



## **MEMORANDUM**

**To:** Mayor and City Council

**From:** Michael Tuller, Community Development Director

**Date:** January 24, 2011

**Subject:** **Text Amendment to City of Dunwoody Zoning Ordinance**

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### **BACKGROUND**

On behalf of the Sustainability Commission and at the direction of the Mayor and City Council, staff has researched the possibility of expanding the definition of "paved" to include pervious surfaces. The City of Dunwoody Zoning Ordinance currently only allows vehicular parking on impervious surfaces, such as concrete and asphalt. Staff recommends adding a definition for "pervious surface" and amending the definition of "paved" to include pervious surfaces. At the August 23, 2010 Mayor and Council Meeting, the Council deferred the item full-cycle with the request that Council's concerns regarding the possibility of increased backyard parking be discussed.

### **ANALYSIS**

In a natural, undeveloped environment, rain water that reaches the ground either evaporates from the surface, or if deposited in suitable quantities, is absorbed into the ground on which it lands. Once that ground is saturated with rain water, additional rain will collect and slowly travel along the ground as sheet flow toward lower areas. While traveling in this sheet flow, the water is partially absorbed into the ground on which it is located, and partially continues to collect as run-off, traveling in larger quantities with greater velocity into water features like open ditches, creeks and rivers.

The impervious surfaces found in the developed environment, such as roofs, driveways, parking lots, roads, and sidewalks, etc., do not allow ground water absorption. These surfaces alter the natural tendency of water to infiltrate the ground. Instead of infiltrating the ground, stormwater is concentrated in higher volumes and velocities immediately, and runs off toward lower areas in greater volume and with greater velocity at an earlier point in the run-off cycle. This added volume and velocity inhibits ground water absorption, as the water is moving too fast to soak into the ground. Additionally, stormwater as both sheet flow and concentrated run-off rinses these impervious surfaces, carrying away the solid particles that have collected there since the last storm event. These solid particles have been identified as the carriers of toxins and other man made pollutants which collect in great quantities in water features like our streams and rivers.

Soil acts like a filter in the stormwater cycle; stormwater run-off enters the ground on the surface carrying suspended solids containing pollutants, and exits the ground through plant



life transpiration, base flow, or evaporation -- clean. Were these pollutants permitted to infiltrate the ground early in the cycle when suspended in the stormwater run-off, they could be cleansed from the stormwater by the filtering action of the ground.

Impervious paving decreases the natural groundwater recharge, collects pollutants, and contributes to poorer water quality through stormwater run-off and erosion. Certain pavements such as concrete and asphalt can be constructed and installed as a pervious surface. These paving treatments are a special type of hard surface with a high porosity that allows water from precipitation and other sources to pass directly through, thereby reducing the runoff from a site and allowing groundwater recharge. Pervious surfaces provide the strength and stability of impervious surfaces, but allow precipitation -and the associated stormwater run-off which contains pollutants- to absorb through the paving directly into the soil. This direct absorption provides a level of filtration of toxic materials and reducing that stormwater runoff and its adverse effects.

On its own, a single driveway constructed from pervious pavement will have a negligible effect on the ground water recharge of a region. But as a system, if pervious pavement were to replace impervious pavement in any substantive percentage, the effects on the downstream water features would include (1) lower storm surge volumes immediately following a precipitation event, and (2) decreased pollutant content in stormwater.

The single largest reason for constructing paved areas with pervious pavement will present itself as properties continue to perform at or approaching their highest levels of development. Lots today are only entitled to have specific ratios of impervious to pervious surfaces; in a residential application like R-100, that ratio is 35% impervious and 65% pervious. If a lot were to be built-out at 34.5% impervious surface, further exterior development on the lot would be prohibited. However, if some of the impervious surface were to be replaced with pervious surface, lowering the overall pervious surface ratio, the land owner could build new impervious surfaces on the lot, and the region would benefit from the environmentally-sound practice of allowing once again natural ground water recharge on that lot.

## **RECOMMENDATION**

Amending the Zoning Ordinance would allow parking alternatives in compliance with the City's dedication to sustainable living. Staff recommends amending the following text of Chapter 27, Article 1, Section 27-1, "Definitions" to amend and add the following:

*Paved* means an improved area ~~which is,~~ covered by asphalt, concrete, or other ~~impervious surface~~ hard-surface material, which may or may not be impervious. "Paved" specifically excludes dry gravel and similar materials as a finished product.

