

ARTICLE XXI**WATER RESOURCE PROTECTION****Section 220. Purpose.**

Article XXI – Rev.2.5.02

The intent of this section is to establish minimum development standards and criteria, which will afford reasonable protection of environmentally sensitive natural resources found throughout the City of Perry. It has been determined the wise management of these resources as defined in this Section is essential to maintaining the health, safety, general welfare and economic well being of the public.

Section 221. Establishment of Water Resource Districts.

The City of Perry's Water Resource Districts shall include the following:

Groundwater Recharge Area District
Wetlands Protection District

The boundaries of these Water Resource Districts are shown on a set of maps designated as "Water Resource Districts" and are included as part of the City of Perry's Official Zoning Map, which is on file with the Community Development Office located in the City Hall.

Section 222. Definitions.

In addition to the general definitions provided in this Ordinance, the following definitions shall apply to this Section:

Aquifer – Any stratum or zone of rock beneath the surface of the earth capable of containing or producing water from a well.

Drastic – The standardized system for evaluating groundwater pollution potential using the hydrogeologic settings described in the U.S. Environmental Protection Agency Document EPA-600-87-035 (Note: The Drastic methodology is most widely used technique for evaluating pollution susceptibility).

Generalized Wetlands Map – The current U.S. Fish and Wildlife Service National Wetlands Inventory Maps for the City of Perry, Georgia.

Jurisdictional Wetland – An area that meets the definitional requirements for wetlands as determined by the U.S. Army Corps of Engineers.

Jurisdictional Wetland Determination – A delineation of jurisdictional wetland boundaries by the U.S. Army Corps of Engineers as required by Section 404 of the Clean Water Act, 33.U.S.C § 1344, as amended.

Pollution Susceptibility – The relative vulnerability of an aquifer to being polluted from spills, discharges, leaks, impoundment's, applications of chemicals, injections and other human activities in the recharge area.

Pollution Susceptibility Map – The relative vulnerability to pollution prepared by the Department of Natural Resources using the Drastic methodology. (Georgia Department of Natural Resources Hydrologic Atlas 20: Groundwater Pollution susceptibility Map of Georgia).

Recharge Area – Any portion of the earth's surface where water infiltrates into the ground to replenish an aquifer.

Regulated Activity – Any activity which will or which may reasonably be expected to result in the discharge of dredged or fill material into the waters of the U.S. excepting those activities exempted in Section 404 of the Federal Clean Water Act.

Significant Recharge Areas – Those areas mapped by the Georgia Department of Natural Resources in Hydrologic Atlas 18 (1989 Edition).

Water Resource Districts – A Water Resource District is a map overlay which imposes a set of requirements in addition to those of the underlying zoning district.

Wetlands – Those areas inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas. The ecological parameters for designating wetlands include hydric soils, hydrological vegetation and hydrological conditions involving a temporary or permanent source of water to cause soil saturation.

Section 223. Groundwater Recharge Area District.

223.1. Findings of Fact. Recharge areas are vulnerable to urban development activities as well as agricultural activities. Pesticides, herbicides, animal waste and septic tank effluents contribute to a deterioration in the groundwater quality and can threaten the health of residents relying on well water. Development usually means an increase in the amount of land covered with impervious surfaces. Paving land in recharge areas can alter or impair their recharge characteristics thereby decreasing groundwater supplies.

223.2. Purpose. The purpose of this Overlay District is to establish criteria to protect significant groundwater recharge areas from pollution by spills, discharges, leaks, impoundments, application of chemicals, injections and other development pressures.

223.3. District Delineation. The Groundwater Recharge Area District is delineated according to the Georgia Department of Natural Resources' "Most Significant Groundwater Recharge Areas of Georgia Hydrologic Atlas 18 (1989 Edition)." Each recharge area shall be determined to have a pollution susceptibility of high, medium, or low based on the "Georgia Pollution Susceptibility Map Atlas 20, 1992 Edition." Said maps are hereby adopted and made a part of this ordinance.

223.4. Permitted Uses. All uses allowed in the underlying zoning districts are permitted in the Groundwater Recharge Area Protection District. The following are additional requirements for specific uses:

- (A) New above-ground chemical or petroleum storage tanks, having a minimum volume of 660 gallons, shall have secondary containment for 110% of the volume of such tanks or 110 percent of the volume of the largest tank in a cluster of tanks. Such tanks used for agricultural purposes are exempt provided they comply with all Federal requirements.
- (B) New agricultural waste impoundment sites shall be lined if they are within:
 - (1) a high pollution susceptibility area;
 - (2) a medium pollution susceptibility area and exceed 15 acre feet in size; and
 - (3) a low pollution susceptibility area and exceed 50 acre-feet in size.

As a minimum, the liner shall be constructed of compacted clay having a thickness of one-foot and a vertical hydraulic conductivity of less than 5×10^{-7} cm/sec or other criteria established by the National Resource and Conservation Service.

