



Date: May 4, 2012

To: Thomas J. Bonfield, City Manager
Through: Theodore L. Voorhees, Deputy City Manager
From: Marvin G. Williams, Director of Public Works
Subject: Stormwater Performance Standards for Development Ordinance and Public hearing

Executive Summary

The proposed revisions to the Stormwater Performance Standards for Development ordinance will amend existing Chapter 70, Article X, Sections 70-736 through 70-741, of the Durham City Code to address the final new development rules imposed by the state as part of the Jordan Lake and Falls Lake nutrient management strategies. The North Carolina Department of Environment and Natural Resources (NCDENR) required that the City submit a proposed program to comply with the new development requirements of the Falls Lake and Jordan Lake rules by August 10, 2011 and September 10, 2011 respectively. Staff presented the ordinance proposal to the Council on August 4, 2011 and submitted it to NCDENR for review. The process of review and approval of the new development ordinance and program by NCDENR and the Environmental Management Commission has been completed. The City must begin implementation of the changes by July 12, 2012 for the Falls Lake Rules and August 12, 2012 for the Jordan Lake Rules. The proposed ordinance is presented to the City Council for adoption with an effective date of July 6, 2012.

In anticipation of the final Jordan Lake and Falls rules, staff previously proposed amendments to the City's Stormwater Performance Standards for Development in 2009 and 2010, and the Council passed those amendments. The amendments helped to reduce Durham's costs of retrofitting existing development.

The current package of proposed changes to the Stormwater Performance Standards for Development makes the final necessary modifications that are required to meet the final Falls and Jordan rules. The proposed revisions include changes to nitrogen and phosphorus export limits, disturbance thresholds, required onsite treatment and applicability of standards to redevelopment. Given the difficulty in complying with these requirements, the nutrient limits and other parameters are differentiated where allowed under the state's requirements for the different basins in the City.

Recommendation

The Administration recommends that the City Council adopt the ordinance that amends the existing Stormwater Performance Standards for Development, Durham City Code Chapter 70, Article X, Sections 70-736 through 70-741.

Background

The current city-wide stormwater performance standards for development were last revised by City Council in March 2009 and June 2010. Those changes were made in anticipation of the final Falls Lake and Jordan Lake rules. They set lower nitrogen and phosphorus export limits City-wide, and imposed the requirements sooner than required so as to reduce Durham's obligation to retrofit existing development. These standards limited nitrogen export to 2.2 lbs/ac/yr and phosphorous export to 0.5 lb/ac/yr throughout the City. Since these standards were adopted, the Jordan and Falls Lake nutrient management regulations were finalized. Staff submitted comprehensive ordinance amendments to NCDENR for evaluation to determine compliance with both the Jordan and Falls Lake new development rules. These amendments were approved by NCDENR and, ultimately, by the EMC.

The nitrogen export requirements will remain at 2.2 lb/ac/yr for the Jordan and Falls Lake basin. The requirement for phosphorus will be 0.82 lb/ac/yr for the Jordan Lake basin and 0.33 lb/ac/yr for the Falls Lake basin. Areas of the City that are outside of the Falls Lake and Jordan Lake basin, but subject to the Neuse Basin Nutrient Management Strategy are part of the lower Neuse basin and will have a nitrogen limit of 3.6 lb/ac/yr. The Neuse Basin Nutrient Management Strategy does not have a phosphorus requirement and one will not be imposed in the lower Neuse basin. The lower Neuse basin includes areas of the southeastern portion of the City in the Stirrup Iron Creek watershed and a portion of Little Brier Creek.

The disturbance threshold for determining applicability of the rules to projects within the Falls basin will be reduced to 0.5 acres for residential construction and to 12,000 square feet for commercial/multi-family construction as required by the state. Disturbance thresholds for the Jordan and Lower Neuse basins will remain at 1 acre for residential construction and 0.5 acres for commercial/multi-family construction.

Projects in the Jordan Lake basin will require a minimum onsite reduction of 40% of the required nitrogen and phosphorus load reduction and projects in the Falls Lake basin will require a minimum onsite reduction of 50% of the required nitrogen and phosphorus load reduction. Lesser reductions are required for downtown and for disturbances of less than 1 acre. The Lower Neuse requires a minimum onsite reduction of 85% TSS removal for sites with 24% or more impervious.

Redevelopment that does not increase impervious surface and is downtown will not be required to make additional reductions in nitrogen and phosphorus export. Redevelopment that does not increase impervious surface and is not located in downtown will be required to make a 10% reduction in phosphorus and nitrogen loading onsite or can make a 15% reduction using offsite measures such as purchasing Nutrient Bank credits. This reduction in nitrogen and phosphorus from redevelopment will work towards the City's obligation in both the Jordan and Falls Lake Rules to reduce nitrogen and phosphorus loading from existing development.

Issues and Analysis

The primary impact of the proposed changes in from these performance standards is to reduce the export loading limit for phosphorus from 0.5 lb/ac/yr to 0.33 lb/ac/yr for the Falls Lake basin. The export limit for phosphorus in the Jordan Lake basin will be raised from 0.5 lb/ac/yr to 0.82 lb/ac/yr. The nitrogen limit of 2.2 lb/ac/yr complies with both the Falls and Jordan Lake new development nitrogen limit. Locations within the City that are outside of the Falls Lake and Jordan Lake Basin but still subject to the Neuse Basin Nutrient Management Strategy have a nitrogen export loading limit of 3.6 lb/ac/yr. The Neuse Basin Nutrient Management Strategy does not have a phosphorus requirement and as such there will not be one imposed. Due to the stringent requirements of both of the new development rules, the revisions are more reflective of the minimum requirements.

A presentation was made to the City Council on the proposed revision on August 4, 2011. Input on the proposed changes to the ordinance was solicited from engineers, designers, and developers at meetings held on July 26, 2011, February 13, 2012 and April 12, 2012.

Alternatives

The City Council could choose not to adopt the proposed ordinance. However, this could result in penalties and fines associated with the Falls and Jordan Nutrient Management Strategies as well as the City of Durham's municipal stormwater National Pollutant Discharge Elimination System permit. This alternative is not recommended.

Financial Impact

The cost of not passing the ordinance could include fines imposed by the state.

SDBE Summary

The Ordinance to Promote Equal Opportunity in City Contracting does not apply to this item.