TESTIMONY OF THE NATURAL RESOURCES DEFENSE COUNCIL, FRIENDS OF THE EARTH, ANACOSTIA WATERSHED SOCIETY, DC APPLESEED CENTER FOR LAW AND JUSTICE, ANACOSTIA RIVERKEEPER AT THE EARTH CONSERVATION CORPS, AUDUBON NATURALIST SOCIETY, AND CASEY TREES ENDOWMENT FUND RE AMENDMENTS PROPOSED IN CASE NO. 04-34 CONCERNING THE USE OF PERVIOUS PAVEMENT

Presented by Nancy Stoner, Director, Clean Water Project, Natural Resources Defense Council

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Pursuant to a petition of the Zoning Advisory Committee, the Zoning Commission is considering text amendment to its zoning regulations to authorize the use of pervious pavement for certain parking and related facilities. We commend the Zoning Commission for holding this hearing to consider these improvements to the Zoning Regulations to help to clean our waterways by allowing the use of porous of pervious pavements to trap, filter, and infiltrate polluted stormwater runoff. We support the proposed amendments and encourage the Zoning Commission to consider some related amendments that would also help to reduce stormwater pollution into the Anacostia and Potomac Rivers and Rock Creek.

Stormwater runoff from streets, rooftops and parking lots is one of the largest sources of water pollution into DC's waterways. Stormwater carries a variety of pollutants into the waterways, such as trash, sediment, bacteria, oil and grease, metals, and pesticides. Stormwater pollutes 42.8 miles of rivers and streams in DC according to the DC Department of Health. In the third of the city that has stormwater and sewage in the same set of pipes, stormwater also makes the combined sewers overflow, dumping billions of gallons of raw sewage into the Anacostia and Potomac Rivers and Rock Creek each year.

Stormwater pollution is a direct result of urbanization. Under natural, undeveloped conditions, plants and soil capture and filter most rainwater through the processes of infiltration, storage, and interception. Development replaces natural landscape features with roads, sidewalks, parking lots, roof tops, and other impervious surfaces that generate substantial quantities of surface runoff. These features of urban landscapes prevent water from flowing into the ground and filtering through soil before being released into surface and ground waters. As a result, more runoff leaves sites, and there are more pollutants in the runoff as the water picks up waste from the landscape and carries it into waterways. Studies have found a direct correlation between the amount of impervious cover in a watershed and water quality degradation, reduction in stream stability, habitat loss, and decrease in biological diversity.[1] In general, the greater the amount of landscape covered by impervious surfaces, the increased runoff volumes, increased runoff velocity,

[1] Schueler, T., "The Importance of Imperviousness," Watershed Protection Techniques, vol. 1, no. 3, Fall, 1994, pp 100;111.

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increased streambank erosion, reduce infiltration, increased pollutant loadings, and also increased air and water temperatures.

There are a variety of types of permeable or porous pavement that can be used instead of asphalt and concrete, all of which provide enhanced infiltration, reduced surface flow, stormwater filtration, and depending on the approach used, may have other benefits as well, such as urban greening, enhanced property values and re-development potential, improved wildlife habitat, thermal pollution reduction, and decreased flooding. Among the options are pervious pavement, porous asphalt, modular pavement, pavers surrounded by porous materials, narrowed pavement strips with vegetation in between the pavement, and structured grass grids. The breadth of options allow permeable pavement options to be tailored for the needs of the site in terms of structural stability, infiltration rate, filtration needs, maintenance needs, and costs. These approaches have been used in a number of forward thinking communities across the country in parking lots, driveways, alleys, sidewalks, lightly used roads, and so forth. They are also recommended by EPA, especially for parking lots, which EPA describes as "very efficient at concentrating and delivering a large amount of runoff to receiving waters, exacerbating erosion problems, [and acting] as a repository for pollutants associated with automobiles, which includes nutrients, trace metals, and hydrocarbons."[2] Runoff from roads and parking lots may be responsible for the extremely high rate of tumors found in the brown bullhead catfish caught in the Anacostia River, the highest cancer rate of any river in the nation.[3]

We support the proposed amendments before the Commission that would delete the requirement to use only impervious surfaces for certain parking spaces (amendments to subsections 2117.3 and 2117.4). We also support the proposed amendments to 2117.10 and 2303.1 that would allow the use of impervious open-faced paving block over a pervious based to be used for open parking spaces, but, if possible, would urge that the language be modified to allow the use of any pervious modular pavement systems that is recognized in the industry as structurally sufficient to support the intended anticipated vehicle load. We therefore suggest that the following language be adopted by the Commission in both of those subsections:

> *Any pervious modular pavement system that is structurally sufficient to support the intended anticipated vehicle load.*

We also support to proposed amendment to Section 2403.9(h), which will ensure that a broader range of the benefits of storm water controls are considered in the PUD process.

In addition to these comments on the proposal before the Commission at this time, we urge you to consider several additional zoning amendments that will also enhance the use of permeable pavement for stormwater mitigation in DC.

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[2] US EPA, National Management Measures to Control Nonpoint Source Pollution from Urban Areas (Draft, July 2002).

[3] Studies have found more than 50% of catfish in the Anacostia River have liver tumors and 37% have skin tumors. http://www.fws.gov/chesapeakebay/studies.htm.

- Shared driveways: We urge the Commission to consider a provision clarifying that shared driveways are allowed in parts of DC for accessory parking spaces and not only for row house dwellings.
- Driveways-Surfacing: We urge the Commission to consider a provision allowing the use of two-track driveway design for single-family dwellings.
- Parking Space Size and Landscaping: DC driveway ordinance allows for standard off-street parking accessory parking spaces in DC to be 9 feet in width and 19 feet in length. This is larger than the desired size in order to decrease impervious surfaces in parking lots. We urge the Commission to consider changing this requirement to 9 feet in width and 18 feet in length for parking lots that use the saved footage for landscaping to retain and filter parking lot runoff.

Additional support for these proposals is provided in NRDC's report, *Out of the Gutter*, which can be found at http://www.nrdc.org/water/pollution/gutter/gutterinx.asp.

Again, we thank you for moving forward with these proposals for improving water quality in DC's waterways and urge you to consider our comments as you proceed.