Chapter 9

Policy and Land Use Recommendations

9.1 Watershed Strategy

The strategy for achieving the vision of minimizing runoff, reducing pollution, and restoring the quality of Middle Potomac Watersheds includes a wide range of recommendations. Not only are the capital improvement program projects described in chapters four through eight needed to meet the goals of the watershed management plan, but policy and land use changes are also vital in mitigating the effects of existing development in the watershed. This chapter describes the policy and land use recommendations proposed by the Middle Potomac Steering Committee. The policy recommendations include proposals that would typically involve amendments to the county code and other supporting documents such as the Public Facilities Manual. These recommendations will need to be further evaluated by the county in light of their countywide implications. The recommendations will be compiled by the county from all the adopted watershed management plans and a group will be convened to take the recommendations to the next step. This process will happen in conjunction with the planning process, which will continue with the second round of watershed management plans.

The current planned approach for processing the policy recommendations from the Middle Potomac Watersheds Management Plan is to integrate these recommendations with similar recommendations in the other county watershed management plans that were recently completed. Specific ordinance amendments would then be drafted in light of other county initiatives and address the common ground that can be established between the various policy recommendations.

9.2 Goals, Objectives, and Actions

The goals put forward in Chapter 3 are restated in this chapter to demonstrate the interaction of these recommendations with the structural and non-structural projects. The policy actions recommended in this chapter apply to all five Middle Potomac Watersheds.

GOAL A: Reduce stormwater impacts to protect human health, safety and property.

Objective A1: Reduce stormwater volumes and velocities to minimize stream bank erosion.

Policy Action A1.7: Encourage Fairfax County Department of Transportation (FCDOT) and the Virginia Department of Transportation (VDOT) road widening projects to control runoff

from both newly paved areas and existing pavement which may not have any existing stormwater management controls or have poorly functioning controls in place.

Strategy to Achieve Action: The Virginia Stormwater Management Program Permit Regulations (4VAC50-60-110.F) state that if a locality has adopted more stringent requirements or implemented a regional (watershed-wide) stormwater management plan, it may request, in writing, that the Department of Conservation and Recreation consider these requirements in its review of state projects (including VDOT projects) within that locality. For example, the county's revised adequate outfall provisions and the minimum ten percent nutrient reduction for redevelopment could be applied to road projects also.

One possible approach to implement this action would be to size the stormwater management facility based on a desired reduction in flow rate. This approach could include existing and proposed pavement and be targeted on a subwatershed basis instead of by individual outfalls. This would provide a greater capture of runoff water and mitigate runoff from both old and new road surfaces. Another possible approach would be to reduce imperviousness along the project corridor by providing more efficient access to entrances, removing old pavement instead of abandoning it, and reducing overall pavement footprints.

Minor roadway improvement projects, such as the addition of turn lanes, should be excluded from this proposed requirement. This is because they typically have small cumulative impacts, often less than 0.10 acres of new imperviousness for each project. Also, the addition of stormwater management controls for minor urban improvement projects would be cost prohibitive and their installation would be extremely difficult, if not impossible, without major improvements to downstream stormwater conveyances.

It should be noted that it has become increasingly difficult to provide stormwater detention for the additional pavement associated with road widening projects, much less for the existing pavement. There are limited opportunities for stormwater management for many roadway and walkway projects, particularly widening roadways adjacent to existing developments. Coordination with FCDOT and VDOT is essential in the implementation of this objective.

Watershed Benefit: For new road widening projects the goal is to reduce the two-year peak flow by five percent for the existing roadway surfaces that currently do not have stormwater controls. Reducing the peak flow will benefit the watershed by reducing the velocity and quantity of runoff, and therefore allow for downstream restoration.

Policy Action A1.8: Strategy to reduce cumulative impacts of infill development.

Strategy to Achieve Action: Fairfax County has begun to investigate methods of reducing the negative impacts due to infill development, or mansionization, in the county. The county's new adequate outfall policy, effective December 5, 2005, was an initial step, but more action is needed. For instance, strategies can be developed which allow infill, but limit the amount of impervious cover added to a site.

Watershed Benefit: Reducing the impact of infill development will protect streams from increased runoff and decreased water quality.

GOAL B: Protect and improve habitat and water quality to sustain native animals and plants.

Objective B2: Increase the use of Low Impact Development (LID) for all new and existing development to reduce runoff and improve water quality.

Policy Action B2.1: Provide incentives for individual residential or commercial landowners and leading edge developers to encourage the use and adoption of LID on existing developed land. Incentives for LID are necessary to encourage the immediate and short term voluntary adoption of LID, while the longer term process for formally understanding and implementing LID becomes standard practice in the county.

