

Chapter 9 - DRAINAGE AND FLOOD CONTROL

FOOTNOTE(S):

(18) **Cross reference**— Buildings and building regulations, Ch. 7.

(18) **State Law reference**— Adoption of building ordinances authorized, Code of Ala. § 11-43-59.

ARTICLE I. - IN GENERAL

Sec. 9-1. - Obstruction of drainage system.

It shall be unlawful and an offense against the city for any person to place any structure, trash, debris, or other object of any type whatsoever, in any city drainage ditch, pipe, or easement or in any other part of the city drainage system where such placement constitutes or would constitute an obstruction, in any manner, to the free passage of water. No person shall be prosecuted under this article until he or she has been given five (5) days notice by an authorized employee of the city, orally or in writing, to remove the offending material.

(Ord. No. 426, §§ 1, 2, 12-9-82)

Secs. 9-2—9-20. - Reserved.

ARTICLE II. - FLOODPLAIN MANAGEMENT

FOOTNOTE(S):

(19) **Editor's note**— Ord. No. 756, adopted Dec. 13, 2007, amended Ord. No. 658, which had been codified as Art. II, §§ 9-21—9-30, 9-41—9-44, and 9-51—9-59, in its entirety. Similar provisions have been codified to read as herein set out.

DIVISION 1. - GENERALLY

Sec. 9-21. - Statutory authorization, findings of fact, purpose and objectives.

- (a) *Statutory authorization.* The Legislature of the State of Alabama has in Title 11, Chapter 19, Sections 1—24 [sections 11-19-1—11-19-24]; Chapter 45, Sections 1—11 [sections 11-45-1—11-45-11]; Chapter 52, Sections 1—84 [sections 11-52-1—11-52-84]; and Title 41, Chapter 9, Section 166 [section 41-9-166] of the Code of Alabama, 1975, authorized local government units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the council of the City of Saraland, Alabama, does ordain as follows:
- (b) *Findings of fact.*
- (1) The flood hazard areas of Saraland, Alabama, are subject to periodic inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood relief and protection, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.
 - (2) These flood losses are caused by the occupancy in flood hazard areas of uses vulnerable to floods, which are inadequately elevated, floodproofed, or otherwise unprotected from flood damages, and by the cumulative effect of obstructions in floodplains causing increases in flood heights and velocities.

- (c) *Statement of purpose.* It is the purpose of this article to promote the public health, safety and general welfare and minimize public and private losses due to flood conditions in specific areas by provisions designed to:
- (1) Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
 - (2) Restrict or prohibit uses which are dangerous to health, safety and property due to water or erosion hazards, or which increase flood heights, velocities, or erosion;
 - (3) Control filling, grading, dredging and other development which may increase flood damage or erosion; and
 - (4) Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands;
 - (5) Control the alteration of natural floodplains, stream channels, and natural protective barriers which are involved in the accommodation of floodwaters.
- (d) *Objectives.* The objectives of this article are to:
- (1) Protect human life and health;
 - (2) Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in floodplains;
 - (3) Help maintain a stable tax base by providing for the sound use and development of floodprone areas in such a manner as to minimize flood blight areas;
 - (4) Minimize expenditure of public money for costly flood control projects;
 - (5) Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
 - (6) Minimize prolonged business interruptions; and
 - (7) Insure that potential home buyers are notified that property is in a flood area.

(Ord. No. 756, Div. 1(§§ A—D), 12-13-07)

Sec. 9-22. - General provisions.

- (a) *Lands to which this article applies.* This article shall apply to all areas of special flood hazard within the jurisdiction of Saraland, Alabama.
- (b) *Basis for area of special flood hazard.* The areas of special flood hazard identified by the Federal Emergency Management Agency in its flood insurance study (FIS), dated March 16, 2007, with accompanying maps and other supporting data and any revision thereto, are adopted by reference and declared a part of this article. For those land areas acquired by a municipality through annexation, the current effective FIS and data for Mobile County are hereby adopted by reference. Areas of special flood hazard may also include those areas known to have flooded historically or defined through standard engineering analysis by governmental agencies or private parties but not yet incorporated in a FIS.
- (c) *Establishment of development permit.* A development permit shall be required in conformance with the provisions of this article prior to the commencement of any development activities.
- (d) *Compliance.* No structure or land shall hereafter be located, extended, converted or altered without full compliance with the terms of this article and other applicable regulations.
- (e) *Abrogation and greater restrictions.* This article is not intended to repeal, abrogate, or impair any existing ordinance, easements, covenants, or deed restrictions. However, where this article and another conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

- (f) *Interpretation.* In the interpretation and application of this article all provisions shall be:
- (1) Considered as minimum requirements;
 - (2) Liberally construed in favor of the governing body; and
 - (3) Deemed neither to limit nor repeal any other powers granted under state statutes.
- (g) *Warning and disclaimer of liability.* The degree of flood protection required by this article is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur; flood heights may be increased by manmade or natural causes. This article does not imply that land outside the areas of special flood hazard or uses permitted within such areas will be free from flooding or flood damages. This article shall not create liability on the part of Saraland or by any officer or employee thereof for any flood damages that result from reliance on this article or any administrative decision lawfully made thereunder.
- (h) *Penalties for violation.* Violation of the provisions of this article or failure to comply with any of its requirements, including violation of conditions and safeguards established in connection with grants of variance or special exceptions shall constitute a misdemeanor. Any person who violates this article 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 thirty (30) days, or both, and in addition, shall pay all costs and expenses involved in the case. Each day such violation continues shall be considered a separate offense. Nothing herein contained shall prevent Saraland from taking such other lawful actions as is necessary to prevent or remedy any violation.

(Ord. No. 756, Div. 2(§§ A—H), 12-13-07)

Sec. 9-23. - Definitions.

Unless specifically defined below, words or phrases used in this article shall be interpreted so as to give them the meaning they have in common usage and to give this article its most reasonable application.

Addition (to an existing building) means any walled and roofed expansion to the perimeter of a building in which the addition connected by a common load-bearing wall other than a fire wall. Any walled and roofed addition which is connected by a fire wall or is separated by an independent perimeter load-bearing wall shall be considered new construction.

Appeal means a request for a review of the building inspector (appointed officials) interpretation of any provision of this article.

Area of shallow flooding means a designated AO or AH zone on a community's flood insurance rate map (FIRM) with base flood depths. From one to three (3) feet, and/or where a clearly defined channel does not exist, where the path of flooding is unpredictable and indeterminate, and where velocity flow may be evident.

Area of special flood hazard means the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. In the absence of official designation by the Federal Emergency Management Agency, areas of special flood hazard shall be those designated by the local community and referenced in section 9-22(b).

Base flood means the flood having a one percent chance of being equaled or exceeded in any given year.

Basement means that portion of a building having its floor subgrade (below ground level) on all sides.

Building means any structure built for support, shelter, or enclosure for any occupancy or storage.

Development means any manmade change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation, drilling operations, and storage of equipment or materials.

Elevated building means a nonbasement building built to have the lowest floor of the lowest enclosed area elevated above the ground level by means of solid foundation perimeter walls, [pilings, columns, piers, or shear walls adequately anchored so as not to impair the structural integrity of the building during a base flood event.

Existing construction means any structure for which the start of construction commenced before July 6, 1998 (i.e., the effective date of the first floodplain management code or ordinance adopted by the community as a basis for that community's participation in the National Flood Insurance Program (NFIP)).

Existing manufactured home park or subdivision means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum the installation of utilities, the construction of streets, and final site grading or the pouring of concrete pads) is completed before July 6, 1998 (i.e., the effective date of the first floodplain management regulations adopted by a community).

Expansion to an existing manufactured home park or subdivision means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed, including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads.

Flood or flooding means a general and temporary condition of partial or complete inundation of normally dry land areas from the:

- (a) Overflow of inland or tidal waters; or
- (b) Unusual and rapid accumulation or runoff of surface waters from any source.

Flood hazard boundary map (FHBM) means an official map of a community, issued by the Federal Insurance Administration, where the boundaries of areas of special flood hazard have been designated as zone A.

Flood insurance rate map (FIRM) means an official map of a community, issued by the Federal Insurance Administration, delineating the areas of special flood hazard and/or risk premium zones applicable to the community.

Flood insurance study (FIS) means the official report by the Federal Insurance Administration evaluating flood hazards and containing flood profiles and water surface elevations of the base flood.

Floodplain means any land area susceptible to flooding.

Floodway (regulatory floodway) means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

Functionally dependent facility means a facility which cannot be used for its intended purpose unless it is located or carried out in close proximity to water, such as a docking or port facility necessary for the loading and unloading of cargo or passengers, shipbuilding, or ship repair facilities. The term does not include long-term storage, manufacture, sales, or service facilities.

Highest adjacent grade means the highest natural elevation of the ground surface, prior to construction, adjacent to the proposed walls of a structure.

Historic structure means any structure that is:

- (a) Listed individually in the National Register of Historic Places (a living maintained by the U.S. Department of I preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing c Register;
- (b) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
- (c) Individually listed on a state inventory of historic places and determined as eligible by states with historic preservation programs which have been approved by the Secretary of the Interior; or
- (d) Individually listed on a local inventory of historic places and determined as eligible by communities with historic preservation programs that have been certified either:
 - (1) By an approved state program as determined by the Secretary of the Interior; or
 - (2) Directly by the Secretary of the Interior in states without approved programs.

Levee means a manmade structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control or divert the flow of water so as to provide protection from temporary flooding.

Levee system means a flood protection system which consists of a levee, or levees, and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices.

Lowest floor means the lowest floor of the lowest enclosed areas (including basement). An unfinished or flood-resistant enclosure, used solely for parking of vehicles, building access, or storage, in an area other than a basement, is not considered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of other provisions of this Code.

Manufactured home means a building, transportable in one or more sections, built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. The term also includes park trailers, travel trailers, and similar transportable structures placed on a site for one hundred eighty (180) consecutive days or longer and intended to be improved property.

Manufactured home park or subdivision means a parcel (or contiguous parcels) of land divided into two (2) or more manufactured home lots for rent or sale.

Mean sea level means the average height of the sea for all stages of the tide. It is used as a reference for establishing various elevations within the floodplain. For purposes of this article, the term is synonymous with National Geodetic Vertical Datum (NGVD) of 1929 or other datum.

National Geodetic Vertical Datum (NGVD), as corrected in 1929, is a vertical control used as a reference for establishing varying elevations within the floodplain.

New construction means any structure (see definition) for which the start of construction commenced after July 6, 1998, and includes any subsequent improvements to the structure and includes any subsequent improvements to such structures.

New manufactured home park or subdivision means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after July 6, 1998 (i.e., the effective date of the first floodplain management regulations adopted by a community).

Repetitive loss means flood-related damages sustained by a structure on two (2) separate occasions during a ten-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds twenty-five (25) percent of the market value of the structure before the damages occurred.

Recreational vehicle means a vehicle which is:

- (a) Built on a single chassis;
- (b) Four hundred (400) square feet or less when measured at the largest horizontal projection;
- (c) Designed to be self-propelled or permanently towable by a light-duty truck; and
- (d) Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

Remedy a violation means to bring the structure or other development into compliance with state or local floodplain management regulations, or, if this is not possible, to reduce the impacts of its noncompliance. Ways that impacts may be reduced include protecting the structure or other affected development from flood damages, implementing the enforcement provisions of this article or otherwise deterring future similar violations, or reducing federal financial exposure with regard to the structure or other development.