- (C) New homes served by septic tank/drain field systems shall be on lots having the following minimum size limitations as identified in Table MT-1 of the Department of Human Resources' Manual for On-Site Sewage Management Systems (hereafter DHR Table MT-1). The minimum set forth in Table MT-1 may be increased further based on consideration of other factors (set forth in Sections A-F) of the DHR Manual.
 - (1) 150 percent of the subdivision minimum lot size calculated based on application of DHR Table MT-1 if they are within a high pollution susceptibility area;

- (2) 125 percent of the subdivision minimum lot size calculated based on application of DHR Table MT-1 if they are within a medium pollution susceptibility area;
 - (3) 110 percent of the subdivision minimum lot size calculated based on application of DHR Table MT-1 if they are within a low pollution susceptibility area.
- (D) New manufactured home parks served by septic tank/drain field systems shall have lots or spaces having the following size limitation as identified on Table MT-2 of the Department of Human Resources' (DHR) Manual for On-site Sewage Management Systems (hereafter DHR Table MT-2). The minimums set forth in Table MT-2 may be increased further based on consideration of other factors (set forth in sections A-F) of the DHR Manual.
- (1) 150 percent of the subdivision minimum lot or space calculated based on application of DHR Table MT-2 if they are within a high pollution susceptibility area;
 - (2) 125 percent of the subdivision minimum lot or space size calculated based on application of DHR Table MT-2 if they are within a medium pollution susceptibility area; and
 - (3) 110 percent of the subdivision minimum lot size or space size calculated based on application of DHR Table MT-2 if they are within a low pollution susceptibility area.
- (E) No construction may proceed on a building or manufactured home to be served by a septic tank unless the Houston County Health Department first approves the proposed septic tank installation as meeting the requirements of the Georgia Department of Human Resources Manual for On-Site Sewage Management (hereinafter DHR Manual and Sections (C) and (D) above.
- (F) New facilities which handle hazardous materials, of the types (listed in section 312 of the Resource Conservation and Recovery Act of 1976, excluding underground storage tanks) and in amounts 10,000 pounds or more on any one day shall perform their operations on impervious surfaces and in conformance with any applicable federal spill prevention requirements and any local fire prevention code requirements.
- (G) Permanent storm water infiltration basins shall not be constructed in areas having high pollution susceptibility.

223.5. Exemptions. Any lot of record approved prior to the adoption of this Ordinance is exempt from the minimum lot size requirements contained in Section 4.4(C) and (D).

Section 224. Wetlands Protection District.

224.1. Findings of Fact. The wetlands within the City of Perry are indispensable and fragile natural resources with significant development constraints due to flooding, erosion and soil limitations. In their natural state, wetlands serve man and nature. They provide habitat areas for fish, wildlife and vegetation; water quality maintenance and pollution control; flood control; natural resource education; scientific study, and recreational opportunities.

224.2. Purpose. The purpose of this Overlay District is to promote them from alterations, which will significantly affect or reduce the primary functions for water quality, floodplain and erosion control, groundwater recharge, aesthetic natural areas and wildlife habitat areas.

224.3. District Delineation. The Wetlands Protection District is hereby established which shall correspond to all lands within the jurisdiction of the City of Perry, Georgia that are mapped as wetland areas by the U.S. Fish and Wildlife National Wetlands Inventory Maps. This map shall be referred to as the Generalized Wetlands Map and is hereby adopted by reference and declared to be part of this Ordinance, together with all explanatory matter thereon as attached thereto.

The Generalized Wetlands Map does not necessarily represent the boundaries of jurisdictional wetlands with the City of Perry and cannot serve as a substitute for a delineation of wetland boundaries by the U.S. Army Corps of Engineers, as required by Section 404 of the Clean Water Act, as amended. Any local government action under this Ordinance does not relieve the landowner from federal or state permitting requirements.

224.4. Wetland Development Permit Requirements. No regulated activity or use except those identified in Section 5.5 shall be allowed within the Wetland Protection District without a development permit from the City of Perry. If the area proposed for development is located within fifty (50) feet of a Wetlands Protection District boundary as determined by the Zoning Enforcement Officer using the Generalized Wetlands Map, a U.S. Army Corps of Engineers determination shall be required. If the Corps determines that wetlands are present on the proposed development site, the development permit will not be granted until Section 404 Permit or Letter of Permission is issued.

224.5. Permitted Uses. The following uses are permitted by right within the Wetland Protection District to the extent they are not prohibited by any other ordinance or law and provided they do not require structures, grading, fill, draining or dredging as provided herein. (These activities listed in this section are exempted from Section 404 regulations

provided they do not have impacts on a navigable waterway that would necessitate acquisition of an individual 404 Permit. However, under Section 10 of the Rivers and Harbors Act, a permit may be required in some circumstances).

