2019 Stormwater Management Plan for the City of Hammond, Louisiana

LPDES Permit No. LAR041030

Agency Interest No. 104053

September 1, 2019

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Section 1.0 Overview of the Stormwater Management Plan

1.0 Overview of the Stormwater Management Plan

1.1 Introduction

On December 5, 2007, the City of Hammond was reissued a Louisiana Pollutant Discharge Elimination System (LPDES) General Permit for Discharges from a Regulated Small Municipal Separate Storm Sewer System (MS4).

Pursuant to the Louisiana Environmental Quality Act (LRS 30:2001 *et seq.*), automatic authorization under the reissued permit was granted for the discharge(s) as identified in the reissued permit.

In accordance with the reissued permit, the City was required to develop and implement a stormwater management plan (SWMP) no later than 5 years from the date of initial authorization, December 5, 2002.

This SWMP must describe the minimum control measures (MCMs) and best management practices (BMPs) that are being/will be used to fulfill permit requirements. The SWMP must be updated regularly to reflect changes in the City's stormwater management program. Part IV of the reissued permit describes the minimum requirements of this stormwater management program.

Together, these MCMs and BMPs are intended to support and to be supported by City of Hammond, Louisiana, Unified Development Code (UDC) Article 12—Floodways, Floodplains, and Stormwater Management (Attachment 1), which provides additional statutory authorizations, definitions, and guidance for Floodways and Floodplains, Stormwater Management, and Water Quality Requirements, and by the UDC as a whole.

1.2 Permitted Areas

The reissued permit covers all areas, except agricultural lands, of the State of Louisiana that are served by regulated small MS4s, as defined in LAC 33:IX.2511.B.16 and LAC 33:IX.2519.

1.3 Eligibility

The reissued permit authorizes discharges of stormwater from a regulated small MS4.

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1.4 Allowable Non-stormwater Discharges

The following non-stormwater sources may be discharged from the MS4 and are not required to be addressed in the MS4's Illicit Discharge Detection and Elimination Plan or by other MCMs provided they have not been determined to be substantial sources of pollutants to the MS4:

- a. discharges or flows from firefighting activities (excludes predictable and controllable discharges from a firefighting training facility) or fire hydrant flushing;
- b. potable water, including water line flushing using potable water, drinking fountain overflows, lawn watering runoff, and similar sources of potable water;
- c. uncontaminated air conditioning or compressor condensate;
- d. residual street wash water and pavement wash waters where no detergents are used and no spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed);
- e. routine external building wash down where no detergents are used;
- f. drainage from landscape watering;
- g. diverted stream flows;
- h. rising ground waters;
- i. uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20));
- j. uncontaminated pumped ground water;
- k. foundation drains;
- I. irrigation water;
- m. uncontaminated spring water;

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- n. water from crawl space pumps;
- o. footing drains;
- p. water from individual residential car-washing;
- q. flows from riparian habitats and wetlands;
- r. de-chlorinated swimming pool discharges;
- s. other similar occasional incidental discharges (e.g. non-commercial or charity car washes) where such discharges will not cause a problem either due to the nature of the discharge or controls the MS4 places on the discharge. The MS4 must identify all types of discharges it will allow as occasional incidental discharges and specify these discharges in its SWMP.

1.5 Non-authorized Discharges

The following discharges, whether discharged separately or commingled with municipal stormwater, are not authorized under the reissued permit:

- a. stormwater discharges that are mixed with non-stormwater or stormwater associated with industrial activity unless such discharges are:
 - i. in compliance with a separate LPDES permit, or
 - ii. identified by and in compliance with Part I. C of this permit;
- b. discharges of material resulting from a spill (where discharge of material resulting from a spill is necessary to prevent loss of life, personal injury, or severe property damage, the MS4 shall take or ensure the responsible party for the spill takes, all reasonable steps to minimize or prevent any adverse effects on human health or the environment);
- c. stormwater discharges whose direct, indirect, interrelated, interconnected, or interdependent impacts are likely to have unauthorized adverse effects upon endangered or threatened species or on the critical habitats for these species as

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determined through consultation with the Louisiana Department of Wildlife and Fisheries and/or United States Fish and Wildlife Service;

- d. stormwater discharges or implementations of the City's SWMP that adversely affect properties listed or eligible for listing in the National Register of Historic Places unless the MS4 is in compliance with requirements of the National Historic Preservation Act and any necessary activities to avoid or minimize impacts have been coordinated with the Louisiana State Historic Preservation Officer;
- e. stormwater discharges into any water body for which a total maximum daily load (TMDL) has been approved if the stormwater discharges are not in compliance with Part III. B of the reissued permit; and
- f. any new source or new discharge containing the pollutants of concern to a 303(d)listed waterbody where a TMDL has not been approved—unless allowed under LAC 33:IX.2317.A.9 (eligibility for this type of discharge may be obtained if compliance with Part IV. G of the reissued permit is obtained).

1.6 Permitted Industrial Facilities

Currently, there are no industrial facilities permitted by the City to discharge into the MS4 and that would be subject to a LPDES permit or a Multi-sector General Permit (MSGP) issued by the Environmental Protection Agency (EPA).

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Purpose of the Stormwater Management Plan

2.0 Purpose of the Stormwater Management Plan

The purpose of this stormwater management plan (SWMP) is to present information to the public on the City of Hammond's goals and efforts to maintain and improve the quality of the waters that receive runoff from the municipality. The SWMP is also used to document the City's compliance and cooperation with State and federal stormwater permitting programs as required by the Clean Water Act.

In accordance with the Clean Water Act, the Environmental Protection Agency (EPA) and Louisiana Department of Environmental Quality (LDEQ) implemented regulations that govern the discharge of stormwater from certain urbanized areas. These regulations require the City to develop and implement a SWMP.

The City is required to provide a SWMP because the City is considered to operate a regulated small Municipal Separate Storm Sewer System (MS4).

The City is responsible for the development and implementation of the SWMP within the incorporated limits of Hammond, Tangipahoa, Louisiana, as shown in Incorporated Limits of the City of Hammond (next page).

The department responsible for developing, implementing, and maintaining the SWMP will be the City's Streets Department.

Robert Morgan is the current Streets Superintendent and the City official responsible for the SWMP.

The Streets Department assumes the lead role in SWMP development and implementation. Other City departments and officials actively support the Streets Department, the SWMP, and the City's stormwater management program.

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Section 2.0 Purpose of the Stormwater Management Plan

Incorporated Limits of the City of Hammond 2013–17 American Community Survey



Map Key

- City of Hammond
- Incorporated Limits
- Major Streets
- Rivers and Creeks

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Assessing and Characterizing Drainage Areas

3.0 Assessing and Characterizing Drainage Areas

Program goals should be focused on areas where impacts are possible. This focus may be achieved by assessing existing water resource conditions and existing or potential pollutants. It is also necessary to identify and characterize drainage areas, as well as the receiving waters. Problem areas should be identified with the objectives of collecting data that will identify causes and suggest solutions. Steps should also be taken to ensure the continued operation of existing water conveyances and the implementation of control measures will not adversely impact sensitive areas or environments.

3.1 Description of Drainage Areas

Description and characterization of drainage areas will address the following:

- a. land use,
- b. zoning,
- c. topography,
- d. drainage conveyances,
- e. industrial development,
- f. residential development,
- g. erosion potential,
- h. industrial activities,
- i. population segments,
- j. existing structural controls, and
- k. potential problems and opportunities.

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3.2 Description of Receiving Waters

The following have been identified as receiving waters of the City of Hammond: the Natalbany River, from its headwaters to the Tickfaw River (Subsegment 040503); the Yellow Water River, from its headwaters to the Ponchatoula Creek (Subsegment 040504); the Ponchatoula Creek and Ponchatoula River (Subsegment 040505); the Selsers Creek, from its headwaters to the South Slough (Subsegment 040603); and the Tangipahoa River, from the Mississippi line to I-12 (Subsegment 040701).

A map of these receiving waters, other discharge points ("outfalls"), and major control structures is included as Receiving Waters, Outfalls, and Major Control Structures of the City of Hammond (Attachment 2).

3.3 Total Maximum Daily Load (TMDL)

As established by Environmental Protection Agency (EPA), a Total Maximum Daily Load (TMDL) is a calculation of the maximum amount of a pollutant allowed to enter a waterbody so the waterbody will meet and continue to meet water quality standards for that particular pollutant. TMDLs are issued for "point sources" and "nonpoint sources." Point sources include all sources subject to regulation under the National Pollutant Discharge Elimination System (NPDES) (e.g. wastewater treatment facilities, some stormwater discharges, concentrated animal feeding operations) and receive a Wasteload Allocation (WLA). Nonpoint sources include all remaining sources, including natural sources, and receive a Load Allocation (LA).

As summarized in the table Total Maximum Daily Loads for Receiving Waters of the City of Hammond (next page), WLAs have been issued for 4 of the City's 5 receiving waters.

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Section 3.0

Assessing and Characterizing Drainage Areas

Total Maximum Daily Loads (TMDLs) for Receiving Waters of the City of Hammond

Subsegment			MS4			Sourco
ID	Name	Acreage	Acreage	Waste Load Allocation (WLA) in lb/Day		Source
040503	Natalbany River (Headwaters to Tickfaw River)	90,787	6,703	Fecal Coliform Bacteria (Summer)	1.77E+11	2
				Fecal Coliform Bacteria (Winter)	1.29E+12	2
040504	Yellow Water River (Headwaters to Ponchatoula Creek)	11,047	7,583	Dissolved Solids	20,356.2	3
				Fecal Coliform Bacteria (Summer)	1.96E+11	2
				Fecal Coliform Bacteria (Winter)	1.46E+12	2
040505	Ponchatoula Creek and Ponchatoula River	36,246	13,300	Ammonia as Nitrogen (Ammonia as N) (Summer)	1.87	4
				Ammonia as Nitrogen (Ammonia as N) (Winter)	7.51	4
				Carbonaceous Biochemical Oxygen Demand (CBOD) (Summer)	254.6	4
				Carbonaceous Biochemical Oxygen Demand (CBOD) (Winter)	964.2	4
				Fecal Coliform Bacteria (Summer)	3.51E+11	2
				Fecal Coliform Bacteria (Winter)	2.56E+12	2
				Organic Nitrogen as Nitrogen (Organic Nitrogen as N) (Summer)	9.48	4
				Organic Nitrogen as Nitrogen (Organic Nitrogen as N) (Winter)	42.35	4
				Sediment Oxygen Demand (SOD) (Summer)	351.4	4
				Sediment Oxygen Demand (SOD) (Winter)	328.5	4
040603	Selsers Creek (Headquarters to South Slough)	10,376	1,438	Dissolved Oxygen (DO) (Summer)	80	1
			1,024	Dissolved Oxygen (DO) (Winter)	68	1
				Fecal Coliform Bacteria (Summer)	2.69E+10	2
				Fecal Coliform Bacteria (Winter)	1.97E+11	2

Sources

1 Selsers Creek Watershed TMDL for Biochemical Oxygen-demanding Substances (EDMS Document ID 8053289)

2 TMDLs for Fecal Coliform Bacteria for Selected Subsegments in the Lake Pontchartrain Basin, Louisiana (EDMS Document ID 8205184)

3 TMDLs for Total Dissolved Solids for Selected Subsegments in the Lake Pontchartrain Basin, Louisiana (EDMS Document ID 8354305)

4 TMDL for Dissolved Oxygen for Ponchatoula Creek and Ponchatoula River in the Lake Pontchartrain Basin, Louisiana (EDMS Document ID 8355444)

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Assessing and Characterizing Drainage Areas

3.4 **Testing Locations**

To monitor for compliance with TMDLs, the City performs water quality testing at 10 locations in and around Hammond: the Ponchatoula Creek at the East Ponchatoula Creek (Coordinates 30.507481, -90.447614); the Selsers Creek at US 190 East (30.511915, -90.422137); the Arnold's Creek at Medical Center Drive (30.46807, -90.462985); I-55 at West Club Deluxe Road (30.476022, -90.486191); the Yellow Water River at Stein Road (30.496329, -90.506233); US 190 East near Industrial Park Road (30.512086, -90.408833); the East Ponchatoula Creek at Magazine Street (30.514306, -90.445166); the Ponchatoula Creek at Harvey Street (30.516554, -90.456212); the Ponchatoula Creek at North Oak Street (30.525376 -90.474031); and the Yellow Water River at West University Avenue (LA 3234) (30.519192, -90.487272).

A map of these testing locations is included as Testing Locations of the City of Hammond (Attachment 3).

3.5 Drainage Area Water Quality Objective

The drainage area water quality objective in preparing and implementing this SWMP was/is to maintain or improve the quality of the waters that receive stormwater discharge from the City.

For impaired receiving waters, the goal of the SWMP will be to initiate BMPs, where feasible, that are focused on reducing the pollutant loading for which the water is considered impaired. For waters that are not considered impaired, BMPs will be initiated to prevent future impairment of receiving waters.

3.6 Threatened or Endangered Species

To the best of the City's knowledge, current stormwater discharges and implementation of the SWMP do not adversely impact any listed threatened or endangered species or designated critical habitat. If any listed threatened or endangered species or critical habitat is encountered by the City through the implementation of its SWMP, the City will consult the Louisiana Department of Wildlife and Fisheries and/or United States Fish and Wildlife Service as appropriate for guidance.

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Assessing and Characterizing Drainage Areas

3.7 National Register of Historic Places

To the best of the City's knowledge, current stormwater discharges and implementation of the SWMP do not adversely impact any properties listed or eligible for listing in the National Register of Historic Places. Should the potential for such a property to be impacted arise, the City will consult the State Historic Preservation Officer (SHPO) for guidance. LPDES Permit No. LAR041030

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Section 4.0 Best Management Practices

4.0 Best Management Practices

As they related to stormwater management, best management practices (BMPs) may be generally defined as actions undertaken to remove pollutants from stormwater runoff. BMPs can be structural (e.g. detention basins, erosion control measures) or nonstructural (e.g. educational outreach, public awareness efforts).

4.1 Minimum Control Measures

Similar BMPs are organized into categories called Minimum Control Measures (MCMs). Six (6) MCMs have been specified by the Louisiana Department of Environmental Quality (LDEQ) and are included in this stormwater management plan (SWMP). For each MCM, the City of Hammond has developed BMPs to aid in controlling pollutants in stormwater runoff.

4.2 BMP Selection Criteria

BMPs can be categorized either as pollution prevention or a pollution treatment. Due to the large amount of stormwater that can accumulate over an area, pollution treatment is typically not feasible, making it necessary to implement a pollution prevention BMP. In most cases, smaller pollution treatment BMPs, as well as pollution prevention BMPs, may be implemented locally to reduce pollutants in stormwater runoff. The BMPs included in this SWMP primarily focus on pollution prevention. Each BMP has been assigned an abbreviation and number based on LDEQ's Small Municipal Separate Storm Sewer System General Permit Notice of Intent (NOI) form, as revised April 12, 2018.

4.3 BMP Operation and Maintenance

Funding for the operation and maintenance (O&M) of these BMPs is provided for annually in the City's Consolidated Budget—as line items in the Streets, Water & Sewer, Building, and Parks & Grounds Departments' budgets. Trained and skilled staff from these departments share O&M responsibilities.

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Section 4.0 Best Management Practices

Minimum Control Measure 1

Public Education and Outreach on Stormwater Impacts

Best Management Practice PE3

Educational Displays, Pamphlets, Booklets, and Utility Stuffers

BMP Description

Distribute utility stuffers to educate the public on stormwater impacts and steps they can take to improve the stormwater system's function and to minimize stormwater pollution and the pollution of waterways.

Measurable Goal(s)

- 1. Distribute utility stuffers to the 6,400 residential and commercial users of the City's water and sewer utilities to educate the public on stormwater impacts and steps they can take to improve the stormwater system's function and to minimize stormwater pollution and the pollution of waterways (e.g. bagging grass clippings instead of sweeping them into streets; helping to keep ditches and storm drains clear of obstructions, such as branches, leaves, grass, dirt, and other small debris; contacting the Streets Department to remove limbs and other large obstructions from ditches and storm drains; disposing of waste in trash cans or dumpsters; not using storm drains to dispose of chemicals, oils, or waste products; reporting spills, releases, illicit connections, or other suspected illegal discharges to the Building Department). Including both residential and commercial users will ensure this information reaches every household and business in Hammond—reminding them stormwater management is a community effort with community-wide implications. Distribution may be on an ongoing basis, but should occur at least annually and be timed to occur before typical periods of heavy rainfall.
- 2. Provide landscaping companies copies of the above when occupational licenses are applied for or renewed (annually).
- 3. Provide contractors copies of the above before permits are issued.
- 4. Publish this information in a conspicuous place on the City's website, www.hammond.org, where it shall be updated annually.

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Section 4.0 Best Management Practices

Person(s) or Department(s) Responsible

Streets Department, Water & Sewer Department, Keep Hammond Beautiful Committee, Information Technology Department

Timeframe/Milestones for Implementation

Ongoing, at least annually, before typical periods of heavy rainfall, when occupational licenses are applied for or renewed, before permits are issued

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Section 4.0 Best Management Practices

Minimum Control Measure 1

Public Education and Outreach on Stormwater Impacts

Best Management Practice PE6

Education on Proper Disposal of Household Hazardous Wastes

BMP Description

Educate the public on the proper disposal of household hazardous wastes.

Measurable Goal(s)

- 1. Distribute utility stuffers to the 5,200 residential users of the City's water and sewer utilities identifying common household hazardous wastes and their proper disposal, including through recycling. Distribution may be on an ongoing basis, but should occur at least annually.
- 2. Announce (e.g. via the City's website, www.hammond.org, the City's Facebook, www.facebook.com/cityofhammond, the City's Journal of Record *The Daily Star*, and/or utility stuffers) community-wide household hazardous wastes recycling events (e.g. the City's annual Recycling Day, described under IDDE5) approximately 1 month prior to each event. Each announcement should identify the household hazardous wastes that may be recycled at the event.