Strategy to Achieve Action: Provide incentives for developers and land owners of already developed properties to implement LID measures on their properties even if they already meet minimum pollutant removal and peak flow requirements. The implications of the incentives will need to be considered in coordination with county land use, transportation, and revitalization goals. If implemented, the incentives would require extensive coordination with the appropriate county agencies. Some of the incentives may also require changes to the county code.

Examples of incentives might include the following:

- Design assistance and outreach programs for individual landowners to install LID on their property. Examples of this are providing for a pro bono LID consultation, soil analysis, site suitability review, 'LID-for-Homeowners' training workshops, etc.
- For properties that are already developed, provide financial assistance programs, such as low interest loans, grants, materials subsidies, and/or tax breaks for those who want to pursue and implement LID strategies on their existing property.
- Create a county grant, subsidy or tax abatement program for existing land owners who repave existing pavement (e.g. driveways) with porous pavers.
- Create a county grant or subsidy program to provide joint education and training for technical review staff, design professionals, and developers about the design, installation and maintenance of LID practices.
- Remove disincentives to use LID by arranging for a technical, pre-review process to ensure that proposed plans are workable and potentially acceptable to the county. A pre-review meeting or process involving technical review staff and developers can help to expedite the permitting and approval process and remove the uncertainty associated with proposing and implementing LID.
- Develop an incentive which will allow LID methods to offset a portion of the interior parking lot landscaping requirements for exceeding the county's minimum stormwater management requirements. These methods could include pervious paving, underground storage BMPs, infiltration trenches, or bioretention areas. The benefits of the interior parking lot landscaping will need to be compared to the benefits of the proposed LID methods during evaluation of this incentive.
- Provide flexibility to county staff to administratively approve deviations of the minimum

yard requirements in exchange for the use of contiguous areas needed for LID in locations that do not displace natural areas within the Resource Protection Area, floodplains, or stream channels.

Watershed Benefit: A quantitative evaluation of these incentives was not made since it is difficult to accurately estimate developer participation should they be implemented. However, the benefit of LID can be quantified for individual sites and exceeding the minimum stormwater management requirements will help to offset the increased runoff and pollutants from existing developed sites that were constructed before stormwater controls were required. Reducing stormwater runoff will reduce stream erosion, and reducing pollutants in the stormwater will improve in-stream water quality.

Policy Action B2.2: Provide a list of desirable LID projects so that developers considering the use of proffers can easily find where projects are needed.

Strategy to Achieve Action: The county could provide a list of LID projects from Actions A1.2 and A1.3 to developers who are looking for proffer opportunities. This would make it easier for developers to select projects that are needed in the watershed.

Watershed Benefit: The LID projects in this watershed management plan may get constructed sooner if developers are encouraged to use them as proffers. LID projects will help to reduce the amount of pollutants in the runoff from areas that don't have existing stormwater controls.

Policy Action B2.3: Continue to evaluate LID practices for application to private sector development projects to the maximum extent practicable.

Strategy to Achieve Action: Fairfax County views LID as one of many tools in the stormwater management toolbox. The County recently adopted the LID amendments to the PFM which list acceptable stormwater management practices for development and provides design criteria for each. There were six LID practices included in the amendments: pervious pavement, bioretention filters and basins, vegetated swales, tree box filters, vegetated roofs and reforestation. This will facilitate greater usage of LID by developers.

The development of design and construction standards for additional LID practices and an overall design procedure for demonstrating that LID designs will meet county and state requirements for water quality control, stormwater detention, and adequate outfall will be necessary to implement comprehensive LID based designs on a broader scale. The county has partnered with other local jurisdictions, the Northern Virginia Regional Commission (NVRC), and the Engineers and Surveyors Institute (ESI) to develop a supplement to the Northern Virginia BMP Handbook (NVRC & ESI 1992) that will incorporate LID design and address some of these needs. As additional experience and understanding of these practices is obtained, staff will review the issues surrounding the location and maintenance of stormwater management facilities and will bring recommendations to the Board for amendments to the current policies.

Watershed Benefit: LID uses small scale stormwater management controls that are intended

to mimic predevelopment site conditions by treating and controlling stormwater at its source instead of downstream at one large BMP. For existing development, LID measures are easier to fit onto a small site than larger facilities. Using LID will help control the small, frequent storm events which will help reduce stream erosion.

Policy Action B2.4: Require all public facilities to use LID to the 'maximum extent practicable'.

Strategy to Achieve Action: Fairfax County should install LID methods at all public facilities in order to lead by example. Developers would be less likely to resist using LID if the county had successfully employed it at their facilities. Local contractors would gain experience in the proper construction of LID. Educational signs at public facilities would help teach the public about stormwater issues and promote the use of LID in private development.