Section 1316 means no new flood insurance shall be provided for any property which the administrator finds has been declared by a duly constituted state or local zoning authority or other authorized public body, to be in violation of state or local laws, regulations or ordinances which are intended to discourage or otherwise restrict land development or occupancy in floodprone areas.

Start of construction means the date the development permit was issued, provided the actual start of construction, repair, reconstruction, or improvement was within one hundred eighty (180) days of the permit date. The actual start means the first placement of permanent construction of the structure such as the pouring of slabs or footings, installation of piles, construction of columns, or any work beyond the stage of excavation, and includes the placement of a manufactured home on a foundation. Permanent construction does not include initial land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of buildings appurtenant to the permitted structure, such as garages or sheds not occupied as dwelling units or part of the main structure. (NOTE: accessory structures are not exempt from any ordinance requirements.) For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

Structure means a walled and roofed building that is principally above ground, a manufactured home, a gas or liquid storage tank.

Substantial damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed fifty (50) percent of the market value of the structure before the damage occurred. Substantial damage also means flood-related damages sustained by a structure on two (2) separate occasions during a ten-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds twenty-five (25) percent of the market value of the structure before the damages occurred.

Substantial improvement means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds fifty (50) percent of the market value of the structure before the start of construction of the improvement. This term includes structures which have incurred repetitive loss or substantial damage, regardless of

construction of the improvement. This term includes structures which have incurred repetitive loss or substantial damage, regardless of the actual repair work performed. The market value of the building should be:

- (1) The appraised value of the structure prior to the start of the initial repair or improvement; or
- (2) In the case of damage, the value of the structure prior to the damage occurring.

This term includes structures which have incurred substantial damage, regardless of the actual amount of repair work performed.

For the purposes of this definition, substantial improvement is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the building. The term does not, however, include either:

- (1) Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or
- (2) Any alteration of a historic structure, provided that the alteration will not preclude the structure's continued designation as a historic structure.

Substantially improved existing manufactured home park or subdivision means where the repair, reconstruction, rehabilitation or improvement of the streets, utilities and pads equals or exceeds fifty (50) percent of the value of the streets, utilities and pads before the repair, reconstruction or improvement commenced.

Variance means a grant of relief from the requirements of this article which permits construction in a manner otherwise prohibited by this article.

Violation means the failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in the Code of Federal Regulations (CFR) 44, Sec. 60.3(b)(5), (c)(4), (c)(10), (d)(3), (e)(2), (e)(4), or (e)(5) and corresponding parts of this article is presumed to be in violation until such time as that documentation is provided.

(Ord. No. 756, Div. 6, 12-13-07; Ord. No. 788, 2-25-10)

Secs. 9-24—9-30. - Reserved.

DIVISION 2. - ADMINISTRATION

Sec. 9-31. - Designation of ordinance administrator.

The City of Saraland (agency) is hereby appointed to administer and implement the provisions of this article.

(Ord. No. 756, Div. 3(§ A), 12-13-07)

Sec. 9-32. - Permit procedures.

Application for a development permit shall be made to the building inspector (floodplain administrator) on forms furnished by the community prior to any development activities, and may include, but not be limited to the following: Plans in duplicate drawn to scale showing the elevations of the area in question and the nature, location, dimensions, of existing or

proposed structures, fill placement, storage of materials or equipment, and drainage facilities.

Specifically, the following information is required:

- (1) *Application stage:*
 - a. Elevation in relation to mean sea level (or highest adjacent grade) of the regulatory lowest floor level, including basement, of all proposed structures;
 - b. Elevation in relation to mean sea level to which any nonresidential structure will be floodproofed;
 - c. Design certification from a registered professional engineer or architect that any proposed nonresidential floodproofed structure will meet the floodproofing criteria of sections 9-42(2) and 9-44(2); and
 - e. Description of the extent to which any watercourse will be altered or relocated as a result of a proposed development.
- (2) *Construction stage:* For all new construction and substantial improvements, the permit holder shall provide to the administrator an as-built certification of the regulatory floor elevation or floodproofing level using appropriate FEMA elevation or floodproofing certificate immediately after the lowest floor or floodproofing is completed. When floodproofing is utilized for nonresidential structures, said certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same.

Any work undertaken prior to submission of these certifications shall be at the permit holder's risk. The building inspector (floodplain administrator) shall review the above-referenced certification data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further progressive work being allowed to proceed. Failure to submit certification or failure to make said corrections required hereby, shall be cause to issue a stop work order for the project.

(Ord. No. 756, Div. 3(§ B), 12-13-07)

Sec. 9-33. - Duties and responsibilities of the administrator.

Duties of the building inspector (floodplain administrator) shall include, but shall not be limited to:

- (1) Review all development permits to assure that the permit requirements of this article have been satisfied; and that sites are reasonably safe from flooding.
- (2) Review proposed development to assure that all necessary permits have been received from governmental agencies from which approval is required by federal or state law, including section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334. Require that copies of such permits be provided and maintained on file.
- (3) When base flood elevation data or floodway data have not been provided in accordance with section 9-22(b), then the building inspector (floodplain administrator) shall obtain, review and reasonably utilize any base flood elevation and floodway data available from federal, state or other sources in order to administer the provisions of Division 3 of this article.
- (4) Verify and record the actual elevation in relation to mean sea level (or highest adjacent grade) of the regulatory floor level, including basement, of all new construction or substantially improved structures in accordance with section 9-32(2).
- (5) Verify and record the actual elevation, in relation to mean sea level to which any new or substantially

improved structures have been floodproofed, in accordance with sections 9-42(2) and 9-44(2).

- (6) When floodproofing is utilized for a structure, the building inspector (floodplain administrator) shall obtain certification of design criteria from a registered professional engineer or architect in accordance with sections 9-32(1)(c) and 9-42(2) or 9-44(2).
- (7) Notify adjacent communities and the Alabama Department of Natural Resources prior to any alteration or relocation of a watercourse and submit evidence of such notification to the Federal Emergency Management Agency (FEMA), and the Alabama Department of Economic and Community Affairs/Office of Water Resources/NFIP State Coordinator's Office.
- (8) For any altered or relocated watercourse, submit engineering data/analysis within six (6) months to the FEMA and state to ensure accuracy of community flood maps through the letter of map revision process. Assure flood carrying capacity of any altered or relocated watercourse is maintained.
- (9) Where interpretation is needed as to the exact location of boundaries of the areas of special flood hazard (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. Any person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in this article.
- (10) All records pertaining to the provisions of this article shall be maintained in the office of the floodplain administrator and shall be open for public inspection.

(Ord. No. 756, Div. 3(§ C), 12-13-07)

Secs. 9-34—9-40. - Reserved.

DIVISION 3. - FLOOD HAZARD REDUCTION

Sec. 9-41. - General standards.

In all areas of special flood hazard the following provisions are required:

- (1) New construction and substantial improvements of existing structures shall be anchored to prevent flotation, collapse or lateral movement of the structure;
- (2) New construction and substantial improvements of existing structures shall be constructed with materials and utility equipment resistant to flood damage;
- (3) New construction or substantial improvements of existing structures shall be constructed by methods and practices that minimize flood damage;
- (4) Elevated buildings. All new construction or substantial improvements of existing structures that include any fully enclosed area located below the lowest floor formed by foundation and other exterior walls shall be designed so as to be an unfinished or flood-resistant enclosure. The enclosure shall be designed to equalize hydrostatic flood forces on exterior walls by allowing for the automatic entry and exit of floodwaters.
 - a. Designs for complying with this requirement must either be certified by a professional engineer or architect or meet the following minimum criteria:
 1. Provide a minimum of two (2) openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding;

2. The bottom of all openings shall be no higher than one foot above grade; and
 3. Openings may be equipped with screens, louvers, valves or other coverings or devices provided they permit the automatic flow of floodwater in both directions.
 - b. So as not to violate the lowest floor criteria of this article, the unfinished or flood-resistant enclosure shall only be used for parking of vehicles, limited storage of maintenance equipment used in connection with the premises, or entry to the elevated area; and
 - c. The interior portion of such enclosed area shall not be partitioned or finished into separate rooms.
- (5) All heating and air-conditioning equipment and components, all electrical, ventilation, plumbing, and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
- (6) Manufactured homes shall be anchored to prevent 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 standard shall be in addition to and consistent with applicable state requirements for resisting wind forces.
- (7) New and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system;
- (8) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters;
- (9) On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding; and
- (10) Any alteration, repair, reconstruction or improvement to a structure which is not compliant with the provisions of this article, shall be undertaken only if the nonconformity is not furthered, extended or replaced.

(Ord. No. 756, Div. 4(§ A), 12-13-07)

Sec. 9-42. - Specific standards.

In all areas of special flood hazard designated as A1-30, AE, AH, A (with estimated BFE), the following provisions are required:

- (1) *New construction and substantial improvements.* Where base flood elevation data are available, new construction or substantial improvement of any structure or manufactured home shall have the lowest floor, including basement, elevated no lower than one foot above the base flood elevation. Should solid foundation perimeter walls be used to elevate a structure, openings sufficient to facilitate the unimpeded movements of floodwaters shall be provided in accordance with standards of section 9-41(4), elevated buildings.
- (2) *Nonresidential construction.* New construction or the substantial improvement of any nonresidential structure located in A1-30, AE, or AH zones, may be floodproofed in lieu of elevation. The structure, together with attendant utility and sanitary facilities, must be designed to be watertight to one foot above the base flood elevation, with walls substantially impermeable to the passage of water, and structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of

buoyancy. A registered professional engineer or architect shall certify that the design and methods of construction are in accordance with accepted standards of practice for meeting the provisions above, and shall provide such certification to the official as set forth above and in section 9-33(6).

- (3) *Standards for manufactured homes and recreational vehicles.* Where base flood elevation data is available:
- a. All manufactured homes placed or substantially improved on:
 1. Individual lots or parcels;
 2. In new or substantially improved manufactured home parks or subdivisions;
 3. In expansions to existing manufactured home parks or subdivisions; or
 4. On a site in an existing manufactured home park or subdivision where a manufactured home has incurred substantial damage as the result of a flood, must have the lowest floor including basement elevated no lower than one foot above the base flood elevation.
 - b. Manufactured homes placed or substantially improved in an existing manufactured home park or subdivision may be elevated so that either:
 1. The lowest floor of the manufactured home is elevated no lower than one foot above the level of the base flood elevation; or
 2. Where no base flood elevation exists, the manufactured home chassis and supporting equipment is supported by reinforced piers or other foundation elements of at least equivalent strength and is elevated to a maximum of sixty (60) inches (five (5) feet).
 - c. All manufactured homes must be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement. (Refer to section 9-41.)
 - d. All recreational vehicles placed on sites must either:
 1. Be on the site for fewer than one hundred eighty (180) consecutive days, fully licensed and ready for highway use if it is licensed, on its wheels or jacking system, attached to the site only by quick disconnect-type utilities and security devices, and has no permanently attached structures or additions; or
 2. The recreational vehicle must meet all the requirements for new construction, including the anchoring and elevation requirements of section 9-42(3)(a) and (c), above.

