391-3-16-.02 Criteria For Protection of Groundwater Recharge Areas.

(1) Background. Variable levels of recharge area protection can be based upon the State's hydrogeology (e.g., areas such as the Dougherty Plain where a major aquifer crops out would receive a relatively high degree of protection whereas other areas, such as the shale hills of northwest Georgia, would receive a lower degree of Protection). Recharge area protection within the significant recharge areas would be further refined, based upon the local susceptibility or vulnerability to human induced pollution (e.g., high, medium, or low). The significant recharge areas have already been identified and mapped (about 22-23% of the State). Pollution susceptibility mapping is ongoing. Existing statutes are adequate for protection of the remaining recharge areas (about 77-78% of the State).

(2) Definitions:
(a) "Aquifer" means any stratum or zone of rock beneath the surface of the earth capable of containing or producing water from a well. (Note: this is the same definition as in the Groundwater Use Act.)
(b) "DRASTIC" means the standardized system for evaluating groundwater pollution potential using the hydrogeologic settings described in U.S. Environmental Protection Agency document EPA-600/287-035 (Note: the DRASTIC methodology is the most widely used technique for evaluating pollution susceptibility).
(c) "Pollution Susceptibility" means the relative vulnerability of an aquifer to being polluted from spills, discharges, leaks, impoundments, applications of chemicals, injections and other human activities in the recharge area.
(d) "Pollution Susceptibility Maps" means maps of relative vulnerability to pollution prepared by the Department of Natural Resources, using the DRASTIC methodology. Pollution susceptibility maps categorize the land areas of the State into areas having high, medium and low groundwater pollution potential.
(e) "Recharge Area" means any portion of the earth's surface, where water infiltrates into the ground to replenish an aquifer.
(f) "Significant Recharge Areas" means those areas mapped by the Department of Natural Resources in Hydrologic Atlas 18 (1989 edition). Mapping of recharge areas is based on outcrop area, lithology, soil type thickness, slope, density of lithologic contacts, geologic structure, the presence of karst, and potentiometric surface. Significant recharge areas are as follows in the various geologic provinces of Georgia:
1. In the Valley and Ridge and in the Cumberland Plateau, significant recharge areas outcrop areas of carbonate rock where low slope (less than 8% slope) conditions prevail. Such areas commonly are characterized by karst topography (caves and sinkholes).
2. In the Piedmont and in the Blue Ridge, rocks have little primary porosity, with most groundwater being stored in the overlying soils. The significant recharge areas are those with thicker soils. Field mapping indicates that thick soils in the Piedmont and Blue Ridge are characterized by a density of two or more geologic contacts per four squares miles (source: 1976 1:500,000 Geologic Map of Georgia) and slopes lower than 8%.
3. In the Coastal Plain, the significant recharge areas are the surface outcroppings of the large and extensively used drinking water aquifers (e.g., the Floridian, the Clayton, etc.) and soils having high permeability according to the 1976 1:750,000 Soils Association Map of Georgia.
The following criteria pursuant to O.C.G.A. § 12-2-8 shall apply in significant recharge areas:

(a) The Department of Natural Resources shall not issue any permits for new sanitary landfills not having synthetic liners and leachate collection systems.

(b) The Department of Natural Resources shall not issue any new permits for the land disposal of hazardous wastes.

(c) The Department of Natural Resources shall require all new facilities permitted or to be permitted to treat, store, or dispose of hazardous waste to perform such operations on an impermeable pad having a spill and leak collection system.

(d) 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% of the volume of the largest tank in a cluster of tanks. (Note: These figures are consistent with US EPA rules for oil pollution prevention, 40 CFR 112.1). Such tanks used for agricultural purposes are exempt, provided they comply with all Federal requirements.

(e) New agriculture waste impoundment sites shall be lined if they are within:
   1. a high pollution susceptibility areas;
   2. a medium pollution susceptibility area and exceed 15 acre-feet;
   3. a low pollution susceptibility area and exceed 50 acre-feet.

   (i) 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 $5 \times 10^{-7}$ cm/sec or other criteria established by the U.S. Soil Conservation Service. (The average size of existing agricultural waste impoundments in Georgia is about 15 acre-feet; sheeps-foot rollers or pans with heavy tires, which are normal equipment for most Georgia moving contractors, should be able to compact clay to the recommended vertical hydraulic conductivity).

(f) New homes served by septic tank/drain field systems shall be on lots having the following minimum size limitations as identified on Table MT-1 of the Department of Human Resources’ Manual for On-Site Sewage Management systems (hereinafter "DHR Table MT-1")
   1. 150% of the subdivision minimum lot size of DHR Table MT-1 if they are within a high pollution susceptibility area; and
   2. 125% of the subdivision minimum lot size of DHR Table MT-1 if they are within a medium pollution susceptibility area; and
   3. 110% of the subdivision minimum lot size DHR Table MT-1 if they are within a low pollution susceptibility area.

(g) New mobile 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' Manual for On-Site Sewage Management System (hereinafter "DHR Table MT-2").
   1. 150% of the subdivision minimum lot or space size of DHR Table MT-2 if they are within a high pollution susceptibility area; and
   2. 125% of the subdivision minimum lot or space size of DHR Table MT-2 if they are within a medium pollution susceptibility area; and
   3. 110% of the subdivision minimum lot or space size of DHR Table MT-2 if they are within a low pollution susceptibility area.
(h) If a local government requires a larger lot size than that required by (f) above for homes or by (g) above mobile homes, the larger lot size shall be used.

(i) Local governments at their option may exempt from the requirement of (f) or (g) any lot of record on the date of their adoption of these lot size standards.

(j) No construction may proceed on building or mobile home to be served by a septic tank unless the county health department first approves the proposed septic tank installation as meeting the requirements of the DHR Manual and (f), (g), (h), and (i) above.

(k) Each Regional Development Center is responsible for considering, in its regional plan, the cumulative environmental effects of a significant number of septic tank systems being used in close proximity to each other. In so considering the Regional Development Center shall not approve any local plans which would result in adverse environmental effects on another area. A Regional Development Center may consult with the Department of Human Resources and Department of Natural Resources for technical assistance as to appropriate densities of lots served by septic tanks insignificant recharge areas.

(l) New facilities which handle hazardous materials, of types and in amounts determined by the Department of Natural Resources, shall perform their operations on impermeable surfaces having spill and leak collection systems, as prescribed by the Department of Natural Resources.

(m) The Department of Natural Resources shall require conservative design in any new permits for the spray irrigation of wastewater sludges in areas having pollution susceptibility. This shall be accomplished by comparing the Department's CRITERIA FOR SLOW RATE LAND TREATMENT (February, 1986 or latest edition) with amendments and other technical publication to site specific information submitted by a registered professional engineer for each project.

(n) Permanent storm water infiltration basins shall not be constructed in areas having pollution susceptibility.

(o) Exclusive of mining settling basins, new wastewater treatment basins shall have an impermeable liner in areas having high pollution susceptibility.

(4) Local governments having jurisdiction authority over all significant recharge areas shall adopt, implement, and enforce ordinances for recharge area protection at least as stringent as the standards developed by the Department of Natural Resources.