Watershed Benefit: Requiring all public facilities to use LID to the 'maximum extent practicable' would set a good example for homeowners, developers, and business owners to implement LID methods on their properties and in new development. Adding LID to public facilities that do not have stormwater controls will help to reduce the amount of runoff and improve water quality throughout the watershed.

Policy Action B2.5: Implement the Tysons Corner stormwater management strategy in light of the potential for significant redevelopment in this area. (Tysons Corner Stormwater Strategy Project SC9845)

Tysons Corner sits at the headwaters of several watersheds including Difficult Run, Pimmit Run and Scotts Run as shown in Figure 9.1. Watershed plans are currently being developed by the Department of Public Works and Environmental Services under two planning efforts: Difficult Run watershed plan and Middle Potomac watershed plan. The Middle Potomac Watersheds include Scotts Run and Pimmit Run as well as the adjacent watersheds Bull Neck Run, Dead Run and Turkey Run.

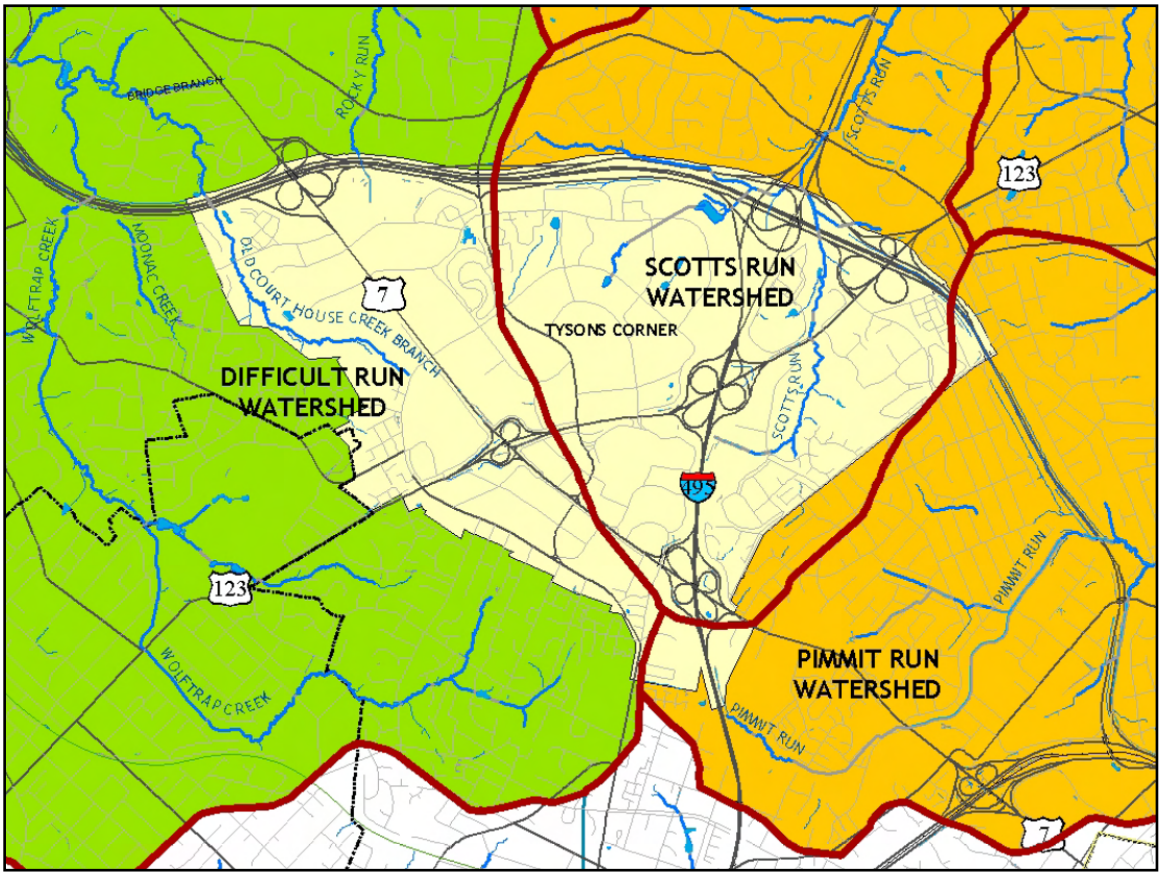

Figure 9.1 Difficult Run Watershed, Scotts Run Watershed, and Pimmit Run Watershed boundaries at Tysons Corner.