(Ord. No. 756, Div. 4(§ B), 12-13-07)

Sec. 9-43. - Floodways.

- (1) Located within areas of special flood hazard established in section 9-23(b), are areas designated as floodways. A floodway may be an extremely hazardous area due to velocity floodwaters, debris or erosion potential. In addition, the area must remain free of encroachment in order to allow for the discharge of the base flood without increased flood heights. Therefore, the following provisions shall apply:
 - (a) The community shall select and adopt a regulatory floodway based on the principle that the area chosen for the regulatory floodway must be designed to carry the waters of the base flood, without increasing the water surface elevation of that flood more than one foot at any point.
 - (b) Encroachments are prohibited, including fill, new construction, substantial improvements or other development within the adopted regulatory floodway. Development may be permitted, however, provided it is demonstrated through hydrologic and hydraulic analyses performed in accordance with

standard engineering practice that the encroachment shall not result in any increase in flood levels or floodway widths during a base flood discharge. A registered professional engineer must provide supporting technical data and certification thereof.

- (c) Require, until a regulatory floodway is designated, 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 foot at any point within the community.
- (d) Only if subsection (1)(b) or (c), above, is satisfied, then any new construction or substantial improvement shall comply with all other applicable flood hazard reduction provisions of Division 3 of this article.

(Ord. No. 756, Div. 4(§ C), 12-13-07)

Sec. 9-44. - Building standards for streams without established base flood elevations (approximate A-Zones).

Located within the areas of special flood hazard established in section 9-22(b), where streams exist but no base flood data have been provided (approximate A-Zones), the following provisions apply:

- (1) When base flood elevation data or floodway data have not been provided in accordance with section 9-22(b), then the building inspector (floodplain administrator) shall obtain, review, and reasonably utilize any scientific or historic base flood elevation and floodway data available from a federal, state, or other source, in order to administer the provisions of Division 3 of this article. Only if data are not available from these sources, then the following provisions of subsections (2) and (3) shall apply:
- (2) No encroachments, including structures or fill material, shall be located within an area equal to the width of the stream or twenty-five (25) feet, whichever is greater, measured from the top of the stream bank, unless certification by a registered professional engineer is provided demonstrating that such encroachment shall not result in any increase in flood levels during the occurrence of the base flood discharge.
- (3) All development in Zone A must meet the requirements of sections 9-41 and 9-42(1) through (3).
- (4) In special flood hazard areas without base flood elevation data, new construction and substantial improvements of existing structures shall have the lowest floor of the lowest enclosed area (including basement) elevated no less than three (3) feet above the highest adjacent grade at the building site. Also, in the absence of a base flood elevation, a manufactured home must also meet the elevation requirements of section 9-42(3)(b)2., in that the structure must be elevated to a maximum of sixty (60) inches (five (5) feet). Openings sufficient to facilitate the unimpeded movements of floodwaters shall be provided in accordance with standards of section 9-41(4), elevated buildings. The building inspector (floodplain administrator) shall certify the lowest floor elevation level and the record shall become a permanent part of the permit file.

(Ord. No. 756, Div. 4(§ D), 12-13-07)

Sec. 9-45. - Standards for areas of shallow flooding (AO Zones).

Areas of special flood hazard established in section 9-22(b), may include designated "AO" shallow flooding areas. These areas have base flood depths of one to three (3) feet above ground, with no clearly defined channel. The following provisions apply:

- (1) All new construction and substantial improvements of residential and nonresidential structures shall

have the lowest floor, including basement, elevated to the flood depth number specified on the flood insurance rate map (FIRM) above the highest adjacent grade. If no flood depth number is specified, the lowest floor, including basement, shall be elevated at least two (2) feet above the highest adjacent grade. Openings sufficient to facilitate the unimpeded movements of floodwaters shall be provided in accordance with standards of section 9-41(4), elevated buildings. The building inspector (administrator) shall certify the lowest floor elevation level and the record shall become a permanent part of the permit file.

- (2) New construction or the substantial improvement of a nonresidential structure may be floodproofed in lieu of elevation. The structure, together with attendant utility and sanitary facilities, must be designed to be watertight to the specified FIRM flood level or two (2) feet (if no map elevation is listed), above highest adjacent grade, with walls substantially impermeable to the passage of water, and structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. A registered professional engineer or architect shall certify that the design and methods of construction are in accordance with accepted standards of practice for meeting the provisions above, and shall provide such certification to the official as set forth above and as required in section 9-32(1)(c) and (2).
- (3) Drainage paths shall be provided to guide floodwaters around and away from any proposed structure.

(Ord. No. 756, Div. 4(§ E), 12-13-07)

Sec. 9-46. - Standards for subdivisions.

- (1) All subdivision proposals shall be consistent with the need to minimize flood damage;
- (2) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage;
- (3) All subdivision proposals shall have adequate drainage provided to reduce exposure to flood hazards; and
- (4) Base flood elevation data shall be provided for subdivision proposals and all other proposed development, including manufactured home parks and subdivisions, greater than fifty (50) lots or five (5) acres, whichever is the lesser.

(Ord. No. 756, Div. 4(§ F), 12-13-07)

Secs. 9-47—9-50. - Reserved.

DIVISION 4. - VARIANCES

Sec. 9-51. - Procedures.

- (1) The Saraland Board of Adjustments (appointed board) as established by the City of Saraland shall hear and decide requests for appeals or variance from the requirements of this article.
- (2) The board shall hear and decide appeals when it is alleged an error in any requirement, decision, or determination is made by the building inspector (local official) in the enforcement or administration of this article.
- (3) Any person aggrieved by the decision of the Saraland Board of Adjustments (appointed board) may appeal such decision to the circuit court (appropriate court), as provided in the Code of Alabama, 1975, as amended.
- (4) 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 an historic

- structure and the variance is the minimum to preserve the historic character and design of the structure.
- (5) Variances may be issued for development necessary for the conduct of a functionally dependent use, provided the criteria of this article are met, no reasonable alternative exists, and the development is protected by methods that minimize flood damage during the base flood and create no additional threats to public safety.
 - (6) Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.
 - (7) In reviewing such requests, the Saraland Board of Adjustments (appointed board) shall consider all technical evaluations, relevant factors, and all standards specified in this and other sections of this article.
 - (8) Conditions for variances:
 - (a) A variance shall be issued only when there is a:
 1. Finding of good and sufficient cause;
 2. Determination that failure to grant the variance would result in exceptional hardship; and
 3. Determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisance, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.
 - (b) The provisions of this article are minimum standards for flood loss reduction, therefore any deviation from the standards must be weighed carefully. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief; and, in the instance of a historic structure, a determination that the variance is the minimum necessary so as not to destroy the historic character and design of the building.
 - (c) Any applicant to whom a variance is granted shall be given written notice specifying the difference between the base flood elevation and the elevation of the proposed lowest floor and stating that the cost of flood insurance will be commensurate with the increased risk to life and property resulting from the reduced lowest floor elevation.
 - (d) The building inspector (administrator) shall maintain the records of all appeal actions and report any variances to the Federal Emergency Management Agency and the Alabama Department of Economic and Community Affairs/Office of Water Resources upon request.
 - (9) Upon consideration of the factors listed above and the purposes of this article, the Saraland Board of Adjustments (appointed board) may attach such conditions to the granting of variances as it deems necessary to further the purposes of this article.

(Ord. No. 756, Div. 5, 12-13-07)

Secs. 9-52—9-60. - Reserved.

ARTICLE III. - SURFACE DRAINAGE

FOOTNOTE(S):

⁽²⁰⁾ **Editor's note**— Ord. No. 537, §§ 1.1—1.20, adopted September 13, 1990, did not specifically amend the Code; hence, its inclusion herein as Art. III, §§ 9-61—9-70 was at the discretion of the editor.

Sec. 9-61. - Purpose.

The purpose of this article is to promote the public health and general welfare through the establishment of comprehensive land management regulations for flood control, designed to minimize loss of life and property due to flooding conditions, prevent unnecessary disruption of commerce and public service in times of flooding, avoid unnecessary and extraordinary expenditure of public funds for flood protection and relief and contribute to the maintenance of a stable tax base.

(Ord. No. 537, § 1.11, 9-13-90)

Sec. 9-62. - Methodology.

In order to accomplish its purpose, this article establishes requirements and procedures for review of proposed development and land disturbing activity within the districts previously established and includes provisions for:

- (1) Restricting or prohibiting development and land disturbing activity which, acting alone or in combination with other development or activity, will cause an increase in flood heights or velocities;
- (2) Controlling the alteration or relocation of watercourses, channels, and floodplains and controlling filling, grading and other land disturbing activity within the floodplain areas in accordance with federal, state and local requirements and procedures; and
- (3) Insuring that those who develop land subject to flooding are aware of potential flood hazards and assume responsibility for their actions.

(Ord. No. 537, § 1.12, 9-13-90)

Sec. 9-63. - Definitions.

For the purposes of this article, certain words or terms used herein shall be interpreted as set forth below. Words and terms not specifically defined shall be interpreted in accord with such normal dictionary meaning or customary usage as is appropriate to the context.

Adequate channel means a natural or manmade channel which is capable of conveying the runoff from a twenty-five-year storm without overtopping its banks or eroding after development of the site; a storm drainage facility which is capable of conveying the runoff from a twenty-five-year storm.

Development means any manmade change to improved or unimproved real estate including, but not limited to, buildings or other structures for which a development and/or building permit must be obtained under the requirements of City of Saraland.

Erosion and sediment control methods means exposure of the smallest practical area at any one time, exposure for the shortest practical period of time, establishment of permanent vegetation at the earliest practical date, employment of methods most suitable to the storm runoff from the site, and employment of methods to remove the maximum practical amount of sediment from the storm runoff, or other methods suitable to the topography, soil conditions, and nature of the disturbance.

Flood means a general and temporary condition of partial or complete inundation of normally dry land areas due to the overflow of inland or tidal waters and/or the unusual and rapid accumulation of runoff of surface waters from any source.

Land disturbing activity means any land change including, but not limited to clearing, grading, excavating, transporting and filling of land, or other construction activities which would disturb the natural vegetation or the existing contours of the land, which may result in soil erosion from water or wind and the movement of sediment into public or private storm

drainage facilities.

Owner means the person, firm, association, organization or corporation holding legal title to the land.

Person means any individual, partnership, firm, association, joint venture, public or private corporation, trust, estate, commission, board, public or private institution, utility, cooperative or any other legal entity.

Stormwater detention storage means stormwater runoff collected and stored for a period of time and released at a rate much less than the inflow rate.

Watercourse means any natural or manmade channel through which water flows.

(Ord. No. 537, § 1.13, 9-13-90)

Sec. 9-64. - Applicability.

The provisions of this article shall apply to all lands within the City of Saraland.

(Ord. No. 537, § 1.14, 9-13-90)

Sec. 9-65. - Compliance.

No land shall hereafter be developed, no structure shall be located, constructed, reconstructed, enlarged, or structurally altered, and no land disturbing activity shall take place within any district of the City of Saraland except in full compliance with the provisions of this article and other applicable city regulations.

(Ord. No. 537, § 1.15, 9-13-90)

Sec. 9-66. - Permits to be required.