Person(s) or Department(s) Responsible

Streets Department, Water & Sewer Department, Keep Hammond Beautiful Committee, Information Technology Department, Public Information Officer

Timeframe/Milestones for Implementation

Ongoing, at least annually, 1 month prior to community-wide household hazardous wastes recycling events

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Section 4.0 Best Management Practices

Minimum Control Measure 1

Public Education and Outreach on Stormwater Impacts

Best Management Practice PE12

Proper Pet Waste Management

BMP Description

Place pet waste collection stations with signage encouraging pet owners to "Please pick up after your pet" in areas where pets are frequently walked.

Measurable Goal(s)

- 1. For 3–6 months, trial pet waste collection stations and signage in Zemurray Park, Cate Square Park, and historic downtown Hammond, areas where pets are frequently walked.
- 2. Assess the effectiveness of these stations and signage through weekly pet waste collection (e.g. has the presence of the stations and signage resulted in less pet waste on park grounds?).
- 3. Record findings after collection.
- 4. Communicate findings during meetings of the Stormwater Committee.

Person(s) or Department(s) Responsible

Parks & Grounds Department, Recreation Department, Stormwater Committee

Timeframe/Milestones for Implementation

3-6 months, weekly, after collection, during meetings of the Stormwater Committee

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Section 4.0 Best Management Practices

Minimum Control Measure 1

Public Education and Outreach on Stormwater Impacts

Best Management Practice PE19

Others—Public Access to the Stormwater Management Plan

BMP Description

Make the SWMP easily and publicly accessible.

Measurable Goal(s)

- 1. Within 2 months of LDEQ approval of this SWMP, publish a copy (e.g. in PDF) of the revised SWMP in a conspicuous place on the City's website, www.hammond.org.
- 2. Announce the availability of this copy (e.g. on the City's homepage, on the City's Facebook, in the City's Journal of Record *The Daily Star*, in utility stuffers) within 1 month of publication.
- 3. Maintain this copy on the City's website until the next LDEQ-approved revision.
- 4. Print this copy upon request.

Person(s) or Department(s) Responsible

Streets Department, Information Technology Department

Timeframe/Milestones for Implementation

Within 2 months, within 1 month, until the next LDEQ-approved revision, upon request

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Section 4.0 Best Management Practices

Minimum Control Measure 2

Public Involvement/Participation in Development and Implementation of the Stormwater Program

Best Management Practice PI7

Community Cleanups

BMP Description

Implement monthly community cleanups, supplemented by daily cleanups performed by the City's Parks & Grounds Department.

Measurable Goal(s)

- 1. Through the City's Keep Hammond Beautiful Committee, organize monthly community cleanups in areas where litter is a problem—involving volunteers from the City, civic and community organizations, schools, businesses, and the general public.
- 2. Supplement these cleanups with daily cleanups performed by the City's Parks & Grounds Department across all 5 of the City's districts in areas where litter is a problem and as directed by the Hammond City Council Member representing each district.

Person(s) or Department(s) Responsible

Keep Hammond Beautiful Committee, Parks & Grounds Department

Timeframe/Milestones for Implementation

Monthly, daily

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Best Management Practices

Minimum Control Measure 2

Public Involvement/Participation in Development and Implementation of the Stormwater Program

Best Management Practice PI11

Storm Drain Stenciling

BMP Description

Stencil/mark storm drains to remind citizens they are not for dumping and drain to waterways.

Measurable Goal(s)

1. As storm drains are inspected/cleaned, verify they are stenciled/marked "NO DUMPING | DRAINS TO WATERWAYS" (or similar), stencil/mark them if they are not, and record the finding/action.

Person(s) or Department(s) Responsible

Streets Department, Keep Hammond Beautiful Committee

Timeframe/Milestones for Implementation

As storm drains are inspected/cleaned

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Minimum Control Measure 3

Illicit Discharge Detection and Elimination

Best Management Practice IDDE5

Recycling Programs for Commonly Dumped Wastes, such as Motor Oil, Antifreeze, and Pesticides

BMP Description

Implement a community-wide recycling program for commonly dumped wastes, such as aerosol cans, antifreeze, batteries, cooking oil, electronics, herbicides, household cleaners, lamps/light bulbs, motor oil, propane tanks, paint, pesticides, and tires.

Measurable Goal(s)

- 1. Annually, host at least 1 community-wide household hazardous wastes recycling event (e.g. the City's annual Recycling Day).
- 2. Promote the event through BMP PE6—Education on Proper Disposal of Household Hazardous Wastes.

Person(s) or Department(s) Responsible

Streets Department, Water & Sewer Department, Keep Hammond Beautiful Committee, Information Technology Department, Public Information Officer

Timeframe/Milestones for Implementation

Annually, 1 month prior to the community-wide household hazardous wastes recycling event (per BMP PE6)

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Section 4.0 Best Management Practices

Minimum Control Measure 3

Illicit Discharge Detection and Elimination

Best Management Practice IDDE7

System to Inform General Public of Hazards Associated with Illegal Dischargers and Improper Disposal of Waste

BMP Description

Distribute utility stuffers to inform the public of the hazards associated with illegal dischargers and improper disposal of waste.

Measurable Goal(s)

- 1. Distribute utility stuffers to the 6,400 residential and commercial users of the City's water and sewer utilities to inform the public of the hazards associated with illegal dischargers and improper disposal of waste. These utility stuffers should also remind the public of the prohibitions against illicit discharge (found under IDDE8) and encourage reporting of illegal dischargers to the Streets Department. Including both residential and commercial users will ensure this information reaches every household and business in Hammond—reminding them stormwater management is a community effort with community-wide implications. Distribution may be on an ongoing basis, but should occur at least annually.
- 2. Provide brick-and-mortar businesses copies of the above when occupational licenses are applied for or renewed (annually).
- 3. Provide contractors copies of the above before permits are issued.
- 4. Publish this information in a conspicuous place on the City's website, www.hammond.org, where it shall be updated annually.

Person(s) or Department(s) Responsible

Streets Department, Water & Sewer Department, Keep Hammond Beautiful Committee, Information Technology Department

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Timeframe/Milestones for Implementation

Ongoing, at least annually, before permits are issued

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Minimum Control Measure 3

Illicit Discharge Detection and Elimination

Best Management Practice IDDE8

Others—Illicit Discharge Prohibition Ordinance

BMP Description

Establish and enforce City ordinances prohibiting illicit discharges—such as the City's Unified Development Code (UDC), City Ordinance 14-5364, as amended June 27, 2017.

Measurable Goal(s)

- 1. Enforce UDC Section 12.2.1—Drainage Impact Study.
- 2. Enforce UDC Section 12.2.2—General Design and Construction Standards of Storm Drainage.
- 3. Enforce UDC Section 12.3.2—User Requirements, which prohibits any user (i.e. person, business, or industry) from discharging or causing to be discharged into the MS4 any substance that would cause the City to violate a water quality standard or a discharge permit requirement; regulates or prohibits specific types of discharges and specific substances; and identifies specific instances in which the user must comply with State and/or federal requirements.
- 4. Enforce UDC Section 12.3.3—Stormwater Discharges from Construction Activities.
- 5. Enforce UDC Section 12.3.5—Compliance Monitoring, which reserves for the City the right to enter the premises of any user discharging stormwater to into the MS4 or into any water of the United States to verify the user is in compliance UDC, State, and/or federal requirements.
- 6. Enforce UDC Section 12.3.6—Penalties and Enforcement, which provides for Notices of Noncompliance, Cease and Desist Orders, and fines by the City for illicit discharges.

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7. Incorporate future stormwater-related ordinances and UDC amendments prohibiting illicit discharges into this BMP as adopted by the Hammond City Council.

Person(s) or Department(s) Responsible

Building Department, Streets Department, Water & Sewer Department

Timeframe/Milestones for Implementation

Ongoing (e.g., for enforcement, in response to calls from the public or reports/observations made by City workers—particularly as related to other BMPs), as stormwater-related ordinances and/or UDC amendments prohibiting illicit discharges are adopted

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Minimum Control Measure 3

Illicit Discharge Detection and Elimination

Best Management Practice IDDE9

Others—Illicit Discharge Detection and Elimination Procedures

BMP Description

Detect, identify, trace, and eliminate illicit discharges.

Measurable Goal(s)

- 1. At least annually and when water quality testing yields an unexplainable anomaly, conduct dry-weather, visual inspections of the City's receiving waters and outfalls to detect illicit discharges.
- 2. When an illicit discharge is suspected
 - a. determine its frequency by returning to the site (e.g. daily, weekly, monthly) during dry weather,
 - b. determine its severity through field measurements (e.g. volume, flow), and
 - c. determine its composition by field testing for chemical, bacterial, and other indicators (e.g. ammonia, boron, chlorine, color, conductivity, coliforms, detergents, fluorescence, fluoride, hardness, pH, potassium, surface tension, surfactants, and turbidity).
- 3. When an illicit discharge is confirmed (e.g. by the presence of pollutants or pathogens), determine its origin through further field observations and/or tests—tracing the discharge from the receiving water or outfall, up pipes, ditches, canals, and/or other conveyances, to the origin.
- 4. If the origin is a person, business, or industry,
 - a. refer to IDDE8 and enforceable City ordinances prohibiting illicit discharges,

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- b. notify the originator of the illicit discharge and the originator's obligation to correct the illicit discharge immediately,
- c. provide the originator an opportunity to meet with the City's Stormwater Manager at earliest possible convenience to review the originator's plan to correct the illicit discharge,
- d. issue a Notice of Noncompliance, Cease and Desist Order, and/or fine as necessary to eliminate the illicit discharge (this step may occur simultaneously with Steps a. and/or b.) and,
- e. contact LDEQ if these steps fail to correct the illicit discharge.
- 5. If the origin is municipal (e.g. a broken sewer main), take necessary action to correct the illicit discharge immediately.
- 6. If the origin is neither a person, business, or industry nor municipal or cannot be determined, contact LDEQ immediately.
- 7. Promote (e.g. via PE3) UDC Section 12.3.7—Citizen Participation, which encourages citizens to report spills, releases, illicit connections, or other suspected illegal discharges into the MS4 or any water of the United States to the Building Department.
- 8. Incorporate future stormwater-related ordinances and UDC amendments concerning illicit discharge detection and elimination procedures into this BMP as adopted by the Hammond City Council.

Person(s) or Department(s) Responsible

Streets Department, Water & Sewer Department

Timeframe/Milestones for Implementation

At least annually, when water quality testing yields an unexplainable anomaly, when an illicit discharge is suspected, when an illicit discharge is confirmed, ongoing (e.g., for enforcement, in response to confirmation of an illicit discharge or reports from citizens), as stormwater-related ordinances and/or UDC amendments concerning illicit discharge detection and elimination procedures are adopted

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Best Management Practices

Minimum Control Measure 4

Construction Site Stormwater Runoff Control

Best Management Practice CONS1

BMP Inspection and Maintenance

BMP Description

Perform construction site inspections to ensure BMPs are being implemented and are effective as implemented. Record findings and communicate these findings to the Stormwater Committee for evaluating the practicality of BMPs and revising them as necessary.

Measurable Goal(s)

- 1. Perform construction site inspections before, during, and after construction.
- 2. Perform construction site inspections before, during, and after rainfalls.
- 3. During each inspection, evaluate the contractor's implementation of the following structural BMPs, as applicable:
 - CONS5 **Concrete Washout Areas** Construction Entrance Stabilization to Prevent Vehicle Tracking CONS6 CONS16 **Grass-lined Channels** CONS17 Land Grading CONS26 Silt Fence Perimeter Control CONS27 Sodding CONS31 Storm Drain Inlet Protection CONS35 **Vegetative Buffers**
- 4. During each inspection, advise the contractor of deficiencies in the implementation of these BMPs and recommend corrective actions to resolve such deficiencies.
- 5. Record findings and recommendations after each inspection.

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6. Communicate findings and recommendations during meetings of the Stormwater Committee.

Person(s) or Department(s) Responsible

Building Department, Stormwater Committee

Timeframe/Milestones for Implementation

Before, during, and after construction; before, during, and after rainfalls; during each inspection; after each inspection; when BMPs are not being implemented; during meetings of the Stormwater Committee

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Minimum Control Measure 4

Construction Site Stormwater Runoff Control

Best Management Practice CONS5

Concrete Washout Areas

BMP Description

Perform construction site inspections to identify and approve concrete washout areas and confirm these areas are properly contained to prevent contamination of or other impacts upon the stormwater system.

Measurable Goal(s)

- 1. Perform construction site inspections before, during, and after construction.
- 2. Perform construction site inspections before, during, and after rainfalls.
- 3. Record findings after each inspection.
- 4. Advise and/or cite the contractor when unapproved or improperly contained concrete washout areas are identified and have impacted or have the potential to impact the stormwater system.
- 5. Communicate findings during meetings of the Stormwater Committee.

Person(s) or Department(s) Responsible

Building Department, Stormwater Committee

Timeframe/Milestones for Implementation

Before, during, and after construction; before, during, and after rainfalls; after each inspection; when unapproved or improperly contained concrete washout areas are identified; during meetings of the Stormwater Committee

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Minimum Control Measure 4

Construction Site Stormwater Runoff Control

Best Management Practice CONS6

Construction Entrance Stabilization to Prevent Vehicle Tracking

BMP Description

Perform construction site inspections to identify and approve construction entrances and confirm these entrances are properly stabilized to prevent obstruction or contamination of or other impacts upon the stormwater system.

Measurable Goal(s)

- 1. Perform construction site inspections before, during, and after construction.
- 2. Perform construction site inspections before, during, and after rainfalls.
- 3. Record findings after each inspection.
- 4. Advise and/or cite the contractor when unapproved or improperly stabilized construction entrances are identified and have impacted or have the potential to impact the stormwater system.
- 5. Communicate findings during meetings of the Stormwater Committee.

Person(s) or Department(s) Responsible

Building Department, Stormwater Committee

Timeframe/Milestones for Implementation

Before, during, and after construction; before, during, and after rainfalls; after each inspection; when unapproved or improperly stabilized construction entrances are identified; during meetings of the Stormwater Committee

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Minimum Control Measure 4

Construction Site Stormwater Runoff Control

Best Management Practice CONS8

Construction Site Inspection by Municipal Inspectors

BMP Description

Perform construction site inspections to ensure work to be performed, being performed, and as completed includes adequate stormwater runoff control, supports this plan, and complies with City ordinances.

Measurable Goal(s)

- 1. Perform construction site inspections before, during, and after construction.
- 2. Perform construction site inspections before, during, and after rainfalls.
- 3. Record findings after each inspection.
- 4. Advise and/or cite the contractor when stormwater runoff control is inadequate and/or there has been a noncompliance finding.
- 5. Communicate findings during meetings of the Stormwater Committee.

Person(s) or Department(s) Responsible

Building Department, Stormwater Committee

Timeframe/Milestones for Implementation

Before, during, and after construction; before, during, and after rainfalls; after each inspection; when stormwater runoff control is inadequate and/or there has been a noncompliance finding; during meetings of the Stormwater Committee
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Minimum Control Measure 4

Construction Site Stormwater Runoff Control

Best Management Practice CONS16

Grass-lined Channels

BMP Description

Perform construction site inspections to advise the contractor on the use of grass-lined channels for supplemental stormwater runoff control and to ensure grass-lined channels, when used, function properly.

Measurable Goal(s)

- 1. Perform construction site inspections before, during, and after construction.
- 2. Perform construction site inspections before, during, and after rainfalls.
- 3. Record findings after each inspection.
- 4. Advise the contractor when stormwater runoff control is inadequate and grass-lined channels may be used to provide supplemental runoff control.
- 5. When grass-lined channels are to be used, perform construction site inspections before and after sod is installed.
- 6. Communicate findings during meetings of the Stormwater Committee.

Person(s) or Department(s) Responsible

Building Department, Stormwater Committee

Timeframe/Milestones for Implementation

Before, during, and after construction; before, during, and after rainfalls; after each inspection; when stormwater runoff control is inadequate and/or there has been a noncompliance finding; before and after sod is installed; during meetings of the Stormwater Committee

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Section 4.0 Best Management Practices

Minimum Control Measure 4

Construction Site Stormwater Runoff Control

Best Management Practice CONS17

Land Grading

BMP Description

Perform construction site inspections to advise the contractor when, where, and how land grading may be used for stormwater runoff control.

Measurable Goal(s)

- 1. As early as possible, advise the contractor when, where, and how land grading may be used for stormwater runoff control so land grading can be incorporated into construction plans and specifications.
- 2. Perform construction site inspections before, during, and after construction.
- 3. Perform construction site inspections before, during, and after rainfalls.
- 4. Record findings after each inspection.
- 5. Communicate findings during meetings of the Stormwater Committee.

Person(s) or Department(s) Responsible

Building Department, Stormwater Committee

Timeframe/Milestones for Implementation

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Minimum Control Measure 4

Construction Site Stormwater Runoff Control

Best Management Practice CONS26

Silt Fence Perimeter Control

BMP Description

Perform construction site inspections to advise the contractor when and where silt fence perimeter control will be required for stormwater runoff control.

Measurable Goal(s)

- 1. As early as possible, advise the contractor when and where silt fence perimeter control will be required for stormwater runoff control so silt fence perimeter control can be incorporated into construction plans and specifications.
- 2. Perform construction site inspections before, during, and after construction.
- 3. Perform construction site inspections before, during, and after rainfalls.
- 4. Record findings after each inspection.
- 5. Communicate findings during meetings of the Stormwater Committee.

