

Storm Drainage & Stormwater Management Ordinance

Section 1. Purpose/Intent.

The purpose of this ordinance is to protect, maintain, and enhance the public health, safety, environment, and general welfare of the citizens of Oconee County, Georgia (hereinafter "County") by: the regulation of non-stormwater discharges to the storm drainage system to the maximum extent practicable as required by federal and state law; establishing minimum requirements and procedures to control the adverse effects of increased post-development stormwater runoff and nonpoint source pollution associated with new development and redevelopment; and establishing inspection and maintenance requirements for existing privately owned detention facilities in the area of the County regulated under the National Pollutant Discharge Elimination System (NPDES) Stormwater Phase II Permit. It has been determined that proper management of stormwater runoff will minimize damage to public and private property and infrastructure, safeguard the public health, safety, environment and general welfare of the public, and protect water and aquatic resources. The objectives of this ordinance are:

- A. Regulate the contribution of pollutants to the Oconee County separate storm sewer system by stormwater discharges by any user;
- B. Prohibit Illicit Connections and Discharges to the Oconee County separate storm sewer system;
- C. Require that drainage easements are maintained in a proper manner;
- D. Establish design and application criteria for the construction and use of structural stormwater control facilities that can be used to meet the minimum post-development stormwater management standards;
- E. Establish legal authority to carry out all inspection procedures necessary to ensure compliance with this ordinance.
- F. Establish provisions for the long-term responsibility for and maintenance of structural stormwater control facilities and nonstructural stormwater management practices to ensure that they continue to function as designed, are maintained, and pose no threat to public safety.
- G. In addition, for the area of the County regulated under the National Pollutant Discharge Elimination System (NPDES) Stormwater Phase II Permit:
 1. Establish decision-making processes surrounding land development activities that protect the integrity of the watershed and preserve the health of water resources;
 2. Require that new development and redevelopment maintain the pre-development hydrologic response in their post-development state as nearly as practicable in order to reduce flooding, stream bank erosion, nonpoint source pollution and increases in stream temperature, and maintain the integrity of stream channels and aquatic habitats;
 3. Establish minimum post-development stormwater management standards and design criteria for the regulation and control of stormwater runoff quantity and quality; and,

4. Encourage the use of nonstructural stormwater management and stormwater better site design practices, such as the preservation of greenspace and other conservation areas, to the maximum extent practicable.

Section 2. Definitions.

For the purposes of this ordinance, the following shall mean:

Applicant. A person submitting a post-development stormwater management application and plan for approval.

Beneficial Owner(s). All property owners in a subdivision that derive benefit from a stormwater management facility, detention facility, retention facility, or drainage easement may be considered owners of that facility or easement.

Best Management Practices (BMPs). Schedules of activities, prohibitions of practices, general good housekeeping practices, pollution prevention and educational practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants directly or indirectly to stormwater, receiving waters, or stormwater conveyance systems. BMPs also include treatment practices, operating procedures, and practices to control site runoff, spillage or leaks, sludge or water disposal, or drainage from raw materials storage.

Channel. A natural or artificial watercourse with a definite bed and banks that conducts continuously or periodically flowing water.

Clean Water Act. The federal Water Pollution Control Act (33 U.S.C § 1251 et seq.), and any subsequent amendments thereto.

Construction Activity. Activities subject to the Georgia Erosion and Sedimentation Control Act or NPDES Construction Permits. Such activities include but are not limited to clearing and grubbing, grading, excavating, and demolition.

Detention. The temporary storage of stormwater runoff in a stormwater management facility for the purpose of controlling the peak discharge.

Detention Facility. A basin or structure used for the temporary storage of stormwater runoff for the purpose of controlling the peak discharge and is designed to completely drain after a specified period of time.

Developer. A person who undertakes land development activities.

Development. A land development or land development project.

Drainage Easement. An easement appurtenant or attached to a tract or parcel of land allowing the owner of adjacent tracts or other persons to discharge stormwater runoff onto the tract or parcel of land subject to the drainage easement.

Erosion and Sedimentation Control Plan. A plan that is designed to minimize the accelerated erosion and sediment runoff at a site during land disturbance activities.

Georgia Stormwater Management Manual, Volume 2. Technical Handbook, produced as a result of a collaborative effort between the Atlanta Regional Commission (ARC), the Georgia Department of Natural Resources-Environmental Protection Division (EPD), and 35 cities and counties from across Georgia that provides guidance on the techniques and

measures that can be implemented to meet a set of stormwater management minimum standards for new development and redevelopment.

Greenspace or Open Space. Permanently protected areas of the site that are preserved in a natural state.

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

Hotspot. A land use or activity on a site that produces higher concentrations of trace materials, hydrocarbons or other pollutants than are normally found in urban stormwater runoff. Examples of hotspots include, but are not limited to: gas stations, vehicle service and maintenance areas, salvage yards, material storage sites, garbage transfer facilities, and commercial parking lots with high-intensity use,

Illegal Connection. An illegal connection is defined as either of the following:

1. Any pipe, open channel, drain or conveyance, whether on the surface or subsurface, which allows an illicit discharge to enter the storm drain system including but not limited to any conveyances which allow any non-stormwater discharge including sewage, process wastewater, and wash water, regardless of whether said drain or connection has been previously allowed, permitted, or approved by an authorized enforcement agency; or
2. Any pipe, open channel, drain or conveyance connected to the Oconee County separate storm sewer system which has not been documented in plans, maps, or equivalent records and approved by an authorized enforcement agency.

Illicit Discharge. Any direct or indirect non-stormwater discharge to the Oconee County storm drain system, except as exempted in Section 3.B. of this ordinance.

Impervious Cover. A surface composed of any material that significantly impedes or prevents the natural infiltration of water into soil. Impervious surfaces include, but are not limited to, rooftops, buildings, streets and roads, disturbed and compacted soil, and any concrete or asphalt surface.

Industrial Activity. Activities subject to NPDES Industrial Permits as defined in 40CFR, Section 122.26 (b) (14).

Infiltration. The process of percolating stormwater runoff into the subsoil.

Inspection and Maintenance Agreement. A written agreement providing for the long-term inspection and maintenance of stormwater management facilities and practices on a site or with respect to a land development project, which when properly recorded in the deed records constitutes a restriction on the title to a site or other land involved in a land development project.

Land Development. Any land change, including, but not limited to, clearing, digging, grubbing, stripping, removal of vegetation, dredging, grading, excavating, transporting and filling of land, construction, paving, and any other installation of impervious cover.

Land Development Activities. Those actions or activities which comprise, facilitate, or result in land development.

Land Development Project. A discrete land development undertaking.

National Pollutant Discharge Elimination System (NPDES) Stormwater Discharge Permit. A permit issued by Georgia EPD under authority delegated pursuant to 33 USC § 1342 (b) that authorizes the discharge of pollutants to waters of the United States, whether the permit is applicable on an individual, group, or general area-wide basis.

New Development. A land development activity on a previously undeveloped site.

Nonpoint Source Pollution. A form of water pollution that does not originate from a discrete point such as a sewage treatment plant or industrial discharge, but involves the transport of pollutants such as sediment, fertilizers, pesticides, heavy metals, oil, grease, bacteria, organic materials and other contaminants from land to surface water and groundwater via mechanisms such as precipitation, stormwater runoff, and leaching. Nonpoint source pollution is a by-product of land use practices such as agricultural, silvicultural, mining, construction, subsurface disposal and urban runoff sources.

Non-Stormwater Discharge. Any discharge to the storm drain system that is not composed entirely of stormwater.

Nonstructural Stormwater Management Practice or Nonstructural Practice. Any natural or planted vegetation or any other nonstructural component of the stormwater management plan that provides for or enhances stormwater quantity and/or quality control or other stormwater management benefits, and includes, but is not limited to, riparian buffers, open and greenspace areas, overland flow filtration areas, natural depressions, and vegetated channels.

Non-Urbanized Area. The area of unincorporated Oconee County not regulated under the National Pollutant Discharge Elimination System (NPDES) Stormwater Phase II Permit.

Oconee County Separate Storm Sewer System. Any facility, owned or maintained by the county, designed or used for collecting and/or conveying stormwater, including but not limited to roads with drainage systems, Oconee County streets, curbs, gutters, inlets, catch basins, piped storm drains, pumping facilities, retention and detention basins, natural and man-made or altered drainage channels, reservoirs, and other drainage structures.

Owner. The legal or beneficial owner of a site, including, but not limited to, a mortgagee or vendee in possession, receiver, executor, trustee, lessee or other person, firm or corporation in control of the site.

