed and submitted to the City.

B. Obtaining Authorization. Owners or operators are authorized to discharge Storm Water associated with Construction Activity under the terms and conditions of this Ordinance after development of the required Erosion and Sediment Control Plan and after obtaining a Site Development Permit.

C. On-going Construction Activities. Projects that are on-going as of the effective date of this Ordinance must submit the required Erosion and Sediment Control Plan and obtain the necessary permit.

D. Allowable Non-Storm Water Discharges. See ARTICLE I, Section IV.

E. Responsibility Compliance. The Owner(s) of the property and any Operator(s) associated with the Construction Activity on the property shall have joint and several responsibility for compliance with this Article.

F. This Article Does Not Authorize:

1. **Discharges of hazardous substances or oil.** This Article does not authorize the discharge of hazardous substances or oil resulting from an on-site spill.
2. **Post Construction Discharges.** This Article does not authorize Storm Water discharges that originate from the site after Construction Activities have been completed and the site has undergone final stabilization.
3. **Discharges Threatening Water Quality.** This Article does not authorize Storm Water discharges from construction sites that the Building Inspector determines will cause, or have reasonable potential to cause or contribute to, violations of water quality standards. However, the City may authorize coverage under this Article after appropriate controls and implementation procedures designed to bring the discharges into compliance with water quality standards have been included in the Erosion and Sediment Control Plan.
4. **Discharges to Impaired Receiving Waters.** The Erosion and Sediment Control Plan must specifically identify BMPs which ensure Storm Water will not cause or contribute to non-attainment of a water quality standard. In cases where the City becomes aware of potential impairment due to construction activities, the City may require the amendment of the Erosion and Sediment Control Plan in order to require additional BMPs sufficient to comply with requirements of this Article or any other requirements of the City.

Section II. Site Development Permit

Site Development Permit. No person shall commence any Construction Activity without having first obtained a Site Development Permit as provided for by Article VI.

Section III. Erosion and Sediment Control Plan

A. Erosion and Sediment Control Plan Development. An Erosion and Sediment Control Plan shall be developed and implemented by the Owner or Operator of a construction project. The Erosion and Sediment Control Plan must include a description of appropriate Control Measures (i.e., BMPs) that will be implemented as part of the Construction Activity to control Pollutants and other matter in Storm Water discharges.

1. The Erosion and Sediment Control Plan shall be submitted to the City with the application for the Site Development Permit and retained at the permitted site or locally available. A copy of the Erosion and Sediment Control Plan must be made available to the City inspectors for review at the time of any on-site inspection.
2. BMPs shall be in place upon commencement of construction.
3. The Building Inspector of the City may notify the Owner or Operator at any time that the Erosion and Sediment Control Plan does not meet the minimum requirements of this Article. After notification, the Owner or Operator shall amend the Erosion and Sediment Control Plan, implement the changes and certify in writing to the Building Inspector that the requested changes have been made. Unless otherwise approved by the Building Inspector, the requested changes shall be made immediately.
4. The Owner or Operator shall amend the Erosion and Sediment Control Plan and implement the changes before there is a change in construction, operation, or maintenance, which may potentially effect the discharge of Pollutants.
5. The Owner or Operator shall amend the Erosion and Sediment Control Plan and implement the changes if the Erosion and Sediment Control Plan proves to be ineffective in controlling Storm Water Pollutants; including, but not limited to, significant sediment leaving the site and non-functioning BMPs.

B. Erosion and Sediment Control Plan Details.

1. **Owner or Operator.** The Erosion and Sediment Control Plan shall identify the "Owner or Operator" as defined in Article II of this Ordinance. The Owner or Operator's name, complete mailing address and telephone number(s) shall be identified on the plan.
2. **Erosion and Sediment Control Plan.** The Erosion and Sediment Control Plan shall include:
 - a. A scaled site map showing total area of the site, original and proposed contours (if practicable), direction of flow of Storm Water runoff, adjacent receiving water bodies. North arrow, all erosion & sediment controls (vegetative and structural), and the increase in impervious area. *This map should be at a scale no smaller than 1" = 100'.*
 - b. A sequence of construction of the development site, including stripping and clearing, rough grading, construction of utilities, infrastructure, and buildings,

and final grading and landscaping. Sequencing shall identify the expected date on which clearing will begin, the estimated duration of exposure of cleared areas, and the sequence of clearing, installation of temporary erosion and sediment measures, and establishment of permanent vegetation.

- c. All erosion and sediment Control Measures necessary to meet the objectives of this Ordinance throughout all phases of construction and permanently after completion of development of the site. Depending upon the complexity of the project, the drafting of intermediate plans may be required at the close of each season.
- d. Seeding mixtures and rates, types of sod, method of seedbed preparation, expected seeding dates, type and rate of lime and fertilizer application, and the kind and quantity of mulching for both temporary and permanent vegetative Control Measures.
- e. Provisions for maintenance of control facilities and including easements.

3. **Modification to the Plan:**

- a. Major amendments of the Erosion and Sediment Control Plan shall be submitted to the City and shall be processed and approved, or disapproved, in the same manner as the original plans.
- b. Field modifications of a minor nature may be authorized by the City by written authorization to the permittee, which may be noted and initialed on the plan in the field.

4. **Erosion and Sediment Controls.** The Owner or Operator shall list and describe controls appropriate for the Construction Activities and the procedures for implementing such controls. Controls shall be designed to retain sediment onsite and should:

- a. Divert upslope water around disturbed areas;
- b. Limit exposure of disturbed areas to the shortest time possible;
- c. Disturb the smallest area possible;
- d. Preserve existing vegetation where possible, especially trees;
- e. Preserve vegetated buffer zones around any Watercourse, creek, drain, lake, pond or wetland;
- f. Slow rainfall runoff velocities to prevent erosive flows;
- g. Avoid disturbing sensitive areas such as:
 - Steep and/or unstable slopes,
 - Land upslope of surface waters,
 - Areas with erodible soils, or
 - Existing drainage channels;
- h. Transport runoff down steep slopes through lined channels or piping;
- i. Minimize the amount of cut and fill;
- j. Re-vegetate disturbed areas as soon as possible;
- k. Implement BMPs to mitigate adverse impacts from Storm Water runoff;
- l. Remove sediment from Storm Water before it leaves the site by allowing runoff to pond in controlled areas to drop out sediment; and
- m. Filter runoff by using natural vegetation, brush barriers, silt fences, hay bales, etc.

5. **Design Requirements.** Grading erosion control practices, sediment control practices, and waterway crossings shall meet the design criteria set by the City, and shall be adequate to prevent transportation of sediment from the site.

a. **Clearing and Grading.**

- i. Clearing and grading of natural resources, such as forest and wetlands, shall not be permitted, except when in compliance all other provisions of this Ordinance and all other applicable federal and state laws.
- ii. Clearing techniques that retain natural vegetation and retain natural drainage patterns, as described in Planning and Design Manual for the Control of Erosion, Sediment & Storm Water, shall be used to the satisfaction of the City.
- iii. Phasing shall be required on all sites disturbing greater than thirty (30) acres, with the size of each phase to be established during plan review and as approved by the City.
- iv. Clearing, except that necessary to establish sediment control devices, shall not begin until all sediment control devices have been installed and have been stabilized.
- v. Cut and fill slopes shall be no greater than 3:1, except as approved by the City to meet other community or environmental objectives.

b. **Erosion Control.**

- i. Soil must be stabilized within five (5) days of clearing or inactivity in construction.
- ii. If vegetative erosion control methods, such as seeding, have not become established within two (2) weeks, the City may require that the site be re-seeded, or that a non-vegetative option be employed.
- iii. On steep slopes or in drainage ways, special techniques that meet the design criteria outlined in the Planning and Design Manual for the Control of Erosion, Sediment & Storm Water shall be used to ensure stabilization.
- iv. Soil stockpiles must be stabilized or covered at the end of each workday.
- v. At the close of the construction season, the entire site must be stabilized, using heavy mulch layer, or another method that does not require germination to control erosion.
- vi. Techniques shall be employed to prevent the blowing of dust or sediment from the site.
- vii. Techniques that divert upland runoff past disturbed slopes shall be employed.

c. **Sediment Controls.**

- i. Sediment controls shall be provided in the form of settling basins or sediment traps or tanks, and perimeter controls.
- ii. Where possible, settling basins shall be designed in a manner that allows adaptation to provide long-term Storm Water management.
- iii. Adjacent properties shall be protected by the use of a vegetated buffer strip, in combination with perimeter controls.

d. **Waterways and Watercourses.**

- i. When a wet watercourse must be crossed regularly during construction, a temporary stream crossing shall be provided, and an approval obtained from the appropriate governmental agency.
- ii. When in-channel work is conducted, the channel shall be stabilized before, during and after work.
- iii. All on-site Storm Water conveyance channels shall be designed according to the criteria outlined in the Planning and Design Manual for the Control of Erosion, Sediment & Storm Water.
- iv. Stabilization adequate to prevent erosion must be provided at the outlets of all pipes and paved channels.

e. **Construction Site Access.**

- i. A temporary, approved construction access shall be provided to the site at all times.
- ii. Other measures may be required at the discretion of the City in order to ensure that sediment is not tracked onto public streets by construction vehicles, or washed into storm drains.

f. **Inspection.** The City, or its designated agent, shall make inspections as hereinafter required and shall either approve that portion of the work completed or shall notify the permittee wherein the work fails to comply with the Erosion and Sediment Control Plan as approved. Plans for grading, stripping, excavating, and filling work bearing the stamp of approval of the City shall be maintained at the site during the progress of the work. In order to obtain inspections, the permittee shall notify the City at least two (2) working days before each of the following occurs:

- i. Start of Construction;
- ii. Erosion and sediment Control Measures are in place and stabilized;
- iii. Site Clearing has been completed;
- iv. Rough Grading has been completed;
- v. Final Grading has been completed;
- vi. Close of the Construction Season; and
- vii. Final Landscaping.

