

## ENVIRONMENTAL RESOURCES

*Protect and enhance environmental resources to achieve to a healthy, pleasant, and revitalized downtown.*

### VISION

The CBD's environmental quality should support existing and proposed development by creating a clean and attractive downtown and one that contributes to the environmental quality of the larger community.

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#### *Objective:*

- Improve the aesthetics and the quality of the natural environment in and near the Silver Spring CBD.

#### *Summary Recommendations:*

Improve the quality of the CBD's urban environs by implementing innovative environmental policies and practices.

- Encourage the use of alternatives to automobile transportation to reduce air pollution.
  - Incorporate recycling and energy efficiency programs and standards into new development.
  - Enhance the natural environment by creating green space.
  - Enhance water quality through a variety of stormwater management techniques.
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Environmental quality is a key element of the overall quality of life. Residents and employees in downtown areas desire pleasant, cool, green surroundings with adequate open space to lessen the impact of noise, wind, temperature, and glare that can result in a built environment. Downtown redevelopment provides an opportunity to improve the aesthetics and the quality of the natural environment in and near the Silver Spring CBD.

Concentrating growth reduces regional and county-wide environmental impacts. Localized environments have often been adversely affected by past activities, and additional development or redevelopment will cause little further environmental impact. Silver Spring was originally developed prior to modern standards for landscaping, green space, forest conservation, and stormwater management. Enhanced landscaping and green spaces around new development, larger green areas around residential development, and managed stormwater runoff to neighborhood streams will create positive environmental, aesthetic, and even economic benefits over time.

Within the CBD air quality, noise, water and sewer, landscaping/forest conservation and water quality/stormwater management are the primary environmental issues.

## AIR QUALITY

Air quality problems respect no boundaries, so most air quality policies are implemented at the state and regional level. The Washington Metropolitan Statistical Area is still in non-compliance with federal ozone standards but is in attainment with carbon monoxide standards. The metropolitan area will likely be in non-attainment with new federal standards for fine particulate matter, as well. The State's Smart Growth initiative will eventually contribute to an overall improvement in air quality.

While air quality is generally a regional problem, local air pollution nuisances can occur when incompatible uses are located together or when site design does not consider micro-environmental issues. For instance, public gathering places and residential air intakes should be protected from garage, restaurant, or other commercial exhaust fumes. A new County Air Ordinance is in development to address the issue of facility emissions that affect neighboring facilities. Early prevention and management through site design can help prevent these conflicts from arising, reducing the need for often costly retrofits.

## NOISE

Noise prevention and control is an abiding concern for the quality of life in any community, especially in the Silver Spring Central Business District. The CBD contains several sources of significant noise volumes, including large amounts of stop-and-go traffic, commuter, freight, and Metrorail lines, and large reflective buildings. Stationary noise sources can also become nuisances on a site specific basis.

Effective noise control is instrumental in assuring the extended sustainability of a community as a desirable place to live, work, and conduct business. The public sector has the responsibility to design roads, streetscapes and public areas to maximize noise attenuation. For example, noise sources should be located away from public gathering places. The private sector should plan and design development using the receiving property standards of the 1997 County Noise Control Ordinance as a minimum guideline.

## COMMUNITY WATER AND SEWER

Under the County's Comprehensive Water and Supply Sewerage Systems Plan, community (public) water and sewer service is available throughout the master plan area and is provided by the Washington Suburban Sanitary Commission (WSSC).

Two major sewer lines serve the CBD: Sligo Creek and Rock Creek. The WSSC recently upgraded the Sligo Creek trunk sewer, which has sufficient transmission capacity for projected sewer flows through at least 2010. The WSSC recently performed an extensive review of Rock Creek trunk sewer, which has historically experienced very high peak flows due to extraneous flows of groundwater (infiltration) and rainwater (inflow). The 1985 Blue Plains Intermunicipal Agreement (IMA) specifies the maximum peak flow allowed at the point where the trunk sewer enters the District of Columbia. The WSSC's review of the Rock Creek sewer system indicated that the peak flow may exceed the IMA limit in the next ten years if actions are not initiated to reduce the impacts of extraneous infiltration and inflow into the sewer system.

Key elements include an aggressive infiltration/inflow control program and optimized use of the existing Rock Creek sewer storage facility, in addition to other flow reduction projects. The WSSC will closely monitor flows within the sewer system to ensure that appropriate steps are taken to manage the peak flows in conformance with the IMA. The analysis of the Rock Creek sewer system indicated that, with the implementation of the appropriate flow management project, the capacity of this system will support redevelopment of the CBD.

## **BUILDING STANDARDS TO MEET ENVIRONMENTAL CONCERNS**

Two County environmental programs have the potential to affect the design of development in the Silver Spring CBD. The first is a new solid waste law that mandates recycling and waste reduction programs for all employers. To meet this requirement and to help meet the County-wide recycling goal of 50 percent by the year 2000, new development should provide adequate on-site facilities for storage and pickup of recyclable materials at commercial and multi-family residential buildings.

