ARTICLE 7 STORM WATER MANAGEMENT

Division 7.100 Purpose and Application of Article

Sec. 7.101 Purpose

A. Findings of Fact.

1. It is hereby determined that:
    a. Land development projects and associated increases in impervious cover alter the hydrologic response of local watersheds and increase stormwater runoff rates and volumes, flooding, stream channel erosion, and sediment transport and deposition;
    b. This stormwater runoff contributes to increased quantities of water-borne pollutants; and
    c. Stormwater runoff, soil erosion and nonpoint source pollution can be controlled and minimized through the regulation of stormwater runoff from development sites.
2. The City recognizes that water quality and quantity requirements of federal, state, and parish laws applicable to surface waters provide reasonable guidance for the control of stormwater runoff for the purpose of protecting local water resources from degradation.
3. It is determined that the control of stormwater runoff discharges from land development projects and other construction activities in order to manage and minimize increases in stormwater runoff rates and volumes, soil erosion, stream channel erosion, and nonpoint source pollution associated with stormwater runoff is in the public interest and will prevent threats to public health and safety.

B. **Purpose of Regulations that Apply to Permanent Controls and Maintenance.** The purpose of Division 7.200, *Drainage*, is to ensure that stormwater management requirements and controls are in place to protect and safeguard the general health, safety, and welfare of the public. Division 7.200, *Drainage*, requires plans that are reviewed according to performance standards promulgated by East Baton Rouge Parish, the State of Louisiana, and the federal government, depending upon the circumstances of the individual application. It also includes specifications for construction of drainage facilities.

C. **Purpose of Regulations that Apply to Construction Activities.** During the construction process, soil is highly vulnerable to erosion by wind and water. 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 cause the loss of native vegetation necessary for terrestrial and aquatic habitat. Consequently, the purpose of Division 7.300, *Stormwater Management During Construction*, is to implement federal laws that seek to safeguard persons, protect property, and prevent damage to the environment.

Sec. 7.102 Application of Article

A. **Generally.** Drainage plans and stormwater pollution prevention programs (for construction activities) are required as provided in federal and state law.

B. **When Required.** Article 7, *Storm Water Management*, is applicable to all subdivision or site plan applications, unless eligible for an exemption. The ordinance also applies to land development

activities that are smaller than the minimum applicability criteria if such activities are part of a larger common plan of development that is not exempt, even though multiple separate and distinct land development activities may take place at different times on different schedules. In addition, all plans must also be reviewed by federal, state, and local environmental protection officials with jurisdiction to ensure that established water quality standards will be maintained during and after development of the site and that post construction runoff levels are consistent with any local and regional watershed plans.

C. **Construction with Other Articles and Ordinances.** This Article is not intended to interfere with, abrogate, or annul any other Article, ordinance, rule or regulation, stature, or other provision of law. The requirements of this Article should be considered minimum requirements, and where any provision of this Article imposes restrictions different from those imposed by any other Article, 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.

Division 7.200 Drainage

Sec. 7.201 Drainage Impact Study Requirement

A. Requirement.

1. *Drainage Impact Studies Required*. Any owner, developer, subdivider or their agents who apply to subdivide, develop, improve or build upon any residential, industrial or commercial development or subdivision must, in addition to any other requirement of law or ordinance, submit a drainage impact study in conformity with this Section.

2. *Number of Copies; Required Review*. Two copies of the required drainage impact study of the proposed development and surrounding affected areas must be submitted. The subdivision construction plans will not be reviewed and approved until the drainage impact analysis has been reviewed. The public works department may refer the study for review by East Baton Rouge Parish, the State of Louisiana, or appropriate federal agencies.

B. Exemptions.

1. *Mandatory Exemptions*. The following development activities are exempted from the requirements of preparing a drainage impact study:

   a. Development in which the area of impervious surface does not exceed 20 percent of the development area at the point of discharge from the site. The total impervious area shall include all buildings, driveways, sidewalks, streets, parking lots, lakes, ponds, etc. All undeveloped open space, common area, etc., must be clearly identified.

   b. Additions or modifications to existing developments which result in no more than a ten percent increase in existing impervious area and which have existing public storm drainage facilities designed to accommodate runoff from the existing site.

