NCDENR
North Carolina Department of Environment and Natural Resources
Division of Environmental Health

Beverly Eaves Perdue
Governor

Terry L. Pierce
Director

Dee Freeman
Secretary

Memorandum

To: NC Environmental Health Specialists

From: Ted Lyon, On-Site Water Protection Section Chief

Subject: Design Flow Reduction for Dollar General Stores

Date: July 30, 2010

Based on separate sets of data provided for more than ten stores in the past for flow reductions for Dollar General Stores, a proposed design daily flow of 200 gpd may be used. This design flow can only be used with the following conditions:

1. Tanks must be sized on the un-reduced design flow (120 gpd/1,000 square feet of retail space area).
2. Use of low-flow fixtures such as spring-loaded or automatically activated faucets with flow rates of one gallon per minute or less, low-flow urinals which use 0.5 gallons per flush or less, and low-flow toilets which use 1.6 gallons per flush or less. Cut sheets of the fixtures must be provided.
3. A floor plan of the building must be provided. The retail sales floor area must be less than 8,000 square feet.
4. If a pump system is used, a Section approved flow equalization control panel must be used. The flow equalization control panel limits the amount of effluent discharged to the drainfield when the lag float is triggered and only one timed dose is delivered. Non-flow equalization control panels are programmed to discharge all effluent in the pump tank to the drainfield when the lag float is triggered.
5. The control panel should be set up to limit the daily dose to the drainfield to be no more than the maximum design daily flow of 200 gpd.
6. The tenants are prohibited from disposing into the wastewater system any chemical cleaners or any other compound which may be harmful to the bacteria in the wastewater system, including but not limited to quaternary ammonia compounds.
7. The tenants are prohibited from disposing of any food waste (solid or liquid) into the system.
8. The improvement permit, authorization to construct, and operation permit issued must be specify a Dollar General store. Any change to a facility designated as a Dollar General store would require a re-evaluation of the design flow and the system design, and revised permits would have to be issued.

On-site Water Protection Section – Ted Lyon, Chief
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9. This flow reduction applies only to the design flow from a Dollar General store. The improvement permit, authorization to construct, and operation permit issued must indicate that the permit is for a Dollar General store or in the case of multiple stores, which specific store will be a Dollar General.
10. We recommend the installation of a water meter for the Dollar General.