Person(s) or Department(s) Responsible

Building Department, Stormwater Committee

Timeframe/Milestones for Implementation

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Minimum Control Measure 4

Construction Site Stormwater Runoff Control

Best Management Practice CONS27

Sodding

BMP Description

Perform construction site inspections to advise the contractor when, where, and how sodding may be used for stormwater runoff control.

Measurable Goal(s)

- 1. As early as possible, advise the contractor when, where, and how sodding may be used for stormwater runoff control so sodding can be incorporated into construction plans and specifications.
- 2. Perform construction site inspections before, during, and after construction.
- 3. Perform construction site inspections before, during, and after rainfalls.
- 4. Record findings after each inspection.
- 5. Communicate findings during meetings of the Stormwater Committee.

Person(s) or Department(s) Responsible

Building Department, Stormwater Committee

Timeframe/Milestones for Implementation

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Minimum Control Measure 4

Construction Site Stormwater Runoff Control

Best Management Practice CONS31

Storm Drain Inlet Protection

BMP Description

Perform construction site inspections to ensure storm drain inlets are protected to prevent obstruction or contamination of or other impacts upon the stormwater system.

Measurable Goal(s)

- 1. Perform construction site inspections before, during, and after construction.
- 2. Perform construction site inspections before, during, and after rainfalls.
- 3. Record findings after each inspection.
- 4. Advise and/or cite the contractor when storm drain inlet protection is inadequate and has impacted or has the potential to impact the stormwater system.
- 5. Communicate findings during meetings of the Stormwater Committee.

Person(s) or Department(s) Responsible

Building Department, Stormwater Committee

Timeframe/Milestones for Implementation

Before, during, and after construction; before, during, and after rainfalls; after each inspection; when storm drain inlet protection is inadequate; during meetings of the Stormwater Committee

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Minimum Control Measure 4

Construction Site Stormwater Runoff Control

Best Management Practice CONS35

Vegetative Buffers

BMP Description

Perform construction site inspections to advise the contractor when, where, and how vegetative buffers may be used for stormwater runoff control.

Measurable Goal(s)

- 1. As early as possible, advise the contractor when, where, and how vegetative buffers may be used for stormwater runoff control so vegetative buffers can be incorporated into construction plans and specifications.
- 2. Perform construction site inspections before, during, and after construction.
- 3. Perform construction site inspections before, during, and after rainfalls.
- 4. Record findings after each inspection.
- 5. Communicate findings during meetings of the Stormwater Committee.

Person(s) or Department(s) Responsible

Building Department, Stormwater Committee

Timeframe/Milestones for Implementation

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Minimum Control Measure 4

Construction Site Stormwater Runoff Control

Best Management Practice CONS37

Educational and Training Measures for Construction Site Operators

BMP Description

Educate the contractor on BMPs; permit, land clearing, and construction requirements; and City codes/ordinances applicable to construction.

Measurable Goal(s)

- 1. Within 2 months of LDEQ approval of this SWMP, publish copies (e.g. in PDF) of the following educational materials in a conspicuous place on the City's website, www.hammond.org:
 - a. City of Hammond, Louisiana, Unified Development Code Article 12—Floodways, Floodplains, and Stormwater Management (Attachment 1)
 - b. 10 Steps to Stormwater Pollution Prevention on Small Residential Construction Sites (Attachment 4)
 - c. Stormwater and the Construction Industry (Attachment 5)
- 2. Provide the contractor copies of the above before permits are issued.
- 3. Meet with the contractor before permits are issued.
- 4. Meet with the contractor as necessary before and during construction.

Person(s) or Department(s) Responsible

Building Department

Timeframe/Milestones for Implementation

Within 2 months; before permits are issued; before and during construction

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Best Management Practices

Minimum Control Measure 5

Post-construction Stormwater Management in New Development and Redevelopment

Best Management Practice POST5

BMP Inspection and Maintenance

BMP Description

Ensure the long-term operation and maintenance of BMPs.

Measurable Goal(s)

1. Annually, as line items in the Streets, Water & Sewer, Building, and Parks & Grounds Departments' budgets, provide for adequate funding for the operation and maintenance of the following structural BMPs by trained and skilled staff from these departments:

POST6	Buffer Zones
POST11	Grassed Filter Strips
PP16	Storm Drain System Cleaning

- 2. Annually, as line items in the Streets, Water & Sewer, Building, and Parks & Grounds Departments' budgets, provide for adequate funding for the operation and maintenance of the following nonstructural BMPs by trained and skilled staff from these departments:
 - Educational Displays, Pamphlets, Booklets, and Utility Stuffers PE3 PE6 Education on Proper Disposal of Household Hazardous Wastes **Proper Pet Waste Management PE12** Others—Public Access to the Stormwater Management Plan **PE19** PI7 **Community Cleanups PI11** Storm Drain Stenciling IDDE5 Recycling Programs for Commonly Dumped Wastes, such as Motor Oil, Antifreeze, and Pesticides IDDE7 System to Inform General Public of Hazards Associated with Illegal Dischargers and Improper Disposal of Waste Others—Illicit Discharge Prohibition Ordinance IDDE8

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IDDE9	Others—Illicit Discharge Detection and Elimination Procedures
CONS1	BMP Inspection and Maintenance
CONS8	Construction Site Inspection by Municipal Inspectors
CONS37	Educational and Training Measures for Construction Site Operators
POST5	BMP Inspection and Maintenance
POST22	Ordinances for Post-construction Runoff
PP18	Used Oil Recycling
PP19	Vehicle Washing

Person(s) or Department(s) Responsible

Streets Department, Water & Sewer Department, Building Department, Parks & Grounds Department

Timeframe/Milestones for Implementation

Annually

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Best Management Practices

Minimum Control Measure 5

Post-construction Stormwater Management in New Development and Redevelopment

Best Management Practice POST6

Buffer Zones

BMP Description

Keep buffer zones (e.g. roadside shoulders and other City rights of way) free of obstructions by mowing grass and maintaining trees and plants located in these buffer zones.

Measurable Goal(s)

- 1. Mow grass monthly and in response to calls from the public or reports/observations made by City workers related to high grass.
- 2. During mowings and in response to calls from the public or reports/observations made by City workers related to fallen branches, sick, dying, or dead trees, and/or overgrowth, perform tree and plant maintenance to keep buffer zones free of obstructions.

Person(s) or Department(s) Responsible

Streets Department, Parks & Grounds Department

Timeframe/Milestones for Implementation

Monthly, in response to calls from the public or reports/observations made by City workers

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Best Management Practices

Minimum Control Measure 5

Post-construction Stormwater Management in New Development and Redevelopment

Best Management Practice POST11

Grassed Filter Strips

BMP Description

Keep grassed filter strips free of obstructions by mowing grass.

Measurable Goal(s)

1. Mow grass monthly and in response to calls from the public or reports/observations made by City workers related to high grass.

Person(s) or Department(s) Responsible

Streets Department, Parks & Grounds Department

Timeframe/Milestones for Implementation

Monthly, in response to calls from the public or reports/observations made by City workers

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Best Management Practices

Minimum Control Measure 5

Post-construction Stormwater Management in New Development and Redevelopment

Best Management Practice POST22

Ordinances for Post-construction Runoff

BMP Description

Establish and enforce City ordinances prohibiting post-construction runoff—such as the UDC.

Measurable Goal(s)

- 1. Enforce UDC Section 12.2.2—General Design and Construction Standards of Storm Drainage.
- 2. Enforce UDC Section 12.3.2—User Requirements, which prohibits any user (i.e. person, business, or industry) from discharging or causing to be discharged into the MS4 any substance that would cause the City to violate a water quality standard or a discharge permit requirement; regulates or prohibits specific types of discharges and specific substances; and identifies specific instances in which the user must comply with State and/or federal requirements.
- 3. Enforce UDC Section 12.3.5—Compliance Monitoring, which reserves for the City the right to enter the premises of any user discharging stormwater to into the MS4 or into any water of the United States to verify the user is in compliance UDC, State, and/or federal requirements.
- 4. Enforce UDC Section 12.3.6—Penalties and Enforcement, which provides for Notices of Noncompliance, Cease and Desist Orders, and fines by the City for illicit discharges.
- 5. Promote (e.g. via PE3) UDC Section 12.3.7—Citizen Participation, which encourages citizens to report to the City spills, releases, illicit connections, or other suspected illegal discharges into the MS4 or any water of the United States.

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6. Incorporate future stormwater-related ordinances and UDC amendments concerning post-construction runoff into this BMP as adopted by the Hammond City Council.

Person(s) or Department(s) Responsible

Building Department, Streets Department, Water & Sewer Department

Timeframe/Milestones for Implementation

Ongoing (e.g., for enforcement, in response to calls from the public or reports/observations made by City workers—particularly as related to other BMPs), as stormwater-related ordinances and/or UDC amendments concerning post-construction runoff are adopted

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Section 4.0 Best Management Practices

Minimum Control Measure 6

Pollution Prevention/Good Housekeeping for Municipal Operations

Best Management Practice PP16

Storm Drain System Cleaning

BMP Description

Keep storm drains free of obstructions through routine cleanings.

Measurable Goal(s)

- 1. Clean storm drains in response to calls from the public or reports/observations made by City workers related to obstructions.
- 2. Before, during, and after heavy rainfalls, inspect and, as necessary, clean storm drains in areas with an historically high volume of calls from the public related to stormwater (e.g. obstructed storm drains, standing water, water that has backed up into homes).

Person(s) or Department(s) Responsible

Streets Department

Timeframe/Milestones for Implementation

In response to calls from the public or reports/observations made by City workers; before, during, and after heavy rainfalls

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Best Management Practices

Minimum Control Measure 6

Pollution Prevention/Good Housekeeping for Municipal Operations

Best Management Practice PP18

Used Oil Recycling

BMP Description

Recycle used oil.

Measurable Goal(s)

- 1. During oil changes and other routine maintenance, discard used oil from City vehicles in the waste oil container at the City Garage, from which the oil can be collected and recycled.
- 2. Annually, encourage citizens to recycle used oil on Recycling Day, collect this oil, and recycle it.

Person(s) or Department(s) Responsible

All City departments with City vehicles, City Garage, Streets Department

Timeframe/Milestones for Implementation

During oil changes and other routine maintenance, annually

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Best Management Practices

Minimum Control Measure 6

Pollution Prevention/Good Housekeeping for Municipal Operations

Best Management Practice PP19

Vehicle Washing

BMP Description

Wash City vehicles in designated washdown areas at the City's Maintenance Facility, where oil-water separators have been installed to remove oil and solids from runoff.

Measurable Goal(s)

1. When washing City vehicles, wash them in designated washdown areas at the City's Maintenance Facility.

Person(s) or Department(s) Responsible

All City departments with City vehicles

Timeframe/Milestones for Implementation

When washing City vehicles

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Section 4.0 Best Management Practices

Minimum Control Measure 6

Pollution Prevention/Good Housekeeping for Municipal Operations

Best Management Practice PP20

Operation and Maintenance (O&M) Program that Has a Goal of Preventing or Reducing Pollutant Runoff from Municipal Operations

BMP Description

Perform preventative maintenance to reduce pollutant runoff from City operations.

Measurable Goal(s)

- 1. Mow grass around City buildings every 1–2 weeks during the spring and summer and every 2–4 weeks during the fall and winter.
- 2. Mow grass in City parks and along City rights of way every 2–4 weeks and in response to calls from the public or reports/observations made by City workers related to high grass.
- 3. When mowing grass, maintain trees and plants around City buildings, in City parks, and along City rights of way—removing fallen branches and treating or removing sick, dying, or dead trees and plants.
- 4. When performing this maintenance, ensure clippings are not swept into streets or storm drains.
- 5. When performing this maintenance, remove obstructions from storm drains, ditches, canals, and other conveyances. Recycle removed leaves and other organic sediment (e.g. by providing it to homeowners for composting). Transport removed non-recyclable debris to an approved disposal site (e.g. Averett Dirt Pit). Transport floatables to the Tangipahoa Parish Government Regional Landfill.
- 6. During community events (e.g. cook-offs, fireworks displays, fairs, parades), supplement permanent waste receptacles with temporary ones along pedestrian routes and in spaces where people gather. Use bags and/or liners to contain and collect trash.

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- 7. Collect trash and/or perform street-sweeping following such events. Transport collected trash and floatables to the Tangipahoa Parish Government Regional Landfill.
- 8. Perform 8–10 community cleanups annually.
- Ensure City workers are trained (e.g. via operator's manuals, demonstrations, and/or certifications) in the operation and maintenance of the light and heavy equipment (e.g. mowers, skid-steer loaders, backhoes) used in the implementation of this BMP before their use.
- 10.At least annually, revisit LDEQ, Environmental Protection Agency (EPA), and Center for Watershed Protection websites to identify training opportunities and updated training materials related to stormwater management (e.g. Illicit Discharge Detection and Elimination—A Guidance Manual for Program Development and Technical Assessments). Incorporate these training opportunities and materials into the training described above.
- 11.Enforce City ordinances related to grass-cutting, landscaping, and trash—namely Article II—Cutting of Grass, Weeds, and Brushes and Removal of Trash, Rubbish, and Garbage (Attachment 6). Enforcement should be on an ongoing basis and in response to calls from the public or reports/observations made by City workers.

Person(s) or Department(s) Responsible

Parks & Grounds Department, Streets Department, Keep Hammond Beautiful Committee, Building Department (Code Enforcement Division)

Timeframe/Milestones for Implementation

1–2 weeks, 2–4 weeks, when mowing grass, when performing this maintenance, during community events, following such events, annually, ongoing

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Section 5.0 Storm Water Management Plan Evaluation

5.0 Stormwater Management Plan Evaluation

This stormwater management plan (SWMP) will be maintained and updated to reflect current conditions within the City of Hammond. The SWMP will be reviewed annually and updated as necessary to remain current and effective. All reviews and assessments will be documented in an annual report.

5.1 Annual Reporting

Louisiana Pollutant Discharge Elimination System (LPDES) General Permit No. LAR041030, Part V, Paragraph C, requires the City to submit an annual report to the Louisiana Department of Environmental Quality (LDEQ) by March 10 of each year after coverage under the permit is obtained.

This report will include:

- a. the status of compliance with permit conditions,
- b. an assessment of the appropriateness of the best management practices (BMPs) being adopted in the SWMP,
- c. progress toward achieving the identified measurable goals for each minimum control measure (MCM),
- d. results of information collected and analyzed during the reporting year,
- e. a summary of the stormwater activities that are planned during the next reporting period, and
- f. reporting on any change in identified measurable goals.

The reports for each reporting period will be attached as Appendices to this SWMP and made available to the public for comment.

2019 Stormwater Management Plan Section 5.0

LPDES Permit No. LAR041030

Agency Interest No. 104053

Storm Water Management Plan Evaluation

5.2 Evaluating and Updating the SWMP

On an ongoing basis the City of Hammond will evaluate SWMP compliance, the appropriateness of identified BMPs, and progress toward achieving identified measurable goals and make any necessary updates to the SWMP. In doing so, the City will consider public comments, the results of questionnaires and surveys, record keeping to track progress toward measurable goals, visual inspections of stormwater and stormwater structures, analytical testing of stormwater and suspected illicit discharges, and the results of the City's own annual review of the SWMP.

LPDES Permit No. LAR041030

Agency Interest No. 104053

2019 Stormwater Management Plan

Section 6.0 Attachments

Attachment 1

City of Hammond, Louisiana, Unified Development Code Article 12—Floodways, Floodplains, and Stormwater Management

Article 12. Floodways, Floodplains, and	12.3 Water Quality Requirements
Stormwater Management	12.3.1 General Provisions
12.1 Floodways and Floodplains	12.3.2 User Requirements
12.1.1 In General	12.3.3 Stormwater Discharges from
12.1.2 General Provisions	Construction Activities
12.1.3 Administration	12.3.4 Grading Permit
12.1.4 Provisions For Flood Hazard Reduction	12.3.5 Compliance Monitoring
12.2 Stormwater Management	12.3.6 Penalties and Enforcement
12.2.1 Drainage Impact Study	12.3.7 Citizen Participation
12.2.2 General Design and Construction	12.3.8 Miscellaneous Provisions
Standards of Storm Drainage	
Improvements	

12.1 Floodways and Floodplains

12.1.1 In General

A. Statutory Authorization

The Legislature of the State of Louisiana has in statute <u>LA R.S. 38:84</u> delegated the responsibility of local governmental units to adopt regulations designed to minimize flood losses. Therefore, the City Council of Hammond, Louisiana, does ordain as follows.

B. Findings of Fact

- (1) The flood hazard areas of Hammond are subject to periodic inundation, which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, and extraordinary public expenditures for flood protection and relief, all of which adversely affect the public health, safety and general welfare.
- (2) These flood losses are created by the cumulative effect of obstructions in floodplains which cause an increase in flood heights and velocities, and by the occupancy of flood hazard areas by uses vulnerable to floods and hazardous to other lands because they are inadequately elevated, floodproofed or otherwise protected from flood damage.

C. Statement of purpose.

It is the purpose of this chapter to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

- (1) Protect human life and health;
- (2) Minimize expenditure of public money for costly flood control projects;
- (3) Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- (4) Minimize prolonged business interruptions;
- (5) Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in floodplains;

- (6) Help maintain a stable tax base by providing for the sound use and development of flood-prone areas in such a manner as to minimize future flood blight areas; and
- (7) Ensure that potential buyers are notified that property is in a flood area.

D. Methods of reducing flood losses.

In order to accomplish its purposes, this chapter uses the following methods:

- (1) Restrict or prohibit uses that are dangerous to health, safety or property in times of flood, or cause excessive increases in flood heights or velocities;
- (2) Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- (3) Control the alteration of natural floodplains, stream channels, and natural protective barriers, which are involved in the accommodation of flood waters;
- (4) Control filling, grading, dredging and other development which may increase flood damage;
- (5) Prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands.