2. *Discretionary Exemptions*. Developers may request that the Planning and Zoning Commission approve an exemption from providing the drainage impact study. If such a request is granted, the Planning and Zoning Commission director will provide written approval. A copy of the exemption authorization shall be forwarded to the public works director and no detailed drainage impact study shall be required for the development. An exemption under this section must be requested in writing that includes specific details of the proposed development. An exemption under this section shall be considered for approval provided:

a. The proposed development results in no more than a ten year predevelopment peak discharge at the point of discharge from the development site.

b. The site is located within existing developed areas which are served by a network of public storm drainage facilities which were designed to accommodate runoff from the development site. Notwithstanding the above, a discretionary exemption may be granted provided sufficient information can be submitted indicating that the runoff from the proposed development is consistent with, and discharges to, a previously approved development or is a part of an approved larger plan of development, both having adequate drainage facilities.

Sec. 7.202 Information Required in Drainage Impact Study

A. **Generally.** The drainage impact study shall include the minimum information requirements of this Section.

B. **Location.** Describe location of subject property; locate by township and range; identify adjacent developments, major drainage outfalls, streets, highways, lot and block by page number or other reference to recordation with the parish clerk of court; and provide a vicinity map.

C. **Description.** Describe the predominate existing land use and future land use in projected watershed. Describe the proposed development, soil types, vegetative cover, watershed slopes and provide an estimate of percent of impervious area for pre and post development conditions. Provide photos of existing channels, ditches, natural drains and drainage structures.

D. **Watershed Map.** Delineate drainage boundaries; indicate the acreage; and show slope of basins, and peak ten year runoff rate at entry and exit points of the development. The watershed map should indicate the location of existing channels, ditches, natural drains, proposed major drainage structures, channel realignments and cross section locations.

E. Hydrologic Design.

1. The drainage impact analysis shall indicate existing condition peak 50-year flow rates at the development entry and exit points. Interior drainage shall be designed to ten-year flow rates.

2. The drainage impact analysis should indicate future condition peak 50-year flow rates at the development entry and exit points.

F. **On-Site Hydraulic Capacity.** Indicate capacity of any existing drainage outfall facility (ditch, canal, culvert, bridge, etc.) within the proposed development site and required type size, and capacity of any proposed outfall facilities as defined above.

G. **Off-Site Hydraulic Capacity.** Determine capacity of existing downstream outfall facilities (ditches, canals, culverts, bridges, etc.) that will be utilized to convey flow from the downstream limits of the proposed development to the first public outfall as identified by the city engineer. An inventory of downstream structures including size, type, invert elevation, and cover topping elevation should be made. Channel cross sections at upstream and downstream limits of the proposed development, at structure locations and at intermediate canal locations shall be required to adequately define existing channel capacities.

H. **Special Site Conditions.** Special conditions which may exist at the proposed development site should be clearly identified including but not limited to such items as:

1. Special flood hazard areas (firm zones A and AE);

2. Regulatory floodway;

3. Fill placement location and mitigation requirements;
4. Potential wetland sites;
5. Churches;
6. Schools;
7. Cemeteries;
8. Landfills and hazardous waste sites;
9. Parks.

I. **Study Conclusions and Recommendations.** The study should clearly identify the results and conclusions of the analysis and provide recommendations of any required action(s) so that no adverse impact is experienced by surrounding properties.

Sec. 7.203 Required TMDL Review; Exemptions

A. **Generally.** Section 303(d) of the Clean Water Act requires the Louisiana Department of Environmental Quality ("LDEQ") to establish total maximum daily loads ("TMDLs") for waterbodies. LDEQ permits are required for all development except for the location of a single-family home or manufactured home, in order to ensure that the TMDLs are not exceeded.

B. Required Review.

1. No preliminary subdivision approval or site plan approval shall be issued until the applicant submits:
   a. A "Request for Preliminary Determination of LPDES Permit Issuance" ("RPD") to the Louisiana Department of Environmental Quality; and
   b. A response letter to the request.
2. No final subdivision approval shall be granted until a TMDL permit is issued by LDEQ.

