



Date: July 19, 2011

To: Thomas J. Bonfield, City Manager
Through: Theodore L. Voorhees, Deputy City Manager
From: Marvin G. Williams, Director of Public Works
Ed Venable, Engineering and Stormwater Manager
Paul Wiebke, Assistant Stormwater Manager
Sandra Wilbur, Civil Engineer
Subject: Presentation on Proposed Stormwater Performance
Standards for Development - Chapter 70, Article X Durham City Code

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 “New Development” final rule requirements of the Jordan and Falls Lake nutrient management strategies. The North Carolina Department of Environment and Natural Resources (NCDENR) requires submittal of a program and new development ordinance language that complies with the final rule requirements of the Falls Lake rules and Jordan Lake rules by August 10, 2011 and September 10, 2011 respectively.

Staff will submit to NCDENR a program and ordinance for review that complies with the local “new development” regulations on or before August 10, 2011 for both rules. The previous two amendments to the ordinance that were implemented in 2009 and 2010 helped to reduce Durham’s costs of retrofitting existing development. The changes to the Stormwater Development Performance Standards are the final adjustments to the ordinance to meet the requirements of the final rules. After review and approval of the “New Development” ordinance and program by NCDENR and the Environmental Management Commission, implementation by the City is required by July 12, 2012 for the Falls Lake Rules and August 12, 2012 for the Jordan Lake Rules. The “approved” ordinance and program will be brought to the City Council for adoption and implementation prior to July 12, 2012.

The proposed revisions include changes to nitrogen and phosphorus export limits, disturbance thresholds, required onsite treatment and applicability of standards to redevelopment.

Recommendation

The Administration recommends that the City Council receive the presentation on the proposed Stormwater Performance Standards for Development, Durham City Code Chapter 70, Article X.

Background

The current city-wide stormwater performance standards for development were last revised in March 2009 and June 2010 and helped to reduce Durham's costs of retrofitting existing development by reducing nitrogen export limits to 2.2 lbs/ac/yr and phosphorous export limits to 0.5 lb/ac/yr. Since the city-wide standards were adopted in 2010, the Jordan Lake and Falls Lake Nutrient Management Strategies have been finalized. Each set of strategies sets out rules and requirements for "existing development" and "new development." The amendments to the ordinance will be a part of a package to be submitted to NCDENR for compliance with both the Jordan and Falls Lake "new development" rules. This package which includes a program and ordinance will be reviewed by NCDENR and the EMC for compliance with the "new development" rules.

The water quality requirement for nitrogen 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 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 Lake Basin will be reduced to 0.5 acres for residential construction and to 12,000 square feet for commercial/multi-family construction. Disturbance thresholds for the Jordan Lake and Lower Neuse Basins will remain at 1 acre for residential construction and 0.5 acres for commercial/multi-family construction.

The Jordan Lake rules require a minimum of 85% total suspended solids (TSS) removal. Falls Lake rules require a minimum onsite reduction of 50% of the required nitrogen and phosphorus load reduction with lower reductions required for downtown and disturbances less than 1 acre. The Lower Neuse requires a minimum onsite reduction of 85% TSS removal for sites with 24% or more impervious.

Redevelopment sites that do not increase impervious surface and are in Downtown Areas will not be required to make reductions in nitrogen and phosphorus export. Redevelopment sites that do not increase impervious surface and are not located in Downtown Areas will be required to make a small 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 by redevelopment will work towards the City's obligation in both the Jordan and Falls Lake Rules to reducing nitrogen and phosphorus loading from existing development.

Issues and Analysis

The primary impact 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 and Jordan Lake Basin but still subject to the Neuse Basin Nutrient Management Strategy will 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.

Notices were emailed and posted on June 3, 2011 on the City’s website that changes to comply with the Jordan and Falls Lake Rules were scheduled and where to find additional information. Input on the proposed changes to the ordinance was solicited from engineers, designers, and developers at a meeting held on July 26, 2011. Additional meetings to solicit input and provide education will occur prior to adoption.

Alternatives

The Council could choose not to receive the presentation on the proposed Stormwater Development Performance Standards - Chapter 70, Article X Durham City Code.

Financial Impact

This item has no financial impact.

SDBE Summary

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

Attachments

Content goes here.