The permittee or his/her agent shall make regular inspections of all Control Measures in accordance with the inspection schedule outlined on the approved Erosion and Sediment Control Plan(s). The purpose of such inspections will be to determine the overall effectiveness of the control plan, and the need for additional Control Measures. All inspections shall be documented in written form and submitted to the City at the time interval specified in the approved permit.

6. **Minimum Requirements.** At a minimum, the controls must be in accordance with the standards set forth in, or other recognized manual of design as appropriate for Mississippi. The erosion and sediment controls shall address the following minimum components:

- a. Vegetative practices shall be designed to preserve existing vegetation where possible and revegetate disturbed areas as soon as practicable after grading or construction. Such practices may include surface roughening, temporary seeding, permanent seeding, mulching, sod stabilization, vegetative buffer strips, and protection of trees.
- b. Structural practices shall divert flows from exposed soils, store flows or otherwise limit runoff from exposed areas. Such practices may include construction entrance/exit, straw bale dikes, silt fences, earthen dikes, brush barriers, drainage swales, check dams, subsurface drains, pipe slope drains, level spreaders, drain inlet protection, outlet protection, Detention/Retention basins, sediment traps, temporary sediment basins or equivalent sediment controls.
- c. Post construction Control Measures shall be installed to control Pollutants in Storm Water after construction is complete. These controls include, but are not limited to on-site infiltration of runoff, flow attenuation using open vegetated swales, exfiltration trenches and natural depressions, constructed wetlands and Retention/Detention structures. Where needed, velocity dissipation devices shall be placed at Detention or Retention pond outfalls and along the outfall channel to provide a non-erosive flow.

7. **Housekeeping Practices.** The Owner or Operator shall describe and list practices appropriate to prevent Pollutants from entering Storm Water from construction sites due to poor housekeeping. The Owner or Operator shall:

- a. Designate areas for equipment maintenance and repair and concrete chute wash off;
- b. Provide waste receptacles at convenient locations;
- c. Provide regular collection of waste;
- d. Provide protected storage areas for chemicals, paints, solvents, fertilizers, and other potentially hazardous materials;
- e. Provide adequately maintained sanitary facilities; and
- f. Provide secondary containment around on-site fuel tanks.

8. **Reporting Requirements.** Any releases into the environment of hazardous substances, oil, Pollutants or contaminants, which pose a threat to applicable water quality standards or causes a film, sheen or discoloration of waters, shall be reported to the:

- a. Mississippi Emergency Management Agency @ (601) 352-9100;
- b. National Response Center @ 1-800-424-8802; and
- c. City Building Inspector @ (601) 833-7766.

Section IV. Limitations And Requirements

A. **Non-Numeric Limitations.** Storm Water discharges shall be free from:

- 1. Debris, oil, scum, and other floating materials other than in trace amounts;
- 2. Eroded soils and other materials that will settle to form objectionable deposits in receiving waters;
- 3. Suspended solids, turbidity and color at levels inconsistent with the receiving waters; and
- 4. Chemicals in concentrations that would cause violation of the "water quality criteria" set by the State of Mississippi in the receiving waters.

B. Implementation Requirements. The Owner or Operator shall:

1. Implement the Erosion and Sediment Control Plan as required;
2. Install downslope and perimeter controls before any major land disturbing activities;
3. Install needed erosion controls even if they may be located in the way of subsequent activities, such as utility installation, grading or construction. It shall not be an acceptable defense that controls were not installed because subsequent activities would require their replacement or cause their destruction;
4. Implement controls as needed to prevent erosion and adverse impacts to receiving streams and shall install additional and/or alternative erosion and sediment controls when existing controls prove to be ineffective in preventing sediment from leaving the site;
5. Maintain all erosion and sediment controls. At a minimum, accumulated sediment shall be removed from controls when it reaches 1/3 to 1/2 the height of the control and properly disposed. Nonfunctioning controls shall be repaired, replaced or supplemented with functional controls within 24 hours of discovery or as soon as field conditions allow;
6. Implement the appropriate temporary or permanent vegetative practices within 5 days when a disturbed area will be left undisturbed for 30 days or more;
7. Minimize off-site vehicle tracking of sediments;
8. Remove any off-site accumulations of sediment at a frequency sufficient to minimize offsite impacts (e.g., fugitive sediment in street could be washed into storm sewers by the next rain and/or pose a safety hazard to users of public streets); and
9. Comply with applicable State or local waste disposal, sanitary sewer or septic system regulations.

C. Inspection Requirements. Inspection of all erosion controls and other Erosion and Sediment Control Plan requirements shall be performed during land disturbing activities. Inspections shall be performed:

1. At least once a week;
2. Within 24 hours of the end of a storm event of a half-inch or greater; and
3. As often as is necessary to ensure that appropriate erosion and sediment controls have been properly constructed and maintained and determine if additional or alternative Control Measures are required.

D. Documentation of Inspections. The documentation and inspections required herein shall be completed by the engineer representing the Owner, Operator or Developer during construction and submitted upon application for first approval of any plat or any other time requested by the City. Such inspections must be documented and certified according to Article VII herein. Documentation must include the day and time the inspection was performed, who performed the inspection, any deficiencies noted, and corrective action needed. Documentation of all inspections must be kept with the Erosion and Sediment Control Plan. Inspections must continue until such time that planned Construction Activities have been completed, land disturbing activities have ceased and disturbed areas have been stabilized with no significant erosion occurring.

E. Retention of Records. All records, reports and information resulting from activities required by this Ordinance shall be retained by the Owner or Operator, on-site if practicable, for a period of at least three years from the latter of the date construction was completed or the date of approval of the final plat.

F. Noncompliance Reporting.

1. **Anticipated Noncompliance.** The Owner or Operator shall give at least 10 days advance notice, if possible, before any anticipated or planned noncompliance with permit requirements. Giving notice of planned or anticipated noncompliance may not immunize the Owner or Operator from enforcement for that noncompliance.
2. **Unanticipated Noncompliance.** The Owner or Operator shall notify the City orally within 24 hours from the time he or she becomes aware of unanticipated noncompliance. A written report shall be provided to the City within 5 working days of the time he or she becomes aware of the circumstances. The report shall describe the cause, the exact dates and times, steps taken or planned to reduce, eliminate, or prevent reoccurrence and, if the noncompliance has not ceased, the anticipated time for correction.
3. **Termination of Permit Requirements.** Upon successful completion of all permanent erosion and sediment controls for a construction project a written notification of such shall be submitted to the City. All inspection forms required by the City must be attached. Coverage is not terminated until done so in writing by the City.

ARTICLE IV

PROHIBITION OF ILLICIT DISCHARGE AND CONNECTION TO THE MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)

Section I. Applicability

This Article shall apply to all water entering the storm drain system generated on any developed and/or undeveloped lands unless explicitly exempted by the City or this ordinance.

Section II. Discharge Prohibitions

A. Prohibition of Illegal Discharges. No person shall discharge or cause to be discharged into the Municipal Separate Sewer Storm System or watercourses any materials, including but not limited to Pollutants or waters containing any Pollutants that cause or contribute to a violation of applicable water quality standards, other than Storm Water. The commencement, conduct or continuance of any illegal discharge to the storm drain system is prohibited except as follows:

1. The discharges set forth in Article I, Section IV are exempt from the discharge prohibitions established by this Article:
2. Discharges specified in writing by the City as being necessary to protect public health and safety.
3. Dye testing in an allowable discharge requires a verbal notification to the City prior to the time of the test.
4. The prohibition shall not apply to any non-Storm Water discharge permitted under an NPDES permit, waiver, or waste discharge order issued to the discharger and administered under the authority of the Federal Environmental Protection Agency, provided that the discharger is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations, and provided that written approval has been granted for any discharge to the MS4.

B. Prohibition of Illicit Connections.

1. The construction, use, maintenance or continued existence of Illicit Connections to the Storm Drainage System is prohibited.

2. This prohibition expressly includes, without limitation, Illicit Connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.
3. A person is considered to be in violation of this Ordinance if the person connects a line conveying sewage to the MS4, or allows such a connection to continue.

Section III. Suspension of MS4 Access

A. Suspension Due to Illicit Discharges in Emergency Situations. The City may, without prior notice, suspend MS4 discharge access to any Person when such suspension is necessary to stop an actual or threatened discharge which presents or may present imminent and substantial danger to the environment, or to the health or welfare of persons, or to the MS4 or Waters of the United States. If the violator fails to comply with a suspension order issued in an emergency, the City may take such steps as deemed necessary to prevent or minimize damage to the MS4 or Waters of the United States, or to minimize danger to persons.