Sec. 7.204 Drainage Requirements for Development

A. **Generally.** Drainage systems shall be designed according to the standards of this Section.

B. **Design.** Drainage systems within development shall be designed and engineered for a 10-year design storm, and outfalls shall be designed and engineered for a 50-year design storm.

C. **Storm Drainage Pipe.** The interior storm drainage pipe shall meet the requirements of ASTM Designation C-67, Class II, Reinforced Concrete Pipe with Rubber Gasket joints or its equivalent, including polyethylene pipe, and shall be sized using Manning's Roughness Coefficient of 0.013 for design. The minimum size of pipe shall be 15 inch inside diameter or equivalent pipe arch. As an alternate for locations not within roadways, corrugated plastic pipe of a minimum 15 inch diameter may be used if approved as part of the drainage impact study. Corrugated plastic pipe or polyethylene shall meet the requirements of ASTM F794, and shall be sized using Manning's Roughness Coefficient as recommended by the pipe's manufacturer. Other pipe materials which are equal to or superior to the above materials may be utilized if approved by the city prior to submission of the drainage impact analysis.

D. **Changing or Altering Existing Drainage Channels.** No individual, partnership, or corporation shall deepen, widen, fill, re-route or change the location of any existing ditch, stream, drain, or drainage canal without first obtaining written permission from the city engineer and the public works director. Such deepening, widening, filling, re-routing or changing the location of any existing

ditch, stream, drain or drainage canal shall be constructed under the supervision of the city engineer and be approved by the planning and zoning commission as part of the drainage impact analysis. Adequate servitude or rights-of-way must be obtained at the cost of the developer and dedicated to public use for the construction and maintenance of any channels which may be relocated. Any such relocation must be by subsurface drainage under terms, conditions and specifications approved by the public works director or the city engineer. The city shall not be required to pipe preexisting open ditches, but if a landowner decides to pipe an open ditch, the landowner must do so according to the specifications promulgated by the city engineer, and the piping of the ditch must be approved by the city department of public works.

E. **Servitude for Existing Drainage Channels.** Whenever any stream or improved surface drainage course is located in an area that is being subdivided, the subdivider shall dedicate an adequate right-of-way along each side of the stream as determined by the city engineer; the subdivider shall, where feasible, arrange for subsurface drainage to replace any existing open drainage.

F. **Concrete Liners.** When open drainage is allowed, four inch concrete liners meeting city standards shall be installed in those portions of drainage channels which are located within the limits of subdivision development. Such open drainage, however, shall be acceptable only when allowed by this chapter.

G. **Permanent Markers.** All subdivision boundary corners and the four corners of all street intersections in subdivisions of previously unsubdivided tracts shall be marked with permanent monuments of concrete with a minimum dimension of four inches extending a minimum of three feet below the ground, or steel pipe firmly imbedded in concrete which extends a minimum of three feet below the ground line. Should conditions prohibit the placing of monuments on line, offset marking will be permitted, provided however, that exact offset courses and distances are shown on the subdivision plat. A permanent benchmark shall be accessibly placed, and its elevation shall be based on gulf level datum as determined by the U.S. Geological Survey, and accurately noted on the subdivision plat.

H. **Improvements.** Improvements which are made in accordance with the drainage impact study must be designed and constructed in such a way as to prevent any adverse impact to surrounding areas. Provision of stormwater retention ponds may be required to reduce the stormwater flow to any off- site point to the volume which was discharged prior to development.

I. **Guidelines; Subsurface Drainage.** The developer shall plan all drainage in the subdivision in accordance with guidelines from the city engineer and the public works director with approval of the planning and zoning commission. All interior storm drainage pipe shall meet the requirements of ASTM Designation C-67, Class II, Reinforced Concrete Pipe and Rubber Gasket joints and shall be sized using Manning's Roughness Coefficient of 0.013 for design. The minimum size of pipe shall be 15 inch inside diameter or equivalent pipe arch. Unless otherwise provided, all drainage in subdivisions will be subsurface drainage. Subsurface drainage shall be required in any plan by a developer submitted to the planning and zoning commission for approval where the smallest lot in the proposed development has less than 150 feet of road frontage and the smallest lot in the proposed subdivision is less than two acres.