Permit. Authorization(s) issued by Oconee County to the applicant which is required for undertaking any land development activity.

Person. Except to the extent exempted from this ordinance, any individual, partnership, firm, association, joint venture, public or private corporation, trust, estate, commission, board, public or private institution, utility, cooperative, city, county, or other political subdivision of the State, and interstate body or any other legal body.

Pollutant. Anything which causes or contributes to pollution. Pollutants may include, but are not limited to: paints, varnishes, and solvents; petroleum hydrocarbons; automotive fluids; cooking grease; detergents (biodegradable or otherwise); degreasers; cleaning chemicals; non-hazardous liquid and solid wastes; refuse, rubbish, garbage, litter, or other discarded or abandoned objects and accumulations, so that same may cause or contribute to pollution; floatables; pesticides, herbicides, and fertilizers; liquid and solid wastes; sewage, fecal coliform and pathogens; dissolved and particulate metals; animal wastes; wastes and residues that result from constructing a building or structure; concrete and cement; and noxious or offensive matter of any kind.

Pollution. Contamination or other alteration of any water's physical, chemical, or biological properties by addition of any constituent including but not limited to a change in temperature, taste, color, turbidity, or odor of such waters, or the discharge of any liquid, gaseous, solid, radioactive, or other substance into any such waters as will or is likely to create a nuisance or render such waters harmful, detrimental, or injurious to the public health, safety, welfare, or environment, or to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses, or to livestock, wild animals, birds, fish or other aquatic life.

Premises. Any building, lot, parcel of land, or portion of land whether improved or unimproved including adjacent sidewalks and parking strips.

Post-development. The time period, or the conditions that may reasonably be expected or anticipated to exist, after completion of the land development activity on a site as the context may require.

Pre-development. The time period, or the conditions that exist, on a site prior to the commencement of a land development project and at the time that plans for the land development of a site are approved by Oconee County. Where phased development or plan approval occurs (preliminary grading, roads and utilities, etc.), the existing conditions at the time prior to the first element of construction and/or phase being approved or permitted shall establish pre-development conditions.

Project. A land development project.

Redevelopment. A land development project on a previously developed site, but excludes ordinary maintenance activities, remodeling of existing buildings, resurfacing of paved areas, and exterior changes or improvements which do not materially increase or concentrate stormwater runoff, or cause additional nonpoint source pollution.

Retention Facility. A basin or structure designed to contain a permanent pool of water with sufficient freeboard to provide for temporary storage and water quality treatment of stormwater runoff.

Site. The parcel of land being developed, or the portion thereof on which the land development project is located.

Stormwater. Any surface flow, runoff, and drainage consisting entirely of water from any form of natural precipitation, and resulting from such precipitation.

Stormwater Discharge. The flow rate of surface water resulting from precipitation.

Stormwater Better Site Design. Nonstructural site design approaches and techniques that can reduce a site's impact on the watershed and can provide for nonstructural stormwater management. Stormwater better site design includes conserving and protecting natural areas and greenspace, reducing impervious cover and using natural features for stormwater management.

Stormwater Management. The collection, conveyance, storage, treatment and disposal of stormwater runoff in a manner intended to prevent increased flood damage, stream bank channel erosion, habitat degradation and water quality degradation, and to enhance and promote the public health, safety and general welfare.

Stormwater Management Facility. Any infrastructure that controls or conveys stormwater runoff.

Stormwater Management Measure. Any stormwater management facility, structure, or nonstructural stormwater management practice.

Stormwater Management Plan. A document describing how existing runoff characteristics will be affected by a land development project and containing measures for complying with the provisions of this ordinance.

Stormwater Management System. The entire set of structural and nonstructural stormwater management facilities and practices that are used to capture, convey, and control the quantity and quality of the stormwater runoff from a site.

Stormwater Management Retrofit. A stormwater management practice designed for a currently developed site that previously had either no stormwater management practice in place or a practice inadequate to meet the stormwater management requirements of the site.

Stormwater Runoff. The quantity of surface water resulting from precipitation.

Structural Stormwater Control. A structural stormwater management facility or device that controls stormwater runoff and changes the characteristics of that runoff including, but not limited to, the quantity and quality, the period of release, the velocity of flow, or the rate of discharge of such runoff.

Subdivider. Any individual, firm, association, syndicate, partnership, corporation, trust, or any other legal entity commencing proceedings to effect a subdivision of land hereunder for himself or for another.

Subdivision. Any division of a tract or parcel of land into two (2) or more lots, building sites, or other divisions for the purpose, whether immediate or future, of sale, legacy, or building development, and including any division of land involving a new street, public or private, or a change in existing streets, and including resubdivision and, where appropriate to the context, related to the process of subdividing or to the land or area subdivided.

Urbanized Area. The area of unincorporated Oconee County regulated under the National Pollutant Discharge Elimination System (NPDES) Stormwater Phase II Permit.

Wastewater. Any water or other liquid discharged from a facility, that has been used, as for washing, flushing, or in a manufacturing process, and so contains waste products.

Section 3. Applicability.

- A. Section 4 of this ordinance shall be applicable to all unincorporated portions of the County.
- B. Section 5 of this ordinance shall be applicable to owners of all existing stormwater structures or facilities, regardless of their previous practices, in the area of the County, and for the activities, regulated under the NPDES Stormwater Phase II Permit.
- C. Stormwater Management in the Urbanized Area:
 - 1. Section 6 of this ordinance shall be applicable to all land development in the area of the County regulated under the NPDES Stormwater Phase II Permit, including, but not limited to, site plan development applications, subdivision development applications, and grading permit applications, unless exempted pursuant to Subsection 2 below. These standards apply to any new development or redevelopment site that meets one or more of the following criteria:

- a. New development that involves the creation of 5,000 square feet or more of impervious cover, or that involves other land development activities that result in the disturbance of land of one (1) acre or more;
- b. Redevelopment that includes the creation, addition or replacement of 5,000 square feet or more of impervious cover, or that involves other land development activity that results in the disturbance of land of one (1) acre or more;
- c. Any new development or redevelopment, regardless of size, that is defined by the County to be a hotspot land use; or,
- d. Land development activities that are smaller than the minimum applicability criteria set forth in items 1 and 2 above if such activities are part of a larger common plan of development, even though multiple, separate and distinct land development activities may take place at different times on different schedules.

2. The following activities are exempt from Section 6 of this ordinance:

- a. Individual single-family or duplex residential lots that are not part of a subdivision or phased development project;
- b. Additions or modifications to existing single-family or duplex residential structures;
- c. Agricultural or silvicultural land management activities within areas zoned for these activities; and,
- d. Repairs to any stormwater management facility or maintenance practice deemed necessary by the Public Works Director.

D. Stormwater Management in the Non-Urbanized Area

Section 7 of this ordinance shall be applicable to all land subdivision and/or development in the area of the County not regulated under the NPDES Stormwater Phase II Permit.

- E. As a condition of rezone, the Oconee County Board of Commissioners may compel a land development site in a non-urbanized area to follow the requirements for the urbanized area, set forth in Section 6 of this ordinance, for conditions including, but not limited to: any residential development containing lot sizes of three (3) acres or less, any non-residential development, any development with size, configuration, and/or density that would lend itself to be considered an urbanized area, or the site is considered a hotspot for stormwater pollution.

Section 4. Illicit Non-Stormwater Discharges and Illegal Connection

Section 4.1. Prohibitions.

A. Prohibition of Illicit Discharges

No person shall throw, drain, or otherwise discharge, cause or allow others under its control to throw, drain, or otherwise discharge into the Oconee County separate storm sewer system or watercourses any materials, including but not limited to any pollutants or waters containing any pollutants, other than stormwater.

The commencement, conduct or continuance of any illicit discharge to the storm drain system is prohibited except as described as follows:

1. Water line flushing performed by a government agency, other potable water sources, landscape irrigation or lawn watering, diverted stream flows, rising ground water, ground water infiltration to storm drains, uncontaminated pumped ground water, foundation or footing drains (not including active groundwater dewatering systems), crawl space pumps, air conditioning condensation, springs, natural riparian habitat or wetland flows, and any other water source not containing pollutants;
2. Discharges or flows from fire fighting, and other discharges specified in writing by the Oconee County Board of Commissioners as being necessary to protect public health and safety;
3. Dye testing is an allowable discharge, but requires a verbal notification to the Oconee County Code Enforcement Department prior to the time of the test;
4. Any non-stormwater discharge permitted under an NPDES permit, waiver, or waste discharge order issued to the discharger and administered under the authority of the Federal Environmental Protection Agency, provided that the discharger is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations, and provided that written approval has been granted for an discharge to the Oconee County separate storm sewer system.