- (a) *[Generally.]* No development or land disturbing activity shall be undertaken until after issuance of building and/or land disturbing activity permit as follows:
- (1) A building permit shall be required to erect, construct, reconstruct, enlarge, extend, or structurally alter any building or structure within the City of Saraland. Applications for building permits shall be filed with the building inspector of the city, and no such permit shall be issued until the applicant has furnished satisfactory evidence that all necessary permits have been received from those governmental agencies from which approval is required by state and federal law.
 - (2) A person or owner is required to obtain a permit for land disturbing activity from the building inspections department except: When a building permit is obtained for building operations which will have no land disturbing activity apart from the actual building's area where the site plan has been approved, or for such other minor land disturbing activities as home gardens; construction or maintenance of electric or telephone lines; construction or maintenance of underground utility lines in an existing hardsurfaced street, alley or sidewalk provided the activity is confined to the hard-surfaced area; construction or maintenance of individual underground utility connections; individual home landscaping; minor repairs; maintenance work; preparation for single-family residences separately built, unless in conjunction with multiple construction in subdivision development; individual noncommercial tracts of land less than seven thousand five hundred (7,500) square feet; alterations or additions to existing structures where the disturbed area will not exceed four thousand (4,000) square feet; persons engaging in agricultural operations requiring the tilling of soil shall not be required to secure a separate permit for each seasonal tilling activity; emergency work to protect life, limb or property; and emergency repairs.

- (3) All engineering designs, plans, criteria, and practices, whether for land disturbing activities alone or in conjunction with construction shall be reviewed for adequacy by the city engineer prior to issuance of a permit.
 - (4) In the case of land disturbing activity proposed in conjunction with construction for which a building permit application has been filed, a site grading and drainage plan shall be approved by the building inspector prior to issuance of the building permit, and a separate land disturbing activity permit shall not be required.
 - (5) Application for land disturbing activity permits shall be made to the city building inspector and no such permit shall be issued, nor shall any site grading and drainage plan be approved, until the applicant has furnished satisfactory evidence that all necessary permits have been received from those governmental agencies from which approval is required by state and federal law, and until the building inspector is satisfied that the applicable provisions of this article and the site control, erosion and drainage regulations are entirely fulfilled.
 - (6) The city building inspector shall act upon all permit applications submitted to him within thirty (30) days from receipt thereof, including review by the city engineer if required, by either the granting of the permit or by disapproving the permit, in writing, and giving specific reasons for the disapproval, and specifying such modifications, terms and conditions, as will allow the approval of the permit and shall communicate these requirements to the applicant.
 - (7) Notwithstanding the exclusions contained in this section, the city building inspector is specifically authorized to control or regulate, by means of a permit for land disturbing activity, all land disturbing activities which encroach or tend to encroach on any public or private storm drainage facility or any land disturbing activity which might obstruct or tend to obstruct any public or private storm drainage facility.
 - (8) The city building inspector, in conjunction with the city engineer, shall require standards, design criteria and other specifications for the preparation of site grading and drainage plans. The requirements shall be for the purpose of carrying out the terms of this article and shall include, as a minimum, location and methods of erosion and sediment control.
- (b) *[Channel improvements and/or modifications.]* The plan shall be accompanied by the calculations of an Alabama Registered Engineer verifying the discharge of storm water runoff and that such runoff does not exceed the limits established by this article. For runoff discharging to an estuary water course, if an existing receiving channel is not an adequate channel the owner must choose one of the following options. For runoff discharging in the first instance to a riverine natural watercourse, only option (1) or (2) may be used.
- (1) Improve the receiving channel to an adequate channel condition. Such improvements shall extend downstream until an adequate channel section is reached. Cost of such improvements shall be borne by the developer.
 - (2) Develop a site design that will not cause the predevelopment peak runoff rate from a twenty-five-year storm to increase.
 - (3) Provide stormwater detention storage and/or channel improvement and/or other measures, as required, in the adopted twenty-five-year standards.

Sufficient engineering calculations shall accompany plan submitted for verification of obtaining adequate channel condition.

All channel improvements or modifications shall comply with all applicable city, state and federal laws and regulations. If stormwater detention storage is included, owner must provide city with a plan for the maintenance of the detention facility. Said plan shall set forth the maintenance requirements of the facility and the party responsible for performing the maintenance, other than the City of Saraland.

Individual lots in subdivision developments shall not be considered as separate projects, rather the subdivision development as a whole shall be considered as a single project.

(c) *[Approved plan changes and/or modifications.]* An approved plan may be changed or modified under the following conditions:

- (1) Where inspection has revealed the inadequacy of the plan to accomplish the erosion and sediment control objectives of the plan, the appropriate modifications to correct the deficiencies of the plan shall be presented to the city building inspector within ten (10) days of notification of the inadequacy of the plan; or
- (2) Where the person responsible for carrying out the plan finds that because of changed circumstances or for other reasons the approved plan cannot be effectively carried out and proposed amendments to the plan, consistent with the requirements of this article, are agreed to by the city building inspector and the person responsible for carrying out the plan.

(Ord. No. 537, §§ 1.16—1.162, 9-13-90)

Sec. 9-67. - Design criteria for utilities and facilities.

The following design criteria shall be applicable to utilities and facilities proposed to be installed within the City of Saraland. In the case of privately installed sanitary sewer facilities which are subject to approval by the director of the Mobile County Health Department, said director shall be satisfied, after conferring with the city building inspector, that the provisions of this section and the applicable codes and ordinances of the City of Saraland are met.

- (1) *Sanitary sewer facilities.* All new or replaced sanitary sewer facilities, and private package sewer treatment plants (including all pumping stations and collector systems) shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into the floodwaters. In addition, they shall be located and constructed so as to minimize or eliminate flood damage and impairment.
- (2) *Drainage facilities.* All storm drainage facilities shall be designed to convey the flow of surface waters so as to minimize or eliminate damage to persons or property. The system shall insure drainage away from buildings and onsite waste disposal sites. The city building inspector may require a primarily underground system to accommodate a twenty-five-year flood frequency and a secondary surface system to accommodate larger, less frequent floods. Drainage plans shall be consistent with local and regional drainage plans. The facilities shall be designed to prevent the discharge of excess runoff onto adjacent properties.
- (3) *Utilities.* All utilities such as gas lines, electrical and telephone systems shall be located and constructed to minimize the chance of impairment during flooding.
- (4) *Streets and sidewalks.* Streets and sidewalks shall be designed to minimize potential for increasing or aggravating flood levels.
- (5) *Off-street parking facilities.* Off-street parking facilities shall be drained to prevent damage to abutting property and streets and to prevent pollutants from draining onto adjacent lots. Landscaped areas and perimeter areas shall be so graded as to receive a reasonable portion of the rainfall from the surrounding pavement. Protective curbing around landscaped area will leave openings for the flow of water onto unpaved areas.

(Ord. No. 537, § 1.17, 9-13-90)

Sec. 9-68. - Fees.

A fee shall be charged and paid into the city treasury by each person obtaining a permit for land disturbing activities from the department of building inspections to aid in defraying the cost of reviewing site grading and drainage plan, making onsite inspections and providing the other services required in the administration of this article. The rate shall be as follows:

*Commercial Building Sites**AreaAmount*

Less than 10,000 square feet \$100.00

10,000 to 50,000 square feet 200.00

Over 50,000 square feet 300.00

*Subdivisions—With Streets and/or
Underground Drainage**AreaAmount*

Two-lot subdivisions \$ 50.00

Three to five lots 100.00

Five to twenty-five lots 200.00

Over twenty-five lots 300.00

*Planned Urban Developments and
Multifamily Developments**AreaAmount*

Over twenty-five units \$400.00

Land clearing only 50.00

(Ord. No. 537, § 1.18, 9-13-90)

Sec. 9-69. - Liability disclaimer.

This article shall not create liability on the part of the City of Saraland or any officer or employee thereof for any flood damages that may result under compliance with the provisions of this article or any administrative decision lawfully made pursuant thereto.

(Ord. No. 537, § 1.19, 10-9-90)

Sec. 9-70. - Penalties.

Any person(s) violating any of the provisions of this article shall, upon conviction, be punished within the limits of, as provided by section 1-8 of the General Code of the City of Saraland as amended. Each day that a violation exists shall constitute a separate offense.

(Ord. No. 537, § 1.20, 9-13-90)

ARTICLE IV. - DISCHARGES

DIVISION 1. - GENERAL PROVISIONS

Sec. 9-71. - Purpose.

The purpose of this article is to provide for the protection of human health and the environment through the establishment of procedures to control discharges from commercial and industrial facilities and construction sites. This article provides measures that will preserve water quality, and the application of this article shall not be deemed a limitation or repeal of any state statute.

(Ord. No. 664, § 1A, 11-24-98)

Sec. 9-72. - Definitions.

For the purpose of this article, the following terms shall have the meaning given herein:

Agricultural structure or facility shall mean a building or a defined uncovered area which supports activities associated with agricultural product production.

Best management practices shall mean a wide range of management procedures, schedules of activities, prohibitions on practices and other management practices which have been demonstrated to effectively control the quality and/or quantity of storm water runoff and which are compatible with the planned land use.

Development shall generally mean any of the following actions undertaken by a public or private individual or entity: the division of a lot, tract or parcel of land into two (2) or more lots, plots, sites, tracts, parcels or other divisions by plat or deed, any land change, including, without limitation, clearing, tree removal, grubbing, stripping, dredging, grading, excavating, transporting and filling of land.

Develop land shall mean to change the runoff characteristics of a parcel of land in conjunction with residential, commercial, industrial, or institutional construction or alteration.

Hazardous substance or material shall mean any substance or material defined as hazardous by the U.S. Department of Transportation, the U.S. Environmental Protection Agency, the Alabama Public Service Commission, the Alabama Department of Environmental Management or any other federal or state agency, including but not limited to the definitions and illustrations given in the Code of Federal Regulations, Title 40, Section 171.8, as may be amended from time to time.

Illicit discharge shall mean any discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges for the municipal separate storm sewer) and discharges resulting from fire fighting activities.

Person shall mean an individual, partnership, association, syndicate, company, firm, trust, corporation, business, government entity, or any entity recognized by law.

Pollutant shall mean those pollutants specified in Code of Alabama 1975, Section 22-22-1(b)(3) and any other effluent characteristics specified in a NPDES permit.

Storm water management shall mean the collection, conveyance, storage, treatment and disposal of storm water runoff in a manner to minimize accelerated channel erosion, increased flood damage, and/or degradation of water quality and in a manner to enhance and ensure the public health, safety, and general welfare.

Storm drain or storm sewer shall mean a drain or sewer for conveying precipitation from a storm event.

Storm water runoff shall mean the direct response of a watershed to precipitation and includes the surface and subsurface runoff that enters a ditch, stream, storm drain or other concentrated flow during and following precipitation.

Ten-year storm shall mean a storm that is capable of producing rainfall expected to be equaled or exceeded on the average of one in ten (10) years. It may also be expressed as an exceedance probability with a ten (10) percent chance of being equaled or exceeded in any given year.

Twenty-five-year storm shall mean a storm that is capable of producing rainfall expected to be equaled or exceeded on the average of one in twenty-five (25) years. It may also be expressed as an exceedance probability with a four (4) percent chance of being equaled or exceeded in any given year.