Many of the headwater streams in this area were buried and piped when the area began to develop in the 1960s and 1970s. This early development occurred prior to federal, state or local regulations to protect these headwater streams. In addition, these earlier developments were also built prior to stormwater management regulations to control runoff and water quality prior to being discharged to the receiving streams. The existing condition of Scotts Run and Pimmit Run within and downstream of Tysons Corner includes degraded stream habitat, inadequate buffers, actively widening streams, and minor to moderate erosion.

The Tysons Corner area will experience redevelopment as the Washington Metropolitan Area Transit Authority expands their rail lines and adds four rail stations to the area in the future. This redevelopment will further negatively impact Scotts Run unless a stormwater management strategy is implemented. LID measures, new Best Management Practices (BMPs), BMP retrofits, and additional stormwater management requirements for developed properties without existing BMPs should be implemented to mitigate the effects of existing and future impervious areas. Figure 9.2 shows the development potential for parcels in Tysons Corner from the current *Fairfax County Comprehensive Plan*. It is possible that substantially more redevelopment will be considered for this area. Fairfax County has initiated a Tysons Corner Transportation/Urban Design Study and appointed a Tysons Land Use Task Force to coordinate community participation and recommend changes to the 1994 Tysons Corner Comprehensive Plan. Additional information on the Tysons Corner Study is

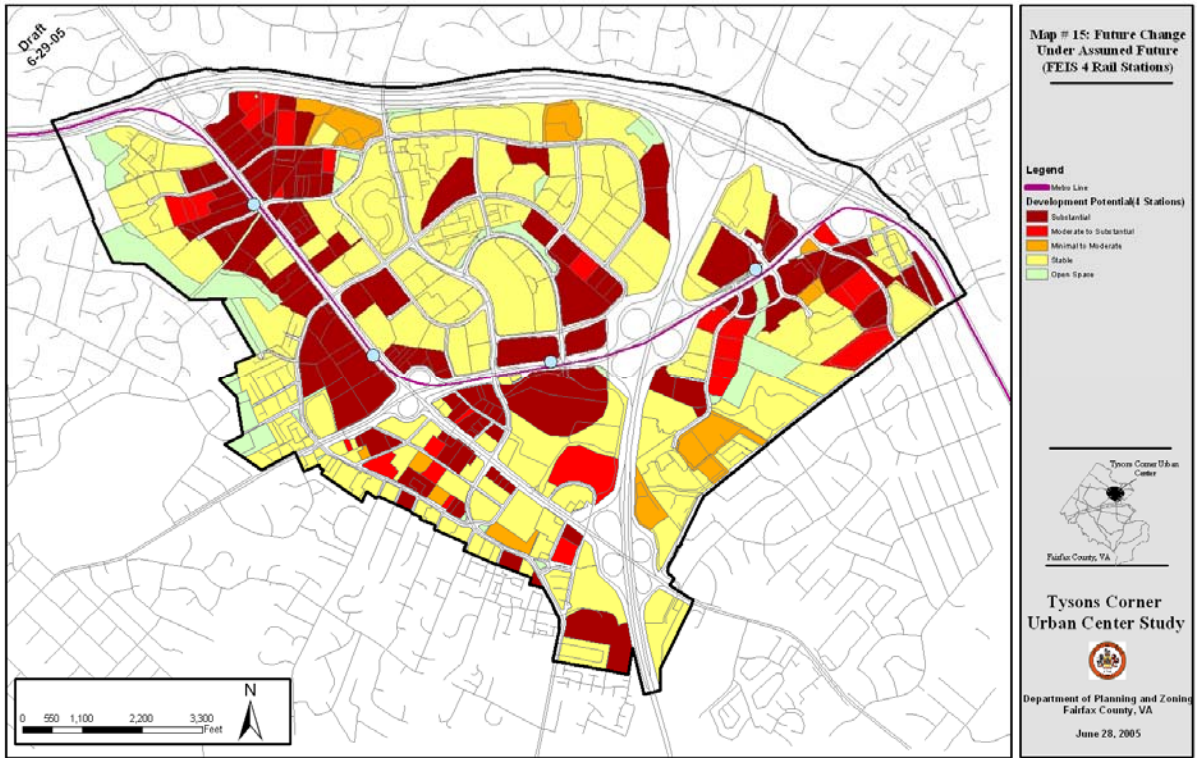

Figure 9.2 Fairfax County draft development potential for Tysons Corner.

available at www.fairfaxcounty.gov/dpz/tysonscorner/.