12.1.2 General Provisions

A. Lands to which this chapter applies.

The chapter shall apply to all areas of special flood hazard within the jurisdiction of the City of Hammond, Louisiana.

B. Basis for establishing the areas of special flood hazard.

The areas of special flood hazard identified by the Federal Emergency Management Agency in the current scientific and engineering report entitled, "The Flood Insurance Study (FIS) for Tangipahoa Parish, Louisiana and Incorporated Areas," effective July 22, 2010, with accompanying Flood Insurance Rate Maps (FIRM) effective July 22, 2010, and any revisions thereto are hereby adopted by reference and declared to be a part of this chapter.

C. Establishment of development permit.

A floodplain development permit shall be required to ensure conformance with the provisions of this chapter.

D. Compliance.

No structure or land shall hereafter be located, altered, or have its use changed without full compliance with the terms of this chapter and other applicable regulations.

E. Abrogation and greater restrictions.

This chapter is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this chapter and another ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

F. Interpretation.

In the interpretation and application of this chapter, all provisions shall be:

- (1) Considered as minimum requirements;
- (2) Liberally construed in favor of the City of Hammond; and
- (3) Deemed neither to limit nor repeal any other powers granted under State statutes.

G. Warning and disclaimer or liability.

The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. On rare occasions greater floods can and will occur and flood heights may be increased by manmade or natural causes. This chapter does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of the community or any official or employee thereof for any flood damages that result from reliance on this chapter or any administrative decision lawfully made hereunder.

H. Severability.

If any section, clause, sentence, or phrase of this chapter is held to be invalid or unconstitutional by any court of competent jurisdiction, then said holding shall in no way affect the validity of the remaining portions of this chapter

I. Penalties for noncompliance.

No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this chapter and other applicable regulations. Violation of the provisions of this chapter by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions) shall constitute a misdemeanor. Any person who violates this chapter or fails to comply with any of its requirements shall upon conviction thereof be fined not more than five hundred dollars (\$500.00) or imprisoned for not more than six (6) months, or both, for each violation. Each day the violation continues shall be deemed a new violation. In addition, the violator shall pay all costs and expenses involved in the case. Nothing herein contained shall prevent the City of Hammond from taking such other lawful action as is necessary to prevent or remedy any violation. (Appendix H)

12.1.3 Administration

A. Designation of the floodplain administrator.

The city building official or the designee of the building official is hereby appointed the floodplain administrator to administer and implement the provisions of this chapter and other appropriate sections of <u>44 CFR (Emergency Management and Assistance—National Flood Insurance Program Regulations)</u> pertaining to floodplain management.

B. Duties and responsibilities of the floodplain administrator.

Duties and responsibilities of the floodplain administrator shall include, but not be limited to, the following:

- (1) Maintain and hold open for public inspection all records pertaining to the provisions of this chapter.
- (2) Review permit application to determine whether to ensure that the proposed building site project, including the placement of manufactured homes, will be reasonably safe from flooding.
- (3) Review, approve or deny all applications for development permits required by adoption of this chapter.
- (4) Review permits for proposed development to assure that all necessary permits have been obtained from those federal, state or local governmental agencies (including <u>Section 404 of the Federal Water</u> <u>Pollution Control Act Amendments of 1972, 33 U.S.C. 1334</u>) from which prior approval is required.
- (5) Where interpretation is needed as to the exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions) the floodplain administrator shall make the necessary interpretation.
- (6) Notify, in riverine situations, adjacent communities and the state coordinating agency which is the department of transportation and development, prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency.
- (7) Assure that the flood carrying capacity within the altered or relocated portion of any watercourse is maintained.
- (8) When base flood elevation data has not been provided in accordance with <u>Sub-Section 12.1.3C</u>, the floodplain administrator shall obtain, review and reasonably utilize any base flood elevation data and floodway data available from a federal, state or other source, in order to administer the provisions of <u>Section 12.1.4</u> of this chapter.
- (9) When a regulatory floodway has not been designated, the floodplain administrator must require that no new construction, substantial improvements, or other development (including fill) shall be permitted within Zones A1—30 and AE on the community's FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one (1) foot at any point within the community.
- (10) Under the provisions of <u>44 CFR Chapter 1, Section 65.12</u>, of the National Flood Insurance Program regulations, a community may approve certain development in Zones A1—30, AE, AH, on the

community's FIRM which increases the water surface elevation of the base flood by more than one (1) foot, provided that the community first completes all of the provisions required by <u>44 CFR Chapter</u> <u>1, Section 65.12</u>.

C. Permit procedures.

- (1) Application for a floodplain development permit shall be presented to the floodplain administrator on forms furnished by him/her and may include, but not be limited to, plans in duplicate drawn to scale showing the location, dimensions, and elevation of proposed landscape alterations, existing and proposed structures, including the placement of manufactured homes, and the location of the foregoing in relation to areas of special flood hazard. Additionally, the following information is required:
 - (a) Elevation (in relation to mean sea level), of the lowest floor (including basement) of all new and substantially improved structures;
 - (b) Elevation in relation to mean sea level to which any nonresidential structure shall be floodproofed;
 - (c) A certificate from a registered professional engineer or architect that the nonresidential floodproofed structure shall meet the floodproofing criteria of Paragraph 12.1.4 B(2);
 - (d) Description of the extent to which any watercourse or natural drainage will be altered or relocated as a result of proposed development;
 - (e) Maintain a record of all such information in accordance with <u>Sub-Section 12.1.3 B</u>.
- (2) Approval or denial of a floodplain development permit by the floodplain administrator shall be based on all of the provisions of this chapter and the following relevant factors:
 - (a) The danger to life and property due to flooding or erosion damage;
 - (b) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
 - (c) The danger that materials may be swept onto other lands to the injury of others;
 - (d) The compatibility of the proposed use with existing and anticipated development;
 - (e) The safety of access to the property in times of flood for ordinary and emergency vehicles;
 - (f) The costs of providing governmental services during and after flood conditions including maintenance and repair of streets and bridges, and public utilities and facilities such as sewer, gas, electrical and water systems;
 - (g) The expected heights, velocity, duration, rate of rise and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site;
 - (h) The necessity to the facility of a waterfront location, where applicable;
 - (i) The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use.

D. Variance procedures.

(1) The appeal board, as appointed by the mayor of the City of Hammond, shall hear and render judgment on requests for variances from the requirements of this chapter.

- (2) The appeal board shall hear and render judgment on an appeal only when it is alleged there is an error in any requirement, decision, or determination made by the floodplain administrator in the enforcement or administration of this chapter.
- (3) Any person or persons aggrieved by the decision of the appeal board may appeal such decision in the courts of competent jurisdiction.
- (4) The floodplain administrator shall maintain a record of all actions involving an appeal and shall report variances to the Federal Emergency Management Agency upon request.
- (5) Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the state inventory of historic places, without regard to the procedures set forth in the remainder of this chapter.
- (6) Variances may be issued for new construction and substantial improvements to be erected on a lot of one-half (½) acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood elevation, providing the relevant factors in <u>Paragraph 12.1.3 C(2)</u> have been fully considered. As the lot size increases beyond the one-half (½) acre, the technical justification required for issuing the variance increases.
- (7) Upon consideration of the factors noted above and the intent of this chapter, the appeal board may attach such conditions to the granting of variances as it deems necessary to further the purpose and objectives of this chapter (<u>Sub-Section 12.1.1 C</u>).
- (8) Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.
- (9) Variances may be issued for the repair or rehabilitation of historic structures upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.
- (10) Prerequisites for granting variances:
 - (a) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
 - (b) Variances shall only be issued upon:
 - (1) Showing a good and sufficient cause;
 - (2) A determination that failure to grant the variance would result in exceptional hardship to the applicant; and
 - (3) A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.
- (11) Any application to which a variance is granted shall be given written notice that the structure will be permitted to be built with the lowest floor elevation below the base flood elevation, and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.
- (12) Variances may be issued by a community for new construction and substantial improvements and for other development necessary for the conduct of a functionally dependent use provided that (i) the

criteria outlined in <u>Paragraph 12.1.3 D(10)</u> are met, and (ii) the structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.

12.1.4 Provisions for Flood Hazard Reduction

A. General standards.

In all areas of special flood hazards the following provisions are required for all new construction and substantial improvements:

- All new construction or substantial improvements shall be designed (or modified) and adequately anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;
- (2) All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damage;
- (3) All new construction or substantial improvements shall be constructed with materials resistant to flood damage;
- (4) All new construction or substantial improvements shall be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding;
- (5) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;
- (6) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the system and discharge from the systems into flood waters; and,
- (7) On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

B. Specific standards

In all areas of special flood hazards where base flood elevation data has been provided as set forth in (i) <u>Sub-Section 12.1.2 B</u>, (ii) <u>Paragraph 12.1.3 B(8)</u>), or (iii) <u>Paragraph 12.1.4 C(3)</u>, the following provisions are required:

- (1) Residential construction. New construction and substantial improvement of any residential structure shall have the lowest floor (including basement), elevated to or above the base flood elevation. A registered professional engineer, architect, or land surveyor shall submit a certification to the floodplain administrator that the standard of this subsection as proposed in <u>Paragraph 12.1.3 C(1)</u> is satisfied.
- (2) Nonresidential construction. New construction and substantial improvements of any commercial, industrial or other nonresidential structure shall either have the lowest floor (including basement) elevated to or above the base flood elevation or together with attendant utility and sanitary facilities, be designed so that below the base flood elevation the structure is watertight with walls substantially

impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered professional engineer or architect shall develop and/or review structural design, specifications, and plans for the construction, and shall certify that the design and methods of construction are in accordance with accepted standards of practice as outlined in this subsection. A record of such certification which includes the specific elevation (in relation to mean sea level) to which such structures are floodproofed shall be maintained by the floodplain administrator.

- (3) Enclosures. New construction and substantial improvements, with fully enclosed areas below the lowest floor that are usable solely for parking of vehicles, building access or storage in an area other than a basement and which are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:
 - (a) A minimum of two (2) openings on separate walls having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided.
 - (b) The bottom of all openings shall be no higher than one (1) foot above grade.
 - (c) Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.
- (4) Manufactured homes.
 - (a) Require that all manufactured homes to be placed within Zone A on a community's FHBM or FIRM shall be installed using methods and practices which minimize flood damage. For the purposes of this requirement, manufactured homes must be elevated and anchored to resist flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable state and local anchoring requirements for resisting wind forces.
 - (b) Require that manufactured homes that are placed or substantially improved within Zones A1— 30, AH, and AE on the community's FIRM on sites (i) outside of a manufactured home park or subdivision, (ii) in a new manufactured home park or subdivision, (iii) in an expansion to an existing manufactured home park or subdivision, or (iv) in an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as a result of a flood, be elevated on a permanent foundation such that the bottom of the longitudinal structural I-beam of the manufactured home is elevated to or above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.
 - (c) Require that manufactured homes be placed or substantially improved on sites in an existing manufactured home park or subdivision with Zones A1—30, AH and AE on the community's FIRM that are not subject to the provisions of paragraph (4) of this section be elevated so that either:
 - The bottom of the longitudinal structural I-beam of the manufactured home is at or above the base flood elevation; or
 - (2) The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than thirty-six (36) inches in height

above grade and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

(3) Recreational vehicles. Require that recreational vehicles placed on sites within Zones A1— 30, AH, and AE on the community's FIRM either (i) be on the site for fewer than one hundred eighty (180) consecutive days, or (ii) be fully licensed and ready for highway use, or (iii) meet the permit requirements of Paragraph 12.4.1.3 C(1), and the elevation and anchoring requirements for "manufactured homes" in subsection Paragraph 12.1.4 B(4). A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions.

C. Standards for subdivision proposals

- (1) All subdivision proposals including the placement of manufactured home parks and subdivisions shall be consistent with Sub-Sections 12.1.1 B, 12.1.1 C, and 12.1.1 D of this chapter.
- (2) All proposals for the development of subdivisions including the placement of manufactured home parks and subdivisions shall meet floodplain development permit requirements of <u>Sub-Section 12.1.3</u> (<u>C</u>) and the provisions of <u>Section 12.1.4</u> of this chapter.
- (3) Base flood elevation data shall be generated for subdivision proposals and other proposed development including the placement of manufactured home parks and subdivisions which is greater than fifty (50) lots or five (5) acres, whichever is lesser, if not otherwise provided pursuant to <u>Sub-</u><u>Section 12.1.2 B</u> or <u>Paragraph 12.1.3 B(8)</u> of this chapter.
- (4) All subdivision proposals including the placement of manufactured home parks and subdivisions shall have adequate drainage provided to reduce exposure to flood hazards.
- (5) All subdivision proposals including the placement of manufactured home parks and subdivisions shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize or eliminate flood damage.

D. Standards for areas of shallow flooding (AO/AH zones)

Located within the areas of special flood hazard established in <u>Sub-Section 12.1.2 B</u>, are areas designated as shallow flooding. These areas have special flood hazards associated with flood depths of one (1) to three (3) feet where a clearly defined channel does not exist, where the path of flooding is unpredictable, and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow; therefore, the following provisions apply:

- (1) All new construction and substantial improvements of residential structures have the lowest floor (including basement) elevated to or above the base flood elevation or the highest adjacent grade at least as high as the depth number specified in feet on the community's FIRM (at least two (2) feet if no depth number is specified).
- (2) All new construction and substantial improvements of non-residential structures;
 - (a) Have the lowest floor (including basement) elevated to or above the base flood elevation or the highest adjacent grade at least as high as the depth number specified in feet on the community's FIRM (at least two (2) feet if no depth number is specified); or

- (b) Together with attendant utility and sanitary facilities be designed so that below the base specified flood depth in an AO Zone, or below the base flood elevation in an AH Zone, the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads of effects of buoyancy.
- (c) A registered professional engineer or architect shall submit a certification to the floodplain administrator that the standards of this section, as proposed in <u>Sub-Section 12.1.3 C</u> are satisfied.
- (d) Require within zones AH or AO adequate drainage paths around structures on slopes, to guide flood waters around and away from proposed structures.

E. Floodways

Floodways—located within areas of special flood hazard established in <u>Sub-Section 12.1.2 B</u>, are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles and erosion potential, the following provisions shall apply:

- (1) Encroachments are prohibited, including fill, new construction, substantial improvements and other development within the adopted regulatory floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base flood discharge.
- (2) If subsection (1) of this section is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of <u>Section 12.1.4</u> of this chapter.
- (3) Under the provisions of <u>44 CFR Chapter 1, Section 65.12</u>, of the National Flood Insurance Program Regulation, a community may permit encroachments within the adopted regulatory floodway that would result in an increase in base flood elevations, provided that the community first completes all of the provisions required by <u>44 CFR Chapter 1, Section 65.12</u>.

12.2 Stormwater Management

- A. GENERAL PROVISIONS
 - (1) General Design Requirements: The regulations contained in these standards will apply to all projects which are to be submitted for consideration to the City of Hammond for the development of land in the City of Hammond such as residential subdivisions, commercial development, industrial development, institutional and recreational areas. These standards cannot be expected to provide for all possible situations. They are intended to provide minimum design criteria, but not be substituted for the competent work of a Louisiana registered professional civil engineer. These standards are also not intended to place unreasonable limitations on any innovative or creative effort, which could result in better quality facilities, cost savings, or both. Any proposed departure from the standards will be considered if it is demonstrated that the approach will produce a compensating or comparable result, to the benefit of both the City and the system user.
 - (2) The objective is a citywide storm water management system that will:
 - (a) Be consistent with all other city codes and adopted master plans and policies,
 - (b) Be of adequate design to manage all volumes of water generated upstream and on site to an approved point of discharge,

- (c) Prevent the capacity of downstream channels and storm drainage facilities from being exceeded,
- (d) Prevent the uncontrolled discharge of storm water onto adjoining public or private property,
- (e) Maintain or reduce the maximum stage elevations of the original undeveloped drainage basin,
- (f) Be constructed of materials that will have sufficient strength to support external loads that may be imposed and to minimize corrosion.
- (g) Maximize efficient use of the natural drainage system including bayous, canals and wetlands,
- (h) Be designed in a manner that allows economical ongoing maintenance and ease of access,
- (i) Be designed using materials that ensure a specified design life; and
- (j) Maintain the highest feasible level of water quality.
- B. INTERPRETATION AND COMPATIBILITY WITH OTHER REGULATIONS
 - In the interpretation and application of this chapter, all provisions shall be:
 - (1) Considered as minimum requirements for the promotion of the public health, safety and general welfare.
 - (2) Liberally construed in favor of the City of Hammond Government.
 - (3) Not intended to repeal, abrogate or impair any existing federal, local or state law. Further, where these provisions and any other law, ordinance or regulation conflicts or overlaps, whichever imposes the more stringent restrictions or imposes higher protection standards for human health or the environment shall control.

12.2.1 Drainage Impact Study

In order to comply with Federal and State regulations for urban storm water, a Drainage Impact Study (DIS) will be required for all development and redevelopment projects that require demolition or complete removal of existing structures or impervious surfaces at a site and replacement with new development. Maintenance activities such as top-layer grinding and repavement are not considered redevelopment. Interior remodeling projects are also not considered to be redevelopment. Utility trenches in streets are not considered redevelopment unless more than fifty (50) percent of the street width is removed and re-paved. Two (2) copies of the required Drainage Impact Study of the proposed development and surrounding affected areas must be submitted to the City of Hammond. The development will not be approved until the Drainage Impact Study has been reviewed and approved by the City of Hammond.