*Pervious Surface* means a ground covering of hard-surfaced material(s) placed in an improved area, for such uses as walkways and pedestrian plazas/terraces, on-grade vehicle parking lots, and driveways. Pervious surfaces include but are not limited to porous concrete and modular porous paver systems that are designed to allow infiltration of stormwater, consistent with Stormwater BMPs. Pervious paving areas shall not be considered as "impervious surface areas" for the purpose of calculating impervious surface coverage.



## HISTORY

At the regular August voting meeting, the Mayor and City Council discussed this proposed text amendment at length. One item of discussion centered on the unintended consequence of this text change allowing property owners to pave their yards with pervious pavement, thereby allowing those land owners to park additional passenger vehicles. Since the code specifically prohibits more than 35% lot coverage in any front yard for vehicle parking, the expectation was that this text change was encouraging the home owner to pave their backyard for vehicle storage.

Staff has considered the effect of the ordinance on backyard parking and feels that not counting pervious pavement toward the impervious surface ratio of a lot will not encourage increased backyard parking. The systems cost considerably more than traditional paving methods, so staff is of the opinion that the system will not be used to increase parking on small, residential lots. Instead, the exemption incentivizes developers to utilize these systems to improve the quality of parking areas by allowing them to utilize building lots at higher performances.

At their regularly scheduled meeting on September 9, 2010, the Sustainability Commission recommended the text amendment with the deletion of the last sentence of the definition of pervious surface.

At their regularly scheduled October meeting, the Community Council favorably recommended the proposed text change, as drafted, but also encouraged a further amendment that would inhibit backyard parking in a similar manner as found in §27-1336(2)(g):

“Parking shall not be permitted within the front yard in any R district except within a driveway or in a carport or garage. Within any R district not more than 35 percent of the total area between the street right-of-way line and the front of the principal building shall be paved...”

The vote was 6-1, with the lone dissent coming from Dennis Crean who believes the prohibition on back and rear yard parking should precede the text change related to pervious paving.

The Planning Commission reviewed the item at their November 9, 2010 meeting. The Commission discussed the item and voted 7-0 to support the amendment as written.

**AN ORDINANCE OF THE CITY OF DUNWOODY AMENDING CHAPTER 27 (ZONING ORDINANCE) TO CHANGE CERTAIN DEFINITIONS TO ALLOW PARKING ON PERVIOUS SURFACES**

- WHEREAS,** the City of Dunwoody is charged with providing for the health, safety and welfare of the citizens of the City; and
- WHEREAS,** the City of Dunwoody Zoning Ordinance, codified as Chapter 27 of the City of Dunwoody Code of Ordinances, currently only allows vehicular parking on impervious surfaces, such as concrete and asphalt; and
- WHEREAS,** in order to preserve the environment for the health, safety and welfare of the citizens of the City, the City Council desires to allow for vehicle parking on pervious surfaces, which provide the strength and stability of impervious surfaces but allow precipitation to absorb through the paving, providing a level of filtration of toxic materials and reducing stormwater runoff and its adverse effects; and
- WHEREAS,** the first read of this ordinance occurred on December 13, 2010 and a properly advertised public hearing and second read of this ordinance occurred on January 24, 2011.

**THEREFORE, THE MAYOR AND COUNCIL FOR THE CITY OF DUNWOODY HEREBY ORDAIN AS FOLLOWS:**

**Section 1:** Chapter 27 (Zoning Ordinance) of the City of Dunwoody Code of Ordinances shall be amended by revising Article I (In General), Section 27-1 (Definitions) to revise the definition of the term "paved" and add a definition of the term "pervious surface" as follows:

**ADDITIONS - underlined**

**DELETIONS - ~~strikethroughs~~** *Paved* means an improved area, covered by asphalt, concrete, or other hard surface material, which may or may not be impervious. "Paved" specifically excludes dry gravel and similar materials as a finished product.

*Pervious Surface* means a ground covering of hard-surfaced material(s) placed in an improved area, for such uses as walkways and pedestrian plazas/terraces, on-grade vehicle parking lots, and driveways. Pervious surfaces include but are not limited to porous concrete and modular porous paver systems that are designed to allow infiltration of stormwater, consistent with Stormwater BMPs. Pervious paving areas shall not be considered as "impervious surface areas" for the purposes of calculating impervious surface coverage.

**Section 2:** This Amendment shall become effective immediately upon its adoption by the City Council, and incorporated into the Code of the City of Dunwoody, Georgia. This Amendment hereby repeals any and all conflicting ordinances and amendments.

**SO ORDAINED**, this \_\_\_ day of January, 2011.

**Approved:**

\_\_\_\_\_  
Ken Wright, Mayor

**ATTEST:**

**Approved as to Form and Content:**

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Sharon Lowery, City Clerk  
(Seal)

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Brian Anderson, City Attorney