Two-year-storm shall mean a storm that is capable of producing rainfall expected to be equaled or exceeded on the average of one in two (2) years. It may also be expressed as an exceedance probability with a fifty (50) percent change of being equaled or exceeded in any given year.

Water quality shall mean those characteristics of storm water runoff that relate to the physical, chemical, biological, or radiological integrity of the water.

Watershed shall mean the drainage area contributing storm water runoff to a single point.

(Ord. No. 664, § 1B, 11-24-98)

DIVISION 2. - ILLICIT DISCHARGES

Sec. 9-73. - Water or liquid discharges.

It shall be unlawful for any person, firm, or corporation to allow water or any other liquid to run or flow continuously from a private premises in the city into, on, or upon the streets or into the storm drain system, excepting however, rain, sleet or snow falling on said private premise by an Act of God.

(Ord. No. 664, § IIA, 11-24-98)

Sec. 9-74. - Pollutant discharges.

It shall be unlawful for any person, firm, or corporation to discharge a pollutant to the city's storm water system that will have a deleterious impact on the environment. Any pollutant associated with an industrial or commercial activity that is covered by the National Pollutant Discharge Elimination System, as dictated by 40 CFR 122.26, can be discharged to the city storm water system only if the discharge is covered by an NPDES permit for storm water and the conditions of the permit are not violated.

(Ord. No. 664, § IIB, 11-24-98)

Sec. 9-75. - Right of entry by city officials.

Where an illicit discharge is suspected by the city of originating from a facility, it shall be the right of the city to designate employees, bearing proper credentials and identification, to enter facility grounds for the purpose of inspection, observation, measurement, sampling and testing in accordance with this article.

(Ord. No. 664, § IIC, 11-24-98)

Sec. 9-76. - City's right to inspect facilities.

As part of ADEM NPDES Permit No. ALS000002, the City of Saraland is required to develop a program to detect and eliminate illicit discharges and improper disposal in the storm sewer. Part II, Paragraph A(6)(c) and (d) provides the City of Saraland with the authority to halt any discharge from a facility that is suspected by the city of being illicit. This paragraph provides for the inspection of facilities.

(Ord. No. 664, § IID, 11-24-98)

Sec. 9-77. - Reimbursement for costs incurred by city.

All costs incurred by the city in association with the ceasing of a potentially harmful discharge will be reimbursed by the discharging facility.

(Ord. No. 664, § IIE, 11-24-98)

DIVISION 3. - RELEASES FROM HAZARDOUS MATERIALS TRANSPORTATION VEHICLES

Sec. 9-78. - Release or threatened release of hazardous materials.

The release or threatened release of hazardous materials into the environment in violation of this article shall be considered a nuisance. It shall be unlawful for any person to permit, cause, or maintain any such nuisance within the city.

(Ord. No. 664, § IIIA, 11-24-98)

Sec. 9-79. - Commercial compliance with regulations.

All persons, companies, other legal entities and all motor vehicles engaged in transportation operations for commercial purposes shall comply with all federal and state laws and regulations. These regulations shall include but are not limited to regulations enacted by the U.S. Department of Transportation, Federal Highway Administration, the U.S. Environmental Protection Agency, the Alabama Department of Environmental Management and the Alabama Public Service Commission, as fully set out and incorporated herein. Any violation of the above laws or regulations shall be a violation of this article. The city police department is hereby authorized to stop and inspect any vehicles suspected of engaging in improper transportation operations which can potentially lead to a release in order to ensure compliance with this article.

(Ord. No. 664, § IIIB, 11-24-98)

Sec. 9-80. - Proper handling of hazardous materials.

It shall be unlawful for any person or other legal entity to transport, convey, store or offer for transportation any hazardous material as defined herein, unless such material is properly packaged, marked, labeled and accompanied by the proper documentation as required by Title 49 of the Code of Federal Regulation.

(Ord. No. 664, § IIIC, 11-24-98)

Sec. 9-81. - Liability for emerging action by city.

Any person responsible for a release or threatened release of hazardous materials in the environment which results in an emergency action shall be liable to the city for the city's recoverable expenses resulting from such action.

The staff of each city department involved in an emergency action to stabilize a release shall keep a detailed record of its recoverable expenses resulting from the emergency action. Promptly after completion of the emergency action, the staff shall certify those expenses with the city clerk. The recoverable expenses resulting from an emergency response to any spill or release of a hazardous substance, as defined herein, which poses a significant present threat or potential hazard to human life, property or environment, shall be a charge against the person or entity whose conduct or conduct of its employees, agents or contractors, caused or permitted the incident resulting in the emergency response. The city clerk shall mail an invoice to the person responsible for the emergency action. The invoice shall be payable within thirty (30) days and if payment is not received within thirty (30) days the city may initiate a civil action for the collection of the claim. This civil action shall be in addition to and not in lieu of any criminal prosecution or penalty.

(Ord. No. 664, § IIID, 11-24-98)

DIVISION 4. - CONTROL OF RUNOFF FROM CONSTRUCTION SITES

Sec. 9-82. - Provision of storm water management measures.

No person shall develop any land without having provided for appropriate storm water management measures that control or manage runoff, in compliance with this article. Exceptions include the following:

- (1) Land-disturbing activities on agricultural land for production of plants and animals useful to man, excluding the construction of an agricultural structure or facility on one or more acres that require a building permit;
- (2) Land-disturbing activities undertaken on forest land for the production and harvesting of timber and timber products;
- (3) Construction or improvement of single-family residences or their accessory buildings which are separately built and not part of multiple construction of a subdivision development.

(Ord. No. 664, § IVA, 11-24-98)

Sec. 9-83. - Development.

- (1) In developing plans for residential subdivisions, individual lots in a residential subdivision development shall not be considered to be separate land-disturbing activities and shall not require development of a storm water management plan. Instead the residential subdivision development, as a whole, shall be considered to be a single land-disturbing activity. Hydrologic parameters that reflect the ultimate subdivision development shall be used in all engineering calculations.

If individual lots or sections in a residential subdivision are being developed by different property owners, all land-disturbing activities related to the residential subdivision shall be covered by the approved storm water management plan for the residential subdivision. Individual lot owners or developers shall comply with the plan as approved by the city planning commission.

Residential subdivisions which were approved prior to the effective date of these regulations are exempt from these requirements. Development of new phases of existing subdivisions which were not previously approved shall comply with the provisions of these regulations.

- (2) For land-disturbing activities involving two (2) acres or less for a residential development and all acreage for a commercial development which are not part of a larger common plan of development or sale, the person responsible for the land-disturbing activity may be required by the building inspector to submit a simplified storm water management plan. This plan will require approval of the city building inspector but not professional certification. This plan will require, unless dictated differently by the city building inspector, the following:
- (a) A narrative description of the storm water management facilities to be used.
 - (b) A general description of topographic and soil conditions of the development site.
 - (c) A general description of adjacent property and a description of existing structures, buildings, and other fixed improvements located on surrounding properties.
 - (d) A sketch plan to accompany the narrative which shall contain:
 - 1. A site location drawing of the proposed project, indicating the location of the proposed project in relation to roadways, jurisdictional boundaries, streams and rivers;
 - 2. The boundary lines of the site on which the work is to be performed;
 - 3. All areas within the site which will be included in the land-disturbing activities shall be identified and the total disturbed area calculated.
 - (e) A topographic map of site.
 - (f) Anticipated starting and completion dates of the various stages of land-disturbing activities and the expected date the final stabilization will be complete.
 - (g) The location of temporary and permanent vegetative and structural storm water management control measures.
 - (h) Storm water management plans shall contain certification by the persons responsible for the land-disturbing activity that the land-disturbing activity will be accomplished pursuant to the plan.
 - (i) Storm water management plans shall contain certification by the person responsible for the land-disturbing activity that the city building inspector has the right to conduct on-site inspections.

Land-disturbing activities disturbing more than two acres shall meet the requirements of sections 9-84 through 9-87.

(Ord. No. 664, § IVB, 11-24-98)

Sec. 9-84. - Review and approval of plan.

A storm water management plan shall be submitted to the city building inspector for review and approval. Should any plan involve any storm water management facilities or land dedicated to public use, the same information shall also be submitted for review and approval to the department having jurisdiction over the land or other appropriate departments or agencies identified by the city building inspector for review and approval. This storm water management plan shall serve as the basis for all subsequent construction. The city building inspector shall review the plan within ten (10) working days from the receipt of the plan. Within fifteen (15) working days from the receipt of the storm water management plan, the city building inspector shall issue a decision approving, rejecting or conditionally approving the plan with modification. Storm water management plan requirements are found in section 9-95.

(Ord. No. 664, § IVC, 11-24-98)

Sec. 9-85. - Fees.

A list of fees for plan review and other fees associated with this article can be obtained from the city building inspector.

(Ord. No. 664, § IVD, 11-24-98)

Sec. 9-86. - Storm water management facility elements.

Storm water management facilities may include both structural and nonstructural elements. Natural swales and other natural runoff conduits shall be retained where practicable.

Where additional storm water management facilities are required to satisfy the minimum control requirements, the following measures are examples of what may be used:

- (1) Storm water detention structures (dry basins);
- (2) Storm water retention structures (wet ponds);
- (3) Facilities designed to encourage overland flow, slow velocities of flow, and flow through buffer zones; and
- (4) Infiltration practices.

Where detention and retention structures are used, consolidation of these facilities into a limited number of large structures will be preferred over designs which utilize a large number of small structures.

Storm water management plans can be rejected by the city building inspector if they incorporate structures and facilities that will demand considerable maintenance, will be difficult to maintain, or utilize numerous small structures if other alternatives are physically possible.

The drainage system and all storm water management structures within the city will be designed in accordance with the technical criteria and standards established by the city engineer.

(Ord. No. 664, § IVE, 11-24-98)

Sec. 9-87. - Professional preparation and approval of plans.

Storm water management plans shall be prepared, certified, and stamped/sealed by a qualified registered professional engineer, land surveyor or landscape architect, using acceptable engineering standards and practices.

(Ord. No. 664, § IVF, 11-24-98)

DIVISION 5. - MISCELLANEOUS PROVISIONS**Sec. 9-88. - Exceptions.**

The city building inspector may grant an exception from the requirements of this article if there are exceptional circumstances applicable to the site such that strict adherence to the provisions of this article will result in unnecessary hardship and not fulfill the intent of this article.

A written request for an exception shall be required and shall state the specific exception sought and the reasons, with supporting data, for their granting. The request shall include descriptions, drawings, calculations and any other information that is necessary to evaluate the proposed variance.

The city building inspector will conduct a review of the request for an exception within ten (10) working days. Failure of the city building inspector to act by the end of the tenth working day will result in the automatic approval of the exception.

(Ord. No. 664, § VA, 11-24-98)

Sec. 9-89. - Appeals.

Any person aggrieved by a decision of the city building inspector (including any decision with reference to the granting or denial of an exception from the terms of this article) may appeal by filing a written notice of appeal with the city building inspector within thirty (30) calendar days of the issuance of the decision by the city building inspector. The city building inspector may reverse his/her decision or send this notice to the city council. A notice of appeal shall state the specific reasons why the decision of the city building inspector is alleged to be in error and the city building inspector shall prepare and send to the city council and the appellant, within fifteen (15) days of receipt of the notice of appeal, a written response to said notice of appeal.