B. Suspension Due to the Detection of Illicit Discharge. Any person discharging to the MS4 in violation of this Article may have their MS4 access terminated if such termination would abate or reduce an Illicit Discharge. The City will notify a violator of the proposed termination of its MS4 access. The violator may petition the City for a reconsideration and hearing.

C. Unauthorized Reconnection. A Person is in violation for this Ordinance if the Person reinstates MS4 access to premises terminated pursuant to this Section, without the prior approval of the City.

Section IV. Industrial Or Construction Activity Discharges

Any person subject to an industrial or Construction Activity NPDES Storm Water discharge permit shall comply with all provisions of such permit. Proof of compliance with said permit may be required in a form acceptable to the City prior to the allowing of discharges to the MS4.

Section V. Monitoring Of Discharges

A. Applicability. This Section applies to all facilities that have Storm Water discharges associated with Industrial Activity, including Construction Activity.

B. Access to Facilities.

1. The City shall be permitted to enter and inspect facilities subject to regulation under this Ordinance as often as may be necessary to determine compliance with this Ordinance. If a discharger has security measures in force, which require proper identification and clearance before entry into its premises, the discharger shall make the necessary arrangements to allow access to representatives of the City.
2. Facility operators shall allow the City ready access to all parts of the premises for the purposes of inspection, sampling, examination and copying of records that must be kept under the conditions of an NPDES permit to discharge Storm Water, and the performance of any additional duties as defined by state and federal law.
3. The City shall have the right to set up on any permitted facility such devices as are necessary in the opinion of the City to conduct monitoring and/or sampling of the facility's Storm Water discharge.
4. The City has the right to require the discharger to install monitoring equipment as necessary. The facility's sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the discharger at its own expense. All

- devices used to measure Storm Water flow and quality shall be calibrated to ensure their accuracy.
5. Any temporary or permanent obstruction to safe and easy access to the facility to be inspected and/or sampled shall be promptly removed by the Owner or Operator at the written or oral request of the City and shall not be replaced. The costs of clearing such access shall be borne by the Owner or Operator.
 6. Unreasonable delays in allowing the City access to a permitted facility is a violation of this Ordinance. A person who is the Operator of a facility with a NPDES permit to discharge Storm Water associated with industrial activity commits an offense if the person denies the City reasonable access to the permitted facility for the purpose of conducting any activity authorized or required by this Ordinance.
 7. If the City has been refused access to any part of the premises from which Storm Water is discharged, and the City is able to demonstrate probable cause to believe that there may be a violation of this Ordinance, or that there is a need to inspect and/or sample as part of a routine inspection and sampling program designed to verify compliance with this Ordinance or any order issued hereunder, or to protect the overall public health, safety, and welfare of the community, then the City may seek issuance of a search warrant from any court of competent jurisdiction.

Section VI. Requirement to Prevent, Control, and Reduce Storm Water Pollutants by the Use of BMPs

The City will adopt requirements identifying BMPs for any activity, operation, or facility which may cause or contribute to pollution or contamination of Storm Water, the storm drain system, or waters of the U.S. The Owner or Operator of a commercial or industrial establishment shall provide, at their own expense, reasonable storm drain systems or Watercourse through the use of these structural and non-structural BMPs. Further, any person responsible for a property or premise, which is, or may be, the source of an illicit discharge, may be required to implement, at said person's expense, additional structural and non-structural BMPs to prevent the further discharge of Pollutants to the MS4. Compliance with all terms and conditions of a valid NPDES permit authorizing the discharge of Storm Water associated with industrial activity, to the extent practicable, shall be deemed compliance with the provisions of this Section. These BMPs shall be part of a Storm Water Pollution Prevention Plan (SWPP) as necessary for compliance with requirements of the NPDES permit.

Section VII. Watercourse Protection

Every person owning property through which a Watercourse passes, or such person's lessee, shall keep and maintain that part of the Watercourse within the property free of trash, debris, excessive vegetation, and other obstacles that would pollute, contaminate, or significantly retard the flow of water through the Watercourse. In addition, the owner or lessee shall maintain existing privately owned structures within or adjacent to a Watercourse, so that such structures will not become a hazard to the use, function, or physical integrity of the Watercourse.

Section VIII. Notification Of Spills

Notwithstanding other requirements of law, as soon as any person responsible for a facility or operation, or responsible for emergency response for a facility or operation has information of any known or suspected release of materials which are resulting or may result in Illegal Discharges or Pollutants discharging into Storm Water, any storm drain system, or waters of the U.S., said person shall take all necessary steps to ensure the discovery, containment, and cleanup of such release. In the event of such a release of Pollutants or hazardous materials said person shall immediately notify emergency response agencies and the City as

required under Article III, Section III, Subsection B(8). In the event of a release of non-hazardous materials, said person shall notify the agencies and the City in person or by phone or facsimile no later than the next business day. Notifications in person or by phone shall be confirmed by written notice addressed and mailed to the City within 3 business days of the phone notice. If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall also retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least three years.

ARTICLE V

REGULATION OF DISCHARGES INTO THE STORM WATER DRAINAGE SYSTEM, AND REGULATION OF STORM WATER RUN-OFF

Section I. Regulations Governing Rate of Storm Water Discharge

A. Regulations Governing Rate of Storm Water Discharge.

1. Rate of discharge shall be determined at each point where Storm Water leaves the property being developed in its pre-development state.
2. The Storm Water management system shall be designed so that the peak flow rate at any discharge point in the post-development state shall be less than or equal to the peak flow rate for the discharge point in the pre-developed state for the 2-year, 5-year, 10-year, 25-year, 50-year and 100-year, 24-hour storm events.
3. In addition to the peak flow requirement listed above, it shall be the responsibility of the Developer and his engineer to ensure that any change in timing of the discharge of the 100-year storm event does not create a Flooding Problem at any road, street, or Storm Water conveyance within 500 feet of any discharge exit point from the property which did not previously exist.

B. Regulations Regarding Velocity of Storm Water Discharge.

1. Velocity calculations for the purpose of compliance with this Article shall be calculated using the 2-year 24-hour storm event.
2. The velocity of flow at any of the Storm Water discharge points from the property for the post-developed state shall be less than or equal to the velocity of flow in the pre-developed state.

C. Regulations Regarding Regimes of Flow.

1. For the purpose of this Article, there will be considered to be two regimes of flow: sheet flow and concentrated flow.
2. Sheet flow shall be defined as any flow for which there is no defined channel in the ground at the exit point from the property. Any flow designated as either "sheet flow" or "shallow concentrated" flow for the purpose of SCS TR-55 flow calculations will fall into the category of sheet flow for the purpose of this Article.
3. Concentrated flow shall be defined as any flow for which there is a defined channel or culvert in the ground at the exit point from the property.

4. Flow must exit the property in the post-developed condition in the same regime as it exited the property in the pre-developed condition unless otherwise approved by the City.

D. Regulations Regarding Bypass of Upstream Flows.

1. If it is desired by the Developer of a piece of property to pass upstream flows through the property through means of a drainage way physically separated from the Storm Water management system of the development, this is an acceptable practice. Permission of the United States Army Corp of Engineers may be required.
2. The bypass drainage way must be designed to pass the 100-year 24-hour storm event without overtopping.
3. The bypass drainage way must exit the property in the post-developed condition at the same location as the drainage from the upstream basin exited the property in the pre-developed state.
4. The bypass drainage way must have approximately the same flow exiting the property as it did entering the property or must be included in the calculations for the overall Storm Water management system for the development.
5. In addition to the peak flow requirement listed above, it shall be the responsibility of the Developer and his engineer to ensure that any change in timing of the discharge of the 100-year storm event does not create a Flooding Problem at any road, street, or Storm Water conveyance within 500 feet of any discharge exit point from the property which did not previously exist.

E. Regulations Regarding Detention in the 100-year Floodplain.

1. In the event that Detention is to be provided within the 100-year floodplain, no storage will be considered below the flood elevation for the respective design storm event (e.g. 2-year, 5-year, 10-year, 25-year, 50-year, or 100-year / 24-hour storm event).
2. In the event that calculations determining the elevation of the appropriate design storm event are not conclusively presented, no storage will be considered below the 100-year flood elevation.

F. Regulations Regarding Retention in Detention Ponds.

1. A Retention/Detention basin provides for the permanent storage of water while utilizing the freeboard above the permanent pool elevation for Detention of Storm Water run-off.
2. "Wet Pond" refers to the Retention portion of the basin. No volume below the permanent pool elevation for the Wet Pond will be considered for storage in the Detention calculations.
- 3. The City reserves the right to require aeration in any Wet Pond at the expense of the Developer. In the event that the Developer questions such a requirement, he must provide calculations showing that the pond will not become a nuisance during any month of the year.