- A. **Exemptions:** The following development activities shall be exempted from the requirements of preparing a Drainage Impact Study, but must comply with the DIS prepared for the subdivision:
 - (1) Residential lots of less than one-half (0.5) acres within subdivisions approved on or before <u>the</u> <u>date this UDC is adopted by the City Council</u>.
 - (2) All lots in duly authorized subdivisions created with a DIS.
 - (3) Development in which the area of impervious surface does not exceed twenty (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.
 - (4) Additions or modifications to existing developments which result in no more than a ten (10) percent increase in existing impervious area and which have existing public storm drainage facilities designed to accommodate runoff from the existing site.
- B. **Waivers**: Developers may request that the Planning Commission approve a waiver of the Drainage Impact Study. If such a request is granted, the Planning Commission will provide written approval. A copy of the waiver authorization shall be forwarded to the City Planner, and no detailed Drainage Impact Study shall be

required for the development. A waiver must be requested in writing and contain sufficient information regarding the specific details of the proposed development. A waiver shall be considered for approval provided:

- (1) The proposed development results in no more than a ten (10) percent increase in the ten (10) year pre-development peak discharge at the point of discharge from the development site.
- (2) 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 waiver 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.

C. Drainage Impact Study Requirements

The Drainage Impact Study shall comply with the following minimum requirements:

- (1) Development Location and Description:
 - (a) Location: Describe location of subject property; locate by Township and Range; identify adjacent developments, major drainage outfalls, streets, highways, lot and block page number, and provide a vicinity map.
 - (b) Description: Describe the predominant existing land use and future land use in project watershed (Comprehensive Land Use Plan, Land Use Data, aerial photos, etc.); describe the proposed development, soil types, vegetative cover, watershed slopes; provide an estimate of percent of impervious area for pre and post development conditions; and provide photos of existing channels, ditches, natural drains, and drainage structures.
- (2) Watershed Map: Delineate drainage boundaries; indicate the acreage; and show slope of basins, and peak ten (10) 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. The latest U.S.G.S. seven and one-half (7½) minute quadrangle map or better at scale of one inch equals five hundred feet (1:500) or less may be used as the base for the watershed map.
- (3) Hydrologic Design:
 - (a) The Drainage Impact Study shall indicate existing condition peak ten (10) year flow rates at the development entry and exit points.
 - (b) The Drainage Impact Study shall indicate future condition peak ten (10) year flow rates at the development entry and exit points.
 - (c) If ponds are used in design for routing of flows, the ten (10) year storm event shall be used in design. The effects of a 100-year storm on the pond should be provided.
- (4) Hydraulic Capacities:
 - (a) On site 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.
 - (b) Off-site 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 on the City of Hammond Drainage Map. 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. Where the proposed development is located an extended distance from an indexed stream, the study may be terminated at a point where the total area

drained exceeds the project area by five (5) times for single family residential developments and ten (10) times for all other developments.

- (5) 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:
 - (a) Special Flood Hazard Areas (Firm Zones A and AE)
 - (b) Regulatory Floodway
 - (c) Fill placement location and mitigation requirements
 - (d) Potential wetland sites
 - (e) Churches
 - (f) Schools
 - (g) Cemeteries
 - (h) Landfills and Hazardous Waste Sites
 - (i) Parks
- (6) Drainage Impact Study Conclusions and Recommendations: Drainage Impact Study should clearly identify the results and conclusions of the study and provide recommendations of any required action(s) so that surrounding properties experience no adverse impact.

12.2.2 General design and construction standards of storm drainage

- A. Drainage Impact Study (DIS). As stated in Section 12.2.1, the developer shall prepare and submit to the City of Hammond a Drainage Impact Study that recommends specific on-site drainage improvements to provide adequate capacity for a ten (10) year storm event. With the submittal of any construction plans to the City of Hammond that include drainage related work, a Drainage Calculations Report (DCR) shall be submitted verifying the hydraulic routing of the drainage network shown on the final construction plans. A DIS is required to be signed, sealed, and dated by a Louisiana Licensed Civil Engineer before submittal to the city.
- B. The minimum information shown in a Drainage Calculations Report (DCR) shall be: All calculations contributing to the design of the proposed hydraulic structures (i.e., how the tailwater or stage elevation was determined, the discharge calculations and the sizing of any structures, etc.) are to be included in the report. Hydraulic calculations showing flows and capacities of open ditches, culverts, or cross drains are to be included in the report. Storm drain system hydraulic routing shall include at a minimum all information shown in Figure 8-B.6-1(c), Summary Spreadsheet of Pipe Selection, shown in the Louisiana Department of Transportation and Development Hydraulics Manual published in 2011, or as amended. The designer should ensure that the numbers and values shown on the corresponding plans match the calculations submitted. A DCR is required to be signed, sealed, and dated by a Louisiana Licensed Civil Engineer before submittal to the city.
- C. The minimum design of the interior drainage systems of the subdivision or site or tract proposed for development shall be based on a ten-year storm frequency. The selection of runoff coefficients shall be based on the anticipated nature of future development in the area, and shall be subject to the approval of the city engineer or public works director. Stormwater BMP's may be required by the city to be installed in accordance with <u>Sub-Paragraph 9.1.5 A(9)</u>.
- D. Hydrologic design methods approved for use in the City of Hammond shall be as follows:
 - For development less than 300 acres the Rational Method shall be used in accordance with the Louisiana Department of Transportation and Development Hydraulics Manual published in 2011, or as amended.
 - (2) For development between 300 and 2,000 acres the SCS Method shall be used in accordance with the *Louisiana Department of Transportation and Development Hydraulics Manual* published in 2011, or as amended. The TR-55 method shall be used for Time of Concentration calculations.

- (3) For development greater than 2,000 acres the USGS Method shall be used in accordance with the *Louisiana Department of Transportation and Development Hydraulics Manual* published in 2011, or as amended.
- E. Site drainage and grading shall be addressed on the submitted plans and shall meet the following minimum standards:
 - (1) Preservation of drainage patterns in the drainage basin in which a subdivision is located will be required. For additional requirements see <u>Paragraph 4.1B</u>.
 - (2) For any site requiring a drainage impact study the post-developed peak runoff rate for the ten year design storm must not exceed the pre-developed peak runoff rate for a ten year design storm. Discharges not meeting this requirement will not be permitted by the planning commission unless the developer/subdivider, on a case by case basis, can establish to the satisfaction of the planning commission that the existing downstream drainage is adequate to handle the anticipated flow resulting from the proposed development of the property. Alternatively, the developer/subdivider may propose to undertake such work or improvements, at no cost to the city, to make the downstream drainage system adequate to handle the anticipated flow resulting from the development of the property. The planning commission may deny any such proposal to improve downstream drainage if the commission determines that the nature or extent of the proposed work or improvements would detrimentally alter the character or condition of any downstream drainage ways. The planning commission shall not approve any proposal to improve manmade drainage ways until the proposal is first reviewed by the public works director and the planning commission is thereafter advised by the public works director, in writing, that he has no objection to the proposal. Absent such approval by the planning commission, the developer/subdivider shall be required to retain the increase in storm drainage runoff on the site of the development utilizing detention ponds or other innovative methods until this water can be released at a storm drainage runoff rate which does not exceed the storm drainage runoff from the site prior to development.
 - (3) The design of drainage systems for the interior portions of subdivisions or site or tract development and for the watershed areas surrounding the subdivision or site or tract development shall be in accordance with the *Louisiana Department of Transportation and Development Hydraulics Manual* published in 2011, or as amended. The design of the interior drainage systems of the subdivision or site or tract development shall be based on a ten-year storm frequency. The selection of runoff coefficients shall be based on the anticipated nature of future development in the area and shall be subject to the approval of the city engineer or public works director.
 - (4) In subdivisions with curb and gutter streets, the intervals for installation of curb drainage inlets shall be determined in accordance with the requirements of the *Louisiana Department of Transportation and Development Hydraulics Manual* published in 2011, or as amended. Where these inlets connect to storm sewers, a catch basin shall be installed with the inlet. Storm drain inlets will be placed so that surface water is not carried across intersections or crosswalks. When calculations indicate that curb capacities are exceeded at a point, no further allowance

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shall be made for flow beyond that point and a basin shall be used to intercept flow at that point. Drainage plans submitted with the drainage report will show surface water drainage patterns for each and every lot and block and all design specifications for land development.

- (5) 10-year Hydraulic Grade Line (HGL) shall be below existing or proposed gutter elevation for streets.
- F. Detention Basin.
 - (1) Whenever a "Detention Basin" is utilized by the developer to minimize downstream flooding, the design shall address, at a MINIMUM, the following:
 - (a) Detention basin shall be designed to detain flows so as not to increase in downstream runoff for a ten (10) year pre-development storm.
 - (b) Detention basin shall be checked for the ten (10) and one hundred (100) year frequency to assure that adequate capacity is provided in the basin and at the outlet to prevent flooding of upstream and downstream developments as well as structures on the development site.
 - (c) Adequate land must be reserved for maintenance of detention pond.
 - (d) Detention Basins may be wet (lakes or ponds) or dry.
 - (i) Wet detention basins shorelines and control structures shall be privately owned and maintained. The basin must have minimum side slopes of three (3) to one (1) and must have a minimum fifteen (15) feet wide access along the entire perimeter for maintenance. Both the construction plans and final plat for development shall include a note which states that the proposed detention basin, shoreline and control structure shall be "privately owned and maintained". Storm drainage pipe inverts must be designed to be above the normal water surface elevation of the basin, unless the review engineer approves variations.
 - (ii) Dry detention basins shall be privately owned and maintained as part of the development drainage system. The basin must have minimum side slopes of three (3) to one (1) and must have a minimum fifteen (15) feet wide access along the entire perimeter for maintenance. Storm drainage pipe inverts must be designed to be above the normal water surface elevation of the basin, unless the Review Engineer approves variations. The basin bottom shall be designed and compacted to allow for proper maintenance with mowing machines and other equipment.
- G. Open drainage ditch construction and design.
 - (1) Drainage ditches shall be designed, whenever possible, with sloping earthen banks and earthen bottoms. Drainage ditches shall also be designed with shoulders of not less than four (4) feet in width. When it is determined by the planning commission upon the recommendation of the city engineer or public works director that a concrete-lined channel is required such concrete-lined channel shall have side slopes of a grade that is no steeper than one and one-half (1.5) to one (1) and shall be lined with reinforced concrete. The bottom shall be six (6) inches thick, sides at least four (4) inches thick, and a five-foot collar on each side shall be at least four (4) inches thick. Construction details for footings, joints, etc., shall be in accordance with standards provided by the city engineer or public works director.
 - (2) When a proposed open ditch, whether lined or unlined, must discharge into a major unlined canal, the developer shall be required to enclose the ditch, under the access strip of the major
canal, in a metal pipe or concrete culvert. The pipe or culvert shall extend at least four (4) feet into the canal beyond the side slope, and shall discharge into a concrete flume that extends a minimum of five (5) feet into the bottom of the canal. Flume shall be constructed immediately after the pipe or conduit is installed.

H. Drainage easement criteria for open or closed drainage systems.

The following servitude criteria shall be required for each ditch, canal, storm drainage collection line, and storm sewer placed outside of public right of way:

- (1) Minimum easement width—Fifteen (15) feet.
- (2) There will be a minimum of eight (8) feet from the top of the bank to the servitude line on one(1) side of the easement for all canals with a top width of fifteen (15) feet or less.
- (3) Canals with top width of greater than fifteen (15) feet but less than thirty-five (35) feet shall have a minimum of ten (10) feet on each side measured from the top of the bank to the servitude line.
- (4) Canals with a top width of thirty-five (35) feet or greater will have a minimum of twenty-five(25) feet on both sides measured from the top of the bank to the servitude line.

I. Construction permit required

No person shall construct a drainage ditch or canal having a width of more than three (3) feet or a depth of more than three (3) feet within the-city, without first having obtained a permit therefore as provided in this article.

J. Application for construction permit; engineer's report and fee.

- (1) Any person desiring to construct a ditch more than three (3) feet wide or more than three (3) feet deep shall submit to the city engineer a plat showing the proposed location of said drainage ditch, together with the width and length thereof, and the manner in which said ditch is to be connected with existing drainage.
- (2) Such applicant shall deposit twenty dollars (\$20.00) with the city to cover the cost of the engineer's report.
- (3) The city engineer shall thereafter prepare a report on such proposed ditch or canal, which shall include his recommendations in the matter.

K. Approval of construction proposal by mayor and city council.

A proposal submitted pursuant to this article shall, after the engineer's report, be submitted to the mayor and city council for approval or disapproval, as to whether a permit as required by this article shall be granted

L. Obstruction of drains, ditches, etc.

No person shall impede, obstruct, or disrupt the passage or overflow of surface runoff from any gutter, pipe, or drain, or in any manner dam the same. Any improvements or construction within or around

drainage passages must be undertaken with an approved permit obtained through the mayor, or his designated representative.

M. Categories.

- (1) Private residences. If requested by a resident, and subject to payment of all associated fees, the city shall install up to twenty (20) linear feet (LF) of driveway pipe, for any one (1) private residential lot at the request of the lot owner, provided that no such installation will be undertaken by the city for any person in the business of building or remodeling residences or commercial structures, or who holds himself out to be a contractor or builder, unless such request is made in connection with said person's own private place of abode. If more than thirty (30) LF of pipe is to be installed, the pipe must be installed by a competent contractor, or by some qualified party other than the city, after the owner obtains a permit from the city.
- (2) *All others.* The city will install no subsurface pipe for applicants other than private residential lot owners.

N. Procedures.

All applicants must fill out and submit a permit request (on the attached form) with the mayor (or his designated representative) and pay the permit fee prior to commencement of the work. The permit fee shall generally be equal [to] ten dollars (\$10.00) plus the pipe costs, plus pipe labor costs (at one dollar (\$1.00) per LF of pipe to be installed), which exact amount shall be determined by the mayor (or his designated representative).

In the event that the applicant chooses to purchase the pipe from a pipe supply vendor, the pipe shall conform to the specifications for drainage culverts herein defined, and the "pipe cost" shall be deleted from the permit fee total, after installation has been approved by the mayor (or his designated representative).

In the event that the applicant chooses [to] install in excess of twenty (20) LF of pipe, the excess length shall be purchased and installed by a competent contractor, to conform with these specifications. No pipe shall be installed in excess of eighty (80) LF without one (1) twenty-four-inch-square cast iron grate inlet, and thirty-six-inch-square concrete catch basin box, spaced at a maximum of eighty (80) feet apart.

The permit request is not set out herein but is available in the office of the council clerk.

O. Materials specifications and construction standards for public/private streets and right of way.

In consideration of the acceptance of the improvements by the city and the assumption of the responsibility for maintaining the dedicated streets constructed therein, the owners of the subdivision shall cause to be designed and constructed, at no expense to the city, the drainage and storm sewer improvements according to the specifications set forth in this Paragraph. Material and construction specifications for all subsurface drainage projects shall be in compliance with the requirements of all American Society for Testing and Materials (ASTM) and Louisiana Department of Transportation and Development Highway Construction Standards or as amended in this Paragraph.

- (1) Exposed Pipe(s). Generally, all pipe with exposed ends shall be one (1) of the following materials:
 - (a) Reinforced concrete pipe (RCP)
 - (b) Bituminous coated corrugated steel pipe (BCCSP)
 - (c) Polymer coated corrugated steel pipe (PCCSP)
 - (d) Fiber bonded bituminous coated corrugated steel pipe (FBBCCSP)

The city shall stock common diameters of BCCSP of the proper gauge thickness. The "pipe cost" as charged in the permit fee shall be calculated using the actual pipe cost to the city plus ten (10) per cent to cover the city's costs for freight, shipping, advertising, warehousing, and administrative costs.

- (2) Concealed pipe(s) (subsurface pipe(s) without exposed ends) may be one (1) of the below nine (9) types, which include reinforced concrete, corrugated metal (steel or aluminum), as well as ribbed or corrugated PVC and polyethylene pipe, to conform with DOTD Engineering Directives and Standards manual (EDSM) No. II.2.1.1 dated July 20, 1992:
 - (a) Reinforced concrete pipe (RCP)
 - (b) Corrugated aluminum pipe (CAP)
 - (c) Corrugated metal pipe (CMP)
 - (d) Bituminous coated corrugated steel pipe (BCCSP)
 - (e) Polymer coated corrugated steel pipe (PCCSP)
 - (f) Fiber bonded bituminous coated corrugated steel pipe (FBBCCSP)
 - (g) Ribbed polyvinyl chloride culvert pipe (RPCCP)
 - (h) Ribbed polyethylene culvert pipe (RPECP)
 - (i) Corrugated polyethylene culvert pipe (CPECP)

All pipe joints shall be "Type 2" or "Type 3" joints per DOTD EDSM II.2.1.1.

