



## Ridgefield Conservation Commission

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### INTERIM FINAL COMMENTS

July 5, 2017

**Comments Regarding Item #2017-037-A: Amendment to RESCIND Section 7.14 Drainage Requirements and Storm Water Management of the Town of Ridgefield Zoning Regulations (adopted and effective May 13, 2016)**

The Ridgefield Conservation Commission strongly opposes this amendment in its current form. Section 7.14 was properly adopted last year by a process that included a public hearing and town meeting. The zoning regulations prior to this adoption focused on stormwater from earth moving and construction activities. While control of stormwater from construction activities is important, far more stormwater is discharged from a site over the life of a facility, after construction is completed. Section 7.14 is intended to deal with post-development stormwater management while the existing Sections 7.5 and 7.6 are focused on construction activities.

That is why the State of Connecticut requires that all MS4 Municipal Stormwater dischargers (Ridgefield is one) implement a Section 7.14 like regulation in their development/redevelopment review process. Our Section 7.14 met this requirement, and Ridgefield was an early adopter, which we commend. Since we were an early adopter, a handful of unanticipated situations were encountered (all of these were candidates for less or no controls). However, the Section 7.14 process did work effectively for a number of projects.

#### **Regulatory Background**

The General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4 General Permit) is the product of a mandate by the US Environmental Protection Agency (USEPA) as part of its Stormwater Phase II rules in 1999. This general permit requires each municipality to take steps to keep the stormwater entering its storm sewer systems clean before that stormwater enters water bodies.

One important element of this permit is the requirement that towns implement public education programs to make residents aware that stormwater pollutants emanate from many of their everyday living activities, and to inform them of steps they can take to reduce pollutants in stormwater runoff.

## **Why Manage Stormwater?**

The goal of a stormwater management regulation is to require and promote the disconnection of stormwater runoff from the receiving stream. Engineers are particularly good at ensuring that runoff is collected efficiently from impervious surfaces and rapidly conveyed and discharged off the property, be it to a nearby stream or a storm drain in the street. The impacts of this efficiency are evident in our watercourses. We see “flashy” storm events, in which small rainfall events result in a torrent of water in our streams and drainage systems. Following the rainfall event, flow in the stream is significantly reduced, since so much less of the runoff enters the ground.

That is why our current stormwater regulations require that drainage systems address goals that include, but are not limited to:

- Maintaining pre-development site hydrology to the greatest extent possible.
- Preserving and protecting streams, channels, wetlands, waterbodies, watercourses and natural features that protect water quality.
- Reducing the post-development peak rate of runoff when compared to the existing conditions.
- Utilizing infiltration where appropriate to reduce stormwater runoff rate and volume, improve water quality and recharge groundwater.

## **Stormwater Management and Ridgefield Property Owners**

What is a benefit to one property owner – that the property owner does not have to be concerned with the increased runoff from their property – impacts the homeowner who is downgradient and receives the additional runoff. Or it may impact the town drainage facilities by overtaxing the existing storm drainage system in the street, which may no longer be capable of conveying the “flash” flood from the increased level of impervious surfaces.

The moneys that are “saved” by the property owner increasing impervious cover without some type of mitigation is then foisted onto the downgradient property owner. The costs and impacts include increased flooding, erosion of banks of watercourses, sedimentation as runoff that eroded upgradient lands is deposited on the downgradient property. These impacts also have a decidedly negative impact on water quality of the streams and waterbodies in our town.

The stormwater regulations are a reasonable way to balance these costs and impacts. Instead of the costs being borne solely by the downgradient homeowners, the costs and impacts of the new impervious cover are, at least in part, borne by the property owner who is creating the additional impact.