G. Existing Downstream Erosion and Flooding Problems.

1. To the maximum extent practicable, Developers shall provide assistance with downstream drainage problems by means of decreasing rates of flow to substantially less than their pre-development conditions or slowing flow velocities to substantially less than their pre-development state.
2. In the event that such an opportunity exists, the City will make the possibility known to

the Developer at the earliest opportunity.

Section II. Permit Required

A. Permit Required. No land owner or land operator shall receive any of the building, grading or other land development permits required for any Construction Activity without obtaining a Site Development Permit in accordance with Article VI of this Ordinance. No Site Development Permit will be issued without first meeting the requirements of this Section prior to commencing the Construction Activity.

Section III. Waivers to Storm Water Management Requirements

A. Waivers for Providing Storm Water Management.

Every Applicant shall provide for Storm Water management as required by this Ordinance, unless a written request is filed to waive this requirement. Requests to waive the Storm Water Management Plan requirements shall be submitted to the City for approval. The City may waive the requirement of the use of a Professional Engineer upon a determination that the use of another qualified storm water professional will be adequate for the particular project. No Storm Water Management Plan shall be required for construction in cases where the Construction Activity is part of a larger development or subdivision where a Storm Water Management Plan has been previously constructed and approved by the City. The Erosion and Sediment Control Plan for such Construction Activity and the Construction Activity must be in compliance with the approved Storm Water Management Plan.

2. The minimum requirements for Storm Water management may be waived in whole or in part upon written request of the Applicant, provided that at least one of the following conditions applies:
 - a. It can be demonstrated that the proposed development is not likely to impair attainment of the objectives of this Ordinance;
 - b. Alternative minimum requirements for on-site management of Storm Water discharges have been established in a Storm Water Management Plan that has been approved by the City;
 - c. Provisions are made to manage Storm Water by an off-site facility. The off-site facility is required to be in place, to be designed and adequately sized to provide a level of Storm Water control that is equal to or greater than that which would be afforded by on-site practices and there is a legally obligated entity responsible for long-term operation and maintenance of the Storm Water practice;
 - d. The City finds that meeting the minimum on-site management requirements are not feasible due to the natural or existing physical characteristics of a site; or
 - e. Non-structural practices will be used on the site that reduce:
 - i. the generation of Storm Water from the site;
 - ii. the size and cost of Storm Water storage; and
 - iii. the Pollutants generated at the site.

These non-structural practices are explained in detail in the current Storm Water Design Manual and the amount of credit available for using such practices shall be determined by the City.

3. In instances where one of the conditions above applies, the City may grant a waiver from strict compliance with these Storm Water management provisions, as long as acceptable mitigation measures are provided. However, to be eligible for a variance, the Applicant must demonstrate to the satisfaction of the City that the variance will not result in the following impacts to downstream waterways:

- a. Deterioration of existing culverts, bridges, dams, and other structures;
- b. Degradation of biological functions or habitat;
- c. Accelerated streambank or streambed erosion or siltation; or
- d. Increased threat of Flood Damage to public health, life, or property.

4. Furthermore, where compliance with minimum requirements for Storm Water management is waived, the Applicant will satisfy the minimum requirements by meeting one of the mitigation measures selected by the City. Mitigation measures may include, but are not limited to, the following:

- a. The purchase and donation of privately owned lands, or the grant of an easement to be dedicated for preservation and/or reforestation. These lands should be located adjacent to the stream corridor in order to provide permanent buffer areas to protect water quality and aquatic habitat.

- b. The creation of a Storm Water management facility or other drainage improvements on previously developed properties, public or private, that currently lack Storm Water management facilities designed and constructed in accordance with the purposes and standards of this Article.

- c. Monetary contributions (Fee-in-Lieu) to fund Storm Water management activities such as research and studies (e.g., regional wetland delineation studies, stream monitoring studies for water quality and macroinvertebrates, stream flow monitoring, threatened and endangered species studies, hydrologic studies, and monitoring of Storm Water management practices.

B. Fee-in-Lieu of Storm Water Management Practices. Where the City waives all or part of the minimum Storm Water management requirements, or where the waiver is based on the provision of adequate Storm Water facilities provided downstream of the proposed development, the Applicant shall be required to pay a fee in an amount as determined by the City. When an Applicant obtains a waiver of the required Storm Water management, the monetary contribution required shall be in accordance with a fee schedule (unless the Developer and the City agree on a greater alternate contribution) established by the City, and based on the cubic feet of storage required for Storm Water management of the development in question. All of the monetary contributions shall be credited to an appropriate capital improvements program project, and shall be made by the developer prior to the issuance of any building permit for the development.

C. Dedication of Land. In lieu of a monetary contribution, an Applicant may obtain a waiver of the required Storm Water management by entering into an agreement with the City for the granting of an easement or the dedication of land by the Applicant, to be used for the construction of an off-site Storm Water management facility. The agreement shall be entered into by the Applicant and the City prior to the recording of plats or, if no record plat is required, prior to the issuance of the building permit.

D. General Performance Criteria for Storm Water Management.

1. Unless determined by the City to be exempt or granted a waiver, the following performance criteria shall be addressed for Storm Water management at all sites:

a. All site designs shall establish Storm Water management practices to control the peak flow rates of Storm Water discharge associated with specified design storms and reduce the generation of Storm Water. These practices should seek to utilize pervious areas for Storm Water treatment and to infiltrate Storm Water runoff from driveways, sidewalks, rooftops, parking lots, and landscaped areas to the maximum extent practicable to provide treatment for both water quality and quantity.

b. All Storm Water runoff generated from new development shall not discharge untreated Storm Water directly into a jurisdictional wetland or local water body without adequate treatment. Where such discharges are proposed, the impact of the proposal on wetland functional values shall be assessed using a method acceptable to the City. In no case shall the impact on functional values be any less than allowed by the Army Corp of Engineers (ACE) or the MDEQ responsible for natural resources.

c. Annual groundwater recharge rates shall be maintained, by promoting infiltration through the use of structural and non-structural methods. At a minimum, annual recharge from the post development site shall mimic the annual recharge from pre-development site conditions.

d. For new development, structural Storm Water treatment practices shall be designed to reduce, to the maximum extent practicable, the average annual post development total suspended solids load (TSS). It is presumed that a STP complies with this performance standard if it is:

- i. sized to capture the prescribed water quality volume (WQ_v);
- ii. designed according to the specific performance criteria outlined in the local Storm Water Design Manual;
- iii. constructed properly; and
- iv. maintained regularly.

e. To protect stream channels from degradation, a specific channel protection criteria shall be provided as prescribed in the current Storm Water Design Manual.

f. Storm Water discharges to critical areas with sensitive resources (i.e., cold water fisheries, swimming areas, recharge areas, water supply reservoirs) may be subject to additional performance criteria, or may need to utilize or restrict certain Storm Water management practices.

g. Certain industrial sites are required to prepare and implement the Storm Water Pollution Prevention Plan, and shall file a notice of intent (NOI) under the provisions of the National Pollutant Discharge Elimination System (NPDES) general permit. The Storm Water Pollution Prevention Plan requirement applies to both existing and new industrial sites and must comply with Article III in this Ordinance.

h. Storm Water discharges from land uses or activities with higher potential Pollutant loadings, known as "hotspots", may require the use of specific structural STPs and pollution prevention practices.

i. Prior to design, Applicants are required to consult with the City to determine if they are subject to additional Storm Water design requirements.

j. The calculations for determining peak flows found in the this Article shall be used for sizing all Storm Water management practices.

Section IV. Basic Storm Water Management Design Criteria

A. Technical Standards.

1. **Storage Volumes.** Any Detention or Retention Basin shall provide storage sufficient to control the excess run-off from the 2-year, 5-year, 10-year, 25-year, 50-year, and 100-year / 24-hour storm events;
2. **Maximum Depth.** The maximum depth from the emergency spillway elevation to the lowest bottom of basin elevation shall be five (5) feet unless deeper depths are approved by the City;
3. **Sideslopes.** Sideslopes of the wet side of a Detention basin dam shall be 4:1 or flatter. Sideslopes of the dry side of a Detention or Retention basin dam shall be 3:1 or flatter. These criteria are maximum slopes and are not intended to be design guidelines. The developer's engineer shall use geotechnical expertise and sound engineering judgment in the determination of appropriate slopes.
4. **Principle Spillway (PSW).** The principle spillway shall be a reinforced concrete pipe of a class suitable for the depth of cover and other loads. The inlet control structure shall be a cast-in-place or precast concrete and designed to operate utilizing gravity and water head as the only driving forces. Inlet control structures utilizing pumps or other artificial operators are prohibited. The minimum diameter of the outfall pipe of the principle spillway is fifteen (15) inches. Seepage collars or a foundation trench, chimney drain, and strip drain shall be provided on all pipes through the dam embankment. The minimum size discharge pipe shall not control the discharge over the spillway. If the maximum allowable discharge is less than the capacity of the minimum size discharge pipe, then other means to limit discharge to the maximum allowable shall be provided
5. **Emergency Spillways (ESW).** Emergency spillways should be constructed in cut conditions whenever possible and should not be provided over the dam embankment. In the event that a ramp spillway (a spillway over the embankment) is required by site conditions, this spillway must be paved using either concrete or riprap from the beginning of the control section to at least five (5) feet past the downstream toe of dam. Emergency spillways must be open channels and may not be pipes. The control section of the ESW must be a section, which is level in profile, is set at the ESW elevation, and is at least ten (10) feet long in profile. Vegetative cover must be established over all unpaved portions of the ESW. The ESW must be designed to pass the 50-year 24-hour storm event should the PSW get clogged.
6. **Downstream Channels.** Calculations must be provided showing the capacity of downstream channels to handle the rate and velocity of flow from the Detention or Retention basin. These calculations must also meet all the standard Storm Water design criteria of the City.

