

ZC #08-06_ZONING REGULATIONS REVIEW
SUBTITLE B: GREEN AREA RATIO CHAPTER
District of Columbia Zoning Commission

DISTRICT OF COLUMBIA ZONING COMMISSION

THE HONORABLE ANTHONY J. HOOD,
CHAIRMAN OF THE ZONING COMMISSION



TESTIMONY OF CHRISTOPHE A.G. TULO
DIRECTOR
DISTRICT DEPARTMENT OF THE ENVIRONMENT

MONDAY, DECEMBER 20, 2010 AT 6:30 P.M.
2ND FLOOR HEARING ROOM, 441 JUDICIARY SQUARE NW

ZONING COMMISSION
District of Columbia
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CASE NO. 08-06
EXHIBIT NO. 111
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Good afternoon Chairman Hood and members of the Zoning Commission. I am Christophe A.G. Tulou, Director of the District Department of the Environment (DDOE). Thank you for the opportunity to present testimony on the proposed changes to the zoning regulations that will incorporate the Green Area Ratio initiative into the District zoning codes. On behalf of DDOE, I would like to express our appreciation for Office of Planning's leadership in initiating this process and in introducing this change to the zoning regulations. I am here to lend my voice in full support of this effort. This change will significantly support the District's environmental goals and advance development that is protective of the District's natural resources and is in step with Federal and local initiatives for on-site stormwater retention, the District's requirements for the US Green Building Council's Leadership in Energy and Environmental Design (LEED) certification, the District's tree canopy goal, as well as the District's climate action plan.

Background

The Green Area Ratio (GAR) zoning initiative from the Office of Planning (OP) applies environmental performance standards to new and major redevelopment projects. It will require lot level development to achieve a GAR score relative to the performance ranking of selected landscape elements and the parcel's zoning code. All values are derived from an analysis of existing peer reviewed literature. Importantly, the GAR allows property owners to choose from a menu of the environmental features that encourage property owners to align their own goals with environmental performance standards. DDOE firmly believes a flexible science based evaluation of landscape features will make great strides toward the collaborative engagement of all to advance the environmental benefits to the city.

DDOE is in strong support of the GAR initiative. DDOE considers these complementary regulations an important tool that will advance the District's ability to comply with Federal regulatory mandates established in the District's Municipal Separate Storm Sewer System (MS4) permit and the DC Water and Sewer Authority's (DC Water) Consent Decree for addressing water quality pollutants from the District's combined sewer system. The GAR regulation will support many of the District's larger environmental goals including the tree canopy goal, the climate action plan, and the move towards on-site retention for stormwater management.

Office of Planning and DDOE staff have worked together for the last year and a half to develop the details of the proposed GAR zoning regulation. The Agencies have coordinated to ensure the GAR regulation complements, but does not overlap or conflict with, other District regulations and environmental goals. DDOE will both implement and incentivize this initiative.

Implementation

OP and DDOE envision the implementation of this zoning regulation will be carried out by DDOE's Technical Services Branch. DDOE Associate Director of the Watershed Protection Division has assessed the agency's existing administrative structure and believes it to be sufficient to implement the Green Area Ratio regulation if it is approved by the Zoning Commission. The Technical Services Branch has existing review procedures that would easily accommodate the addition of the GAR score review. Training for DDOE Intake Officers at DCRA is anticipated and funding exists to support this component. Enforcement would be based on complaints only. Again, the Technical Services Branch has the existing structure to evaluate these complaints. Overtime, if the GAR was shown to increase the permit reviewer's burden

opportunities for additional funding have been identified through both the MS4 funding and the Chesapeake Program Bay Grant. DDOE has reviewed and approved the OP flow chart that outlines the administrative implementation of the GAR.

Incentive Programs

In addition to the support for the administration of the Green Area Ratio (GAR), DDOE will continue to provide technical assistance that will be available to all District property owners to assist them in their efforts to incorporate the GAR into the projects through the Planning and Restoration Division. DDOE operates a cost share programs under the RiverSmart brand including RiverSmart Rooftops, RiverSmart Homes and the coming soon RiverSmart Communities. These programs can not be used to meet regulatory requirements. However, they can be used to expand environmental stewardship beyond regulations. These programs reach out to a varied cross section of property owners and provide incentives to encourage the use of Low Impact Development (LID) practices to better manage stormwater runoff on their property. Funds to support these incentive programs are available through the stormwater utility fee as well as annual Federal grant programs. Bag Bill funds can support environmental stewardship action programs that assist in the greening of properties draining to the Anacostia River. Incentive funding has stimulated green roof commitments for over 600,000 square feet, representing approximately half the green roof area the District expects to be completed by the end of next year. Tree planting incentives exist with the goal to plant over 1,000 trees in the next two years. This program, currently limited to single family homes, is expanding and will soon be available to all District properties outside of the public right of ways. Again, it is important to

note, while technical assistance is available to all, cost share programs are limited to efforts that go beyond regulatory demands.