## **Rationale for the 12% Threshold for Impervious Cover**

In developing its regulations for MS4 municipal stormwater dischargers, the Connecticut Department of Energy and Environmental Protection (CTDEEP) established 12% impervious cover (IC) as the means to protect Connecticut’s aquatic life standards. The study by Christopher Bellucci of CTDEEP (*Stormwater and Aquatic Life: Making the Connection between Impervious Cover and Aquatic Life Impairments for*

*TMDL<sup>1</sup> Development in Connecticut Streams*) established the 12% threshold as an IC target. This was based on correlating the percent IC upstream of macroinvertebrate monitoring locations with a final assessment of passing or failing Connecticut's aquatic life standards.

The general trend observed in these data was that the % IC was lower for streams that met Connecticut's aquatic life criteria than sites that did not meet Connecticut's aquatic life criteria, although there was some overlap in the upper quartile of the "meet" group with the lower quartile of the "do not meet" group. The study noted that "As the % IC in the contributing watershed increases to approximately 12%, no Applicable Streams met Connecticut's aquatic life criteria."

Also, in 2005–2006, CTDEEP conducted statewide research comparing stream health, as indicated by metrics for benthic macroinvertebrate populations, to watershed IC estimates provided by the Center for Land Use Education and Research (CLEAR) (<http://clear.uconn.edu/%5C/projects/TMDL/project/index.htm>). A total of 125 stream segments were studied; no stream segment with over 12% IC in its immediate upstream catchment area met the state's aquatic life criteria for a healthy stream. This became the foundational research supporting the IC-TMDL, which set the IC-TMDL goal as 11% (12% minus a 1% margin of safety).

So, the idea that no action need be taken until such time as the 12% IC threshold is met is absolutely incorrect. At this level of impervious surface cover, the receiving stream will not meet Connecticut's Aquatic Life Criteria.

## **In Conclusion**

We are opposed to this amendment in its current form for the following reasons:

- If Section 7.14 is rescinded, the review and control of stormwater discharges will be reduced for an unknown period of time until a new regulation is adopted and becomes effective.
- A number of large projects with significant stormwater impacts on wetlands including the Great Swamp are pending, including the Winter Park and the renovations to the former Schlumberger property.
- Section 7.5 (Excavation, Filling, and Grading) under Subsection D (Permitted Activities) requires that "all activities are conducted in full compliance with Subsection 7.14." Complete elimination of Section 7.14 would negate an important piece of Section 7.5, suggesting that Section 7.5 needs to be amended.
- Per Section 7.14, implementation of these standards in conjunction with Section 7.6 (Erosion and Sedimentation Control) "will minimize any unnecessary accelerated erosion and sedimentation." Rescinding Section 7.14 will not protect down-gradient property owners and aquatic life.
- While Sections 7.5 and 7.6 open the door to some stormwater considerations, they do not give Planning and Zoning the authority to request sufficient data to 1) consider low impact development alternatives, 2) evaluate impacts on impaired receiving waters, and 3) require Best Management Practices in all appropriate cases.

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<sup>1</sup> Total Maximum Daily Load is a term that defines the maximum amount of a pollutant that a body of water can receive while still meeting water quality standards.

Importantly, there is a reasonable alternative. The regulation could be rescinded for a small number of single-family home stormwater projects while being rewritten. For example, the regulation could temporarily be suspended for properties that are zoned RAAA (3.0 acre minimum size) and RAA (2.0 acre minimum size) where the subject properties exceed the minimum required area of the district zone. (There are many properties that are smaller in size than the district zone into which they are designated due to later upzoning. The regulations still should pertain to these lots). For all other zoning districts, the regulations should continue as currently in place.

This approach would provide relief where needed but keep a strong regulation in effect for stormwater dischargers that are likely to be more problematic. In addition, an aggressive schedule should be set by the Planning and Zoning Commission for the enactment of a revised regulation in order to minimize any potential environmental damage.

### **Some References**

UConn Center for Land Use Education and Research, *Responding to an Impervious Cover-Based TMDL*, 2011.

Bellucci, Christopher, CT DEP, Bureau of Water Protection and Land Reuse, *Stormwater and Aquatic Life: Making the Connection Between Impervious Cover and Aquatic Life Impairments for TMDL Development in Connecticut Streams*, 2007.