B. Control of Construction Site Debris and Wastes

All owners, applicants, contractors and developers shall control wastes such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste on construction sites and shall keep streets, gutters, ditches, and storm drains clear of all sediment and debris from the site.

C. Prohibition of Illegal Connections

The construction, connection, use, maintenance or continued existence of any illegal connection to the Oconee County separate storm sewer system is prohibited.

1. This prohibition expressly includes, without limitation, illegal connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.
2. A person violates this ordinance if the person connects a line conveying sewage to the Oconee County separate storm sewer system, or allows such a connection to continue.
3. Improper connections in violation of this ordinance must be disconnected and redirected, if necessary, to an approved onsite wastewater management system or the sanitary sewer system upon approval of the County.
4. Any drain or conveyance that has not been documented in plans, maps or equivalent, and which may be connected to the storm sewer system, shall be located by the owner or occupant of that property upon receipt of written notice of violation from the County requiring that such locating be completed. Such notice will specify a reasonable time period within which the location of the drain or conveyance is to be completed, that the drain or conveyance be identified as storm sewer, sanitary sewer or other, and that the outfall location or point of connection to the storm sewer system, sanitary sewer system or other discharge point be identified. Results of these investigations are to be documented and provided to the Oconee County Public Works Department.

Section 4.2. Industrial or Construction Activity Discharges.

Any person subject to an industrial or construction activity NPDES stormwater discharge permit shall comply with all provisions of such permit. Proof of compliance with said permit may be required in a form acceptable to the Oconee County Public Works Department prior to allowing discharges to the Oconee County separate storm sewer system.

Section 4.3. Access and Inspection of Properties and Facilities.

The County, or its agent, shall be permitted to enter and inspect properties and facilities subject to regulation under this ordinance as often as may be necessary to determine compliance.

- A. If a property or facility has security measures in force which require proper identification and clearance before entry into its premises, the owner or operator shall make the necessary arrangement to allow access to the County, or its agent.
- B. The owner or operator shall allow the County, or its agent, ready access to all parts of the premises for the purposes of inspection, sampling, photography, videotaping, examination and copying of any records that are required under the conditions of an NPDES permit to discharge stormwater, and the performance of any additional duties as defined by state and federal law.
- C. The County, or its agent, shall have the right to set up on any property or facility such devices as are necessary in the opinion of the County to conduct monitoring and/or sampling of the facility's stormwater discharge.
- D. The County may require the owner or operator to install monitoring equipment and perform monitoring as necessary, and make the monitoring data available to the County. This sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the owner or operator at his/her own expense. All devices used to measure flow and quality shall be calibrated to ensure their accuracy.
- E. Any temporary or permanent obstruction that inhibits access to the property or facility to be inspected and/or sampled shall be promptly removed by the owner or operator at the written or oral request of the County and shall not be replaced. The costs of clearing such access shall be borne by the owner or operator.
- F. If the County, or its agent, has been refused access to any part of the premises from which stormwater is discharged, and the County is able to demonstrate probable cause to believe that there may be a violation of this ordinance, or that there is a need to inspect and/or sample as part of a routine inspection and sampling program designed to verify compliance with this ordinance or any order issued hereunder, or to protect the overall public health, safety, environment and welfare of the community, then the County may seek issuance of a search warrant from any court of competent jurisdiction.
- G. In the event a discharge constitutes an immediate danger to public health or public safety, the County, or its agent, is authorized to enter upon the subject private property, without giving prior notice, to take any and all measures necessary to abate the violation and/or restore the property. The County is authorized to seek costs of the abatement as outlined in "Costs of Abatement of the Violation" section below.

Section 4.4. Notification of Spills and Accidental Discharges

- A. Notwithstanding other requirements of law, as soon as any person responsible for a facility, activity or operation, or responsible for emergency response for a facility, activity or operation has information of any known or suspected release of pollutants or non-stormwater discharges from that facility, activity, or operation which are resulting or may result in illicit discharges or pollutants discharging into stormwater, the Oconee County separate storm sewer system, State Waters, or Waters of the U.S., said person shall take all necessary steps to ensure the discovery, containment, and cleanup of such release so as to minimize the effects of the discharge.
- B. In the event of such a release of hazardous materials, said person shall immediately notify emergency response agencies of the occurrence via emergency dispatch services.
- C. In the event of a release of non-hazardous materials, said person shall notify the Oconee County Public Works Department in person or by phone no later than the next business day, including the nature, quantity and time of occurrence of the discharge. Notifications in person or by phone shall be confirmed by written notice, via certified mail return receipt requested addressed to the Oconee County Public Works Department within three (3) business days of the initial notice. If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall also retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least three years.

Section 5. Maintenance of Existing Stormwater Facilities

Section 5.1. Responsibility for Maintenance

The owners of private stormwater management facilities, detention facilities, and/or retention facilities shall be responsible for maintenance of those facilities. The owners shall be required to:

- A. Maintain the proper operational characteristics of the facility; and,
- B. Maintain the facility free of obstruction, silt or debris.

Section 5.2. Maintenance requirement

- A. When the County determines that deficiencies exist in a private stormwater management system, the County shall notify the owner and the beneficial owners in writing of the deficiencies, describe the required corrective action, and the time period to have the deficiencies corrected.
- B. If the owners fail to correct the deficiencies within the specified time frame, the County, or its agent, may enter the property and make, at the owners' expense, the necessary repairs or corrections to the system.
- C. In the event deficiencies constitute an immediate danger to public health or public safety, the County, or its agent, is authorized to enter upon the subject private property, without giving prior notice, to take any and all measures necessary to abate the violation and/or restore the function of the stormwater system at the owners' expense.

Section 5.3. Easements

The owner of property containing a drainage easement shall not allow or cause to be deposited any material which causes a physical obstruction, including, but not limited to:

structures; landscaping; fences; yard waste such as grass clippings, tree trimmings, and leaves; impervious cover; or any other material that may block the flow of water or otherwise disrupt proper function of the stormwater management system. All drainage easements shall be kept clear of obstructions along the entire length of the easement whether it be a buried pipe, ditch, or other facility contained within the easement. The property owner shall remove any such materials existing prior to, or installed after, the effective date of this ordinance.

Section 5.4. Access and Inspection of Properties and Facilities.

- A. The owners of property containing private stormwater management facilities, detention facilities, or retention facilities shall allow unimpeded access for the county to conduct inspections of the facilities. Inspections may be conducted by the Oconee County Public Works Department at any time for any reasonable basis, including, but not limited to: routine inspections, random inspections, inspections based upon complaints or other notice of possible violations, and joint inspections with other agencies inspecting under environmental or safety laws.
- B. Any temporary or permanent obstruction that inhibits access to the property or facility to be inspected shall be promptly removed at the written or oral request of the county and shall not be replaced. The costs of clearing such access shall be borne by the owner or operator.

Section 6. Stormwater Management in the Urbanized Area

Whenever and wherever conditions, as are caused or aggravated by reason of the subdivision of land hereunder, adversely affect the proper use or drainage of streets, highways, pedestrian ways, slopes or natural watercourses, or adversely affect the public health, safety, or welfare, the following improvements may be required to be provided and installed by the subdivider:

- A. On-tract and/or off-tract drainage or drainage structures necessary for the proper use and drainage of slopes, streets, highways, and pedestrian ways, or for public safety.
- B. Erosion control planting and/or structural controls.

Section 6.1. Stormwater application and permit.

- A. All persons proposing development and/or construction in Oconee County shall submit a stormwater management plan to the county for approval. This plan shall comply with the requirements set forth in Section C below.
- B. The plan shall be prepared by a Registered Professional Engineer or Georgia Registered Landscape Architect to ensure compliance with all regulations.
- C. A stormwater management plan incorporated into the approved construction plans shall constitute a permit that will satisfy the requirements of this Section.

Section 6.2. Standards for stormwater management.

- A. All development and/or construction within urbanized area of Oconee County shall meet requirements of the Georgia Stormwater Management Manual, Vol. 2., unless otherwise specified in this ordinance.
- B. Any required retention and/or detention area shall not be developed. Appropriate vegetation shall be planted in all retention and/or detention areas. Any required

retention and/or detention areas shall be incorporated into the common areas of the residential development or incorporated into individual lots. The local government maintains the right, but not the responsibility, to access retention and/or detention areas for purposes of maintenance and inspection.