- (1) Forestry practices applied in accordance with best management practices approved by the Georgia Forestry Commission and as specified in Section 404 of the Clean Water Act.
- (2) Conservation or preservation soil, water, vegetation, fish or other wildlife, provided it does not affect waters of the State of Georgia or of the United States in such a way that would require an individual 404 permit.
- (3) Outdoor passive recreational activities, including fishing, bird watching, hiking, boating, horseback riding and canoeing.
- (4) The cultivation of agricultural crops. Agricultural activities shall be subject to best management practices approved by the Georgia Department of Agriculture.
- (5) The pasturing of livestock, provided that riparian wetlands are protected, that soil profiles are not disturbed, and that approved agricultural best management practices are followed.
- (6) Education, scientific research and nature trails.

224.6 Prohibited Uses. The following uses are prohibited in a Wetland District:

Receiving areas for toxic or hazardous waste or other contaminants.

Hazardous or sanitary landfills.

TABLE MT-1
NEW HOMES
MINIMUM LOT SIZES, MINIMUM LOT WIDTHS AND MAXIMUM
ALLOWABLE SEWAGE FLOW FOR THE TYPE OF
WATER SUPPLY SYSTEM

	<u>Type of Water Supply System</u>	
	<u>Non-Public*(Individual)</u>	<u>Public</u>
Minimum Lot Size	65,340 sq. feet	21,780 sq. feet
Minimum Lot Width	150 feet	100 feet
Maximum Sewage Flow	600 gpad**	1,200 gpad

* In this context, “Non-Public” means an individual water supply system or any other water supply system which is not a “public” water supply system.

** Gpad = gallons per acre per day = gal/acre/day.

TABLE MT-2
MANUFACTURED HOME PARKS
MINIMUM LOT SIZES, MINIMUM LOT WIDTHS AND MAXIMUM
ALLOWABLE SEWAGE FLOW FOR THE TYPE OF
WATER SUPPLY SYSTEM

	<u>Type of Water Supply System</u>	
	<u>Non-Public*(Individual)</u>	<u>Public</u>
Minimum Lot Size	65,340 sq. feet	21,780 sq. feet
Minimum Lot Width	150 feet	100 feet
Maximum Sewage Flow	600 gpad**	1,200 gpad

* In this context, “Non-Public” means an individual water supply system or any other water supply system which is not a “public” water supply system.

** Gpad = gallons per acre per day = gal/acre/day.

- Section A.** The above minimum lot sizes are for the typical size home (3 or 4 bedroom) with basic appurtenances such as: driveway, minimum number of trees and water supply line. If larger homes, swimming pools, tennis courts or outbuildings, etc., are proposed for construction or if trees would interfere with installation of an on-site sewage management system, the Houston County Board of Health will require larger lots to assure usable soil area.
- Section B.** The Houston County Board of Health may also require larger lot sizes when physical factors indicate the need to do so. These factors include, but are not limited to, the availability of sufficient unobstructed land areas for an approved on-site sewage management system and approved replacement system, slope greater than five percent, percolation rates higher than 45 minutes per inch, need for subsurface drainage or adverse topographic features.
- Section C.** Lots shall be a minimum width of 100 feet or 150 feet measured within the area where an approved on-site sewage management system and replacement system are to be located when served by a public water supply system or nonpublic water supply system, respectively.
- Section D.** The following land areas are not considered as a part of a lot when calculating the required minimum lot size: rights-of-way of roads, easements (such as power line or pipe line) that exclude installation of an on-site sewage management system, bodies of water, land within 50 feet of a lake, river, stream, wetland or other bodies of water and similar limiting factors.
- Section E.** There must be an unobstructed area on each lot for installation of an approved on-site sewage management system and an area equal in size for a conventional system or larger area, as appropriate, for an approved replacement system; this will include sufficient area for necessary site modifications for installation of both the initial system and a replacement system. All pertinent city zoning setbacks and other space requirements must also be met.
- Section F.** The maximum daily sewage flow for each lot or parcel of land shall not exceed 600 gpad when served by nonpublic or individual water supply system or 1,200 gpad when served by public water supply system. When sewage flows exceed these quantities (600 or 1,200 gpad as indicated) for a given dwelling structure, the minimum lot size or parcel of land shall be increased proportionally. Example: Assume a public water supply exists (so 1,200 gpad maximum sewage flow allowed per minimum required land area of 21,780 square feet), and there is a proposed sewage flow of 5,000 gpd. To determine the square footage of the lot needed, X, use the following formula:

$$\begin{aligned} X &= \frac{5,000 \text{ gal/day}}{1,200 \text{ gal/acre/day}} \\ &= 4.17 \text{ acres} \\ &= 4.17 \text{ acres} \times 43,560 \text{ ft/acre} \\ &= 181,500 \text{ ft area of land needed} \end{aligned}$$

Likewise, for a nonpublic (individual) water supply, to determine the square footage of the lot needed, Y, for a proposed sewage flow of 5,000 gpd, use the following formula:

$$\begin{aligned} Y &= \frac{5,000 \text{ gal/day}}{600 \text{ gal/acre/day}} \\ &= 8.33 \text{ acres} \\ &= 8.33 \text{ acres} \times 43,560 \text{ ft/acre} \\ &= 363,000 \text{ ft area of land needed} \end{aligned}$$