B. Appearance. Natural vegetation shall be maintained in and around any Detention or Retention areas where possible. No trees or deep-rooted shrubs shall be planted on any Detention or Retention dam.

C. Seed, Sod, and Mulch. The requirements for seeding, sodding, and mulching shall be in accordance with the Mississippi Department of Transportation Standard Specifications.

D. Fencing. Detention and Retention structures shall be enclosed by a six foot fence where the depth of the water could reach two (2) feet.

E. Retention/Detention Basins.

1. **Retention/Detention Criteria.** Retention/Detention basins shall conform to all of the criteria listed in Section IV of this Article.
2. **Minimum Depths.** The minimum depth of the permanent pool shall be four (4) feet.
3. **Facilities for Emptying.** For emergency purposes and periodic maintenance, facilities shall be provided or plans prepared to permit emptying and drainage. Pumps may be planned to be used for this purpose but an emergency plan must be prepared which

4. details the precise location for obtaining the pump and an estimated time for its arrival.
Sideslopes. Below water sideslopes shall be 4:1 or flatter. A ledge shall be located between two (2) and three (3) feet under the permanent pool elevation which slopes back toward shore at about 1% slope. This ledge shall be a minimum of four (4) feet wide. These criteria are maximum slopes and are not intended to be design guidelines. The developer's engineer shall use geotechnical expertise and sound engineering judgment in the determination of appropriate slopes.
5. **Freeboard.** There shall be a freeboard of at least twelve (12) inches from the permanent pool elevation to the top of dam and the PSW structure should be capable of passing the 100-year 24-hour storm event before overtopping the dam.
6. **Sediment Storage.** Sediment storage shall be provided in all Retention ponds such that sediment removal should be required no more than annually.

F. Freestanding Velocity Control Structures (Energy Dissipaters).

1. Where energy dissipaters are required to meet the velocity requirements contained within this Article, those structures shall be constructed in a permanent nature and shall be comprised of concrete, masonry, or stone.
2. Energy dissipaters are considered to be freestanding when they are more than 100 feet downstream from Detention or Retention dam.

G. Flow Regime Structures.

1. Where flow regime structures are required to meet the flow regime requirements contained within this Article, those structures shall be constructed in a permanent nature and shall be comprised of concrete, masonry, or stone.
2. Flow will be considered to have been returned from concentrated flow to sheet flow when the flow width has been increased to five (5) times the concentrated flow width (top of bank to top of bank) or 40 feet, whichever is greater.

Section V. Submittal Requirements

A. Rate of Discharge.

1. **Pre-Development State Drainage Map.** A drainage map shall be provided to the City showing (at a minimum) the following:
 - a. Contours of the land at 2-foot maximum intervals (in flat areas, hot spots and drainage areas, delineating the drainage basins, and showing the points where Storm Water discharge exits the property;
 - b. Property lines and easements with purposes noted. Name of all adjacent property owners and all property owners within 500 feet downstream;
 - c. Vicinity Map
 - d. Public rights-of-way adjacent to the property;
 - e. Existing drainage facilities and structures;
 - f. A graphical display of the hydraulic length of the different drainage basins, which was used for calculating the time of concentration and travel time for each basin;
 - g. Location and elevations of all defined floodplains for the site.
2. **Pre-Development State Calculations.** Calculations shall be provided which show the

pre-development rate of run-off at each of the exit points for the 2-year, 5-year, 10-year, 25-year, 50-year, and 100-year / 24-hour storm events. These calculations shall use the SCS TR-55 methodology or other methodology approved by the City;

3. **Post-Development State Calculations (without Detention).** Calculations shall be provided which show the post-development rate of run-off at each of the exit points for the 2-year, 5-year, 10-year, 25-year, 50-year, and 100-year/24-hour storm events. These calculations shall use the SCS TR-55 methodology or other methodology approved by the City. These calculations shall use the same methodology and assumptions which were used to calculate the existing (pre-development state) peak flow rates;
4. **Post-Development State Drainage Map.** A drainage map shall be provided to the City showing (at a minimum) the following:
 - a. The existing and proposed contours of the land at 1-foot maximum intervals showing the effect of the proposed development on the delineation of the drainage basins and on the points where Storm Water discharge exits the property;
 - b. A table that gives the following information for each exit point:
 - i. Existing and proposed acreage draining to that point;
 - ii. Existing and proposed time of concentrations;
 - iii. Existing and proposed curve numbers;
 - iv. Existing and proposed peak flow rates for the 2, 5, 10, 25, 50 & 100-year / 24-hour storm events. (without Detention)
 - c. Proposed type of street drainage (e.g. roadside ditch, curb, or curb & gutter);
 - d. Proposed storm sewers and open drainage ways;
 - e. Location of proposed Detention Basins numbered to correspond with details;
 - f. Proposed peak flow rates and velocities for design flows at all exit points for the property including bypass channels;
 - g. Location and elevations of all defined floodplains.
5. **Storm Water Detention Calculations.** In the event that Storm Water Detention is utilized to manage the Storm Water peak flow rate, calculations must be provided which show the following for each exit point:
 - a. Stage-Storage-Discharge curves for the Detention basins;
 - b. Inflow hydrographs for the 2, 5, 10, 25, 50, & 100-year, 24-hour storm events (these must use the same methodology and assumptions as the peak flow calculations listed above);
 - c. Outflow hydrographs for the 2, 5, 10, 25, 50 & 100-year, 24-hour storm events (same methodology as referenced above);
 - d. Emergency spillway elevations with section and profile view;
 - e. Inlet riser details showing elevations and principle spillway details;
 - f. Top of dam and overtop elevations;
 - g. Listing of all input assumptions (if computer software used);
 - g. The FEMA 100-year flood elevation at the location of the proposed Detention Basin and any impacts on the storage volume.
6. **Final Grading and Drainage Plan.** A plan shall be provided to the City showing the effect of the proposed development with Detention on the contours of the land, the

delineation of the Drainage Basins, and on the points where Storm Water discharges from the property. This plan must include all information required in Article V, Section V, Subsection A.4.b., and all of the following, as a minimum:

- a. Layout of all proposed improvements on the site;
- b. Existing and proposed contours with a 1 foot maximum interval;
- c. The banks and centerlines of streams and channels;
- d. The normal shoreline of lakes, ponds, Retention and Detention Basins;
- e. Storm, sanitary, and combined sewers with inverts and outfalls;
- f. Delineation of 100-year floodplain as established by the 100-year flood elevations and the surveyed contours of the property;
- g. Environmental features such as wetlands and designated natural areas;
- h. Proposed storm sewers including sizes, inverts, outfalls, slopes, design flows, and headwater depths;
- i. Location and invert elevation of proposed and existing sanitary sewers at all locations where they cross storm sewers;
- j. A table which gives the following information for the site:
 - i. Overall site acreage;
 - ii. Existing impervious surface percentage;
 - iii. Proposed impervious surface percentage;
- k. For each Retention/Detention basin, a table shall be shown giving the following information at a minimum:
 - i. Permanent pool elevation (Retention only);
 - ii. Permanent pool storage in acre-feet (Retention only);
 - iii. ESW elevation;
 - iv. Pool storage at ESW elevation in acre-feet;
 - v. Outflow rate at ESW elevation;
 - vi. Top of dam elevation;
 - vii. Pool Storage at top of dam elevation in acre-feet;
 - viii. Outflow rate at top of dam elevation;
 - ix. The FEMA 100-year floodplain elevation at the location of the Detention basin.

B. Routing of the 100-year Storm Event. Calculations shall be provided demonstrating that the 100-year storm event has been routed through the proposed drainage system utilizing the SCS TR-55 methodology or other methodology approved by the City. The calculations shall show the following, at a minimum:

1. The ability of the Detention Basin/ESW system to handle the 100-year storm event without overtopping.

C. Velocity of Discharge. The following shall be provided:

1. Calculations for all discharge exit points giving the velocities of flow shall take into account changes in flow rates, cross-section, channel lining, flow regime, and proximity of Detention basin outfall.
2. Calculations showing the impact of energy dissipaters as required on the velocity of discharge flow.

D. Regimes of Flow.

1. Detailed information shall be provided for each discharge exit point from the proposed development property, which determines the pre-development flow regime. Survey

- information, photographic evidence, or engineer's certification are acceptable.
- 2. Should it be required to change a concentrated flow to a sheet flow, calculations will be required showing the minimum spread of flow.
- 3. Sketches will be required showing the layout of the overflow structure and how it meets the minimum flow spread.

E. Bypass Channels. The following shall be provided:

- 1. Calculations showing the ability of the bypass channel to handle the 100-year, 24-hour storm event without overtopping.
- 2. Calculations showing the ability of the bypass channel to handle the 2-year, 24-hour storm event without severe erosion problems.