- C. Fences a minimum of four (4) feet in height with a minimum eight (8) foot wide gate will be required on all detention ponds where:
1. The sides of the pond have a slope greater than three (3) horizontal to one (1) vertical, or
 2. The depth of water in the pond is greater than three (3) feet at one hour after the duration of the storm event.
- D. Drainage easement requirements.
1. The minimum easement width for open ditch where pipe is feeding into the ditch will be determined as follows:

Pipe Size Feeding Into Ditch	Minimum Easement Width
15" to 30"	20 feet
36" to 66"	30 feet
72" and greater	40 feet

2. Where a subdivision is traversed by a watercourse, drainage way or stream, there shall be a drainage and access easement conforming substantially with the lines of such watercourse, and such further width as will be adequate for the purpose of drainage and maintenance, taking into account possible future development of higher land in the same drainage area. Such drainage way shall be piped when the County Engineer shall find that it is a hazard or that a continual maintenance problem might exist.
3. If the drainage way is totally piped, the easement width shall be based on the associated pipe size above.

Section 6.3. Stormwater Collection and Transport System Design Considerations

An adequate system based upon at least a 50-year storm event shall be provided for the proper drainage of all surface water originating in or affecting the subdivision.

- A. Stormwater inlets shall be designed and located so as not to exceed a maximum gutter spread width of half the travel size based on flow data calculations for the 25-year storm event.
- B. The drainage system shall conform to any county storm drainage master plan which may be adopted and shall include necessary curbing, pipes, culverts, headwalls, drop inlets, bridges, swale ditches, or any other type of drainage facility needed to control the flow of water in, around, or through the subdivision.

- C. Pipe size will be determined by utilizing the Rational Method or the Soil Conservation Service Method (TR-55) to compute peak runoff. A 50-year storm event will be used to determine all pipe sizes. All cross drains and culverts under roadways shall be sized based on a 50-year storm event. All proposed piping within a FEMA identified floodplain shall be sized to adequately convey the 100-year frequency storm event.
- D. Manning's equation shall be used to evaluate hydraulic capacity and velocity of flow within the storm drainage system. Required storm pipes shall be designed to maintain a water flow velocity greater than or equal to three (3) feet per second. The hydraulic analysis of culverts shall be based on Federal Highway Administration engineering practice and take into account the inlet geometry, slope, size, roughness, and approach or tailwater conditions. Stormwater inlets shall be designed in accordance with Federal Highway Administration engineering practice and constructed in compliance with Georgia D.O.T. construction standards and shall be Georgia D.O.T. Standard 1033, 1034, and 1011. Drainage calculation and design data are required for all stormwater conveyance systems and structures. All drainage structures shall be constructed of reinforced precast concrete, four (4) foot diameter or larger. All 1033D and 1034D drainage structures shall require a reinforced precast "Round to Square" adapter for additional throat support. All junction boxes shall include precast adapters and heavy duty traffic rated ring and covers. All manholes shall include approved steps, spaced twelve (12) inches o.c. vertically, to allow safe access by maintenance personnel. All structures shall have paved inverts.
- E. In certain instances where rolled or "hollywood" curb is utilized, the County Engineer may require the use of 1033F and 1034F catch basins.
- F. Energy dissipation devices, such as splash pads, rip rap, stilling basins, etc., shall be provided at the outlet of every culvert and piped discharge system. The size and type of energy dissipation device to be used shall be designed in accordance with sound engineering practices and this ordinance.
- G. All drainage ditches that are between building lots shall be piped a minimum of 100 feet from the front building line. This shall be done at the expense of the developer.
- H. Any routed stormwater shall attain sheet flow by the property line.
- I. Discharge structures that are within close proximity to adjoining properties or the public right of way shall be screened from view.

Section 6.4. Natural Drainage.

- A. Natural drainage channels, ditches, swales and drainage patterns existing within a subdivision shall be retained and improved by the subdivider unless otherwise approved by the County Engineer.

Section 6.5.

- B. Off-site drainage shall be adequately transported through the proposed development.
Drainage System Construction

All pipe sizes shall be approved by the County Engineer to meet the drainage conditions of the watershed and area of the potential runoff, per current design standards and requirements.

- A. The minimum cross drain diameter shall be 18 inches.
- B. Minimum cover shall be 24 inches.

C. In all instances, depth requirements shall meet or exceed manufacturer's guidelines.

Section 6.6. Materials and Installation

A. Pipes

1. Pipe material shall be determined based on type of installation, as set forth in Table 2: Selection Guidelines for Storm Sewer Piping. All pipe shall be new and unused.
2. The gauge or class of pipe used shall be determined by acceptable methods using H-20 highway loading, and shall meet Georgia D.O.T. Specifications. The County Engineer, or his/her duly appointed representative, shall inspect the pipe before installation to assure that it is free of cracks or damage. All damaged, used, or "second" quality pipe shall be refused and immediately removed from the job site.

B. Joints and Installation.

1. Reinforced concrete pipe joints must be properly constructed to prevent exfiltration.
2. The use of O-rings or sealants may be required, depending on pipe design.
3. All storm sewer piping shall be constructed in a linear approach with no vertical or horizontal variance from the approved design.
4. High density polyethylene (HDPE) and corrugated metal pipe (CMP) shall be joined by manufacturer's recommended pipe banding materials. All trench lines shall be thoroughly compacted prior to pipe installation. HDPE pipe will require special bedding and installation in strict accordance with manufacturer's specifications and as directed by the County Engineer.

Table 2: Selection Guideline for Storm Sewer Piping						
Type of Pipe Installation	Reinforced Concrete Pipe (RCP)	Corrugated Steel AASHTO M-36		Corrugated Aluminum AASHTO M-196	Plastic AASHTO M-294	Reinforced Concrete Box Culvert Per GDOT Standards
		Aluminized Type II CMP	Bituminous Coated CMP	Aluminum Alloy CMP	Corrugated HDPE Smooth Lined	
Longitudinal Grade Less Than 10%	Yes	Yes	Yes	Yes	Yes (1)	---
Longitudinal Grade Over 10%	No	Yes	Yes	Yes	Yes (1)	---
Table 2: Selection Guideline for Storm Sewer Piping (continued)						
Cross Drain Less Than 250 ADT	Yes	Yes	Yes	Yes	Yes (1)	---
Cross Drain Greater Than 250 ADT	Yes	No	No	No	No	---
Cross Drain Flowing Stream Application	Yes	(3)	No	Yes	Yes (1) (4)	---

Cross Drain 25 Yr Flow > 200 CFS <i>or</i> Fill Depth > 18 ft	(2)	No	No	No	No	Yes
Conditional Uses: (1) Corrugated high density polyethylene pipe smooth lined type "S" must be manufactured and installed in strict compliance with the manufacturer's recommendation. Special backfill and bedding are required per the direction of the County Engineer. Prior approval of the County Engineer is required. HDPE applications shall not exceed 36" diameter. (2) Reinforced concrete box culverts are required under excessive flow and/or fill depth conditions. Approved pipe materials may be utilized in some instances based on the County Engineer's assessment of existing conditions and future maintenance requirements. (3) The addition of a type "A" full bituminous coating with paved invert is required for this application. (AASHTO M-190) (4) Requires approval of County Engineer based on assessment of existing conditions and future maintenance requirements.						

- C. Only reinforce concrete pipe shall be used within street right-of way are arterial roads and major and minor collectors. Concrete pipe shall not be used on grades exceeding 10%. Metal pipe may be used within the rights-of way of local streets and for driveway culverts. Metal pipe shall either be corrugated steel (AASHTO M-36) with aluminized Type II or bituminous coating or corrugated aluminum alloy pipe (AASHTO M-196).
- D. Corrugated high density polyethylene pipe smooth lines type "S" can only be used for residential driveway applications and shall not exceed 36 inches in diameter.
- E. Pipe installation shall conform to Georgia D.O.T. Standard Specifications for construction of roads and bridges. Before any traffic over a storm drain is allowed, the developer shall provide an adequate depth and width of compacted backfill to protect the structure from damage or displacement. The developer shall remove any debris or silt that constricts the flow through a pipe as of as necessary to maintain drainage. All pipe structures shall be cleaned before the work is accepted. Any damage or displacement that may occur due to traffic or erosion shall be repaired or corrected at the developer's expense.
- F. Trench construction for storm drainage pipe shall be in accordance with State Highway Standard 1030D (or most current) or as directed by the road and bridge inspector.
- G. Storm drainage pipe shall be bedded in Type 57 gravel where wet conditions are encountered.
- H. Backfilling of trenches shall be accomplished immediately after the pipe is laid. The fill around the pipe shall be placed in layers not to exceed six (6) inches with each layer being thoroughly compacted. All material shall have an in place density of 98% modified proctor to a depth of six (6) inches below the finished grade, and 95% modified proctor at depth greater than six (6) inches below the finished grade. Compaction requirements shall be attained by the use of mechanical methods. Each layer of backfill shall be placed loosely and thoroughly compacted in place.
- I. All backfill shall be non-plastic in nature, free from roots, vegetative matter, waste, construction material or other objectionable material. Said material shall be capable of

being compacted by mechanical means and shall have no tendency to flow or behave in a plastic manner under the tamping blows.