- (3) Catch basins.
 - (a) General—Catch basins shall be brick, cast-in-place concrete, pre-cast concrete, or a combination thereof.
 - (b) Brick—Brick shall conform to the requirements of, and shall be sampled and tested in accordance with ASTM Standard Specifications for sewer brick, serial designation C-32-50, Grade MA or concrete brick measuring 4" × 4" × 8" suitable for use in catch basins or manholes and meeting ASTM Standard Specifications C-139-39. Brick boxes shall be plastered with a coat of cement mortar not less than one-half (½) inch thick. Bricks shall be moistened before application of the plaster. After inspection of the completed structure by the building official and when directed, the excavated areas which are not occupied by the completed structure shall be refilled to the required elevation with suitable material which shall be placed in layers of not more than six (6) inches in depth, and each layer thoroughly compacted by hand or mechanical tamping. If the backfill material is too dry to compact satisfactorily, it shall be wetted with water to obtain suitable compaction.
 - (c) Grate inlets—Grate inlets shall be minimum 24"×24" gray iron castings, spaced no greater than eighty (80) feet apart, and shall meet the requirements of Class No. 30 of the ASTM Standard Specifications for gray iron castings, Serial Designation A-48, supplemented by the following:

The casting shall be true to pattern in form and dimensions, free from pouring faults, sponginess, cracks, blow holes, and other defects in position affecting their strength and value for the service intended. Castings shall be boldly filleted at angles and arises shall be sharp and perfect. Surfaces of the castings shall be free from burnt on sand and shall be reasonably smooth. Runners, risers, fins, and other cast-on pieces shall be removed. Surfaces shall be machined where indicated or where otherwise necessary to secure flat true surfaces. All covers, gratings, and other castings fitting frames shall fit properly and seat uniformly and solidly. Approved castings shall be equal to the following, as manufactured by Vulcan Foundry:

- (1) Type I—Vulcan V-4302-1
- (2) Type II—Vulcan V-4311-1 (formerly SSI N.O. 1)
- (3) Type III—Vulcan V-4410-1 (f. VFG 24×30—N.O. S&WB D-3264)
- (4) Type IV—Vulcan V-5763 (f. VFG 24×30)
- (5) Type V—Vulcan V-5766 (f. VFG 24×36)
- (6) Type VI—Vulcan V-4862 galv. (f. RCB-3 Mod.—28¼×40 galv.)
- (7) Type VII—Vulcan V-5826-1 (f. Vulcan VRFG 24×24)
- (8) Type VIII—Vulcan V-5726 (f. VFG 24×24)
- (9) Type IX—Vulcan V-5752 (f. VFG 18×24)
- (10) Type X—Vulcan V-5736 (f. VFG 36×36)

12.3 Water Quality Requirements

12.3.1 General Provisions

- A. **Purpose.** The purpose and objectives of this division are as follows:
 - (1) To maintain and improve the quality of surface water and groundwater within the City of Hammond;
 - (2) To prevent the discharge of contaminated stormwater runoff from industrial, commercial, residential, and construction sites into the municipal separate storm sewer system (MS4) and natural waters affected by the City of Hammond;
 - (3) To promote public awareness of the hazards involved in the improper discharge of hazardous substances, petroleum products, household hazardous waste, industrial waste, sediment from construction sites, pesticides, herbicides, fertilizers, and other contaminants into the storm sewers and natural waters of the city;
 - (4) To encourage the recycling of used motor oil and safe disposal of other hazardous consumer products;
 - (5) To facilitate compliance with state and federal standards and permits by owners and operators of industrial and construction sites within the city and
 - (6) To enable the city to comply with all federal and state laws and regulations applicable to stormwater discharge.
- B. Administration. Except as otherwise provided herein, the city building official shall administer, implement, and enforce the provisions of this division. Any powers granted to or duties imposed upon the city building official shall be carried out by that person and may be delegated by the city building official to other city personnel.

12.3.2 User Requirements

A. General provisions.

- No person shall introduce or cause to be introduced into the municipal separate storm sewer system (MS4) any discharge that is not composed entirely of stormwater.
- (2) It is an affirmative defense to any enforcement action for violation of subsection (a) of this section that the discharge was composed entirely of one or more of the following categories of discharges:
 - (a) A discharge authorized by, and in full compliance with, an NPDES permit (other than the NPDES permit for discharges from the MS4);
 - (b) A discharge or flow resulting from the fire fighting by the fire department;
 - (c) A discharge or flow of fire protection water that does not contain oil or hazardous substances or materials;
 - (d) Agricultural water runoff;
 - (e) A discharge or flow from water line flushing, but not including a discharge from water line disinfection by superchlorination or other means unless it contains no harmful quantities of chlorine or any other chemical used in the line disinfection;
 - (f) A discharge or flow from lawn watering, landscape irrigation, or other irrigation water;
 - (g) A discharge of flow from a diverted stream flow or natural spring;
 - (h) A discharge or flow from uncontaminated pumped ground water or rising groundwater;
 - Uncontaminated groundwater infiltration (as defined as <u>40 CFR 35.2005(2)</u> to the MS4);
 - (j) Uncontaminated discharge or flow from a foundation drain, crawl space pump, or footing drain;
 - (k) A discharge or flow from air conditioning condensation that is not mixed with water from a cooling tower, emissions scrubber, emission filter, or any other source of pollutant;
 - A discharge or flow from a potable water source not containing any harmful substance or material from the cleaning or draining of a storage tank or other container;
 - (m) A discharge or flow from individual residential car washing;
 - (n) A discharge or flow from riparian habitat or wetland;
 - (o) A discharge or flow from water used in street washing that is not contaminated with any soap, detergent, solvent, emulsifier, dispersant, or any other harmful cleaning substance; or
 - (p) Stormwater runoff from a roof that is not contaminated by any runoff or discharge from an emissions scrubber or filter or any other source of pollutant.
- (3) It is an affirmative defense to any enforcement action for violation of subsection (a) of this section that the discharge was composed entirely of one or more of the following categories of discharges: No affirmative defense shall be available under subsection (b) of this section if the discharger or flow in questions has been determined by the stormwater committee to be a source of a pollutant or pollutants to the waters of the United States or to the MS4, written notice of such determination has been provided to the discharger, and the discharge has occurred more than ten (10) days beyond such notice. The correctness of the stormwater committee's determination that a discharge is a source of a pollutant may be reviewed in any administrative or judicial enforcement proceeding.

B. Specific prohibitions and requirements.

- The specific prohibitions and requirements in this section are not inclusive of all the discharges prohibited by the general prohibition in <u>paragraph 12.3.2 A(2)</u>.
- (2) No person shall introduce or cause to be introduced into the MS4 any discharge that causes or contributes to causing the city to violate a water quality standard, the city's NPDES permit, or any state-issued discharge permit for discharges from its MS4.
- (3) No person shall dump, spill, leak, pump, pour, emit, empty, discharge, leach, dispose, or otherwise introduce or cause, allow, or permit to be introduced any of the following substances into the MS4:
 - (a) Any used motor oil, antifreeze, or any other motor vehicle fluid;
 - (b) Any industrial waste;
 - (c) Any hazardous waste, including hazardous household waste;
 - (d) Any domestic sewage or septic tank waste, grease trap waste, or grit trap waste;
 - (e) Any garbage, rubbish, or yard waste;
 - (f) Any wastewater from a commercial carwash facility; from any vehicle washing, cleaning, or maintenance at any new or used automobile or other vehicle dealership, rental agency, body shop, repair shop, or maintenance facility; or from any washing, cleaning, or maintenance of any business or commercial or public service vehicle, including a truck, bus, or heavy equipment, by a business or public entity;
 - (g) Any wastewater from the washing, cleaning, de-icing, or other maintenance of aircraft;
 - (h) Any wastewater from commercial floor, rug, or carpet cleaning;
 - Any effluent from a cooling tower, condenser, compressor, emission scrubber, emission filter, or the blowdown from a boiler;
 - (j) Any runoff or wash down from any animal pen, kennel, or fowl or livestock containment area;
 - (k) Any discharge from water line disinfection by superchlorination or other means if it contains any harmful quantity of chlorine or any other chemical used in line disinfection;
 - (I) Any fire protection water containing oil or hazardous substances or materials;
 - (m) Any water from a water curtain in a spray room used for painting vehicles or equipment;
 - (n) Any contaminated runoff from a vehicle wrecking;
 - (o) Any substance or material that will damage, block, or clog the MS4;
 - (p) Any release from a petroleum storage tank (PST), or any leachate or runoff from soil contamination by leaking PST, or any discharge of pumped, confined, or treated wastewater from the remediation of such PST release, unless the discharge satisfies all of the following criteria:
 - (1) Compliance with all state and federal standards and requirements;
 - (2) No discharge containing harmful quantity of any pollutant; and

- (3) No discharge containing more than fifty (50) parts per billion of benzene, five hundred (500) parts per billion combined total quantities of benzene, toluene, ethylbenzene, and xylene, (BTEX); or fifteen (15) mg/l of total petroleum hydrocarbons (TPH).
- (4) The following non-storm water sources may be discharged from the MS4 provided that they have been determined by the city not to be substantial sources of pollutants to the MS4. The operator must utilize best management practices to limit discharge of the following non-storm water sources:
- (5) Any waste water from a commercial mobile power washer or from the washing or other cleaning of a building exterior that contains any harmful quantity of soap, detergent, degreaser, solvent, or other harmful cleaning substance;
- (6) Any wastewater from the wash down or other cleaning of pavement that contains any harmful quantity of soap, detergent, solvent, degreaser, emulsifier, dispersant, or any other cleaning substance; or any wastewater from the wash down or other cleaning of any pavement where any spill, leak, or other release or oil, motor fuel, or other petroleum or hazardous substance has occurred, unless all harmful quantities of such released material have been previously removed; and
- (7) Any ready-mixed concrete, mortar, ceramic, or asphalt base material or hydro mulch material, or material from the cleaning of commercial vehicles or equipment containing, or used in transporting or applying, such material.
- (4) No person shall introduce or cause to be introduced into the MS4 any harmful quantity of sediment, silt, earth, soil, or other material associated with clearing, grading, excavation, or other construction activities in excess of what could be retained on site or captured by employing sediment and erosion control measures to the maximum extent practicable.
- (5) No person shall connect a line conveying sanitary sewage, domestic, or industrial, to the MS4, or allow such a connection to continue.
- (6) No person shall cause or allow any pavement washwater from a commercial facility to be discharged into a MS4 unless such wastewater has passed through a proper functioning and maintained grease, oil, and sand interceptor before discharging into the MS4.

C. Used oil regulation.

No person shall:

- (1) Discharge used oil into the MS4 or a sewer drainage system, surface water, groundwater, or water course;
- (2) Knowingly mix or commingle used oil with solid waste that is to be disposed in a landfill or knowingly dispose of used oil on land or in a landfill;

(3) Apply used oil to a road or land for solid suppression, weed abatement, or other similar use that introduces used oil into the environment.

D. Swimming pool regulation.

Requirements for two (2) types of discharges:

- (1) Filter backwashing:
 - (a) Backwash water may be disposed of and filters may be rinsed on the pool/spa owner's property. This should be done in an area that will absorb the water.
 - (b) Water from backwashing a pool or spa containing chlorine <1 mg/l, total suspended solids <45 mg/l, pH in the range of 7 to 8, no harmful quantities of muriatic acid or other chemical used in the treatment or disinfection of the water, free of color, algae, and other contaminants may be discharged off the owner's property to the MS4.</p>
 - (c) The following restrictions apply to backwash water discharge activities;
 - (1) Discharges may not be drained onto a neighbor's property or across a sidewalk.
 - (2) Discharge water may not cause erosion or transport sediment.
 - (3) Discharges may not be drained into unpaved alleys.
 - (4) Discharges may not cause an accumulation of water along the curbline gutter of a paved street.
 - (5) Backwash water discharge unable to meet the restrictions outlined above must be discharged to the sanitary sewer system with approval from the wastewater superintendent and the city plumbing inspector.
- (2) Swimming pool/spa draining;
 - (a) Water from draining a pool or spa containing chlorine <1mg/l, total suspended solids <45mg/l, pH in the range of 7 to 8, no harmful quantities of muriatic acid or other chemical used in the treatment or disinfection of the water, free of color, algae, and other contaminants may be discharged off the owner's property to the MS4.</p>
 - (b) The following restrictions apply to swimming pool and spa discharge activities:
 - (1) Discharges may not be drained onto a neighbor's property or across a sidewalk.
 - (2) Discharge water may not cause erosion or transport sediment.
 - (3) Discharges may not be drained into unpaved alleys.
 - (4) Discharges may not cause an accumulation of water along the curb-line gutter of a paved street.
 - (5) Swimming pool or spa water discharge unable to meet the restrictions outlined above must be discharged to the sanitary sewer system in the event there is no subsurface drainage available. To discharge to the sanitary sewer, prior approval from the wastewater superintendent must be obtained.
- E. **Discharge from dumpster area.** All new construction of commercial facilities requiring suitable cleaning and supplies such as high pressure pumps, hot water, steam, and detergents necessary for the effective cleaning of equipment and receptacles of solid waste collection must meet the following requirements:

- Liquid waste generated by the cleaning operations cannot be discharged into the MS4 without a valid NPDES permit;
- (2) Liquid waste generated by cleaning operations not meeting criteria in subsection (a) above must be discharged to the sanitary sewer. Stormwater runoff must be prevented from entering the sanitary sewer by means approved by the City of Hammond; and
- (3) Discharge entering the sanitary sewer must meet local discharge limits found in city ordinances. Discharges unable to meet these discharge limits must be pretreated on site to reduce pollutant concentration prior to discharging to the sanitary sewer.

12.3.3 Stormwater Discharges from Construction Activities

A. General Requirements.

The operator shall certify all state requirements have been met by signing a certification statement as part of the grading application and/or building permit application. Refer to current specific NPDES permit for site applicability and NOI requirements:

- (1) All operators of construction sites shall use best management practices to control and reduce the discharge, to the MS4 and to waters of the United States, of sediment, silt, earth, soil, and other material associated with the clearing, grading, excavation, and other construction activities to the maximum extent practicable. Such best management practices may include, but not be limited to, the following measures:
 - (a) Ensuring that existing vegetation is preserved where feasible and that disturbed portions of the site are stabilized as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased. Stabilization measures may include: temporary seeding, permanent seeding, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures;
 - (b) Use of structural practices to divert flows from exposed soils, stored flows, or otherwise limit runoff and the discharge of pollutants from the site to the extent feasible;
 - (c) Minimization of the tracking of sediments off-site by vehicles, the generation of dust, and the escape of other windblown waste from the site;
 - (d) Prevention of the discharge of building materials, including cement, lime, concrete, and mortar, to the MS4 or waters of the United States;
 - (e) Providing general good housekeeping measures to prevent and contain spills of paints, solvent, fuel, septic water, and other hazardous chemicals and pollutants associated with construction, and to assure proper cleaning and disposal of any such spills in compliance with state, federal, and local requirement;
 - (f) Implementation of proper waste disposal and waste management techniques, including covering waste materials and minimizing ground contact with hazardous chemicals and trash;

- (g) Timely maintenance of vegetation, erosion and sediment control measures, and other best management practices in good and effective operating condition; and
- (h) Installation of structural measures during the construction process to control pollutants in stormwater discharges that will occur after construction operations have been completed. Structural measures should be placed on upland soil to the degree attainable. Such installed structural measures may include, but not be limited to, the following: stormwater detention structures (including wet ponds); flow attenuation by use of open vegetative swales and natural depressions; other velocity dissipation devices, infiltration of runoff on site; and sequential systems which combine several practices. Operators of construction sites are only responsible for the installation and maintenance of stormwater management measures prior to final stabilization of the site and are not responsible for maintenance after stormwater discharges associated with construction activity have terminated.
- (2) Personnel (provided by the operator of the construction site) shall inspect disturbed areas of any construction site (meeting criteria of current NPDES permit) that have not been finally stabilized, areas used for storage of material that are exposed to precipitation, structural control measures, and locations where vehicles enter or exit the site in accordance with the current NPDES permit. All erosion and sediment control measures and other identified best management practices shall be observed in order to ensure that they are operating correctly and are effective in preventing significant impacts to receiving waters and the MS4. Based on the results of the inspections, best management practices shall be revised as appropriate and as soon as is practicable.
- (3) The city may require any plans and specifications that are prepared for the construction of site improvements to illustrate and describe the best management practices required by subsection (1) (a) above that will be implemented at the construction site. The city may deny approval of any building permit, site development plan, or any other city approval necessary to commence or continue construction, or to assume occupancy, on the grounds that the management practices described in the plans or observed upon the site inspection by the city are determined not to control and reduce the discharge of sediment, silt, earth, soil, and other material associated with clearing, grading, excavation, and other construction activities to the maximum extent practicable.
- (4) Any owner of a site of construction activity, whether or not he/she is an operator, is jointly and severally responsible for compliance with the requirements in this section.
- (5) Any contractor or subcontractor on a site of construction activity, who is not an owner or operator, but who is responsible under his/her contract or subcontract for implementing best management practice control measures, is jointly and severally responsible for any willful or negligent failure on his/her part to adequately implement that control measure if such failure causes or contributes to causing the city to violate a water quality standard, the city's NPDES permit, or any state-issued discharge permit for discharges from its MS4.

12-25

- (6) Based on the results of the inspections required by subsection (2), the site description and/or the pollution prevention measures shall be revised as appropriate, but in no case later than seven (7) calendar days following the inspection. Such modifications shall provide for timely implementation of any changes to the SWPPP within seven (7) calendar days following the inspection.
- (7) Upon final stabilization of the construction site, the owner or the duly authorized representative thereof shall submit written certification to the city that the site has been finally stabilized. The city may withhold an occupancy or use permit for any premises constructed on the site until certification of final stabilization has been filed and the city has determined, following any appropriate inspection, that final stabilization has, in fact, occurred and that any required permanent structural controls have been completed.

B. Site applicability.

Construction activity, including clearing, grading, and excavation activities, that result in the disturbance of one (1) or more acres of total land area shall comply with the requirements of this division.

12.3.4 Grading Permit

A. Purpose.

The purpose of this section is to regulate grading property within the incorporated area of the City of Hammond to safeguard life, limb, health, property, and public welfare; to avoid pollution of watercourses with nutrients, sediments, or other earthen material generated on or caused by surface runoff on or across the permit area; and to ensure that the intended use of a graded site is consistent with applicable city ordinances.

B. Exemptions.

The following described activities shall not require a grading permit in order to perform clearing, excavation, or related earthwork:

- (1) If building permit is obtained, no grading permit is required;
- (2) Utility or public works improvements do not require a grading permit;
- (3) Excavation in connection with a building, swimming pool, retaining wall, or other structure authorized by a valid building permit;
- (4) Any emergency activity that is immediately necessary for the protection of life, property, or natural resources;
- (5) Septic repair and/or alteration;
- (6) Cemetery graves;
- (7) Temporary stockpiling or storing of materials provided that such operations do not affect adjacent properties and all drainage and erosion control requirements;
- (8) Accepted agricultural practices such as plowing, cultivation, construction of agricultural structures, nursery operations, tree cutting, logging operations leaving the stump and root mat intact, and cultivated sod operation;
- (9) Minor landscaping and sprinkler installation.

