

Planning Commission Presentation on Tyson's Corner

March 17, 2010

Good evening members of the Planning Commission, my name is Chris Champagne and I am here this evening to speak to you regarding the proposed Stormwater Management language for the Tyson's Corner Comprehensive Plan Amendment.

For those of you who do not know me, I have been working in the field of site/civil engineering here in Fairfax for 18 years, and currently serve as the Director of Engineering for VIKA, Inc. at our McLean office – focusing primarily on work in Northern Virginia, including Fairfax, Arlington, Alexandria, and Loudoun Counties, as well as the District of Columbia. Perhaps the most important piece of information I can give you about myself is that I am a 6-year Fairfax County and Providence District resident, with a growing interest in the health of the streams outfalling from Tyson's Corner.

For the last year, I have had the opportunity to work with a small group of public and private stakeholders focused on the Stormwater Management requirements for the Tyson's Corner Comprehensive Plan. During this time, through numerous analyses, meetings, research, discussions, and with the benefit of knowledge garnered from the Demonstration Project currently under review with Fairfax County, the working group has recently developed Stormwater Management language for the Tyson's Corner Comprehensive plan that I believe is appropriate.

The currently proposed Strawman language takes what is often times a complicated subject and identifies and describes a practical solution. The proposed language requires Stormwater Management control that is realistic in terms of sustainability, maintenance, and implementation, while still providing a significant step forward by requiring Stormwater control that will have a greater positive impact on the health of the receiving waters.

Perhaps the greatest step forward in this proposed language is that for the first time it requires Stormwater Management to account not only for the greater peak runoff rates from more intensively developed sites, but also to account for the greater runoff volume. By reducing post-developed runoff volumes from Tyson's Corner, through Low Impact Design methodologies such as infiltration, stormwater reuse, evapotranspiration, pervious pavement, vegetated swales, tree box filters, green roofs, and rain gardens, this new language will address a significant factor contributing to the degradation of receiving waters, which is currently not accounted for in Fairfax County Stormwater Management requirements. In fact the amount of detention / retention volume required to accomplish the currently proposed requirements is

approximately three and one half (3.5) times greater than the detention / retention volumes required to meet current PFM requirements.

The proposed emphasis on runoff volume does not preclude the control of peak runoff rates from developed sites, and in fact the proposed language still considers control of the post-developed peak runoff rates. In controlling both the peak rate of runoff and the total volume of runoff, the proposed language will ***provide a significant decrease (43%) in the erosive work***, a product of both the peak rate of runoff and the total runoff volume released, ***felt by receiving streams downstream of the Tyson's Corner area***.

Furthermore, the currently proposed language introduces a requirement to reduce the total suspended solids in the post-developed runoff from developed areas as opposed to just requiring a reduction in the amount of phosphorous in the post-developed runoff. This proposed methodology presents a more complete consideration of runoff quality as opposed to merely focusing on phosphorous removal.

Finally, the design storms considered in the proposed language have been selected to ensure that the vast majority of rainfall events occurring in the course of a typical year will be treated and retained on post-developed sites. By selecting appropriate design storms, the Stormwater Management facilities will be sized in an efficient manner. This ensures that the majority of rainfall events are accounted for, without requiring excessive facility sizes to account for infrequent storm events. Excessive facility size would require a disproportionately large size and maintenance burden relative to the benefit of treating the runoff generated by these large, infrequent storms.

In summary, I believe that the revised language recently developed that focuses on LEED strategies and requirements, offers a reasonable balance between the feasibility of implementation and the benefits achieved through control of post-developed storm water runoff. The proposed language is both achievable in terms of implementation and beneficial in terms of its impact on the receiving waters downstream of Tyson's Corner.