Existing Conditions and Stormwater Management within Tysons Corner

As summarized in Table 9.1, Tysons Corner occupies approximately 1,412 acres or 37 percent of the 3,860 acre Scotts Run Watershed and 115 acres or one percent of the 8,083 acre Pimmit Run Watershed. The current impervious area for the entire Scotts Run Watershed is 30 percent while the portion of the watershed within Tysons Corner is 49

percent. The current impervious area for the entire Pimmit Run Watershed is 27 percent while the portion of the watershed within Tysons Corner is 50 percent.

Table 9.1 Watershed Information for Tysons Corner

Watershed	Drainage Area within Tysons (acres)	Existing Percent Imperviousness within Tysons Corner	Number of Stormwater Management Facilities	Parcel Area with Stormwater Controls[(1)] (acres)	Uncontrolled Parcel and ROW Area (acres)	Future Development Potential [(2)] (acres)
Scotts Run	1,412	48.6%	49	402	1,010	336
Pimmit Run	115	50.4%	10	56	59	28

[1]Based on parcel area not including roads.
[2]Based on site development potential shown on Figure 9.2.

Approximately 59 existing BMPs and stormwater management facilities are located in Tysons Corner. Figure 9.3 shows the parcels currently served by stormwater management facilities that control quantity only or both water quality and quantity. The total parcel area served by stormwater management facilities or BMPs is 458 acres and the total parcel area not controlled by stormwater management facilities or BMPs is 525 acres. The parcel area does not include the roadways which comprise approximately 35 percent of the total land area. There are currently two stormwater management facilities located in the northeast and northwest corners of the cloverleaf intersection of Chain Bridge Road and the Dulles Access Toll Road. For the 364 acres of parcels with future development potential, approximately 70 percent of the parcel area is not controlled by any existing stormwater management facilities.

Table 9.2 shows the total parcel area controlled by stormwater management facilities which only provide stormwater quantity control and the total parcel area controlled by BMPs which provide both stormwater quality treatment and quantity control. The developed parcel area without existing stormwater controls is approximately 57 percent of the total developed parcel area and only ten percent of the total developed parcel area is controlled by BMPs which provide both quality and quantity treatment.

Table 9.2 Parcel Area with Quantity and Quality Controls

	Scotts Run		Pimmit Run	
Parcel Area in Tysons Corner	Total Parcel Area	Total Developed Parcel Area	Total Parcel Area	Total Developed Parcel Area
Total Quantity Controlled	33%	36%	84%	85%
Total Quality Controlled	10%	11%	0%	0%
Total Uncontrolled	57%	53%	16%	15%

As part of the watershed planning process, the watersheds were further divided into smaller subbasins or drainage areas to evaluate existing and future conditions. Land use, stormwater management controls and receiving stream conditions were inventoried and assessed for each subbasin. The Scotts Run and Pimmit Run subbasins located in the Tysons

Corner area include SC-UN-003, SC-UN-004, SC-UN-005, SC-UN-006, SC-UN-007, SC-SC-007, SC-SC-008, SC-SC-009, SC-SC-010, PM-SA-002, PM-UN-003, PM-PM-013, and PM-PM-017 as shown in Figure 9.3. The subbasin parcel area currently controlled by either stormwater management facilities or BMPs in Tysons Corner is described in Table 9.3.