C. Permitting procedures.

- (1) Unless otherwise stated, no person(s) shall perform any clearing, excavation, or earthwork within the city without first having obtained a grading permit or building permit from the building department.
- (2) The grading permit is applicable, but is not limited, to the following activities:
 - (a) Excavating, cutting, filling, grading, draining, or paving lots, parcels, or other areas;
 - (b) Altering, rerouting, deepening, widening, obstructing, or changing in any way an existing drainage system or feature;
 - (c) Development for: residential, commercial, institutional, industrial, utility, or other activities;
 - (d) Commencing any other development or excavation which may: significantly increase or decrease the rate and/or quantity of surface water runoff; degrade the quality of water; or adversely affect any sinkhole, water course, or water body.

D. Responsibility not waived.

The grading permit exceptions listed in <u>Sub-Section 12.3.4 B</u> do not relieve the owner, developer, contractor, or other legal representative of the responsibility of installing and properly maintaining the proper erosion/ sedimentation control measures or other liability resulting from such activities.

E. Site plan and/or conceptual grading plan requirements.

- (1) An approved site sketch is required to obtain a grading permit. The site sketch shall contain in addition to such basic information as owner name and address, date and parcel number the following:
 - (a) The actual shape, location, and dimension of the lot to be built upon;
 - (b) The shape, size, and location of all existing and proposed buildings or other structures;
 - (c) The location and approximate dimension of all points of access to a public street or road;
 - (d) The location of all driveways and entrances; and
 - (e) Locations of areas subject to flooding, if applicable.
- (2) An approved site plan is required to obtain a grading permit. The site plan shall contain, as a minimum, the following items or information, as applicable:
 - (a) Total land area;
 - (b) Existing and proposed topography of existing land and impervious areas shown;
 - (c) Elevations of all existing and proposed streets, alleys, utilities, sanitary and storm water sewers, and existing buildings and structures;
 - (d) All existing and proposed impervious area;
 - (e) Natural or artificial watercourses;
 - (f) Limits of floodplains, if applicable;
 - (g) All existing and proposed slopes, terraces, or retaining walls;
 - (h) All existing and proposed stormwater drainage structures or features;
 - (i) All stormwater structures/features immediately upstream and downstream of the site;
 - (j) Erosion and siltation controls plans;
 - (k) Drainage calculations when required; and

(I) Drainage easement when required.

F. Plan submittal, review, and approval process for grading permits.

- If site, drainage, grading, and erosion plans for the purpose of obtaining a grading permit are required, they shall be submitted to the building department. They are to be submitted not less than ten (10) days prior to the intended date to begin site alterations. The issuance of all other permits is based upon approval of submitted plans.
- (2) The grading permit is valid for a period of one (1) year from the date of issue. Extensions will be considered based on circumstances.

G. Grading permit fees.

- (1) The fee for the grading permit is intended to assist the City of Hammond in recovering some of the expenses associated with the permitting process. These costs consist primarily of administration, inspection, and enforcement activities and shall be approved and set by the city council.
- (2) The fee schedule for grading permits is as follows: Application fees will be the minimum required as per formal application requirements in <u>Section</u> <u>2.3.1</u> of this Code.

H. Erosion and sedimentation control.

Developers and/or property owners shall use appropriate erosion and sedimentation control measures to ensure that erosion, or adverse conditions caused by erosion or sedimentation, is eliminated or held to an acceptable minimum and does not cross to an adjoining property, right-of-way, or stream.

12.3.5 Compliance Monitoring

A. Right of entry: inspection and sampling.

The city shall have the right to enter the premises of any person discharging stormwater to municipal separate storm sewer system (MS4), or to waters of the United States, to determine if the discharger is complying with all requirements of this division and with state or federal discharge permits, limitations, or requirements. Dischargers shall allow the city ready access to all parts of the premises for the purposes of inspection, sampling, record examination and copying, and for the performance of any additional duties. Dischargers shall make available to the city, upon request, any SWPPPs, modifications thereto, self-inspection reports, monitoring records, compliance evaluations, notices of intent, and any other records, reports, and other documents related to compliance with this division and with any state or federal discharge permit.

- (1) Where a discharger has security measures in force which require proper identification and clearance before entry into its premises, the discharger shall make necessary arrangements with its security guards so that, upon presentation of suitable identification, city personnel will be permitted to enter without delay for the purpose of performing his/her responsibilities.
- (2) The city shall have the right to set up on the discharger's property, or require installation of, such devices as are necessary to conduct sampling and/or metering of the discharger's operation.

- (3) The city may require any discharger to the MS4 or waters of the United States to conduct specified sampling, testing, analysis, and other monitoring of its stormwater discharges necessary to meet the requirements of the city's stormwater permit and may specify the frequency and parameters of any such required monitoring. This requirement by the city may be appealed following the administrative appeal process described in <u>Sub-Section 12.3.6 E</u>.
- (4) The city may require the discharger to install monitoring equipment as necessary at the discharger's expense. 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 stormwater 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 discharger at the written or verbal request of the city and shall not be replaced. The costs of clearing such access shall be borne by the discharger.
- (6) Unreasonable delays in allowing the city access to the discharger's premises shall be a violation of this division.

12.3.6 Penalties and Enforcement

A. Notice of noncompliance.

- (1) The city building official or his designee shall deliver to the owner, contractor, and/or representative of any premises, or to any person responsible for an illicit connection, prohibited discharge, maintenance of a threatened discharge, failure to implement BMPs in accordance with this division, or any other violation of this division a notice of noncompliance.
- (2) The notice of noncompliance shall be delivered in accordance with <u>Sub-Section 12.3.6 C</u>. The notice of noncompliance shall identify the provision of this division which has been violated. The notice of noncompliance shall state that continued noncompliance may result in additional enforcement actions, including the recovery of any cost incurred by the city.
- (3) The notice of noncompliance shall identify a compliance date that must be met.
- (4) Nothing within the enforcement or other provisions of this Unified Development Code shall be interpreted to limit the City's enforcement remedies and procedures afforded by LA R.S. 33:4754.

B. Cease and desist orders.

The city building official may issue a cease and desist order. A cease and desist order shall be delivered in accordance with <u>Sub-Section 12.3.6 C</u> and may be delivered simultaneously with the notice of noncompliance as set forth in <u>Sub-Section 12.3.6 A</u>. A cease and desist order may direct the owner, contactor, and/or representative responsible for any violation of this division to take any of the following actions:

- (1) Immediately discontinue any prohibited discharge to the city's stormwater conveyance system.
- (2) Immediately discontinue any other violation of this division.
- (3) Clean up the area affected by the violation.
- (4) The city building official may direct by a cease and desist order that any person immediately cease any activity which may lead to a violation of receiving water limitations.

(5) The city building official may terminate the building permit for the site.

C. Delivery of notice.

Any notice of noncompliance, cease and desist order, or other enforcement order pursuant to the requirements of this division shall be subject to the following requirements:

- (1) The notice shall state that the recipient or the property owner, or both, may be liable for all enforcement costs incurred by the city in correcting the violation.
- (2) The notice shall state that the recipient has a right to appeal the matter as set forth in <u>Sub-Section</u> <u>12.3.6 E</u>.
- (3) Delivery shall be deemed complete upon either personal delivery to the recipient or deposit in the U.S. mail postage prepaid for first class delivery.

D. Penalties.

Any person violating any provision of this division shall be punished by a fine imposed by the city building official for each offense. An offense shall be interpreted as including all violations cited during an inspection. The person cited shall be given the seven-calendar-day grace period, then the penalty phase for noncompliance shall commence. The following penalty schedule shall apply:

Any person, violating this Article shall be punished as provided in <u>Section 2.4.3</u> hereof.

E. Administration appeals.

- (1) Initiating an appeal. Any person wishing to appeal the decision of the city building official shall provide a notice of intent to appeal with the city building official within ten (10) business days of receipt of the penalty notification. The city building official shall make an informal attempt to resolve the dispute. If the dispute is not resolved within ten (10) business days from the date of the notice of intent to appeal, such person may file a petition for appeal of the decision of the city building official with the city director of administration within ten (10) business days of the decision by the city building official. The following information shall be contained in the petition:
 - (a) The name, address, and telephone number of the petitioner, and the name of the owner and/or customer if the appeal is being filed by an interested party other than the owner and/or customer;
 - (b) The property address and a contact person if different from the petitioner;
 - (c) The decision, enforcement action, or other action being appealed with copies of all notices received from the city and decisions being appealed;
 - (d) An indication of the petitioner's status as an interested party;

- (e) A statement giving specific reason why the petitioner believes the decision of the city building official is incorrect or does not comply with the rules and regulations found in this division; and
- (f) All documents, drawings, plans, or other material petitioner believes supports the appeal.
- (2) *Hearing*. The city council may itself conduct the hearing and take the evidence, or may designate any of its members, or employee of the city, or any other person to:
 - (a) Issue in the name of the city council notices of hearings requesting the attendance and testimony of witnesses and the production of evidence relevant to any matter involved in such hearings;
 - (b) Take the evidence; and
 - (c) Transmit a report of the evidence and hearings, including transcripts and other evidence, together with recommendations to the city council for action thereof.

At any hearing held pursuant to this article, testimony must be under oath and recorded stenographically. The transcript, so recorded, will be made available to any member of the public or any party to the hearing upon payment of the usual charges thereof.

After the city council has reviewed the evidence, it may issue an order to the person responsible for the violation, following a specified time period, that corrective action be completed, and/or penalties be paid. Further orders and directives as are necessary and appropriate may be issued. A party or person aggrieved by the city council decision shall have the right of judicial review of such decision.

12.3.7 Citizen Participation

A. Citizen reports of violations.

- (1) All citizens are encouraged to report to the city any spills, releases, illicit connections, other instances of anyone discharging pollutants into the MS4 or waters of the United States, and any other violation of this division of which they become aware.
- (2) Calls received by the first call system will be referred to the city building official. All citizen reports received by telephone, in writing, and in person will be kept on file for a period of three (3) years. When necessary, complaints will be referred to the Department of Environmental Equality, Department of Health and Hospitals, or other appropriate local, state, or federal agency.

12.3.8 Miscellaneous Provisions

- A. **Charges and fees.** The city may adopt reasonable fees for reimbursement of costs of constructing, operating, and maintaining the city's MS4, and for reimbursement of costs of implementing its stormwater management program as required by EPA or the state, and the cost of implementing this division, which costs may include, but not limited to, the following:
 - (1) Fees for monitoring, inspection, and surveillance procedures including the cost of collecting and analyzing discharges and reviewing monitoring reports submitted by dischargers;
 - (2) Fees for spills and release reports and responding to spills and releases of oil, hazardous and extremely hazardous substances, and other pollutants;
 - (3) Fees for the discharges of stormwater into the city's separate storm sewer system.

City of Hammond

LPDES Permit No. LAR041030

Agency Interest No. 104053

2019 Stormwater Management Plan

Section 6.0 Attachments

Attachment 2

Receiving Waters, Outfalls, and Major Control Structures of the City of Hammond



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City of Hammond

LPDES Permit No. LAR041030

Agency Interest No. 104053

2019 Stormwater Management Plan

Section 6.0 Attachments

Attachment 3

Testing Locations of the City of Hammond





Date: April 28, 2019

City of Hammond

LPDES Permit No. LAR041030

Agency Interest No. 104053

2019 Stormwater Management Plan

Section 6.0 Attachments

Attachment 4

10 Steps to Stormwater Pollution Prevention on Small Residential Construction Sites

10 Steps to Stormwater Pollution Prevention on Small Residential Construction Sites





Post Your NOI and Keep an Up-to-Date Copy of Your SWPPP on Site

Post a sign or other notice of your permit coverage, including your NPDES tracking number and site contact information. Also, keep a copy of your complete and up-to-date SWPPP on site and easily accessible, including site maps showing where each BMP is or will be installed.

Site Stabilization

Immediately stabilize exposed portions of the site whenever construction work will stop for 14 or more days, even if work is only temporarily stopped. Remember, final stabilization is required prior to terminating permit coverage.

City of Hammond

LPDES Permit No. LAR041030

Agency Interest No. 104053

2019 Stormwater Management Plan

Section 6.0 Attachments

Attachment 5

Stormwater and the Construction Industry



Protect Natural Features



- Minimize clearing.
- Minimize the amount of exposed soil.
- Identify and protect areas where existing vegetation, such as trees, will not be disturbed by construction activity.
- Protect streams, stream buffers, wild woodlands, wetlands, or other sensitive areas from any disturbance or construction activity by fencing or otherwise clearly marking these areas.







- Good
- Inspect and maintain silt fences after each rainstorm.
- Make sure the bottom of the silt fence is buried in the ground.
- Securely attach the material to the stakes.
- Don't place silt fences in the middle of a waterway or use them as a check dam.
- Make sure stormwater is not flowing around the silt fence.

Construction Entrances





Good

- Remove mud and dirt from the tires of construction vehicles before they enter a paved roadway.
- Properly size entrance BMPs for all anticipated vehicles.
- Make sure that the construction entrance does not become buried in soil.



Stormwater and the **Construction Industry**

Construction Phasing



Good

- Sequence construction activities so that the soil is not exposed for long periods of time.
- Schedule or limit grading to small areas.
- Install key sediment control practices before site grading begins.
- Schedule site stabilization activities, such as landscaping, to be completed immediately after the land has been graded to its final contour.

Maintain your BMPs! www.epa.gov/npdes/menuofbmps





- Rough grade or terrace slopes.
- Break up long slopes with sediment barriers, or under drain, or divert stormwater away from slopes.

Good

Dirt Stockpiles



• Cover or seed all dirt stockpiles.

Vegetative Buffers





Good

- Protect and install vegetative buffers along waterbodies to slow and filter stormwater runoff.
- Maintain buffers by mowing or replanting periodically to ensure their effectiveness.

Site Stabilization



Good

• Vegetate, mulch, or otherwise stabilize all exposed areas as soon as land alterations have been completed.

Storm Drain Inlet Protection



- Good
- Use rock or other appropriate material to cover the storm drain inlet to filter out trash and debris.
- Make sure the rock size is appropriate (usually 1 to 2 inches in diameter).
- If you use inlet filters, maintain them regularly.

Good









he construction industry is a critical participant in the nation's efforts to protect streams, rivers, lakes, wetlands, and oceans. Through the use of best management practices (BMPs), construction site operators are the key defense against erosion and sedimentation.

As stormwater flows over a construction site, it picks up pollutants like sediment, debris, and chemicals. High volumes of stormwater can also cause stream bank erosion, and destroy downstream aquatic habitat. Preventing soil erosion and sedimentation is an important responsibility at all construction sites.

In addition to the environmental impact, uncontrolled erosion can have a significant financial impact on a construction project. It costs money and time to repair gullies, replace vegetation, clean sediment-clogged storm drains, replace poorly installed BMPs, and mitigate damage to other people's property or to natural resources.

Best Management Practice (BMP)

A BMP is a method used to prevent or control stormwater runoff and the discharge of pollutants, including sediment, into local waterbodies. Silt fences, inlet protection, and site-stabilization techniques are typical BMPs on a construction site.

Operator

An operator is someone who has control over and the ability to modify construction plans and specifications (e.g. owner, general contractor)

Someone who has control over the day-to-day operations at a site (e.g., owner, general contractor) that are necessary to ensure compliance with the permit requirements. It is the responsibility of a construction site owner or operator to contain stormwater runoff and prevent erosion during all stages of a project.

There may be more than one person at a site who meets these definitions and must apply for permit coverage. (States may have different definitions of the term "operator.")

So what's being done about polluted runoff?

The Clean Water Act includes the National Pollutant Discharge Elimination System (NPDES) permitting program. As of January 2003, 44 states and territories are authorized to issue NPDES stormwater permits. If your state isn't authorized to operate the NPDES stormwater permit program, EPA issues the permits. Permits vary from state to state, so contact your state or EPA for specific information. Your permitting authority has specific information on your state's NPDES stormwater permit program. In general, construction permits require construction operators to do all of the following:

- Develop and implement a stormwater pollution prevention plan
- Submit a permit application or notice of intent (NOI)
- Comply with the permit, including maintaining BMPs and inspecting the site

Under the NPDES program, construction activities that disturb 1 or more acres are required to obtain stormwater permit coverage. States have different names for the plans that construction operators must develop, such as

- Stormwater pollution prevention plan
- Erosion and sediment control plan
- Erosion control and stormwater management plan
- Stormwater management plan
- Water pollution control plan
- Pollution prevention plan

This document uses the term "Plan."

I think I need a permit... Where do I start?

All land-disturbing activities, including clearing, grading, and excavation, that disturb 1 or more acres are required to be covered under a state or EPA-issued NPDES construction stormwater permit prior to land disturbance. Permit requirements vary by state. Begin by researching the specific requirements in your state. You might already be subject to local erosion and sediment control requirements, but that doesn't release you from the requirements of the NPDES program at the state or EPA level. Although you must comply with both sets of requirements, in most cases they have been designed to be complementary. Contact your permitting authority to find out exactly what you need to do. A good place to start your search is the Construction Industry Compliance Assistance web site at http://www.envcap.org/cica.

The NPDES permit requirements include small construction activities that are part of a larger common plan of development or sale, such as a single lot within a larger subdivision. For developments with multiple operators, all operators must have permit coverage for their individual parts of the larger development, no matter how large or small each operation happens to be. When there are multiple operators at one site, they're encouraged to develop and share one comprehensive Plan and obtain permit coverage as co-permitees.

The owner or operator of the construction site is responsible for complying with the requirements of the permit. Responsibilities include developing a Plan, obtaining permit coverage, implementing BMPs, and stabilizing the site at the end of the construction activity.

Construction sites that discharge unpermitted stormwater are in violation of the Clean Water Act and may be subject to fines of up to \$27,500 a day per violation.