F. Retention Basins. The following shall be provided:

- 1. Calculations demonstrating that the Retention basin can pass the 100-year, 24-hour storm event without overtopping the dam.
- 2. Calculations confirming that the Retention basin has sufficient storage to store one average year of sediment.

G. Required Details.

- 1. Cross-section of proposed Detention or Retention dams;
- 2. Detail of PSW inlet structure;
- 3. Profile of ESW;
- 4. Cross-section of ESW;
- 5. Detail of impact basin at PSW outlet (if required);
- 6. Cross-sections of all major proposed drainage channels showing lining;
- 7. Details of freestanding velocity control structures (if required);
- 8. Details of flow spread structures (if required);
- 9. Sections of Retention basin sideslopes; and
- 10. Detail of Retention basin emptying system.

Section VI. General Requirements

A. Engineer's Statement. All maps and calculations submitted under this Article shall be accompanied by a transmittal letter that contains the following statement:

"I hereby state that the reports, calculations, and plans for the Storm Water management design of [Name of Development] was prepared under my direct supervision and to the best of my knowledge and belief they are in accordance with the provisions of the City of Brookhaven's Storm Water Pollution Prevention Ordinance."

City) Registered Professional Engineer (or other storm water professional approved by the
State of Mississippi Registration NO. _____

B. Minimum Control Requirements. All Storm Water management practices will be designed so that the specific storm frequency storage volumes (e.g., recharge, water quality, channel protection, 10 year, 100 year) as identified in the current Storm Water Design Manual are met, unless the City grants the Applicant a waiver or the Applicant is exempt from such requirements. Additionally, if hydrologic or topographic conditions warrant greater control than that provided by the minimum control requirements, the City reserves the right to impose any and all additional requirements deemed necessary to control the volume, timing, and rate of runoff.

C. Site Design Feasibility.

1. Storm Water management practices for a site shall be chosen based on the physical conditions of the site. Among the factors that should be considered are:

- a. Topography;
- b. Maximum drainage area;
- c. Depth to water table;
- d. Soils;
- e. Slopes;
- f. Terrain;
- g. Head; and
- h. Proximity to environmentally sensitive features or ultra-urban areas.

2. Applicants shall consult the Storm Water Design Manual for guidance on the factors that determine site design feasibility when selecting a Storm Water management practices.

D. Conveyance Issues.

1. All Storm Water management practices shall be designed to convey Storm Water to allow for the maximum removal of Pollutants and reduction in flow velocities. This shall include, but not be limited to:

- a. Maximizing of flow paths from inflow points to outflow points;
- b. Protection of inlet and outfall structures;
- c. Elimination of erosive flow velocities; and
- d. Providing of underdrain systems, where applicable.

2. The Storm Water Design Manual provides detailed guidance on the requirements for conveyance for each of the approved Storm Water management practices.

E. Pretreatment Requirements. Every Storm Water treatment practice shall have an acceptable form of water quality pretreatment, in accordance with the pretreatment requirements found in the current Storm Water Design Manual. Certain Storm Water treatment practices, as specified in the Storm Water Design Manual, are prohibited even with pretreatment in the following circumstances:

1. Storm Water is generated from highly contaminated source areas known as "hotspots;"
2. Storm Water is carried in a conveyance system that also carries contaminated, non-Storm Water discharges;
3. Storm Water is being managed in a designated groundwater recharge area; and

4. Certain geologic conditions exist (e.g., karsts) that prohibit the proper pretreatment of Storm Water.

F. Treatment/Geometry Conditions. All Storm Water management practices shall be designed to capture and treat Storm Water runoff according to the specifications outlined in the Storm Water Design Manual. These specifications will designate the water quantity and quality treatment criteria that apply to an approved Storm Water management practice.

G. Landscaping Plans Required. All Storm Water management practices must have a landscaping plan detailing both the vegetation to be in the practice and how and who will manage and maintain this vegetation.

H. Maintenance Agreements. All Storm Water treatment practices shall have an enforceable operation and Maintenance Agreement to ensure the system functions as designed. This agreement will include any and all maintenance easements required to access and inspect the Storm Water treatment practices, and to perform routine maintenance as necessary to ensure proper functioning of the Storm Water treatment practice. In addition, a legally binding agreement specifying the parties responsible for the proper maintenance of all Storm Water treatment practices shall be secured prior to issuance of any permits for land disturbance activities.

I. Non-Structural Storm Water Practices. The use of non-structural Storm Water treatment practices is encouraged in order to minimize the reliance on structural practices. Credit in the form of reductions in the amount of Storm Water that must be managed can be earned through the use of non-structural practices that reduce the generation of Storm Water from the site. These non-structural practices are explained in detail in the current Storm Water Design Manual and Mississippi Gulf Coast Storm Water Management ToolBox Volume 1 and Applicants wishing to obtain credit for use of non-structural practices must ensure that these practices are documented and remain unaltered by subsequent property owners.

Section VII. Requirements for Storm Water Management Plan Approval

A. Storm Water Management Plan Required for All Developments. No application for development will be approved unless it includes a Storm Water Management Plan detailing in concept how runoff and associated water quality impacts resulting from the development will be controlled or managed. This plan must be prepared by an individual approved by the City and must indicate whether Storm Water will be managed on-site or off-site and, if on-site, the general location and type of practices. The Storm Water Management Plan(s) shall be referred for comment to all other interested agencies, and any comments must be addressed in a final Storm Water Management Plan. This final plan must be signed by a licensed professional engineer (PE), who will verify that the design of all Storm Water management practices meet the submittal requirements outlined in the Submittal Checklist found in the Storm Water Design Manual. No building, grading, or sediment control permit shall be issued until a satisfactory final Storm Water Management Plan, or a waiver thereof, shall have undergone a review and been approved by the City after determining that the plan or waiver is consistent with the requirements of this Ordinance.

B. Storm Water Management Concept Plan Requirements.

1. A Storm Water Management Concept plan shall be required with all permit applications and will include sufficient information (e.g., maps, hydrologic calculations, etc) to evaluate the environmental characteristics of the project site, the potential impacts of all proposed development of the site, both present and future, on the water resources, and the effectiveness and acceptability of the measures

proposed for managing Storm Water generated at the project site. The intent of this conceptual planning process is to determine the type of Storm Water management measures necessary for the proposed project, and ensure adequate planning for management of Storm Water runoff from future development. To accomplish this goal the following information shall be included in the Concept Plan:

a. A map (or maps) indicating the location of existing and proposed buildings, roads, parking areas, utilities, structural Storm Water management and sediment control facilities. The map(s) will also clearly show proposed land use with tabulation of the percentage of surface area to be adapted to various uses; drainage patterns; locations of utilities, roads and easements; the limits of clearing and grading; a written description of the site plan and justification of proposed changes in natural conditions may also be required.

b. Sufficient engineering analysis to show that the proposed Storm Water management measures are capable of controlling runoff from the site in compliance with this Ordinance and the specifications of the Storm Water Design Manual.

c. A written or graphic inventory of the natural resources at the site and surrounding area as it exists prior to the commencement of the project and a description of the watershed and its relation to the project site. This description should include a discussion of soil conditions, forest cover, topography, wetlands, and other native vegetative areas on the site. Particular attention should be paid to environmentally sensitive features that provide particular opportunities or constraints for development.

d. A written description of the required maintenance burden for any proposed Storm Water management facility.

e. The City may also require a Concept Plan to consider the maximum development potential of a site under existing zoning, regardless of whether the Applicant presently intends to develop the site to its maximum potential.

2. For development or redevelopment occurring on a previously developed site, an Applicant shall be required to include within the Storm Water Concept Plan measures for controlling existing Storm Water runoff discharges from the site in accordance with the standards of this Article to the maximum extent practicable.

C. Final Storm Water Management Plan Requirements. After review of the Storm Water Management Concept plan, and modifications to that plan as deemed necessary by the City, a final Storm Water Management Plan must be submitted for approval. The final Storm Water Management Plan, in addition to the information from the Concept Plan, shall include all of the information required in the Final Storm Water Management Plan checklist found in the Storm Water Design Manual. This includes:

1. **Contact Information.** The name, address, and telephone number of all persons having a legal interest in the property and the tax reference number and parcel number of the property or properties affected.

2. **Topographic Base Map.** A 1" = 200' topographic base map of the site which extends a minimum of _____ 500 feet beyond the limits of the proposed development and indicates existing surface water drainage including streams, ponds, culverts, ditches, and wetlands; current land use including all existing structures; locations of utilities, roads, and easements; and significant natural and manmade features not otherwise shown.

3. **Calculations.** Hydrologic and hydraulic design calculations for the pre-development and post-development conditions for the design storms specified in this Article. Such calculations shall include

(i) description of the design storm frequency, intensity and duration, (ii) time of concentration, (iii) Soil Curve Numbers or runoff coefficients, (iv) peak runoff rates and total runoff volumes for each watershed area, (v) infiltration rates, where applicable, (vi) culvert capacities, (vii) flow velocities, (viii) data on the increase in rate and volume of runoff for the design storms referenced in the Storm Water Design Manual, and (ix) documentation of sources for all computation methods and field test results.