J. Material deemed by the County Engineer as unsuitable for backfill purposes shall be removed and replaced with selected backfill material.

K. Water shall not be permitted to rise in trenches that are not backfilled after the pipe has been placed.

Section 6.7. Field Changes

Minor changes to approved construction plans because of field conditions shall be documented as revisions to the approved development plans and correctly shown on the as-built surveys. Discrepancies between the as-built surveys and the approved development plans may result in delays in approving final plans or certificates of occupancy.

Section 6.8. Endwalls.

All culverts shall have endwalls or flared end sections constructed in accordance with Georgia D.O.T. Specifications and Georgia D.O.T. Manual on Drainage Design for Highways. All flared end sections under or adjacent to roadways with a posted speed in excess of 25 mph shall be safety end sections per Georgia D.O.T. standards.

Section 6.9. Catch Basins and Storm Sewer Structures.

A. All catch basins and storm sewer structures shall be designed and constructed in compliance with Georgia D.O.T. Specifications and shall be Georgia D.O.T. Standard 1033D, 1034D, or 1019.

B. The use of a Standard 1019 shall be excluded from turnarounds and the low point of sag vertical curves draining more than 300 feet of gutter. Drainage calculations and design data are required for the use of a Standard 1019.

C. All drainage structures shall be constructed of reinforced precast concrete, four foot (4') diameter or larger.

D. All 1033D and 1034D drainage structures shall require a reinforced precast "Round to Square" adapter for additional throat support.

E. All junction boxes shall include precast adapters and heavy duty traffic rated ring and covers. All junction boxes shall include approved steps, spaced 12" o.c. vertically, to allow safe access by maintenance personnel.

F. All storm sewer structures shall be reinforced precast or poured in place reinforced concrete. Masonry structures are not allowed unless authorized in writing by the County Engineer.

G. No length of pipe shall exceed 200 feet without intermediate structures.

H. In certain instances where rolled or "hollywood" curb is utilized, the County Engineer may require the use of 1033F and 1034F catch basins.

I. All structures shall have poured inverts to minimize accumulation of water and sediment in the structure.

- J. All structure covers shall be cast to read "Oconee County Storm Sewer, Dump No Waste – Drains to Stream".

Section 6.10. Timing of Installation

Construction of the stormwater system shall be initiated as part of the grading of the site. Stormwater detention facilities shall be constructed prior to the installation of any other site improvements, and may be utilized under proper design as sedimentation basins during development. Installation of all other storm drainage pipes, culverts, headwalls, and ditches shall be coordinated with the construction of streets and other site improvements, as appropriate, in accordance with an approved Stormwater Management Plan.

Section 6.11. Maintenance Responsibilities

- A. The developer shall be responsible for removing temporary structures or facilities at the completion of the construction.
- B. It shall be the responsibility of the developer to maintain all facilities required by the Stormwater Management Plan during construction and for a maintenance period following approval of the final subdivision plat or issuance of a certificate of occupancy, as applicable. The maintenance period shall coincide with the maintenance period required under the Procedures and Permits Article of the Unified Development Code regarding acceptance of public improvements.
- D. Should an owner or developer, whichever is the responsible party, fail to maintain the stormwater management facilities in a state of service intended by the Stormwater Management Plan, then the County shall notify the responsible party in writing of the deficiencies and specific minimum maintenance requirements to remedy such deficiencies.

Section 6.12. Stormwater Discharge Management

A. Stormwater Design Manual

- 1. The Oconee County Public Works Department will utilize the policy, criteria and information including technical specifications and standards in the latest edition of the *Georgia Stormwater Management Manual, Volume 2*, and any relevant local addenda, for the proper implementation of the requirements of this ordinance, except that structural stormwater controls shall require prior approval of the Oconee County Public Works Department as described below. The manual may be updated and expanded periodically, based on improvements in science, engineering, monitoring and local maintenance experience.

2. Minimum Stormwater Management Standards

The standards identified in the *Georgia Stormwater Management Manual, Volume 2* shall be the required minimum stormwater management performance criteria for new development or redevelopment sites unless otherwise provided for in this ordinance. In addition, if hydrologic or topographic conditions, or land use activities warrant greater control than that provided by the minimum control requirements, the Oconee County Public Works Department may impose additional requirements deemed necessary to protect upstream and downstream properties and aquatic resources from damage due to increased volume, frequency, and rate of stormwater runoff or increased nonpoint source pollution loads created on the site in question

3. Structural Stormwater Controls

- a. All structural stormwater controls shall be submitted to the Oconee County Public Works Department for review and approval before being included in the design of a stormwater management system. The intent of the approval process is to review independent third-party scientific verification of the structural controls performance and ability to meet water quality treatment objectives, verify the proven record of longevity in the field, verify the ability to function in Georgia conditions, and evaluate the operation and maintenance costs as compared to other alternatives.
- b. Applicants shall consult the *Georgia Stormwater Management Manual, Volume 2* for guidance on the factors that determine site design feasibility when selecting and locating a structural stormwater control.

4. Stormwater Credits for Nonstructural Measures

The use of one or more site design measures by the applicant may allow for a reduction in the water quality treatment volume required under Water Quality section above. The applicant may, if approved by the Oconee County Public Works Department, take credit for the use of stormwater better site design practices and reduce the water quality volume requirement. For each potential credit, there is a minimum set of criteria and requirements which identify the conditions or circumstances under which the credit may be applied. The site design practices that qualify for this credit and the criteria and procedures for applying and calculating the credits are included in the *Georgia Stormwater Management Manual, Volume 2*.

B. Stormwater Management Inspection and Maintenance Agreements.

A land development activity requiring a stormwater management facility or practice hereunder and for which the County requires ongoing maintenance, the applicant or owner of the site must execute an inspection and maintenance agreement that shall be binding on all subsequent owners of the site.

1. A draft copy of the inspection and maintenance agreement shall be contained within the construction plans submitted for a land development permit. Approval of the construction plans shall constitute preliminary approval of the inspection and maintenance agreement. Prior to the submission of the final plat for approval, or request for a Certificate of Occupancy where a final plat is not required, the owner shall record the inspection and maintenance agreement in the deed records of Oconee County. The owner shall provide a copy of the recorded agreement to the Oconee County Public Works Department with the final plat, or request for Certificate of Occupancy where a final plat is not required. The final plat shall have a notation referencing the deed book number and page of recorded inspection and maintenance agreement indicating that individual lot owners are subject to the terms and conditions of said agreement.
2. The inspection and maintenance agreement shall identify by name or official title the person(s) responsible for carrying out the inspection and maintenance. Responsibility for the operation and maintenance of the stormwater management facility or practice shall remain with the property owner and shall pass to any successor owner. If portions of the land are sold or otherwise transferred, legally binding arrangements shall be made to pass the inspection and maintenance responsibility to the appropriate successors in title. These arrangements shall designate for each portion of the site, the person to be permanently responsible for its inspection and maintenance.

3. As part of the inspection and maintenance agreement, a schedule shall be developed for when and how often routine inspection and maintenance will occur to ensure proper function of the stormwater management facility or practice. The agreement shall also include plans for annual inspections to ensure proper performance of the facility between scheduled maintenance activities and shall also include remedies for the default thereof.

C. Long-Term Inspection and Maintenance of Stormwater Facilities and Practices.

1. Stormwater management facilities and practices which are subject to an inspection and maintenance agreement shall be inspected and maintained on a routine basis by the responsible person in accordance with the approved inspection and maintenance agreement. Parties responsible for the operation and maintenance of a stormwater management facility shall maintain records of all maintenance and repairs, and provide copies of said records to the Oconee County Public Works Department.
2. In the event that the stormwater management facility has not been maintained, the County shall notify the responsible person in writing of the deficiencies, describe the required corrective action, and the time period to have the deficiencies corrected.
3. If the responsible person fails to correct the deficiencies within the specified time frame, the County, or its agent, may enter upon the property and make, at the owners' expense, the necessary repairs or corrections to the system.
4. In the event deficiencies constitute an imminent danger to public health or public safety, or threatens downstream water resources, the County, or its agent, is authorized to enter upon the subject private property, without giving prior notice, to take any and all measures necessary to abate the violation and/or restore the function of the stormwater facilities at the owners' expense.