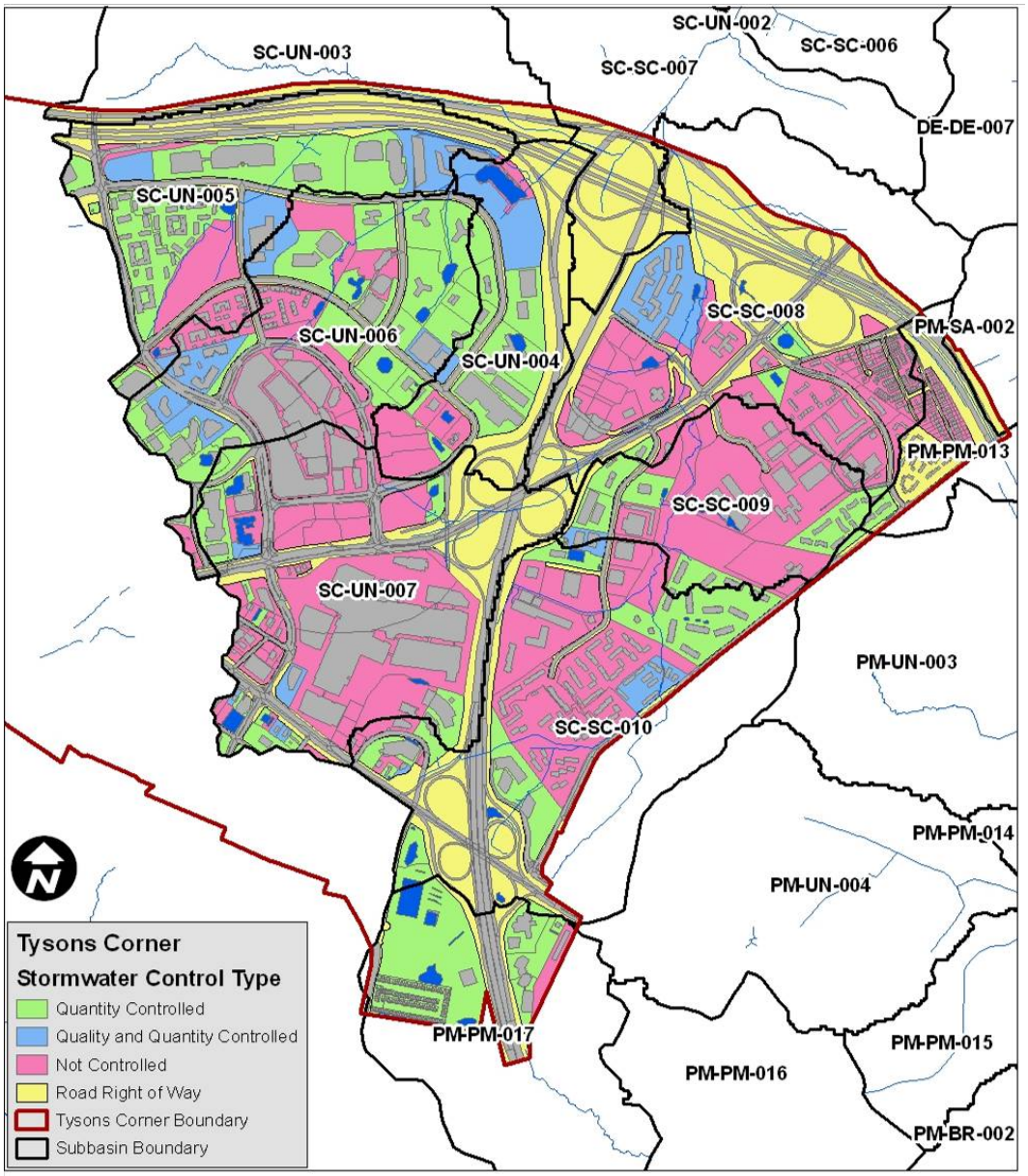

Figure 9.3 Tysons Corner Watershed Scotts Run Watershed and Pimmit Run Watershed Subbasins and Land Use Control Type

Table 9.3 Subbasin Parcel Area with Stormwater Controls

Subbasin	Subbasin Parcel Area (acres)	Percent Water Quantity Controlled Parcel Area	Percent Water Quality Controlled Parcel Area	Percent Uncontrolled Parcel Area
SC-UN-003	1	0%	0%	100%
SC-UN-004	75	52%	20%	28%
SC-UN-005	119	61%	18%	21%
SC-UN-006	165	50%	14%	36%
SC-UN-007	177	15%	3%	82%
SC-SC-007	0	0%	0%	0%
SC-SC-008	114	6%	18%	76%
SC-SC-009	112	23%	2%	75%
SC-SC-010	153	35%	5%	60%
PM-SA-002	0	0%	0%	0%
PM-UN-003	1	100%	0%	0%
PM-PM-013	9	22%	0%	78%
PM-PM-017	57	93%	0%	7%

Due to development of vacant parcels and redevelopment of underutilized parcels, the future peak flows will increase for almost all of the subbasins in Tysons Corner. The percent increase in peak flows for the existing and future conditions of the Tysons Corner area are shown in Table 9.4 for the subbasins with the majority of their area located in Tysons Corner. The peak flows for the future conditions are estimated for complete buildout over the next 25 years and take into account the BMPs that will be required to meet stormwater runoff quantity and quality regulations.

Table 9.4 Tysons Corner Existing and Future Peak Flows

Subbasin	Two-Year Rainfall Event			Ten-Year Rainfall Event		
	Existing Peak Flow	Future Peak Flow	% Peak Flow Increase	Existing Peak Flow	Future Peak Flow	% Peak Flow Increase
SC-UN-004	654	690	6%	1,180	1,230	4%
SC-UN-005	375	393	5%	642	674	5%
SC-UN-006	195	195	0%	326	326	0%
SC-UN-007	448	452	1%	826	832	1%
SC-SC-008	1,640	1,690	3%	3,020	3,110	3%
SC-SC-009	950	962	1%	1,780	1,790	1%
SC-SC-010	386	389	1%	725	732	1%

Strategy to Achieve Action: The major stormwater management issue for the Tysons Corner area is the amount of existing developed area without stormwater management controls. Additional stormwater management controls, including LID measure, are needed in order to reduce peak flows and to support stream restoration efforts. Currently new development and

redevelopment are required to implement stormwater management controls as described in the *Fairfax County Public Facilities Manual* (PFM).