4. **Soils Information.** If a Storm Water management control measure depends on the hydrologic properties of soils (e.g., infiltration basins), then a soils report shall be submitted. The soils report shall be based on on-site boring logs or soil pit profiles. The number and location of required soil borings or soil sits shall be determined based on what is needed to determine the suitability and distribution of soil types present at the location of the control measure.

5. **Maintenance and Repair Plan.** The design and planning of all Storm Water management facilities shall include detailed maintenance and repair procedures to ensure their continued function. These plans will identify the parts or components of a Storm Water management facility that need to be maintained and the equipment and skills or training necessary. Provisions for the periodic review and evaluation of the effectiveness of the maintenance program and the need for revisions or additional maintenance procedures shall be included in the plan.

- a. **Landscaping plan.** The Applicant must present a detailed plan for management of vegetation at the site after construction is finished, including who will be responsible for the maintenance of vegetation at the site and what practices will be employed to ensure that adequate vegetative cover is preserved. This plan must be prepared by a registered landscape architect or by the soil conservation district.
- b. **Maintenance Easements.** The Applicant must ensure access to all Storm Water treatment practices at the site for the purpose of inspection and repair by securing all the maintenance easements needed on a permanent basis. These easements will be recorded with the plat and will remain in effect even with transfer of title to the property.
- c. **Maintenance Agreement.** The Applicant must execute an easement and an Inspection and Maintenance Agreement binding on all subsequent owners of land served by an on-site Storm Water management measure in accordance with the specifications of this Article.
- d. **Erosion and Sediment Control Plans for Construction of Storm Water Management Measures.** The Applicant must prepare an erosion and sediment control plan for all construction activities related to implementing any on-site Storm Water management practices.
- e. **Other Environmental Permits.** The Applicant shall assure that all other applicable environmental permits have been acquired for the site prior to approval of the final Storm Water design plan.

D. Performance Bond/Security.

1. The City may, at its discretion, require the submittal of a performance security or bond prior to issuance of a permit in order to insure that the permit holder as required by the approved Storm Water Management Plan installs the Storm Water practices. The amount of the installation performance security shall be the total estimated construction cost of the Storm Water management practices approved under the permit, plus 25%. The performance security shall contain forfeiture provisions for failure to complete work specified in the Storm Water Management Plan.

2. The installation performance security shall be released in full only upon submission of "as built plans" and written certification by a registered professional engineer that the Storm Water practice has been installed in accordance with the approved plan and other applicable provisions of this Ordinance. The City will make a final inspection of the Storm Water practice to ensure that it is in compliance with the approved plan and the provisions of this Ordinance. Provisions for a partial pro-rata release of the performance security based on the completion of various development stages can be done at the discretion of the City.

Section VIII. Construction Inspection

A. Notice of Construction Commencement.

1. The Applicant must notify the City in advance before the commencement of construction. Regular inspections of the Storm Water management system construction shall be conducted by the staff of the City or certified by a professional engineer or their designee who has been approved by the City. All inspections shall be documented and written reports prepared that contain the following information:
 - a. The date and location of the inspection;
 - b. Whether construction is in compliance with the approved Storm Water Management Plan;
 - c. Variations from the approved construction specifications; and
 - d. Any violations that exist.
2. If any violations are found, the property owner shall be notified in writing of the nature of the violation and the required corrective actions. No added work shall proceed until any violations are corrected and all work previously completed has received approval by the City.

B. As Built Plans. All Applicants are required to submit actual "as built" plans for any Storm Water management practices located on-site after final construction is completed. The plan must show the final design specifications for all Storm Water management facilities and must be certified by a professional engineer. A final inspection by the City is required before the release of any performance securities can occur.

C. Landscaping and Stabilization Requirements.

1. Any area of land from which the natural vegetative cover has been either partially or wholly cleared or removed by development activities shall be revegetated within 10 days from the substantial completion of such clearing and construction. The following criteria shall apply to revegetation efforts:
 - a. Reseeding must be done with an annual or perennial cover crop accompanied by placement of straw mulch or its equivalent of sufficient coverage to control erosion until such time as the cover crop is established over ninety percent (90%) of the seeded area.
 - b. Replanting with native woody and herbaceous vegetation must be accompanied by placement of straw mulch or its equivalent of sufficient coverage to control erosion until the plantings are established and are capable of controlling erosion.

- c. Any area of revegetation must exhibit survival of a minimum of seventy-five percent (75%) of the cover crop throughout the year immediately following revegetation. Revegetation must be repeated in successive years until the minimum seventy-five percent (75%) survival for one (1) year is achieved.
2. In addition to the above requirements, a landscaping plan must be submitted with the final design describing the vegetative stabilization and management techniques to be used at a site after construction is completed. This plan will explain not only how the site will be stabilized after construction, but who will be responsible for the maintenance of vegetation at the site and what practices will be employed to ensure that adequate vegetative cover is preserved. This plan must be prepared by a registered landscape architect or by the soil conservation district, and must be approved prior to receiving a permit.

Section IX. Maintenance and Repair of Storm Water Facilities

A. Maintenance Easement. Prior to the issuance of any permit that has a Storm Water management facility as one of the requirements of the permit, the Applicant or owner of the site must execute a maintenance easement agreement that shall be binding on all subsequent owners of land served by the Storm Water management facility. The agreement shall provide for access to the facility at reasonable times for periodic inspection by the City, or their contractor or agent, to ensure that the facility is maintained in proper working condition to meet design standards and any other provisions established by this Ordinance. The easement agreement shall be recorded by the City in the land records.

B. Maintenance Agreement. Maintenance of all Storm Water management facilities shall be ensured through the creation of a formal maintenance covenant by all property owners and any property owners association and must be approved by the City and recorded into the land record prior to final plan approval. As part of the covenant, a schedule shall be developed for when and how often maintenance will occur to ensure proper function of the Storm Water management facility. The covenant shall also include plans for periodic inspections to ensure proper performance of the facility between scheduled cleanouts. The City, in lieu of a maintenance covenant, may accept dedication of any existing or future Storm Water management facility for maintenance, provided such facility meets all the requirements of this ordinance and includes adequate and perpetual access and sufficient area, by easement or otherwise, for inspection and regular maintenance.

C. Requirements for Maintenance Agreement. All Storm Water management facilities must undergo, at the minimum, an annual inspection to document maintenance and repair needs and ensure compliance with the requirements of this Ordinance and accomplishment of its purposes. These needs may include, removal of silt, litter and other debris from all catch basins, inlets and drainage pipes, grass cutting and vegetation removal, and necessary replacement of landscape vegetation. Any maintenance needs found must be addressed in a timely manner, as determined by the City, and the inspection and maintenance requirement may be increased as deemed necessary to ensure proper functioning of the Storm Water management facility.

D. Inspection of Storm Water Facilities. Inspection programs may be established on any reasonable basis, including but not limited to: routine inspections; random inspections; inspections based upon complaints or other notice of possible violations; inspection of drainage basins or areas identified as higher than typical sources of sediment or other contaminants or Pollutants; inspections of businesses or industries of a type associated with higher than usual discharges of contaminants or Pollutants or with discharges of a type which are more likely than the typical discharge to cause violations of state or federal water or sediment quality standards or the NPDES Storm Water permit; and joint inspections with other agencies inspecting under environmental or safety laws. Inspections may include, but are not limited to: reviewing maintenance and repair 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.

E. 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 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 it has a reasonable basis to believe that a violation of this Ordinance is occurring or has occurred, and to enter when necessary for abatement of a public nuisance or correction of a violation of this Ordinance.

F. Records of Installation and Maintenance Activities. Parties responsible for the operation and maintenance of a Storm Water management facility shall make records of the installation and of all maintenance and repairs, and shall retain the records for at least 5 years. These records shall be made available to the City during inspection of the facility and at other reasonable times upon request.

G. Failure to Maintain Practices. If a responsible party fails or refuses to meet the requirements of the maintenance covenant, the City, after reasonable notice, may correct a violation of the design standards or maintenance needs by performing all necessary work to place the facility in proper working condition. In the event that the Storm Water management facility becomes a danger to public safety or public health, the City 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 an approved manner. After proper notice, the City may assess the owner(s) of the facility for the cost of repair work and any penalties; and the cost of the work shall be a lien on the property, or prorated against the beneficial users of the property, and may be placed on the tax bill and collected as ordinary taxes by the county.

