Pages 65-66:

STORMWATER MANAGEMENT

Receiving waters downstream of Tysons should be protected by reducing runoff from impervious surfaces within Tysons. By using a progressive approach to stormwater management, downstream stormwater problems can be mitigated and downstream restoration efforts can be facilitated.

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Tysons Corner is located in the headwaters area of several of the county's watersheds. Watershed management plans have been prepared for each of these watersheds; these plans identify a comprehensive set of projects needed to improve stream habitat conditions. These efforts are intended to be pursued independent of development proposals and are not dependent upon such proposals for implementation. However, the provision of effective stormwater management controls for new development and redevelopment projects in these watersheds is imperative to the success of watershed planning efforts. Redevelopment offers considerable opportunities to improve upon past stormwater management practices.

In order to protect and facilitate the restoration of streams downstream of Tysons Corner, stormwater runoff should be controlled with the goal of having post-development runoff characteristics mimic runoff characteristics under good forested conditions. Measures to reach this goal may include application of Low Impact Development (LID) techniques (including but not limited to rain gardens, vegetated swales, porous pavement, vegetated roofs, tree box filters, ponds and water reuse). The incorporation of LID practices in the rights-of-way of streets will also support this goal; such efforts should be pursued where allowed. There is also a potential for the establishment of coordinated stormwater management approaches to address multiple development sites.

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Stream restoration and stabilization in the Scotts Run, Old Courthouse Branch, Rocky Run and Pimmit Run watersheds should be encouraged as part of a comprehensive strategy to restore the water quality and ecological health of Tysons' streams, and as part of the parks and open space network for Tysons.

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Pages 71-72:

Stormwater Design

Environmentally-friendly stormwater design should be an integral design principle that should be part of the conceptual stage of site development for all redevelopment, recognizing that stormwater management measures may be phased with development. The stormwater design should first seek to minimize the effect of impervious cover, followed by the application of stormwater reuse, retention, detention, extended filtration and, where soils and infrastructure allow, infiltration to improve downstream waters. The incorporation of stormwater management strategies in parks and other open space areas within the Tysons Corner Urban Center may also support this approach while providing recreational amenities. Coordination of stormwater management controls among multiple development sites may also be effective in achieving stormwater management goals in an efficient manner.

Stormwater management and water quality controls for redevelopment should be designed to return water into the ground where soils are suitable or reuse it, where allowed, to the extent practicable. Stormwater runoff should be controlled with the goal of having post-development runoff characteristics mimic runoff characteristics under good forested conditions. Reduction of stormwater volume is the single most important stormwater design objective for Tysons. Reduction could occur through techniques that either use plants and soils via landscaping measures, or through techniques that reuse harvested rainwater in a variety of ways, and/or that infiltrate water into the ground to replenish aquifers and provide summer baseflows to local streams.

Redevelopment projects in Tysons should incorporate innovative stormwater management measures in a manner that will optimize reduction of stormwater runoff volume first and foremost, and control of peak flows for the remaining stormwater that cannot be completely captured on-site.

The following are recommended for applications for which a redevelopment option is being pursued and for which a significant increase in density/intensity is proposed (per guidance in the Land Use section of the Comprehensive Plan recommendations for Tysons Corner)[1]:

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[1] The Work Group notes that these stormwater management recommendations may not be the only recommendations linked to redevelopment options and significant increases in density/intensity. Therefore, rather than adding guidance her to define "significant increase in density/intensity," the Work Group recommends that this concept be addressed more generally in the Tysons Plan text and that the stormwater management section simply reference this general guidance.

- Stormwater quantity and quality control measures should be provided that are substantially more extensive than minimum requirements, with the goal of reducing the total runoff volume or significantly delaying its entry into the stream system. The emphasis should be on Low Impact Development (LID) techniques that evapotranspire water, filter water through vegetation and/or soil, return water into the ground or reuse it.
- LID techniques of stormwater management should also be incorporated into new and redesigned streets where allowed and practicable.
- Control of the runoff from the one, two and ten year storms should be provided with the goal of mimicking the erosive potential of runoff from Tysons Corner under good forested conditions. LID techniques should be used to the extent practicable in pursuit of this goal. Runoff associated with a development project should be controlled with the goal of ensuring that the product of the peak release rate of runoff and total runoff volume will be no greater than that which would be expected for an undeveloped, good forested condition. In modeling the good forested condition, the hydrologic soil group "B" should be assumed unless different predevelopment soil conditions for the site can be documented.
- Efforts should be pursued to reduce pollutant runoff from redevelopment sites beyond minimum requirements. Water quality controls should be provided for redevelopment projects consistent with what would be required by the Chesapeake Bay Preservation Ordinance for new development.
- Restoration and/or stabilization of degraded streams on development sites should be pursued where feasible; restoration and stabilization techniques that incorporate ecologically and aesthetically beneficial, vegetated approaches are preferred. Off-site efforts to restore and/or stabilize streams in Tysons Corner should also be encouraged.

The above guidelines are intended to improve stormwater management controls sufficiently to allow for improvements to the habitat and recreational values of streams in Tysons Corner through natural restorative processes and/or through restoration projects.

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Deleted: <#>On-site control, through LID techniques, of the runoff volume from the one-year, 24-hour storm should be provided with the goal of mimicking the flow associated with good forested conditions.¶
<#>OPTION A: Any additional runoff should be controlled with the goal of reducing the 2-year and 10-year post development peak rates of runoff below the respective peak rates of runoff for the site in a good forested condition. The 100-year post-development peak rates of runoff should be controlled with the goal of not exceeding existing conditions. ¶
<#>OPTION B: Any additional runoff should be controlled with the goal of reducing the 2-year and 10-year post development peak rates of runoff to a rate no more than the flow rate associated with the 1-year storm for the site in a good forested condition, and reducing the 100-year post development peak rate of runoff to a rate no more than the flow rate associated with the 100-year storm in a good forested condition. ¶
¶
[ISSUES: The working group has not yet discussed the various ideas regarding control of the greater than 10-year storm event (up to the 100 year storm). There are also different ideas regarding reductions of the 2 and 10 year storm flows. Options A and B above present differing approaches to these ideas. There may be other options as well.] ¶

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[ISSUE: There are differing perspectives regarding how this ought to be implemented and whether additional clarifying Plan text is needed.] ¶

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