All such appeals shall be heard by the city council at a regularly scheduled meeting, not to exceed thirty (30) days after receipt of the notice of appeal or at such other time as may be mutually agreed upon in writing by the appellant and the city council. The city council will then render a decision within fifteen (15) days after the appeal has been heard.

(Ord. No. 664, § VB, 11-24-98)

Sec. 9-90. - Penalties.

Upon determination that a violation of this article has occurred the city shall provide the violator written notice of the violation and the time in which to correct the deficiencies.

Any person violating this article or any part thereof shall be, upon conviction, fined not more than five hundred dollars (\$500.00) or imprisoned not more than thirty (30) days for each offense. Each separate interval of twenty-four (24) hours, or every day, that such violations continue, are committed or exist, shall constitute a new and separate offense and shall be punished, as aforesaid, for each separate period of violation.

The city may institute injunctive, mandamus or other appropriate action or proceedings at law or equity for the enforcement of this article or to correct violations of this article, and any court of competent jurisdiction shall have the right to issue restraining orders, temporary or permanent injunctions, mandamus or other appropriate forms of remedy or relief.

(Ord. No. 664, § VC, 11-24-98)

Sec. 9-91. - Applicability.

Whenever the provision of this article imposes more restrictive standards than are required in or under any other ordinance, the regulations herein contained shall prevail. Whenever the provisions of any other ordinance require more strict standards than are required herein, the requirement of such shall prevail.

(Ord. No. 664, § VD, 11-24-98)

Sec. 9-92. - Severability.

If any section, sentence, clause, or phrase of this article is for any reason held to be invalid or unconstitutional by declaration of any court of competent jurisdiction, such declaration shall have no effect on the validity of remaining portions of this article. The city council hereby declares that it would have adopted this article and each section, sentence, clause, or

phrase thereof irrespective of the fact that one or more articles, sections, sentences, clauses, or phrases be declared invalid or unconstitutional.

(Ord. No. 664, § VE, 11-24-98)

Sec. 9-93. - Amendments.

This article may be amended in the manner as prescribed by city procedure for ordinance amendment.

(Ord. No. 664, § VF, 11-24-98)

Sec. 9-94. - Indemnification.

Neither the approval of a plan under the provisions of this article nor the compliance with the provisions of this article shall relieve any person from the responsibility for damage to any person or property otherwise imposed by law nor shall it impose any liability upon the city for damage to any person or property.

(Ord. No. 664, § VG, 11-24-98)

Sec. 9-95. - Appendix A.

PLAN REQUIREMENTS

Storm water management plans shall include as a minimum the following:

- (1) A vicinity map indicating a north arrow, scale, boundary lines of the site, and other information necessary to locate the development site.
- (2) The existing and proposed topography (usually two (2) feet if not over five (5) percent) of the development site except for individual lot grading plans in single-family subdivisions.
- (3) Physical improvements on the site, including present development and proposed development.
- (4) Location, dimensions, elevations, and characteristics of all storm water management facilities.
 - a. The responsible design engineer shall not present for approval any plat of a subdivision or site plan which does not make adequate provision for storm or flood water runoff channels or basins. The storm water drainage system shall be separate and independent of any sanitary sewer system. A copy of design computations sealed by a registered engineer shall be submitted along with plans. Inlets shall be provided so that surface water is not carried across any intersection, nor for a distance of more than six hundred (600) feet in the gutter. When calculations indicate that curb capacities are exceeded at a point, catch basins shall be used to intercept flow at that point.
 - b. Any spring or surface water that may exist either previously to or as a result of the subdivision will be required to carry away such water by pipe or open concrete paved ditch. Such drainage facilities may be located in the road right-of-way where feasible, or in perpetual unobstructed easements of appropriate width, and shall be constructed in accordance with the Alabama Department of Transportation Standard Specifications.
 - c. Where a public storm sewer is accessible, the applicant will not be required to install storm sewer facilities, or, if no outlets are within a reasonable distance, adequate provision shall be made for the disposal of storm waters, subject to the specifications and calculations submitted by the design engineer.

If a connection to a public storm sewer will be provided eventually, as a result of phased construction, the developer shall make arrangements for future storm water disposal by a storm sewer system at the time the plat receives final approval. Provision for such connection shall be incorporated by inclusion in the performance surety required for the subdivision plat.

- (5) All areas within the site which will be included in the land-disturbing activities shall be identified and the total disturbed area calculated.
- (6) The location of temporary and permanent vegetative and structural storm water management control measures.
- (7) An anticipated starting and completion date of the various stages of land-disturbing activities and the expected date the final stabilization will be completed.
- (8) A determination that no occupied first floor elevation of any structure is below the 100-year plus one-foot flood elevation.
- (9) At the discretion of the city building inspector, for all portions of the drainage system which are expected to carry between 50 and 150 cfs for the 100-year storm, the 100-year plus two-foot flood elevation analysis shall be required. To require the 100-year plus two-foot flood elevation analysis, the city building inspector should determine that one of the following conditions may exist:
 - a. The estimated runoff would create a hazard for adjacent property or residents; or
 - b. The flood limits would be of such magnitude that adjacent residents should be informed of these limits.
- (10) For all portions of the drainage system which are expected to carry 150 cfs or more for the 100-year storm, the 100-year plus two-foot flood elevation analysis shall be done and flood limits shall be shown on the storm water management plans.
- (11) Storm water management plans shall include designation of all easements needed for inspection and maintenance of the drainage system and storm water management facilities. As a minimum, easements shall have the following characteristics:
 - a. Provide adequate access to all portions of the drainage system and structures.
 - b. Provide sufficient land area, as determined by the city building inspector, for maintenance equipment and personnel to adequately and efficiently maintain the system with a minimum of ten (10) feet along both sides of all drainage ways, streams, channels, etc., and twenty-five (25) feet around the perimeter of all detention and retention facilities, or sufficient land area for equipment access for maintenance of all storm water management facilities. This distance shall be measured from the top of the bank or toe of the facility, whichever is applicable.
 - c. Restriction on easements shall include prohibiting all fences and structures which would interfere with access to the easement areas and/or the maintenance function of the drainage system.
 - d. Where a subdivision or development of land is traversed by a watercourse, drainage way, channel, or stream, there shall be provided a storm water easement or drainage right-of-way conforming substantially to the lines of such water course, and of such width and construction or both as will be adequate for the purpose. For the smaller streams, the plat shall also provide for channel improvement to enable them to carry all reasonable floods within banks. The floor elevations of houses or buildings shall be high enough to be above the regulatory flood. The floodway easement shall be wide enough to provide for future enlargement of the stream channel as adjacent areas become more highly developed and runoff rates are increased.
 - e. Where topography or other conditions are such as to make impractical the inclusion of drainage

facilities within road rights-of-way, perpetual unobstructed easements at least twenty (20) feet in width for such drainage facilities shall be provided across property outside the road lines and with satisfactory access to the road. Easements shall be indicated on the record plat. Drainage easements shall be carried from the road to the natural watercourse or to other drainage facilities.

The applicant may be required to dedicate, either in fee or by drainage or conservation easement, land on both sides of existing watercourses to a distance that is adequate to discharge flood waters without cumulatively increasing the water surface elevation more than one foot.

Low-lying lands along watercourses subject to flooding or overflowing during storm periods, whether or not included in areas for dedication, shall be preserved and retained in their natural state as drainage ways, except where improvements are warranted as may be deemed necessary by the design engineer.

- (12) To improve the aesthetic aspects of the drainage system, a landscape plan for all portions of the drainage system shall be part of the storm water management plan. This landscape plan shall address the following:
 - a. Tree saving and planting plan;
 - b. Types of vegetation that will be used for stream bank stabilization, erosion control, sediment control, aesthetics and water quality improvement; and
 - c. Any special requirements related to the landscaping of the drainage system and efforts necessary to preserve the natural aspects of the drainage system.
- (13) To improve the water quality aspects of the drainage system, the storm water management plan shall include best management practices to control the water quality of the runoff during the land-disturbing activities and during the life of the development. This includes erosion and sediment control procedures described in the Erosion and Sedimentation Control section of this Appendix.
- (14) The storm water management plan shall include all engineering calculations needed to design the system and associated structures including pre- and post-development velocities, peak rates or discharge, and inflow and outflow hydrographs of storm water runoff at all existing and proposed points of discharge from the site.
- (15) Description of site conditions around points of all surface water discharge including vegetation and method of flow conveyance from the land-disturbing activity.
- (16) Construction and design details for structural controls.
- (17) The expected timing of flood peaks through the downstream drainage system shall be assessed when planning the use of detention facilities.
- (18) In determining downstream effects from storm water management and the development, hydrologic-hydraulic engineering studies shall extend downstream to a point where the proposed development represents less than ten (10) percent of the total watershed.
- (19) All storm water management facilities and all major portions of the conveyance system through the proposed development (i.e., channels, culverts) shall be analyzed, using the design and 100-year storms, for design conditions and operating conditions which can reasonably be expected during the life of the facility. The results of the analysis shall be included in the hydrologic-hydraulic study.
- (20) A culvert, pipe or other drainage facility shall, in each case, be large enough to accommodate potential developed property runoff from its entire upstream drainage area, whether inside or outside the

subdivision. The design engineer will review the necessary size of the facility, based on the provisions of the construction standards and specifications.

- (21) If the storm water management plan and/or design report indicates that there may be a drainage or flooding problem at the exit of the proposed development or at any location between the exit point and the ten (10) percent downstream point, the city building inspector may require:
- a. Water surface profiles plotted for the conditions of pre- and post-development for the 10-year design storm;
 - b. Water surface profiles plotted for the conditions of pre- and post-development for the 100-year design storm;
 - c. Elevations of all structures potentially damaged by 10- and/or 100-year flows.
- These drainage studies, together with such other studies as shall be appropriate, shall serve as a guide to needed improvements. Where it is anticipated that the additional runoff incident to the development will overload an existing downstream drainage facility, approval of the development of said potential condition in such sum as the design engineer shall determine. No development shall be approved unless adequate drainage will be provided to the natural drainage watercourse or an existing facility.
- (22) Any areas subject to periodic flooding caused by poor drainage facilities will not be accepted unless the developer or subdivider makes necessary provisions to eliminate such flooding in conformity with the national flood insurance program. Fill may not be used to raise land in areas subject to flood and/or excessive erosion, unless the fill proposed does not restrict the natural flow of water, advance erosion, and unduly increase flood heights.
- (23) All storm water management plans submitted for approval shall contain certification by the person responsible for the land-disturbing activity that the land-disturbing activity will be accomplished pursuant to the approved plan and that responsible personnel will be assigned to the project.
- a. A complete drainage plan and contour map showing the pipe sizes, their locations and the areas to be drained, shall be submitted along with the profile grades and typical roadway section for approval.
 - b. All existing drainage structures shall also be shown.
 - c. All off-project drainage, draining onto the subdivision, shall be shown on contour maps and/or construction plans showing the areas in acres that the subdivision will have to accommodate.
 - d. On any single drainage structure requiring twenty (20) square feet or more of end area, a special design drawing will be required for approval. All roadway cross drain pipes shall be reinforced concrete and have a minimum size of eighteen (18) inches. Only pipe that meets specifications equaling Alabama State Highway Department specifications will be acceptable.
 - e. No unacceptable pipe shall be used.
 - f. Where the subdivider has open ditches, a maximum of 3 to 1 front slopes and flat bottom ditch is required; the width of the ditch shall be determined by the required flows and the existing conditions and as determined by the design engineer. V-bottom ditches or other special designs may be permitted in special cases if they are concrete slope paved.
 - g. This provision applies to all developers or subdividers.
- (24) All storm water management plans shall contain certification, by the person responsible for the land-disturbing activity, of the right of the city building inspector to conduct on-site inspections.