Sec. 7.205 As-Built Plans

All applicants are required to submit actual "as built" plans for any stormwater management practices located on-site after final construction is completed. The plan must show the final design specifications for all stormwater management facilities and must be certified by a professional engineer.

Sec. 7.206 Continuing Maintenance

A. **Generally.** Continuing maintenance of stormwater management facilities is required pursuant to this Section.

B. **Maintenance Easement.** Prior to the issuance of any permit that has an stormwater 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 stormwater management facility. The agreement shall provide for access to the facility at reasonable times for periodic inspection by the City, or its contractor or agent, and for regular or special assessments of property owners to ensure that the facility is maintained in proper working condition to meet design standards and any other provisions established by this Article. The easement agreement shall be recorded in the public records of East Baton Rouge Parish, and if associated with a plat, shall be identified on the recorded plat.

C. **Maintenance Covenants.** Maintenance of all stormwater management facilities shall be ensured through the creation of a formal maintenance covenant that must be approved by the City and recorded upon final plan approval and prior to the issuance of a building permit. As part of the covenant, a schedule shall be developed for when and how often maintenance will occur to ensure proper function of the stormwater management facility. The covenant shall also include plans for periodic inspections to ensure proper performance of the facility between scheduled cleanouts.

1. *Requirements of Maintenance Covenants.* All stormwater 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 stormwater management facility.

2. *Inspection of Stormwater 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 stormwater 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 stormwater treatment practices.

3. *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 the property owner shall grant to the City or other appropriate enforcement agency 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 Article is occurring or has occurred, and to enter when necessary for abatement of a public nuisance or correction of a violation of this Article.

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

E. **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 stormwater management facility becomes a danger to public safety or public health, the City shall notify the party responsible for maintenance of the stormwater management facility in writing. Upon receipt of that notice, the responsible person shall have not more than seven days to effect maintenance and repair of the facility in an approved manner, which may be reduced if justified by the level of danger posed. After proper notice, the City may assess the owner(s) of the facility for the cost of repair work and any penalties.

F. **Dedication in Lieu of Covenant.** In lieu of an maintenance covenant, the City may, in its discretion, accept dedication (or allow dedication to another appropriate entity) of any existing or future stormwater management facility for maintenance, provided such facility meets all the requirements of this Article and includes adequate and perpetual access and sufficient area, by easement or otherwise, for inspection and regular maintenance.

Division 7.300 Stormwater Management During Construction

Sec. 7.301 Construction Runoff Control

A. **Generally.** Pursuant to the Louisiana Pollutant Discharge Elimination System ("LPDES") program, a stormwater pollution prevention plan ("SWP3") permit is required for all development that:

1. Impacts one or more acres of land; or
2. Occurs within a larger development in which one or more acres of land is disturbed.

B. **Requirements.**

1. The developer or builder must file a Notice of Intent ("NOI") with the Louisiana Department of Environmental Quality ("LDEQ").
2. General contractors shall create or update and submit a stormwater pollution prevention plan for the specific sites upon which they work and the sequence of work on the site. Contractors shall follow:
   a. Best management practices to minimize off-site sedimentation; and
   b. All requirements of the LAR 1000 *General Permit for Stormwater, General Permit for Construction Activities*.
3. Erosion control devices shall be maintained for the entire duration of the construction project. The Contractor shall inspect the condition of erosion control devices:
   a. At intervals of not less than seven days; and
   b. After each rain event of 0.5 inches or more.
4. The Contractor shall maintain a record of these inspections, which shall be available to the City or other designated enforcement entity upon request.

5. Temporary seeding shall be performed as soon as practicable in order to reduce siltation.
6. The contractor shall file a Notice of Termination ("NOT") with LDEQ after a certificate of approval is issued.