D. Access and Inspection of Properties and Facilities.

1. The owners of property containing stormwater management facilities, detention facilities, or retention facilities shall allow unimpeded access for the County to conduct inspections of the facilities. Inspections may be conducted by the Oconee County Public Works Department at any time for any reasonable basis, including, but not limited to: routine inspections, random inspections, inspections based upon complaints or other notice of possible violations, and joint inspections with other agencies inspecting under environmental or safety laws. Inspections may include, but are not limited to: reviewing maintenance and repair records; measurement of discharges, location measurements, surveying, sampling of surface and ground waters; and evaluations of the condition of stormwater management facilities and practices.
2. Any temporary or permanent obstruction that inhibits access to the property or facility to be inspected shall be promptly removed at the written or oral request of the County and shall not be replaced. The costs of clearing such access shall be borne by the owner or operator.

E. Easements.

The owner of property containing a drainage easement shall not allow or cause to be deposited any material which causes a physical obstruction in the easement, including, tree trimmings, and leaves; impervious cover; or any other material that may block the flow of water or otherwise disrupt proper function of the stormwater management system. All drainage easements shall be kept clear of obstructions along the entire length of the

easement whether it be a buried pipe, ditch, or other facility contained within the easement. The property owner shall remove any such materials existing prior to, or installed after, the effective date of this ordinance.

Section 7. Stormwater Management in the Non-Urbanized Area

Whenever and wherever conditions, as are caused or aggravated by reason of the subdivision of land hereunder, adversely affect the proper use or drainage of streets, highways, pedestrian ways, slopes or natural watercourses, or adversely affect the public health, safety, or welfare, the following improvements may be required to be provided and installed by the subdivider:

- A. On-tract and/or off-tract drainage or drainage structures necessary for the proper use and drainage of slopes, streets, highways, and pedestrian ways, or for public safety.
- B. Erosion control planting and/or structural controls.

Section 7.1. Stormwater application and permit.

- A. All persons proposing development and/or construction in Oconee County shall submit a stormwater management plan to the county for approval. This plan shall comply with the requirements set forth in Section C below.
- B. The plan shall be prepared by a Registered Professional Engineer or Georgia Registered Landscape Architect to ensure compliance with all regulations.
- C. A stormwater management plan incorporated into the approved construction plans shall constitute a permit that will satisfy the requirements of this Section.

Section 7.2. Standards for stormwater management.

- A. A combination of storage and controlled release of stormwater runoff on-site detention or retention shall be required when the proposed development shall increase the peak rate of runoff by more than 1 cubic feet per second (CFS) for a ten-year frequency storm. The Rational Method or the Soil Conservation Method shall be used to determine the runoff rate in accordance with sound engineering practice and shall be acceptable to the County Engineer and Code Enforcement Director. Developments may be exempt from this provision if the design professional can demonstrate that the runoff can be adequately transmitted through existing downstream storm drain structures and will not result in increased flood heights or additional threats to public safety, and will not adversely affect downstream properties, and compliance with Section 7.3 is demonstrated.
- B. Should on-site retention or detention be required, the outlet device(s) of the retention/detention facility shall be designed to limit post-development runoff rates to less than or equal to the pre-development rates for the 2, 5, 10, 25, and 50 year storm event.
- C. The retention or detention storage volume to be provided shall be calculated on the basis of the appropriate return frequency rainfall, as published by the National Weather Service or other acceptable service for the affected site. The retention or detention volume required shall be calculated based on the DeKalb hydrograph for inflow and standard reservoir routing at the approved release rates as specified above. However, the design calculation shall include the routing of the 100-year frequency storm event through the retention/detention facility. Said calculations shall indicate that the 100-year frequency storm event can be safely routed through the facility.

- D. Applicants in non-urbanized areas that choose to handle stormwater management using the standards of urbanized areas may do so as long as all aspects of stormwater management meet the urbanized standards.
- E. The storm drainage system shall be designed in accordance with Section 6.3 of this Ordinance. At a minimum, the storm drainage system shall be sized to adequately convey the runoff from the 50-year frequency storm event to the retention/detention facility.
- F. Any required retention and/or detention area shall not be developed. Appropriate vegetation shall be planted in all retention and/or detention areas. Any required retention and/or detention areas shall be incorporated into the common areas of the residential development or incorporated into individual lots. The local government maintains the right, but not the responsibility, to access retention and/or detention areas for purposes of maintenance and inspection.
- G. Fences a minimum of four (4) feet in height with a minimum eight (8) foot wide gate will be required on all detention ponds where:
 - 1. The sides of the pond have a slope greater than three (3) horizontal to one (1) vertical, or
 - 2. The depth of water in the pond is greater than three (3) feet at one hour after the duration of the storm event.
- H. Drainage easement requirements.
 - 1. The minimum easement width for open ditch where pipe is feeding into the ditch will be determined as follows:

Table 1: Drainage Ditch Easement Widths	
Pipe Size Feeding Into Ditch	Minimum Easement Width
15" to 30"	20 feet
36" to 66"	30 feet
72" and greater	40 feet

- 2. Where a subdivision is traversed by a watercourse, drainage way or stream, there shall be a drainage and access easement conforming substantially with the lines of such watercourse, and such further width as will be adequate for the purpose of drainage and maintenance, taking into account possible future development of higher land in the same drainage area. Such drainage way shall be piped when the County Engineer shall find that it is a hazard or that a continual maintenance problem might exist.
- 3. If the drainage way is totally piped, the easement width shall be based on the associated pipe size above.

Section 7.3. Storm Drainage Design Considerations

An adequate system based upon at least a 50-year storm event shall be provided for the proper drainage of all surface water originating in or affecting the subdivision.

- event.
- A. Stormwater inlets shall be designed and located so as not to exceed a maximum gutter spread width of half the travel lane based on flow data calculations for the 25-year storm event.
 - B. The drainage system shall conform to any county storm drainage master plan which may be adopted and shall include necessary curbing, pipes, culverts, headwalls, drop inlets, bridges, swale ditches, or any other type of drainage facility needed to control the flow of water in, around, or through the subdivision.
 - C. Pipe size will be determined by utilizing the Rational Method or the Soil Conservation Service Method (TR-55) to compute peak runoff. A 50-year storm event will be used to determine all pipe sizes. All cross drains and culverts under roadways shall be sized based on a 50-year storm event. All proposed piping within a FEMA identified floodplain shall be sized to adequately convey the 100-year frequency storm event.
 - D. Manning's equation shall be used to evaluate hydraulic capacity and velocity of flow within the storm drainage system. Required storm pipes shall be designed to maintain a water flow velocity greater than or equal to three (3) feet per second. The hydraulic analysis of culverts shall be based on Federal Highway Administration engineering practice and take into account the inlet geometry, slope, size, roughness, and approach or tailwater conditions. Stormwater inlets shall be designed in accordance with Federal Highway Administration engineering practice and constructed in compliance with Georgia D.O.T. construction standards and shall be Georgia D.O.T. Standard 1033, 1034, and 1011. Drainage calculation and design data are required for all stormwater conveyance systems and structures. All drainage structures shall be constructed of reinforced precast concrete, four (4) foot diameter or larger. All 1033D and 1034D drainage structures shall require a reinforced precast "Round to Square" adapter for additional throat support. All junction boxes shall include precast adapters and heavy duty traffic rated ring and covers. All manholes shall include approved steps, spaced twelve (12) inches o.c. vertically, to allow safe access by maintenance personnel. All structures shall have paved inverts.
 - E. In certain instances where rolled or "Hollywood" curb is utilized, the County Engineer may require the use of 1033F and 1034F catch basins.
 - F. Energy dissipation devices, such as splash pads, rip rap, stilling basins, etc., shall be provided at the outlet of every culvert and piped discharge system. The size and type of energy dissipation device to be used shall be designed in accordance with sound engineering practices and this ordinance.
 - G. All drainage ditches that are between building lots shall be piped a minimum of 100 feet from the front building line. This shall be done at the expense of the developer.
 - H. Any routed stormwater shall attain sheet flow by the property line.
 - I. Discharge structures that are within close proximity to adjoining properties or the public right of way shall be screened from view.

Section 6.4. Natural Drainage.