ARTICLE VI

PERMIT PROCEDURES AND INSPECTIONS

A. Application Requirements. Unless specifically excluded by this Ordinance, prior to the commencement of Construction Activity, the Owner or Operator must complete an Application for Site Development Permit (the "Application") on a form approved of by the City for that purpose. Each Application shall bear the name(s) and address(es) of the Owner, Operator and/or Developer of the site, and of any consulting firm retained by the Applicant, together with the name of the Applicant's principal contact at such firm and shall be accompanied by a non-refundable filing fee in the amount of \$200.00 for the first acre or any portion thereof and \$100.00 for each additional acre or any portion thereof. All plans must be in compliance with the following:

1. Unless otherwise excepted by this Ordinance, an Application must be accompanied by three full sets of the following in order that the permit application be considered: a full set of construction drawings including an Erosion and Sediment Control Plan, a Storm Water Management Plan; a Maintenance Agreement; a non-refundable permit review fee; and compliance with all applicable requirements of Articles III and V.
2. The Erosion and Sediment Control Plan shall be prepared to meet the requirements of Article III, the Storm Water Management Plan shall be prepared to meet the requirements of Article V, and the Maintenance Agreement shall be prepared to meet the requirements of Article V.
3. The Applicant will be required to file with the City a performance bond or bonds, letter of credit, or other security in an amount 125% of all costs of compliance with Erosion and Sediment Control Plan and Storm Water Management Plan for such period as specified by the City and engineering and inspection costs to cover the cost of failure or repair of measures implemented on the site pursuant to the Erosion and Sediment Control Plan and Storm Water Management Plan

B. Permit Duration.

Permits issued under this section shall be valid from the date of issuance through the date the City notifies the permit holder that all Storm Water management practices have passed the final inspection required under permit condition.

C. Where to Submit the Permit Application. Complete and appropriately signed Application must be submitted to the City care of:

**Brookhaven Building Inspector
P.O. Box 560
Brookhaven, MS 39602**

D. Review and Approval. The City, or its designated agent, will review each Application for a Site Development Permit to determine its conformance with the provisions of this Article. Within a reasonable time after receiving an Application, the City shall, in writing, either:

1. Approve the Application;
2. Approve the Application subject to such reasonable conditions as may be necessary to secure substantially the objectives of this Ordinance, and issue the Site Development Permit subject to these conditions; or
3. Disapprove the Application, indicating the deficiencies and the procedure for submitting a revised Application and/or submission.

E. Inspections. No measure may be covered prior to its inspection. A fee of \$50 will be charged for each inspection or re-inspection made by the City pursuant to the terms of this Ordinance.

ARTICLE VII

ENFORCEMENT PROCEEDINGS, PENALTIES AND REMEDIES

Section I. Violations and Penalties

A. Violations. No person shall construct, enlarge, alter, repair, or maintain any grading, excavation, or fill; or commence, conduct or continue any illegal discharge to the storm drain system, or cause the same to be done, contrary to or in violation of any terms of this Ordinance. Any development activity that is commenced or is conducted contrary to this Ordinance, may be restrained by injunction or otherwise abated in a manner provided by law.

B. Penalties. Any person, firm, corporation or agency acting as principal, agent, employee or otherwise, who fails to comply with or violates any of the provisions of this Ordinance shall be guilty of a misdemeanor and upon conviction thereof shall be punishable by a fine of not less than one hundred dollars (\$100.00) and not more than one thousand dollars (\$1,000.00), or by imprisonment for not more than six months, or both, for each separate offense. Each day a violation of any Section of this Ordinance continues shall constitute a separate offense.

C. Stop-Work Order; Revocation of Permit. In the event that any person holding a Site Development Permit or any other permit pursuant to this Ordinance 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 City may suspend or revoke the Site Development Permit and any Building Permits.

Section II. Enforcement

A. Notice of Violation: Whenever the City finds that a person has violated a prohibition or failed to meet a requirement of this Ordinance, the City may order compliance by written Notice of Violation to the responsible person. Such notice may require without limitation:

1. The performance of monitoring, analyses, and reporting;
2. The elimination of illicit connections or discharges;
3. The violating discharges, practices, or operations shall cease and desist;
4. The abatement or remediation of storm water pollution or contamination hazards and the restoration of any affected property;
5. Payment of a fine to cover administrative and remediation costs; and
6. The implementation of source control or treatment BMPs.

B. If abatement of a violation and/or restoration of affected property is required, the notice shall set forth a deadline within which such remediation or restoration must be completed. Said notice shall further advise that, should the violator fail to remediate or restore within the established deadline, the work will be done by a designated governmental agency or a contractor and the expense thereof shall be charged to the violator.

Section III. Cost Of Abatement Of The Violation

After abatement of the violation, the owner of the property will be notified of the cost of abatement, including administrative costs. The property owner may file a written protest objecting to the amount of the assessment within 15 days. If the amount due is not paid within 30 days or by the expiration of the time in which to file an appeal, the charges shall become an assessment against the property and shall constitute a lien on the property for the amount of the assessment.

Section IV. Injunctive and Other Relief

It shall be unlawful for any person to violate any provision or fail to comply with any of the requirements of this Ordinance. If a person has violated or continues to violate the provisions of this Ordinance, the City may petition for a preliminary or permanent injunction restraining the person from activities which would create further violations or compelling the person to perform abate or remediation of the violation or for any other appropriate relief.

Section V. Violations Deemed A Public Nuisance

In addition to the enforcement processes and penalties provided, any condition caused or permitted to exist in violation of any of the provisions of this Ordinance is a threat to public health, safety, and welfare, and is declared and deemed a nuisance, and may be summarily abated or restored at the violator's expense, and/or a civil action to abate, enjoin, or otherwise compel the cessation of such nuisance may be taken.

ARTICLE VIII

Miscellaneous Provisions

A. Duty to Comply. Any permit noncompliance constitutes a violation of this Ordinance is grounds for enforcement action. It shall not be a defense in an enforcement action that it would have been necessary to halt or reduce the regulated activity in order to maintain compliance with the conditions of this Ordinance.

B. Continuation of the Expired Permit and Coverages under the Permit. All permits and coverages shall remain in full force and effect until the City makes a final determination regarding any reissuance, modification, or revocation.

C. Duty to Mitigate. The Owner, Operator or Developer shall take all reasonable steps to minimize or prevent any activity discharge in violation of this Ordinance.

D. Duty to Provide Information. The Owner or Operator shall furnish to the City, within a reasonable time, any information that the City may request to determine compliance with this Ordinance.

E. Signatory Requirements. All Applications and permits shall be signed as follows:

1. **For corporations** by a responsible corporate officer. For the purposes of this Ordinance, a responsible corporate officer means: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation;
2. **For a partnership or sole proprietorship** by a general partner or the proprietor, respectively; or
3. **For a State, Federal, or other public agency** by either a principal executive officer or ranking elected official.

For purposes of this section, a principal executive officer of a Federal agency includes:

- (a) the chief executive officer of the agency; or
- (b) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

F. Duly Authorized Representative. All reports required by this Ordinance and other information

requested by the City shall be signed by a person described in Subsection E., above, or by a duly authorized representative of that Person. A person is a duly authorized representative when:

1. the authorization is made in writing by a person described in Subsection E., above, and submitted to the City, if requested; and
2. the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated activity, such as manager, Owner or Operator, superintendent or one having overall environmental responsibility (a duly authorized representative may be a named individual or any individual occupying a named position).

G. Changes to Authorization. If an authorization is no longer accurate because a different individual or position has permit responsibility, a new authorization satisfying the above requirements must be submitted to the City prior to or together with any reports, information or applications signed by the representative.

H. Certification. Any person signing documents under this section shall make the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the site, system or the person or persons who manage the site or system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I. Oil and Hazardous Substance Liability. Nothing in this Ordinance shall relieve the Owner or Operator from responsibilities, liabilities, or penalties under Section 311 of the Clean Water Act (CWA).

J. Severability. The provisions of this Ordinance are severable, and if any provision of this Ordinance, or the application of any provision of this Ordinance to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Ordinance shall not be affected thereby.

K. Proper Operation and Maintenance. The Owner or Operator shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Owner or Operator to achieve compliance with the conditions of this Ordinance including the Erosion and Sediment Control Plan. Proper operation and maintenance includes adequate laboratory controls with appropriate quality assurance procedures and requires the operation of backup or auxiliary facilities when necessary to achieve compliance with permit conditions.

L. Bypass Prohibition. Bypass (see 40 CFR 122.41(m)) is prohibited and enforcement action may be taken against an Owner or Operator for a bypass, unless: (a) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; (b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if the Owner or Operator should, in the exercise of reasonable engineering judgement, have installed adequate backup equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and (c)

The Owner or Operator submitted notices as required by this Ordinance.

M. Upset Conditions. An upset (see 40 CFR 122.41(n)) constitutes an affirmative defense to an action brought for noncompliance with technology-based permit limitations if a permittee shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence, that: (1) An upset occurred and the permittee can identify the specific cause(s) of the upset, (2) The permitted facility was at the time being properly operated, (3) The permittee submitted appropriate notices in compliance with this Ordinance, and (4) The permittee took remedial measures as required under herein. In any enforcement proceeding, the permittee has the burden of proof that an upset occurred. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

N. Inspection and Entry. The Owner or Operator shall allow the City staff or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the premises where a regulated activity is located or conducted, or where records must be kept under the conditions of this Ordinance;
2. Have access to and copy at reasonable times any records that must be kept under the conditions of this Ordinance; and
3. Inspect at reasonable times any facilities, equipment or project site.

O. Most Restrictive Provision Controls. Whenever there is an apparent conflict between any provision of the Storm Water Pollution Prevention Ordinance and any other Ordinance of the City of Brookhaven, Mississippi, the more restrictive provision shall apply.