- (25) The storm water management plan shall not be considered approved without the inclusion of a signature and plans by the city building inspector. The signature on the plans is solely an acknowledgment of satisfactory compliance with the requirements of these regulations. The signature does not constitute a representation or warranty to the satisfaction of any other person concerning the safety, appropriateness or effectiveness of any provision, or omission from the storm water management plan.
- (26) Approved storm water management plans remain valid for five (5) years from the date of an approval. Extensions or renewals of the plan approval may be granted by the city building inspector upon written request by the person responsible for the land-disturbing activity.
- (27) When the project has been completed, a letter shall be submitted by the design engineer to the City of Saraland certifying that all drainage facilities have been installed in accordance with approved plans. Inspection of facilities shall be conducted by the design engineer.
- (28) All plans and specifications submitted for review and/or approval shall be prepared by, or under the direct supervision of a registered professional engineer, licensed in the State of Alabama, and shall meet the minimum standards and requirements of the city, and other applicable authorities.

Each of the plan, profile and special drawing sheets for a project shall bear a legible stamp of the professional engineer in charge. If the name or license number is not clear, the signature and number shall be added. It is imperative that the professional design engineer be qualified in the area of drainage per the State of Alabama registration.
- (29) The developer and the consulting engineer are encouraged to contact the city for a pre-design conference at the conceptual stage of the project. Such conference would be mutually beneficial to outline the complexity and scope of design, applicability of criteria and elimination of possible items of conflict during the review process. Subsequent conferences, during the preparation of plans may be arranged by the consulting engineer or the developer to obtain preliminary, informal decision on items in need of clarification.
- (30) In order to facilitate review of plans, all projects shall be submitted with a letter or transmittal which shall include the name of the project, name and address of the owner or developer, name, address and telephone number of the engineer, and clarification as to the purpose of submittal.

PLAN HYDROLOGIC CRITERIA

The hydrologic criteria to be used for the storm water management plans shall be as follows:

- (1) 25-year design storm for all cross-drain culverts and drainage designs.
- (2) 10-year design storm for all interior culverts and drainage designs.
- (3) 2- and 10-year design storms for all detention and retention basins using procedures approved by the city building inspector.
- (4) All drainage designs shall be checked using the 100-year storm for analysis of local flooding, and possible flood hazards to adjacent structures and/or property.
- (5) All hydrologic analysis will be based on land use conditions.
- (6) For the design of storage facilities, a secondary outlet device or emergency spillway shall be provided to discharge the excess runoff in such a way that no danger of loss of lift or facility failure is created. The size of the outlet device or emergency spillway shall be designed to pass the 100-year storm as a minimum requirement.

PLAN WATER QUALITY CRITERIA

Following are the criteria related to using storm water management facilities for water quality purposes:

Ponds, Lakes and Reservoirs

- (1) When the land-disturbing activity consists of the construction of a pond, lake or reservoir which is singly built and not part of a permitted land-disturbing activity, the following procedures will apply:
 - a. A storm water management plan will not be required if the pond, lake or reservoir has received prior state approval. Best management practices should be used to minimize the impact of erosion and sediment.
 - b. A storm water management plan will be required for the construction of all ponds, lakes or reservoirs not meeting the conditions in a. above that otherwise meet the size requirements for storm water management plan approval.
- (2) When ponds are used for water quality protection, the ponds shall be designed as both quantity and quality control structures. Sediment storage volume shall be calculated considering the clean out and maintenance schedules specified by the designer during the land-disturbing activity. Sediment storage volumes may be predicted by the universal soil loss equation or methods acceptable to the city engineer.
- (3) Storm water runoff and drainage to a single outlet from land-disturbing activities which disturb ten (10) acres or more shall be controlled during the land-disturbing activity by the sediment basin where sufficient space and other factors allow these controls to be used until the final inspection. The sediment basin shall be designed and constructed to accommodate the anticipated sediment load from the land-disturbing activity and meet a removal efficiency of eighty (80) percent suspended solids or 0.5 ml/l peak settleable solids concentration, whichever is less. The outfall device or system design shall take into account the total drainage area flowing through the disturbed area draining to the basin.
- (4) Other practices may be acceptable to the city building inspector if they achieve an equivalent removal efficiency of eighty (80) percent for suspended solids or 0.5 ml/l peak settleable solids concentration, which ever is less. The efficiency shall be calculated for disturbed conditions for the 10-year, 24-hour design storm event.
- (5) Permanent water quality ponds having a permanent pool shall be designed to store and release the first one-half-inch of runoff from the site over a 24-hour period. The storage volume shall be designed to accommodate, at least, one-half-inch of runoff from the entire site.
- (6) Permanent water quality ponds, not having a permanent pool, shall be designed to release the first inch of runoff from the site over a 24-hour period.
- (7) The use of measures other than ponds to achieve water quality improvement are recommended on sites containing less than ten (10) disturbed areas.

Infiltration Practices

- (1) Permanent infiltration practices, when used, shall be designed to accept, at a minimum, the first inch of runoff from all impervious areas.
- (2) Areas draining to infiltration practices must be established and vegetative filters established prior to runoff entering the system. Infiltration practices shall not be used if a suspended solids filter system does not accompany the practice. If vegetation is the intended filter, there shall be a least a twenty-foot width of vegetative filter prior to storm water runoff entering the infiltration practice.
- (3) The bottom of the infiltration practice shall be at least two (2) feet above the seasonal high water table, whether perched or regional, determined by direct piezometer measurements which can be

demonstrated to be representative of the maximum height of the water table on an annual basis during years of normal precipitation, or by the depth in the soil at which mottling first occurs.

- (4) The infiltration practice shall be designed to completely drain water within seventy-two (72) hours.
- (5) Soils must have adequate permeability to allow water to infiltrate. Infiltration practices are limited to soils having an infiltration rate of at least 0.30 inches per hour. Initial consideration will be based on a review of the appropriate soil survey, and the survey may serve as a basis for rejection. On-site soil borings and textural classifications must be accomplished to verify the actual site and seasonal high water table conditions when infiltration is to be utilized.
- (6) Infiltration practices greater than three (3) feet deep shall be located at least ten (10) feet from subsurface walls.
- (7) Infiltration practices designed to handle runoff from impervious parking areas shall be a minimum of one hundred fifty (150) feet from any public or private water supply well.
- (8) The design of infiltration practice shall incorporate an overflow system with measures to provide a nonerosive velocity of flow along its length and at the outfall.
- (9) The slope of the bottom of the infiltration practice shall not exceed five (5) percent. Also, the practice shall not be installed in fill material, as piping along the fill/natural ground interface may cause slope failure.
- (10) An infiltration practice shall not be installed on or atop a slope whose natural angle of incline exceeds twenty (20) percent.
- (11) Clean outs will be provided, at a minimum, every one hundred (100) feet along the infiltration practice to allow for access and maintenance.

TRANSPORTATION CONSIDERATIONS

- (1) Culverts under arterial roadways shall normally accommodate a minimum of 25-year frequency design storm. Conditions may dictate that 100-year design storms must be accommodated.

Culverts under all other roadways shall normally accommodate a minimum of a 25-year storm.

Design storm criteria will be used by the design engineer based on the site specific conditions that warrant life and property protection.

All types of culverts within the rights-of-way of public roads must be approved and shall conform to Alabama Department of Transportation standards.
- (2) Bridges shall accommodate a minimum of a 50-year frequency design storm. Conditions may dictate that of a 100-year frequency design storm.
- (3) Open channels and ditches shall be designed so as not to create a traffic hazard or create hazardous erosion.

The minimum flow line slope for paved ditches shall be 0.3 percent and shall be a maximum of one percent for unpaved ditches.

The recommended maximum flow velocities shall be in accordance with the ranges recommended by the latest edition of the Alabama Department of Transportation Hydraulics Manual.

Clean out accesses shall be provided at least every three hundred (300) feet for continuous pipes of twenty-four (24) inches in diameter or less and at least every four hundred (400) feet for larger continuous pipes, if required. Clean out accesses are also required at each angle point and at each change in grade.

EROSION AND SEDIMENTATION CONTROL

The following provisions impose requirements on persons engaged in land-disturbing activities which require planning and implementation of effective sedimentation controls for subdivision development and all other land-disturbing projects:

- (1) *Plan Requirement.* An erosion and sediment control plan shall be required in all areas of Saraland corporate limits and planning jurisdiction where appropriate. The approval of such plan shall be required and approved by the city building inspections department prior to the commencement of any land-disturbing activity.
- (2) *Plan Submission and Review.* Whenever there is an area to be disturbed a copy of the plan shall be filed with the city building inspections department a minimum of thirty (30) days prior to beginning any land-disturbing activity. A copy of the plans shall also be on file at the job site.

If the city determines, either upon review of such plan or on inspection of the job site, that a significant risk of off-site sedimentation or erosion exists, a revised plan will be prepared. Pending the preparation of the revised plan, the work shall be suspended or continued under conditions outlined by the city building inspections department.
- (3) *Plan Content.* Erosion and sediment control plans shall contain architectural and engineering drawings, maps, assumptions, calculations, and narrative statements as needed to describe accurately the proposed development of the site and the measures planned to meet the basic control objectives. Plan content may vary to meet the needs of the specific site conditions.
- (4) *Protection of Property.* Persons engaged in land-disturbing activities shall take all reasonable measures to protect all public and private property, including roadways, from damage by such activities.
- (5) *Identify Critical Areas.* On-site areas which are subject to severe erosion, and off-site areas which are especially vulnerable to damage from erosion and/or sedimentation, are to be identified and receive special attention.
- (6) *Limit Exposed Areas.* All land-disturbing activities should be planned and conducted to minimize the size of the area to be exposed at any one time.
- (7) *Limit Time of Exposure.* All land-disturbing activities should be planned and conducted to limit exposure to the shortest time.
- (8) *Control Surface Water.* Surface water runoff originating updrift of exposed areas should be controlled to reduce erosion and sediment loss during the period of exposure.
- (9) *Control Sedimentation.* All land-disturbing activities should be planned and conducted so as to minimize off-site sediment damage.
- (10) *Manage Storm Water Runoff.* When the increase in the peak rates and velocity of storm water runoff resulting from a land-disturbing activity is sufficient to cause damaging accelerated erosion of the receiving ditch or channel stream, plans are to include measures to control both the velocity and rate of increase so as to minimize accelerated erosion and increased sediment deposition in the ditch or stream channel.

STANDARDS

- (1) *Mandatory Standards.* No land-disturbing activity subject to these provisions and guidelines shall be undertaken in accordance with the following requirements:

No land-disturbing activity shall be permitted in proximity to a lake, natural watercourse, or adjacent property where applicable unless a buffer zone is provided along the boundary of sufficient width to confine visible siltation and/or prevent erosion, provided that the land-disturbing activity is not in connection with the construction of facilities to be located on, over, or under a lake, natural watercourse, or adjacent property.