- A. Natural drainage channels, ditches, swales and drainage patterns existing within a subdivision shall be retained and improved by the subdivider unless otherwise approved by the County Engineer.

- B. Off-site drainage shall be adequately transported through the proposed development. Post-development stormwater runoff shall not exceed pre-development conditions for the 2, 5, 10, 25, and 50 year storm events.
- C. The applicant must demonstrate adequate protection of the water quality by use of filter berms, stilling basins, velocity control and other approved methods. Such demonstration shall include supporting data that definitely indicates that adequate protection of the water quality is provided.

Section 7.5. Drainage System Construction

All pipe sizes shall be approved by the County Engineer to meet the drainage conditions of the watershed and area of the potential runoff, per current design standards and requirements.

- A. The minimum cross drain diameter shall be 18 inches.
- B. Minimum cover shall be 24 inches.
- C. In all instances, depth requirements shall meet or exceed manufacturer's guidelines.

Section 7.6. Materials and Installation

A. Pipes

1. Pipe material shall be determined based on type of installation, as set forth in Table 2: Selection Guidelines for Storm Sewer Piping. All pipe shall be new and unused.
2. The gauge or class of pipe used shall be determined by acceptable methods using H-20 highway loading, and shall meet Georgia D.O.T. Specifications. The County Engineer, or his/her duly appointed representative, shall inspect the pipe before installation to assure that it is free of cracks or damage. All damaged, used, or "second" quality pipe shall be refused and immediately removed from the job site.

B. Joints and Installation.

1. Reinforced concrete pipe joints must be properly constructed to prevent exfiltration.
2. The use of O-rings or sealants may be required, depending on pipe design.
3. All storm sewer piping shall be constructed in a linear approach with no vertical or horizontal variance from the approved design.
4. High density polyethylene (HDPE) and corrugated metal pipe (CMP) shall be joined by manufacturer's recommended pipe banding materials. All trench lines shall be thoroughly compacted prior to pipe installation. HDPE pipe will require special bedding and installation in accordance with manufacturer's specifications and as directed by the County Engineer.

Table 2: Selection Guideline for Storm Sewer Piping
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Type of Pipe Installation	Reinforced Concrete Pipe (RCP)	Corrugated Steel AASHTO M-36		Corrugated Aluminum AASHTO M-196	Plastic AASHTO M-294	Reinforced Concrete Box Culvert Per GDOT Standards
		Aluminized Type II CMP	Bituminous Coated CMP	Aluminum Alloy CMP	Corrugated HDPE Smooth Lined	
Longitudinal Grade Less Than 10%	Yes	Yes	Yes	Yes	Yes (1)	---
Longitudinal Grade Over 10%	No	Yes	Yes	Yes	Yes (1)	---
Cross Drain Less Than 250 ADT	Yes	Yes	Yes	Yes	Yes (1)	---
Cross Drain Greater Than 250 ADT	Yes	No	No	No	No	---
Cross Drain Flowing Stream Application	Yes	(3)	No	Yes	Yes (1) (4)	---
Cross Drain 25 Yr Flow > 200 CFS or Fill Depth > 18 ft	(2)	No	No	No	No	Yes

Conditional Uses:

(1) Corrugated high density polyethylene pipe smooth lined type "S" must be manufactured and installed in strict compliance with the manufacturer's recommendation. Special backfill and bedding are required per the direction of the County Engineer. Prior approval of the County Engineer is required. HDPE applications shall not exceed 36" diameter.

(2) Reinforced concrete box culverts are required under excessive flow and/or fill depth conditions. Approved pipe materials may be utilized in some instances based on the County Engineer's assessment of existing conditions and future maintenance requirements.

(3) The addition of a type "A" full bituminous coating with paved invert is required for this application. (AASHTO M-190)

(4) Requires approval of County Engineer based on assessment of existing conditions and future maintenance requirements.

- C. Only reinforce concrete pipe shall be used within street right-of way are arterial roads and major and minor collectors. Concrete pipe shall not be used on grades exceeding 10%. Metal pipe may be used within the rights-of way of local streets and for driveway culverts. Metal pipe shall either be corrugated steel (AASHTO M-36) with aluminized Type II or bituminous coating or corrugated aluminum alloy pipe (AASHTO M-196).
- D. Corrugated high density polyethylene pipe smooth lines type "S" can only be used for residential driveway applications and shall not exceed 36 inches in diameter.
- E. Pipe installation shall conform to Georgia D.O.T. Standard Specifications for construction of roads and bridges. Before any traffic over a storm drain is allowed, the developer shall provide an adequate depth and width of compacted backfill to protect the structure from

damage or displacement. The developer shall remove any debris or silt that constricts the flow through a pipe as of as necessary to maintain drainage. All pipe structures shall be cleaned before the work is accepted. Any damage or displacement that may occur due to traffic or erosion shall be repaired or corrected at the developer's expense.

- F. Trench construction for storm drainage pipe shall be in accordance with State Highway Standard 1030D (or most current) or as directed by the road and bridge inspector.
- G. Storm drainage pipe shall be bedded in Type 57 gravel where wet conditions are encountered.
- H. Backfilling of trenches shall be accomplished immediately after the pipe is laid. The fill around the pipe shall be placed in layers not to exceed six (6) inches with each layer being thoroughly compacted. All material shall have an in place density of 98% modified proctor to a depth of six (6) inches below the finished grade, and 95% modified proctor at depth greater than six (6) inches below the finished grade. Compaction requirements shall be attained by the use of mechanical methods. Each layer of backfill shall be placed loosely and thoroughly compacted in place.
- I. All backfill shall be non-plastic in nature, free from roots, vegetative matter, waste, construction material or other objectionable material. Said material shall be capable of being compacted by mechanical means and shall have no tendency to flow or behave in a plastic manner under the tamping blows.
- J. Material deemed by the County Engineer as unsuitable for backfill purposes shall be removed and replaced with selected backfill material.
- K. Water shall not be permitted to rise in trenches that are not backfilled after the pipe has been placed.

Section 7.7. Field Changes

Minor changes to approved construction plans because of field conditions shall be documented as revisions to the approved development plans and correctly shown on the as-built surveys. Discrepancies between the as-built surveys and the approved development plans may result in delays in approving final plans or certificates of occupancy.

Section 7.8. Endwalls.

All culverts shall have endwalls or flared end sections constructed in accordance with Georgia D.O.T. Specifications and Georgia D.O.T. Manual on Drainage Design for Highways. All flared end sections under or adjacent to roadways with a posted speed in excess of 25 mph shall be safety end sections per Georgia D.O.T. standards.

Section 7.9. Catch Basins and Storm Sewer Structures.

- A. All catch basins and storm sewer structures shall be designed and constructed in compliance with Georgia D.O.T. Specifications and shall be Georgia D.O.T. Standard 1033D, 1034D, or 1019.
- B. The use of a Standard 1019 shall be excluded from turnarounds and the low point of sag vertical curves draining more than 300 feet of gutter. Drainage calculations and design data are required for the use of a Standard 1019.
- C. All drainage structures shall be constructed of reinforced precast concrete, four foot (4') diameter or larger.

- D. All 1033D and 1034D drainage structures shall require a reinforced precast "Round to Square" adapter for additional throat support.
- E. All junction boxes shall include precast adapters and heavy duty traffic rated ring and covers. All junction boxes shall include approved steps, spaced 12" o.c. vertically, to allow safe access by maintenance personnel.
- F. All storm sewer structures shall be reinforced precast or poured in place reinforced concrete. Masonry structures are not allowed unless authorized in writing by the County Engineer.
- G. No length of pipe shall exceed 200 feet without intermediate structures.
- H. In certain instances where rolled or "hollywood" curb is utilized, the County Engineer may require the use of 1033F and 1034F catch basins.
- I. All structures shall have poured inverts to minimize accumulation of water and sediment in the structure.
- J. All structure covers shall be cast to read "Oconee County Storm Sewer, Dump No Waste – Drains to Stream".

Section 7.10. Timing of Installation

Construction of the stormwater system shall be initiated as part of the grading of the site. Stormwater detention facilities shall be constructed prior to the installation of any other site improvements, and may be utilized under proper design as sedimentation basins during development. Installation of all other storm drainage pipes, culverts, headwalls, and ditches shall be coordinated with the construction of streets and other site improvements, as appropriate, in accordance with an approved Stormwater Management Plan.