1) Redevelopment projects must reduce phosphorus from subject properties by ten percent from existing conditions. New development projects must reduce phosphorous runoff by 40 percent from predicted postdevelopment conditions.

2) Development projects must have no increase in peak flow for the two-year and ten-year storm events. However, if a site is developed from a parking lot to a building, there is little or no runoff difference between predevelopment and post-development conditions, and there is therefore no net reduction in peak flows

3) Adequate outfall requirements also apply to all development and require an assessment of downstream conditions. However, in some cases the assessment area may end in a pipe if the existing storm drainage system is long enough. If the assessment area ends in a pipe that can accommodate the additional storm drainage, the outfall is considered adequate and no additional controls are needed.

If all area with development potential is required to implement stormwater management controls, the amount of total parcel area in Tysons Corner with stormwater controls will increase from 30 percent to 47 percent. Since not all of the Tysons Corner parcels will be developed or redeveloped in the next 25 years, the recommended Tysons Corner stormwater management strategy requires additional measures for stormwater controls. These additional measures include the following:

- For redevelopment sites that will be subject to the zoning process, a minimum of 30 percent phosphorous removal compared to existing conditions is suggested. The 30 percent phosphorous removal was calculated by taking the estimated future imperviousness of 54 percent and subtracting the Fairfax County average land cover condition of 18 percent imperviousness and using the resulting 36 percent imperviousness to calculate the target pollutant removal rate of 30 percent. Where there are opportunities to incorporate BMPs that will result in phosphorous removal rates above 30 percent, implementation of such BMPs should be encouraged. Consideration should be given to evaluating redevelopment sites on a case-by-case basis to determine the potential for additional water quality control opportunities. New development sites would continue to be subject to the phosphorous removal requirement as noted above, whether or not any zoning action will be required for the development.

- For development sites that will be subject to the zoning process, the adequate outfall requirements establish that there is a need to review the downstream drainage system to one of the following points:

    - A point at which the total drainage area is at least 100 times greater than the contributing drainage area of the site.

    - A point that is at least 150 feet downstream of a point where the drainage area

is 360 acres or greater.

- A point that is at least 150 feet downstream of a point where the receiving pipe or channel is joined by another that has a drainage area that is at least 90 percent of the size of the first drainage area at the point of confluence.

It is suggested that the review of the downstream drainage system for development sites that will be subject to the zoning process not be limited to the third bullet point above because this will not allow review of the potential adverse impacts to the receiving stream channel. This adequate outfall review recommendation is more stringent than what is required in the Public Facilities Manual.

- For redevelopment sites that may not have a future increase in the amount of impervious area and that do not have existing stormwater quantity controls, there is an opportunity to provide peak flow and runoff volume reduction to help mitigate the effects of existing impervious area on stormwater runoff. Consideration should be given to evaluating redevelopment sites on a case-by-case basis to determine the potential for providing stormwater quantity controls. In the future, a stream restoration studies will determine the goals for stream restoration of Difficult, Pimmit and Scotts Run so that the amount of peak flow from that portion of Tysons Corner in each watershed that can be accommodated by the restoration effort can be quantified and a flow reduction target percentage can be recommended for individual redevelopment sites.

- New BMPs and BMP retrofit projects are also recommended for specific sites in Tysons Corner in order to provide greater water quality and quantity reduction benefits.

Both new development and redevelopment will also need to comply with Fairfax County stormwater regulations that address drainage diversions and floodplains.

In order to meet the stormwater runoff quantity and quality requirements, new BMPs may include wet ponds or dry ponds constructed on vacant or underutilized parcels. LID measures may include constructing bioretention areas in the parking lot medians and in landscaped areas. Underground manufactured BMPs could be placed in parking lots and manufactured BMP water quality inlets could replace existing curb drop inlets. Porous pavement could be used in overflow parking areas and green roofs could be installed on mixed use buildings as an amenity for the residential units.

Watershed Benefit: Stormwater management facilities and LID measures on redevelopment sites will help to mitigate the effects of existing impervious areas that do not have stormwater controls and will provide a reduction in stormwater peak flows and pollutant discharge. The reduction in peak flows and the amount of pollutants will benefit the downstream conditions of Scotts Run and allow successful implementation of stream restoration methods. The estimated cost of the Tysons Corner Stormwater Strategy Project proposed in this policy action is $200,000 and does not include the cost of implementing the recommended projects from the study.