Determine your eligibility

All construction activity that disturbs 1 or more acres of land, as well as activity that disturbs less than 1 acre but is part of a larger common plan of development, must obtain permit coverage.

Read and understand your stormwater permit requirements

Get a copy of the permit for construction activities and a permit application (or notice of intent form) from your state or EPA permitting authority.

Develop a Plan

Most states do not require you to submit your Plan. However, you do need to keep the Plan on site. If that's impractical, you may post a notice that tells where the Plan is kept so it can be accessed by the permitting authority and other interested parties.

You'll need to post a copy of your completed application on site. Put it in a place where the public can see it so they'll know your site is covered by an NPDES permit!

Apply for permit coverage

Once you understand your permit requirements and have developed a Plan, you can submit a stormwater permit application (or notice of intent) to your permitting authority. This must be done before beginning any land disturbance on the site. Some states require a few days of lead time, so check with your permitting authority. Once you've submitted the application, you must satisfy the conditions of the permit.

Implement the Plan

Be prepared to implement the BMPs in your Plan before construction begins. Ensure that BMPs are properly maintained, and upgrade and repair them as necessary.

Stormwater and the Construction Industry *Planning and Implementing Erosion and Sediment Control Practices*

Developing and Implementing a Plan

You must have a Plan that includes erosion and sediment control and pollution prevention BMPs. These Plans require

- Advance planning and training to ensure proper implementation of the BMPs
- Erosion and sediment control BMPs in place until the area is permanently stabilized
- Pollution prevention BMPs to keep the construction site "clean"
- Regular inspection of the construction site to ensure proper installation and maintenance of BMPs
- Fortunately, the practices and measures that must be included in your Plan are already part of the standard operating procedures at many construction sites.

Six steps are associated with developing and implementing a stormwater Plan. There's a wealth of information available on developing pollution prevention plans. Please contact your permitting authority for help in finding additional guidance materials, or visit www.epa.gov/npdes/stormwater. A sample construction plan is available at www.epa.gov/npdes/pubs/sample_swppp.pdf.

1. Site Evaluation and Design Development

- Collect site information
- Develop site plan design
- Prepare pollution prevention site map

The first step in preparing a Plan is to define the characteristics of the site and the type of construction that will occur. This involves collecting site information, identifying natural features that should be protected, developing a site plan design, describing the nature of the construction activity, and preparing a pollution prevention site map.

2. Assessment

- Measure the site area
- **Determine the drainage areas**
- Calculate the runoff coefficient

The next step is assessing the impact the project will have on stormwater runoff. Determine the drainage areas and estimate the runoff amounts and velocities. For more information on calculating the runoff coefficient, go to www.epa.gov/npdes/pubs/chap02_conguide.pdf, page 11.

3. Control Selection and Plan Design

- Review and incorporate state or local requirements
- Select erosion and sediment controls
- Select other controls
- Select stormwater management controls
- Indicate the location of controls on the site map
- Prepare an inspection and maintenance plan
- Coordinate controls with construction activity
- Prepare sequence of major activities

In the third step you'll actually document your procedures to prevent and control polluted stormwater runoff. You must delineate areas that will not be disturbed, including critical natural areas like streamside areas, floodplains, and trees. You must also identify the measures (or BMPs) you'll use to protect these areas.

Soil erosion control tips...

- Design the site to infiltrate stormwater into the ground and to keep it out of storm drains. Eliminate or minimize the use of stormwater collection and conveyance systems while maximizing the use of stormwater infiltration and bioretention techniques.
- Minimize the amount of exposed soil on site.
- To the extent possible, plan the project in stages to minimize the amount of area that is bare and
- subject to erosion. The less soil exposed, the easier and cheaper it will be to control erosion. • Vegetate disturbed areas with permanent or temporary seeding immediately upon reaching final
- Vegetate or cover stockpiles that will not be used immediately.
- Reduce the velocity of stormwater both onto and away from the project area. • Interceptors, diversions, vegetated buffers, and check dams are a few of the BMPs that can be used to slow down stormwater as it travels across and away from the project site.
 - Diversion measures can also be used to direct flow away from exposed areas toward stable portions of the site.
 - Silt fences and other types of perimeter filters should never be used to reduce the velocity of runoff.
- Protect defined channels immediately with measures adequate to handle the storm flows expected. • Sod, geotextile, natural fiber, riprap, or other stabilization measures should be used to allow the channels to carry water without causing erosion. Use softer measures like geotextile or vegetation where possible to prevent downstream impacts.
- Keep sediment on site. • Place aggregate or stone at construction site vehicle exits to accommodate at least two tire revolutions of large construction vehicles. Much of the dirt on the tires will fall off before the vehicle gets to the street.
 - Regular street sweeping at the construction entrance will prevent dirt from entering storm drains. Do not hose paved areas.
 - Sediment traps and basins are temporary structures and should be used in conjunction with other measures to reduce the amount of erosion.
- Maintaining all BMPs is critical to ensure their effectiveness during the life of the project. • Regularly remove collected sediment from silt fences, berms, traps, and other BMPs.
- Ensure that geotextiles and mulch remain in place until vegetation is well established
- Maintain fences that protect sensitive areas, silt fences, diversion structures, and other BMPs.

Other BMPs and Activities to Control Polluted Runoff

You'll need to select other controls to address potential pollutant sources on your site. Construction materials, debris, trash, fuel, paint, and stockpiles become pollution sources when it rains. Basic pollution prevention practices can significantly reduce the amount of pollution leaving construction sites. The following are some simple practices that should be included in the Plan and implemented on site:

- Keep potential sources of pollution out of the rain as practicable (e.g., inside a building, covered with plastic or tarps, or sealed tightly in a leak-proof container). • Clearly identify a protected, lined area for concrete truck washouts. This area should be located away from streams, storm drain inlets, or ditches and should be cleaned out periodically.
- Park, refuel, and maintain vehicles and equipment in one area of the site to minimize the area exposed to possible spills and fuel storage. This area should be well away from streams, storm drain inlets, or ditches. Keep spill kits close by and clean up any spills or leaks immediately, including spills on pavement or earthen surfaces.
- Practice good housekeeping. Keep the construction site free of litter, construction debris, and leaking containers. Keep all waste in one area to minimize cleaning.
- Never hose down paved surfaces to clean dust, debris, or trash. This water could wash directly into storm drains or streams. Sweep up materials and dispose of them in
- the trash. Never bury trash or debris! • Dispose of hazardous materials properly.

Visit www.epa.gov/npdes/stormwater for more information.

soil at any given time is a highly effective way to prevent erosion. Erosion control measures designed to prevent soil from being mobilized include diversions to route stormwater away from exposed soils and stabilization with vegetation, mulch, and geotextiles. Sedimentation control measures designed to remove sediment from stormwater or prevent it from leaving the site include silt fences, sediment traps, and diversions.

Phasing your project to minimize the amount of exposed

You'll need to select erosion and sediment controls including stabilization measures for protecting disturbed areas and structural controls for diverting runoff and removing sediment—that are appropriate for your particular site. The appropriateness of the control measures will depend on several factors, but will be influenced most directly by the site characteristics. Some stabilization measures you might consider are temporary seeding, permanent seeding, and mulching. Structural control measures include earth dikes, silt fences, and sediment traps. No single BMP will meet all of the erosion and sedimentation control needs of a construction site. A combination of BMPs is necessary For more information on the types of BMPs appropriate for your construction site, see the BMP fact sheet series available at www.epa.gov/npdes/menuofbmps.

4. Certification and Notification

Certify the Plan

Submit permit application or notice of intent Once the Plan has been developed, an authorized representative must sign it. Now is the time to submit the permit application or notice of intent. Your permit might require that the Plan be kept on site, so be sure to keep it available for the staff implementing the Plan.

Erosion and sedimentation control practices are only as good as their installation and maintenance.

5. Implementing and Maintaining a Plan

- Implement controls
- Inspect and maintain controls
- Update/change the Plan
- Report releases of hazardous materials

A Plan describes the practices and activities you'll use to prevent stormwater contamination and meet the NPDES permit requirements. Make sure that the Plan is implemented and that the Plan is updated as necessary to reflect changes on the site.

Erosion and sedimentation control practices are only as good as their installation and maintenance. Train the contractors that will install the BMPs and inspect immediately to ensure that the BMPs have been installed correctly.

Regularly inspect the BMPs (especially before and after rain events) and perform any necessary repairs or maintenance immediately. Many BMPs are designed to handle a limited amount of sediment. If not maintained, they'll become ineffective and a source of sediment pollution.

It's also important to keep records of BMP installation, implementation, and maintenance. Keep track of major grading activities that occur on the site, when construction activities cease (temporarily or permanently), and when a site is temporarily or permanently stabilized.

If construction plans change at any time, or if more appropriate BMPs are chosen for the site, update the Plan accordingly.

6. Completing the Project: **Final Stabilization and** Termination of the Permit

- Final stabilization
- Notice of Termination
- Record retention

Many states and EPA require a Notice of Termination (NOT) or other notification signifying that the construction activity is completed. An NOT is required when

- Final stabilization has been achieved on all portions of the site for which the permittee is responsible.
- Another operator has assumed control over all areas of the site that have not been finally stabilized. That operator would need to submit a new permit application to the permitting authority.
- For residential construction only, temporary stabilization of a lot has been completed prior to transference of ownership to the homeowner, with the homeowner being made aware of the need to perform final stabilization.

Permittees must keep a copy of their permit application and their Plan for at least 3 years following final stabilization. This period may be longer depending on state and local requirements.

Preconstruction Checklist

• A site description, including

- Nature of the activity
- Intended sequence of major construction activities
- ◆ Total area of the site
- Existing soil type and rainfall runoff data
- A site map with: • Drainage patterns
- Approximate slopes after major grading
- Area of soil disturbance
- Outline of areas which will not be disturbed
- Location of major structural and nonstructural soil erosion controls
- Areas where stabilization practices are expected to occur
- Surface waters
- Stormwater discharge locations
- Name of the receiving water(s)
- A description of controls:
- Erosion and sediment controls, including • Stabilization practices for all areas disturbed by construction • Structural practices for all drainage/discharge locations
- Stormwater management controls, including
- Measures used to control pollutants occurring in stormwater discharges after construction activities are complete • Velocity dissipation devices to provide nonerosive flow conditions
- from the discharge point along the length of any outfall channel • Other controls, including
- Waste disposal practices that prevent discharge of solid materials
- Measures to minimize offset tracking of sediments by construction
- Measures to ensure compliance with state or local waste disposal, sanitary sewer, or septic system regulations
- Description of the timing during the construction when measures will be implemented
- State or local requirements incorporated into the Plan
- Inspection and maintenance procedures for control measures identified in the Plan
- Contractor certification and Plan certification

Implementation Checklist

- Maintain records of construction activities, including
- Dates when major grading activities occur
- Dates when construction activities temporarily cease on the site or a portion of the site
- Dates when construction activities permanently cease on the site or a portion of the site
- Dates when stabilization measures are completed on the site
- Prepare inspection reports summarizing
- Name of person conducting BMP inspections
- Qualifications of person conducting BMP inspections
- BMPs/areas inspected
- Observed conditions
- Necessary changes to the Plan

• Report releases of reportable quantities of oil or hazardous materials • Notify the National Response Center at 800-424-8802 immediately

- Report releases to your permitting authority immediately, or as specified in your permit. You must also provide a written report within 14 days.
- Modify the Plan to include
- The date of release
- Circumstances leading to the release
- Steps taken to prevent reoccurrence of the release • Modify Plan as necessary
- Incorporate requests of the permitting authority to bring the Plan into compliance
- Address changes in design, construction operation, or maintenance that affect the potential for discharge of pollutants

An ounce of prevention is worth a pound of cure! It's far more efficient and costeffective to prevent pollution than it is to try to correct problems later. Installing and maintaining simple BMPs and pollution prevention techniques on site can greatly reduce the potential for stormwater pollution and can also save you money!









City of Hammond

LPDES Permit No. LAR041030

Agency Interest No. 104053

2019 Stormwater Management Plan

Section 6.0 Attachments

Attachment 6

Code of Ordinances of the City of Hammond, Louisiana Article II—Cutting of Grass, Weeds, and Brushes and Removal of Trash, Rubbish, and Garbage

ARTICLE II. - CUTTING OF GRASS, WEEDS AND BRUSHES AND REMOVAL OF TRASH, RUBBISH AND GARBAGE

Sec. 17-16. - Cutting and removal required; notice to comply with article.

The failure and refusal to cut, remove and clear all grass, weeds and brush as defined hereinafter, and the accumulation of trash, rubbish and garbage within the city is declared to be a public nuisance which threatens the spread of disease which is within the scope of the regulatory authority of the city.

- (1) The owner, tenant, occupant and/or the agent or any one (1) or more of them of any developed or undeveloped lot or parcel of land situated within the corporate limits of the city shall be and is required to cut, remove and clear all grass, weeds and brush in excess of eighteen (18) inches in height from the said lot or parcel of land and the sidewalk right-of-way adjacent thereto, within ten (10) days after written notice by the city by registered mail, return receipt requested, at the address provided by the tax rolls for the city, or notice by advertisement in the official journal of the city for two (2) consecutive days.
- (2) The owner, tenant, occupant and/or the agent or anyone or more of them of any developed or undeveloped lot or parcel of land situated within the corporate limits of the city shall be and is hereby required to remove and dispose of all trash, rubbish and garbage which is growing, lying or located in or upon any such lot or parcel of land in the sidewalk right-of-way adjacent thereto, within ten (10) days after written notice by the city by registered mail, return receipt requested, at the address provided by the tax rolls for the city, or notice by advertisement in the official journal of the city for two (2) consecutive days.
- (3) For purposes of this section, developed lot or parcel of land shall mean a lot or parcel of land upon which a house, a residence, a mobile home, a house trailer or other structure used as a dwelling or for business or other structure used as a dwelling or for business or other commercial purposes, has been erected, constructed, located or placed; or a lot or parcel of land which is the subject of a building permit issued by the city.
- (4) For purposes of this section, an undeveloped lot or parcel of land shall mean a lot or parcel of land other than a developed lot or parcel of land.
- (5) For purposes of this article, the term "trash, rubbish and garbage" shall mean any excrement, offal, filth, manure, foul and offensive matter, stagnant, corrupt or putrid water, dead animals or fowl, shells, hay, straw, kitchen stuff, paper, cloth or any matter or substance of any kind which may be offensive to the smell or injurious to the health.
- (6) After due notice is made as provided above, if the owner, tenant, occupant and/or the agent of any one or more of them of said property fails to cut, remove and clear such grass, weeds and brush or remove and properly dispose of any trash, rubbish and garbage within the ten-day period provided, the mayor or his representative is hereby authorized to cut, remove and clear such grass, weeds and brush and/or to remove and dispose of any trash, rubbish and garbage from said lot or parcel of land in the sidewalk right-of-way adjacent thereto.

The charges, cost, and expenses incurred by the city in enforcing this article, shall, to the extent of the actual cost thereof to the city be a charge, cost or expense of the property, parcel of land and the sidewalk right-of-way adjacent thereto, and the owner thereof.

Such charge will be based upon the expense that Hammond actuallypays for contractor to cut and clean a lot plus an administrative fee sufficient to cover filing fees, photos, gas and processing. A charge of two dollars (\$2.00) per front foot of property will be paid to approve contractors (on a rotation basis) for cutting of weeds/grass. Additional charges requested by the contractor and approved by the city (maybe made if a lot must first be cleared of debris and trash. Such additional charges must be approved by the city as a reasonable cost before the contractor does additional work and is reimbursed for it. If such lot(s) must be cut by the more that once, charges billed to the property owner shall be three dollars (\$3.00) per front foot thereafter.

- (7) However, the city may undertake the cutting, destruction, or removal; of grass, weeds and brush, trash, rubbish and garbage on any property within the city on a monthly basis without the notice required in subsection (a) and (b) above if the property owner liable has been notified pursuant to said subsection at any time during the immediate proceeding six (6) months and has failed to do the work himself after opportunity to do so. However, prior to undertaking such work, the municipal governing authority shall file and record an affidavit, signed by the mayor [of] the city at its administrative office. Such affidavit shall include the following:
 - (1) A description of the property sufficient to reasonably identify it;
 - (2) A photograph of the property sufficient to reasonably identify its unsafe or unsanitary condition and to justify the necessity for cutting, destroying or removing weeds, grass, brush, trash, rubbish and garbage;
 - (3) A statement that the property owner liable has within the past six (6) months failed to do such work after notification and opportunity to do so pursuant to subsection (3) of this section.

(Ord. No. 2195, C.S., 6-19-90; Ord. No. 2267, C.S., 12-15-92; Ord. No. 2343, C.S., 4-5-94; Ord. No. 2924, C.S., 2-4-03)

Sec. 17-17. - Mailing statement showing expense incurred; addition to tax liability.

(a) If, after the cutting, destruction or removal of such weeds, grass, brush, trash, rubbish and garbage, by the city after due notice is provided above, the cost or expense thereof has not been paid within ten (10) days, the tax collector of the city shall furnish the owner, as shown on the last assessment roll of the city by registered mail a written statement showing the cost of expense incurred for the work, and place or property on which the work was done. If the said statement is not paid within one month thereafter, the amount thereof shall be included in and form part of the taxes due by the owner of said property, and when collected shall be credited to the general fund of the city.

(Ord. No. 2195, C.S., 6-19-90; Ord. No. 2267, C.S., 12-15-92)

Sec. 17-18. - Record of charges.

(a) The tax collector shall maintain a record of such charges prior to the filing of the tax rolls, which records shall be open to inspection at all times in which shall constitute legal notice to the purchasers of the property, or parties lending money thereon, of the assessment.

(Ord. No. 2267, C.S., 12-15-92)

Secs. 17-19—17-29. - Reserved.