Section 7.11. Maintenance Responsibilities

- A. The developer shall be responsible for removing temporary structures or facilities at the completion of the construction.
- B. It shall be the responsibility of the developer to maintain all facilities required by the Stormwater Management Plan during construction and for a maintenance period following approval of the final subdivision plat or issuance of a certificate of occupancy, as applicable. The maintenance period shall coincide with the maintenance period required under the Procedures and Permits Article of the Unified Development Code regarding acceptance of public improvements.
- D. Should an owner or developer, whichever is the responsible party, fail to maintain the stormwater management facilities in a state of service intended by the Stormwater Management Plan, then the County shall notify the responsible party in writing of the deficiencies and specific minimum maintenance requirements to remedy such deficiencies.

Section 7.12 Stormwater Discharge Management

- B. Stormwater Management Inspection and Maintenance Agreements.

A land development activity requiring a stormwater management facility or practice hereunder and for which the County requires ongoing maintenance, the applicant or

owner of the site must execute an inspection and maintenance agreement that shall be binding on all subsequent owners of the site.

1. A draft copy of the inspection and maintenance agreement shall be contained within the construction plans submitted for a land development permit. Approval of the construction plans shall constitute preliminary approval of the inspection and maintenance agreement. Prior to the submission of the final plat for approval, or request for a Certificate of Occupancy where a final plat is not required, the owner shall record the inspection and maintenance agreement in the deed records of Oconee County. The owner shall provide a copy of the recorded agreement to the Oconee County Public Works Department with the final plat, or request for Certificate of Occupancy where a final plat is not required. The final plat shall have a notation referencing the deed book number and page of recorded inspection and maintenance agreement indicating that individual lot owners are subject to the terms and conditions of said agreement.
 2. The inspection and maintenance agreement shall identify by name or official title the person(s) responsible for carrying out the inspection and maintenance. Responsibility for the operation and maintenance of the stormwater management facility or practice shall remain with the property owner and shall pass to any successor owner. If portions of the land are sold or otherwise transferred, legally binding arrangements shall be made to pass the inspection and maintenance responsibility to the appropriate successors in title. These arrangements shall designate for each portion of the site, the person to be permanently responsible for its inspection and maintenance.
 3. As part of the inspection and maintenance agreement, a schedule shall be developed for when and how often routine inspection and maintenance will occur to ensure proper function of the stormwater management facility or practice. The agreement shall also include plans for annual inspections to ensure proper performance of the facility between scheduled maintenance activities and shall also include remedies for the default thereof.
- C. Long-Term Inspection and Maintenance of Stormwater Facilities and Practices.
1. Stormwater management facilities and practices which are subject to an inspection and maintenance agreement shall be inspected and maintained on a routine basis by the responsible person in accordance with the approved inspection and maintenance agreement. Parties responsible for the operation and maintenance of a stormwater management facility shall maintain records of all maintenance and repairs, and provide copies of said records to the Oconee County Public Works Department.
 2. In the event that the stormwater management facility has not been maintained, the County shall notify the responsible person in writing of the deficiencies, describe the required corrective action, and the time period to have the deficiencies corrected.
 3. If the responsible person fails to correct the deficiencies within the specified time frame, the County, or its agent, may enter upon the property and make, at the owners' expense, the necessary repairs or corrections to the system.
 4. In the event deficiencies constitute an imminent danger to public health or public safety, or threatens downstream water resources, the County, or its agent, is authorized to enter upon the subject private property, without giving prior notice, to take any and all measures necessary to abate the violation and/or restore the function of the stormwater facilities at the owners' expense.

D. Access and Inspection of Properties and Facilities.

3. The owners of property containing stormwater management facilities, detention facilities, or retention facilities shall allow unimpeded access for the County to conduct inspections of the facilities. Inspections may be conducted by the Oconee County Public Works Department at any time for any reasonable basis, including, but not limited to: routine inspections, random inspections, inspections based upon complaints or other notice of possible violations, and joint inspections with other agencies inspecting under environmental or safety laws. Inspections may include, but are not limited to: reviewing maintenance and repair records; measurement of discharges, location measurements, surveying, sampling of surface and ground waters; and evaluations of the condition of stormwater management facilities and practices.
4. Any temporary or permanent obstruction that inhibits access to the property or facility to be inspected shall be promptly removed at the written or oral request of the County and shall not be replaced. The costs of clearing such access shall be borne by the owner or operator.

E. Easements.

The owner of property containing a drainage easement shall not allow or cause to be deposited any material which causes a physical obstruction in the easement, including, tree trimmings, and leaves; impervious cover; or any other material that may block the flow of water or otherwise disrupt proper function of the stormwater management system. All drainage easements shall be kept clear of obstructions along the entire length of the easement whether it be a buried pipe, ditch, or other facility contained within the easement. The property owner shall remove any such materials existing prior to, or installed after, the effective date of this ordinance.

Section 8. Violations, Enforcement and Penalties.

A. Violations

It shall be unlawful for any person to violate any provision or fail to comply with any of the requirements of this ordinance. Any person who has violated or continues to violate the provisions of this ordinance, may be subject to the enforcement actions outlined in this section or may be restrained by injunction or otherwise abated in a manner provided by law. Each act of violation and each day during which violation or failure or refusal to comply continues shall be a separate violation. Unreasonable delays in allowing the County, or its agent, access to the property is a violation of this ordinance.

B. Notice of Violation

Whenever the County finds that a violation of this ordinance has occurred, the County may order compliance by written notice of violation.

1. The notice of violation shall contain:

- (a) The name and address of the alleged violator;
- (b) The address when available or a description of the building, structure or land upon which the violation is occurring, or has occurred;
- (c) A statement specifying the nature of the violation;

- (d) A description of the remedial measures necessary to restore compliance with this ordinance and a time schedule for the completion of such remedial action;
- (e) A statement advising that if the violator fail to remediate or restore the affected property within the established deadline, the work will be done by the County or a contractor and the expense thereof shall be charged to the violator;
- (f) A statement of the penalty or penalties that shall or may be assessed against the person to whom the notice of violation is directed;

2. Such notice may require without limitation:

- (a) The performance of monitoring, analyses, and reporting;
- (b) The elimination of illicit discharges and illegal connections;
- (c) That violating discharges, practices, or operations shall cease and desist;
- (d) The abatement or remediation of stormwater pollution or contamination hazards and the restoration of any affected property;
- (e) Payment of costs to cover administrative and abatement costs; and,
- (f) The implementation of pollution prevention practices.

C. Costs of Abatement of the Violation

- 1. If the violator fails to correct the violation within the specified time frame, the County, or its agent, may enter the property and take, at the violator's expense, any and all measures necessary to abate the violation and/or restore the property.
- 2. Following completion of corrective action, the County shall send to the violator an invoice for the costs incurred to correct the violation and/or restore the property. If the amount due is not paid within thirty (30) days, the charges shall become a special assessment against the property, and shall constitute a lien on the property for the amount of the assessment.

D. Civil Penalties

A person who has violated, or continues to violate, any provisions of this ordinance shall be liable to the County for a maximum penalty of \$1,000 per violation, per day.

E. Remedies Not Exclusive

- 1. The remedies listed in this ordinance are not exclusive of any other remedies available under any applicable Federal, State or local law and the County may seek cumulative remedies.
- 2. The County may recover all attorneys' fees, court costs and other expenses associate with enforcement of this ordinance, including sampling and monitoring expenses.

Section 9. Appeals.

- A. The Oconee County Board of Commissioners shall hear and decide appeals when it is alleged an error in any requirement, decision, or determination in made in the enforcement or administration of this ordinance.

B. Any person aggrieved by the decision of the Board of Commissioners may appeal such decision to a court of competent jurisdiction, as provided by law.

Section 10. Repeal.

All Resolutions or Ordinances and parts or sections of Resolutions or Ordinances in conflict with this Ordinance are hereby repealed.

Section 10. Compatibility with Other Regulations.

Whenever the provisions of this Ordinance and those of other ordinances or statutes apply to the same subject matter, that ordinance which is more restrictive or imposes higher protective standards for human health or the environment shall control.

Section 11. Severability.

If the provisions of any section, subsection, paragraph, subdivision or clause of this ordinance shall be adjudged invalid by a court of competent jurisdiction, such judgment shall not affect or invalidate the remainder of any section, subsection, paragraph, subdivision or clause of this ordinance.

Section 12. Legal Form and Sufficiency

"This document has been approved as to its legal form and sufficiency by the legal counsel of Oconee County prior to its adoption."

Attorney

DONE, this ____ day of _____, 20__.

OCONEE COUNTY BOARD
OF COMMISSIONERS

Chairman

Attest:

Member

County Clerk

Member

(SEAL)

Member

Member