The angle for graded slopes and fills shall be no greater than the angle which can be retained by vegetative cover or other adequate erosion control devices or structures. In any event, slopes left exposed will, within thirty (30) working days of completion of final grading, be planted or otherwise provided with groundcover, devices or structures sufficient to restrain erosion.

Whenever land-disturbing activity is undertaken on a tract comprising more than one acre, if more than one contiguous acre is uncovered, a ground cover sufficient to restrain erosion must be planted or otherwise provided within thirty (30) working days on that portion of the tract upon which further active construction is not being undertaken, provided that this activity shall not apply to cleared land forming the basin of a reservoir later to be inundated.

- (2) *Design and Performance Standards.* Erosion and sediment control measures, structures and devices shall be so planned, designed, and constructed as to provide control from the calculated peak rates of runoff from a ten-year frequency storm. Runoff rates may be calculated using the procedures in the USDA Soil Conservation Practices, or other acceptable calculation procedures. Runoff computations shall be based on rainfall data published by the National Weather Service for the area.
- (3) *Other Requirements.* Provision shall be made for the permanent protection of off-site stream banks and channels from the erosive effects of increased velocity and volume of storm water runoff resulting from certain land-disturbing activities.

A combination of storage and controlled release of storm water runoff shall be required for all highway construction; commercial, industrial, educational, institutional developments of one acre or more; and for all residential developments unless exempted by the city.

Detention, storage and controlled release will not be required in those instances where the person planning to conduct the activity can demonstrate that the storm water release will not cause an increase in accelerated erosion or sedimentation in the receiving ditch, stream channel, overload downstream drainage ways, or other drainage facility, taking into consideration any anticipated development of the watershed in question.

- (4) *Borrow and Waste Areas.* When the person conducting the land-disturbing activity is also the person conducting the borrow or waste disposal activity, areas from which borrow is obtained shall be considered as part of the land-disturbing activity where the borrow material is being used or from which the waste material originated. When the person conducting the land-disturbing activity is not the person obtaining the borrow and/or disposing of the waste, these areas shall be considered a separate land-disturbing activity.
- (5) *Access and Haul Roads.* Temporary access and haul roads, other than public roads, constructed or used in connection with any land-disturbing activity shall be considered a part of such activity.
- (6) *Operations in Lakes or Natural Watercourses.* Land-disturbing activity in connection with construction, in, on, over, or under a lake or natural watercourse shall be planned and conducted in such a manner as to

minimize the extent and duration of disturbance of the stream channel. The relocation of a stream, where relocation is an essential part of the proposed activity, shall be planned and executed so as to minimize changes in the stream flow characteristics, except when justification for significant alteration to flow characteristic is provided.

- (7) *Responsibility for Maintenance.* The person engaged in or conducting the land-disturbing activity shall be responsible for maintaining all temporary and permanent erosion and sediment control measures and facilities during the development of a site. The responsibility for maintaining all permanent erosion and sediment control measures and facilities, after site development is completed, shall lie with the landowner, except for public drainage facilities.
- (8) *Guidelines for Erosion and Sediment Control Practices.* Persons engaged in planning, designing, installing and maintaining erosion and sediment control measures may use generally accepted references on the subject following standard engineering and/or agricultural practices. All plans will be subject to review by the building inspector.
- (9) *Additional Measures.* Whenever the building inspector determines that significant erosion or sedimentation is occurring as a result of a land-disturbing activity, despite application and maintenance of protective practices, the person conducting the land-disturbing activity, or the person responsible for maintenance will be required to take additional protective action.

DETENTION FACILITIES

- (1) *Detention Facilities.* Detention requirements are directly related to permitted land use where it exists. The permitted densities and minimum lot areas are important factors in the anticipated runoff. Projects of small acreage may be required to provide detention if conditions in the receiving system are inadequate, or harmful effects can be anticipated if detention is not implemented.
- (2) *Method of Evaluation.* Differential runoff evaluation consists of determination of rates of runoff before and after development, determination of required volume of detention and verification of adequacy of discharge and control structures. Design should be based on a minimum of a 25-year storm, or a 24-hour event. This shall be based on sound engineering criteria, and computations shall be submitted to the city for review.

Method of Detention. The following conditions and limitations should be observed in the selection and use of method of detention:

- (3) *General Location.* Detention facilities shall be located within the parcel limits of the project under consideration.

No detention or ponding will be permitted within public road rights-of-way.

Location of detention facilities immediately upstream or downstream of the project, will be considered by special request if proper documentation is submitted with reference to practicality, feasibility and proof of ownership or right-of-use of the area proposed.

- (4) *Common Ground Projects.* It is preferred that detention facilities be located in common ground. Projects developed under these procedures shall establish (in the recorded plat) maintenance and access easements for the detention facilities and include provisions for maintenance in the trust indentures.

The entire reservoir area of the open channel shall be seeded, fertilized and mulched, sodded, paved, or lined prior to final plat approval by the City of Saraland.

The hydraulic elevations resulting from channel detention shall not adversely affect adjoining properties.

- (5) *Permanent Lakes.* Permanent lakes with fluctuating volume controls may be used as detention areas provided that the limits of maximum ponding elevations are no closer than thirty (30) feet horizontally from any building and less than two (2) feet below the lowest sill elevation of any building.

Maximum side slopes for the fluctuating area of permanent lakes shall be one (1) foot vertical to three (3) feet horizontal (3:1) unless proper provisions are included for safety, stability and ease of maintenance.

Maximum fluctuation from permanent pool elevation to maximum ponding elevation shall be three (3) feet, with a greater depth subject to approval.

Special consideration is suggested to safety and accessibility for small children in design of permanent lakes in residential areas. Fencing may be required.

Viability of the permanent impoundment pool no greater than one-tenth the size of the tributary drainage area. It is suggested that the maximum depth of twenty-five (25) percent of the permanent pool area be no greater than six (6) feet. Allowances for silting under denuded soil conditions (during construction) for a period no less than one year is also recommended.

The entire fluctuating area of the permanent reservoir shall be seeded, fertilized and mulched, sodded or paved prior to release of surety if required by the city. Any area susceptible to or designed as overflow by higher design intensity rainfall, as indicated previously, shall be sodded or paved.

- (6) *Parking Lots.* Detention is permitted in parking lots to maximum depth of eight (8) inches. In no case should the maximum limits of ponding be designed closer than ten (10) feet from a building unless water proofing of the building and pedestrian accessibility is properly documented.

The minimum freeboard from the maximum ponding elevation to the lowest sill elevation shall be one foot.

- (7) *Other Methods.* Other methods of detention (such as seepage pits, French drains, etc.) are discouraged. If other methods are proposed, proper documentation of soils data, percolation, geological features, etc., will be needed for review and consideration.

- (8) *Verification of Adequacy.* Analysis of all elements of design is always performed by the registered professional engineer. The following outline is provided to ascertain that certain critical elements of design are in workable compliance with the aims of design:

- a. Volume of retention for the total project.
- b. Tributary (Q) peak runoff to basin.
- c. Balanced maximum outflow rate from the low-flow structure.
- d. Ratios of inflow to outflow.
- e. Sizing of the overflow facilities.
- f. Stability of dikes.
- g. Safety features.
- h. Maintenance features.

For projects up to two hundred (200) acres, routing calculations shall be submitted in legible tabulated form. Proof of adequacy of volume of retention and sizing computations for low-flow-structures shall also be submitted. Features of stability and safety may also need to be documented if the scope of the project requires special attention in this area of design.

Projects over two hundred (200) acres in area shall provide documented verification of adequacy according to scope and complexity of design.

- (9) *Control Structures.* Detention facilities shall be provided with obvious and effective control structures. Plan view and sections of the structure with adequate detail shall be included in plans.

Sizing the low-flow pipe shall be by inlet control or hydraulic gradient requirements.

Low-flow pipes shall not be smaller than eight (8) inches in diameter to minimize maintenance and operating problems, except in parking lot and roof retention where minimum size of opening shall be designed specifically for each condition.

The overflow opening or spillway shall be designed to accept the total peak runoff of the improved tributary area.

Proper engineering judgment shall be exercised in analysis of secondary routing of discharge of greater intensity than the basic design storm in order to avoid economic losses or damage downstream. Review with twenty-five (25) and fifty (50) year frequency or greater is recommended.

- (10) *Discharge Systems.* Sizing of the system below the control structure shall be for the total improved peak runoff tributary to the structure with no allowance for detention.

When existing downstream pipe sizing, outside the developers control jurisdiction, is inadequate, and evaluation for under sizing of pipes may be undertaken by the city upon receipt of written request from the engineer specifying the run or runs desired to be undersized.

Requests for under sizing shall be accompanied by the plans and profiles of the entire undersized system downstream if less than five hundred (500) feet in length or a minimum of five hundred (500) feet.

When hydraulic gradients of the proposed undersize system affect the performance or capacity of structures maintained by the city, no undersizing will be allowed.

- (11) *Easements.* Two (2) types of easements shall be provided in plans for detention facilities.
- (12) *Maintenance Easement.* All detention reservoirs with the exception of parking lot and roof detention shall be enclosed by a maintenance easement. The limits of the easement shall extend ten (10) feet beyond the top elevation of the reservoir. When a detention reservoir is adjacent to a public right-of-way, the limits of the easement shall extend twenty-five (25) feet beyond the elevation of the reservoir on the public right-of-way side.
- (13) *Drainage Easement.* A minimum fifteen-foot-wide drainage easement shall be provided within the reservoir area connecting the tributary pipes and the discharge system along the best possible routing of a piping system for possible future elimination of detention.
- (14) *Maintenance.* Detention facilities are to be built in conjunction with the storm sewer installation and/or grading. Since these facilities are intended to control increased runoff, they must be partially or fully operational after the clearing of the vegetation. Silt and debris connected with early construction shall be

removed periodically from the detention area and control structure in order to maintain full storage capacity.

The responsibility for maintenance of the detention facilities in the subdivision projects shall remain with the developer until such time the maintenance responsibility is vested in the trustees of the subdivision. These maintenance requirements do not imply that any drainage structures or systems are or will become the maintenance responsibility of the City of Saraland. A letter from the owner/developer indicating responsibility for maintenance of all drainage structures of systems shall be submitted and will become part of the official record that will run with the land.

When stormwater detention storage is included in subdivision plans the owner must provide the City of Saraland with a plan for the maintenance of the detention facility. Said plan shall set forth the maintenance requirements of the facility and the party responsible for the performing the maintenance; no responsibility for repairs or maintenance is assumed by the City of Saraland.

SPECIAL CONSIDERATIONS

- (1) *Concrete Box Culverts.* Concrete box culverts used as culverts shall be designed and constructed according to the latest edition of the Standards and Specifications for Road and Bridge Construction, Alabama Department of Transportation.
- (2) *Head Walls and Riprap.* Culvert head walls shall be required on pipe culverts and shall be reinforced concrete.

Special types of head walls may be required by the city when deemed necessary for erosion control.

Riprap may be required at the upstream and downstream ends of culverts and shall be placed at these locations based on the velocities at these locations.

(Ord. No. 664, App. A, 11-24-98; Ord. No. 753, 10-25-07)