Objective B3: Restore and protect vegetated stream buffers to filter pollutants from runoff, to provide erosion control, and to provide habitat for animals.

Policy Action B3.6: Utilize environmentally-sensitive trail design to reduce stormwater impacts where possible.

Strategy to Achieve Action: Environmentally-sensitive trail design focuses on trails in environmentally sensitive areas in order to avoid or limit the impacts of trail use and maintenance on stream channel geomorphology and function, wildlife, water quality, and water quantity. If the county builds trails adjacent to streams, they should be environmentally friendly and use porous paving instead of concrete or asphalt. Trails that are located adjacent to streams and are contributing to bank instability and erosion may need to be relocated. In addition, the county's Public Facilities Manual should be changed to allow for alternate but friendlier trail and bridge designs that still meet ADA requirements where possible.

Watershed Benefit: Reducing the amount of impervious trail surface along streams will reduce the amount of runoff which will help to reduce the amount of erosion in streams. Relocating trails that contribute to streambank erosion will help improve stream water quality and habitat. The benefit of this action was not quantified, however when implemented, this action will help maintain the appearance of a natural stream buffer area and will reduce the amount of stormwater runoff and pollutants delivered to the stream.

Policy Action B3.7: Establish wildlife or environmental quality corridors where possible.

Strategy to Achieve Action: Fairfax County should encourage property owners adjacent to streams to donate their land for the development of wildlife or environmental quality corridors. This could be done through conservation easements or through outright donation. The Virginia Department of Conservation and Recreation's Office of Land Conservation could assist in setting up this program.

Watershed Benefit: Protecting land from future development through this program will prevent increases in runoff amounts, protect water quality, and preserve habitat for wildlife.

Objective B4: Protect and restore wetlands to provide habitat and improve water quality.

Policy Action B4.2: The county should work with the appropriate permitting agencies to encourage mitigation for wetland losses resulting from development to be mitigated within the same hydrologic area (same local watershed).

Strategy to Achieve Action: The county should work with appropriate federal and state regulatory officials to encourage mitigation for wetland impacts within the same watershed area. The County should also map existing wetlands and identify potential restoration opportunities to use for mitigation.

Watershed Benefit: This action will help to keep the wetland function and benefit within the

same watershed so that there is no net loss of wetlands within a watershed.

GOAL C: Provide for long term stewardship of the Middle Potomac Watersheds by building awareness of the importance of watershed protection and providing opportunities for enjoyment of streams.

Objective C3: Promote the implementation and maintenance of LID practices.

Policy Action C3.7: Create a program to certify citizens to inspect rain gardens and other LID measures. Ensure that maintenance agreements are recorded on HOA deeds and that the maintenance responsibility transfers with property title changes.

Strategy to Achieve Action: An agreement between the county and HOAs should be established requiring new HOAs to maintain rain gardens and other LID measures in their neighborhood. The maintenance agreement will ensure that the sites continue to function properly and are kept in good condition. Educational materials should be provided by the county to residential property owners and a certified training program should be implemented for citizens to inspect the LID measures. The educational and training materials should include checklists and schedules for maintenance actions for different types of LID methods.

Watershed Benefit: Requiring the HOAs to inspect and maintain the LID sites will help to keep them functioning properly. Properly functioning LID sites will maximize water quality treatment and therefore improve stream quality.

Policy Action: C3.8: HOAs should post signs identifying locations of LID measures in order to prevent inadvertent damage. A universal common symbol (e.g. a bucket with plants coming out of it) should be developed and posted near LID measures.

Strategy to Achieve Action: The county should develop a common symbol to post on LID signage and include it in the Public Facilities Manual with county-approved LID methods. The proposed maintenance agreements between the county and HOAs should require that HOAs post the LID signs near LID sites in order to promote awareness and prevent damage.

Watershed Benefit: LID signs will increase public awareness of LID measures and should help to prevent inadvertent damage to LID sites.

Policy Action C3.9: If a stormwater utility is established, provide opportunities for landowners to lower their utility fees by installing LID measures on their properties. If such an arrangement is reached, ensure that the LID is noted on the deed and transfers with the property to prevent loss of the LID measure under new ownership.

Strategy to Achieve Action: Landowners who voluntarily install and maintain LID methods on their property should receive a discount on their utility fees. The reduction of the utility fee could be measured by the percentage of runoff reduced by the LID method or by the

reduction of impervious surfaces on the property. The county can provide workshops for landowners to learn about the concept, building procedures, and maintenance schedules for LID methods.

Watershed Benefit: In the event that a stormwater utility is established, this action would help to increase the installation of LID methods by individual property owners, which will benefit the watershed by reducing the amount of runoff and of its associated pollutants.