Stormwater

DDOE is responsible for overseeing and implementing a U.S. EPA-issued national pollutant discharge elimination system (NPDES) permit that regulates the District's municipal separate storm sewer system (MS4). This system serves approximately two thirds of the District and collects stormwater runoff for direct discharge to Rock Creek, Potomac and Anacostia Rivers. U.S. EPA is in the process of reissuing this permit; the last draft reviewed indicated that the District will be charged with retrofitting as much as 18 million square feet of impervious surface to manage stormwater runoff on-site within the next five years. DDOE is revising the District's stormwater regulations to be consistent with this mandate. This agency believes the GAR regulation is consistent with the pending stormwater regulations and will further advance the District's ability to meet this aggressive Federal schedule.

Tree Canopy Goals

This regulation would support the District's tree canopy goal. The tree canopy goal has been adopted to arrest the significant decline of the city's trees over the past thirty years, restore the grandeur of the tree lined avenue and revive the ecological services trees provide the city. Additionally, the last draft of the U.S. EPA MS4 permit suggests there will be a Federal mandate related to the tree canopy goal requiring 4,150 plantings annually. Research shows an individual mature tree can provide a carbon sink of as much as 48 pounds of CO₂ per year (McAlinev 1993). An urban tree canopy can reduce street level particulate matter by as much as 60 percent

(Coder 1996)) is an important point in a city struggling to reduce asthma rates and reduce ozone levels. The District has selected five percent increase as the canopy goal target for 2035. An increase of five percent in urban tree canopy is estimated to reduce urban stormwater runoff by approximately two percent (Coder 1996). In the District a nationally recognized model, the Green Build-But Model, based on the local infrastructure and area rainfall conditions, predicts an increase of five percent in tree canopy, along with the retrofit of ten percent of District rooftops with green roofs, would result in the prevention of 1.7 billion gallons of stormwater from entering the sewer systems for an average year, resulting in a reduction of 12 percent, or over 1.3 billion gallons, in discharges to the District's rivers. This agency believes the GAR regulation is consistent with the District tree canopy goals and will play a significant role in advancing the District's ability to meet this goal.

Climate Action Plan

The District's draft Climate Action Plan has identified buildings as the largest contributors to the District's carbon emissions profile. Non residential buildings alone contributed to 51 percent of District's carbon footprint in 2006. When combined with Federal and residential properties building accounted for 74 percent of District's emissions. The draft action plan highlights many ways in which the District's existing portfolio of building and future developments could move to reduce their carbon impact. Greening of the District codes is cited as a significant regulatory step to promote reducing building carbon emissions. The GAR will be one the first steps in that direction that the District should take to improve the resilience and longevity of our city.

In summary, DDOE considers the proposed change to the zoning regulation a major step forward for the protection and restoration of the District's natural resources. The GAR is a choice based model that is consistent with existing regulations such as, the Federal Clean Water Act of 1972, the DC Flood Hazard regulations (DCMR 20, Chapter 31), the District of Columbia Environment Policy Act of 1989 (D.C. Law 8-36), the National Capitol Revitalization Corporation and Anacostia Waterfront Corporation Reorganization Act of 2008 (D.C. Law 17-0138), the Green Building Act of 2006 (D.C. Law 16-0234), the Comprehensive Stormwater Management Enhancement Amendment Act of 2008 (D.C. Law 17-0138) and supportive of many environmental initiatives needed to comply with Federal mandates.

Importantly, the GAR allows property owners choice. It is a flexible science based approach that brings attention to the importance of landscape features in development and redevelopment for the long term health and vitality of the District. DDOE is grateful that the Commission has given proposed regulation the time and attention it requires, and strongly supports the adoption of the proposed Green Area Ratio chapter to the District Zoning Regulations.

Citations

Keeley, M. 2007. Using Individual Parcel Assessments to Improve Stormwater Management. Journal of the American Planning Association, 73(2), 149-160

Keeley, M. (2005). Green roofs and the green area factor. In *Green Roofs for Healthy Cities. Proceeding of the 3rd Annual Green Roofs for Healthy Cities Conference* [CD-ROM]. Toronto: Green Roofs for Healthy Cities.

McAliney, Mike. Arguments for Land Conservation: Documentation and Information Sources for Land Resources Protection, Trust for Public Land, Sacramento, CA, December, 1993

Coder, K. D. 1996. Quantifiable Urban Forest Benefits and Costs; Current Findings and Future Research. In a white paper entitled *Consolidating and Communicating Urban Forest Benefits*. Davey Resource Group, Kent, OH. 1993. pp.25.