The second program is the Energy Wi\$e program, designed to educate businesses and the public about the pollution prevention benefits of increased energy efficiency. The County encourages all new construction and building retrofits to follow the County's model energy efficient design standards.

## **LANDSCAPING/FOREST CONSERVATION**

As redevelopment occurs, zoning requirements and urban forest conservation standards will create improved landscaping and tree planting in green spaces. In most parts of the CBD, forest conservation standards can be met by street trees and landscaping requirements.

## **WATER QUALITY/STORMWATER MANAGEMENT**

The Silver Spring CBD straddles two watersheds: Lower Rock Creek and Sligo Creek. Streams that drain the CBD have been placed underground in a storm drain network that empties to small tributary streams just outside the CBD, feeding Rock Creek and Sligo Creek. Since most of Silver Spring was developed prior to the adoption of stormwater management requirements, these tributary streams are highly degraded with poor water quality and biological diversity, according to the Countywide Stream Protection Strategy (CSPS). The CSPS identifies these areas as Watershed Restoration Areas. Even though significant improvement of stream quality in or near the CBD is unlikely, stormwater management measures applied during redevelopment provide some opportunity to reduce pollutants and storm flows to the newly-restored Sligo Creek watershed and the Rock Creek mainstem.

Stormwater management is the most important environmental issue to address in the Silver Spring CBD. Current stormwater management regulations, enforced by the Department of Permitting Services (DPS), can be expensive and technically difficult to meet in areas with small lot sizes and high existing impervious levels. Redevelopment scenarios estimate that about \$20 million dollars could be needed to actually construct the stormwater facilities needed in the CBD over the next 20 years if county-wide standards were applied. Much of this expense is due to the technical difficulty of designing and building stormwater quality treatment and holding facilities on small lots with high density development, often resulting in underground facilities. Adding to the difficulty of meeting requirements in existing CBDs is the fact that statewide stormwater management standards are likely to tighten even further in the near future.

To address the difficulty of stormwater management in more developed areas while still protecting water quality, the State and County are working to create new policies for the redevelopment of sites with high existing imperviousness with the goal that stormwater management should not become a barrier to redevelopment. Common themes in the County and State policy re-evaluation include the recognition that stormwater management requirements should not become an impediment to Smart Growth, should be flexible in nature, and should promote impervious cover reduction. In addition, the County is undertaking Watershed Restoration Studies to identify stream restoration and stormwater management retrofit projects that address stormwater on a watershed basis.

As an interim measure, the County Executive approved a policy in September, 1997, waiving stormwater quantity requirements on small CBD lots that don't propose significantly more impervious area. The collected waiver fees will be earmarked for stream restoration and stormwater management retrofit projects that address stormwater on a watershed basis. Watershed-based stormwater management is practical and effective in urban areas, providing greater environmental protection than could be provided through smaller isolated stormwater management facilities.

Redevelopment scenarios for the Silver Spring CBD indicate that several million dollars in waiver fees could be collected over the next 20 years if the interim CBD stormwater policy of waiving quantity controls on certain sites is continued. Developers would still need to spend funds to construct on-site stormwater quality facilities on those sites. On balance, the interim County CBD stormwater policy appears to save developers about half of the full cost of on-site compliance and thus provides a significant incentive to attract redevelopment.

## **RECOMMENDATIONS**

Improve the quality of the CBD's environs by implementing innovative environmental policies and practices.

### **Air Quality**

- Encourage the use of alternatives to automobile transportation to reduce air pollution. The recommendations in this Plan concerning pedestrian access, bikeways, and connections to transit stops support transportation and urban design goals and will also contribute to improving air quality in the region.
- Design new development to prevent conditions that may create local air pollution nuisances.

### **Noise**

- Design new development to prevent conditions that may create local noise pollution nuisances.

### **Building Standards**

- Incorporate recycling and energy efficiency programs and standards in the design of new development and where possible into renovations.

### **Landscaping/Forest Conservation**

- Enhance the natural environment in Silver Spring by creating green space as part of landscaping and forest conservation requirements.

### **Water Quality/Stormwater Management**

The following stormwater management options can improve water quality without discouraging development, and can reduce development costs compared to traditional stormwater structures or required waiver fees. These options can also enhance the aesthetic quality of the CBD and help to create a Smart Growth community. During redevelopment, Silver Spring is an ideal location to implement and test innovative stormwater management policies and techniques. This Sector Plan suggests that the Department of Permitting Services and the Department of Environmental Protection consider Silver Spring as a test case and promote the recommended alternatives for stormwater management.

- Continue to provide on-site stormwater treatment, where feasible and with effective technologies.
- Use stormwater quantity waivers where necessary on previously developed sites to support further off-site watershed restoration activities in Rock Creek and Sligo Creek.

For sites where stormwater flow control is infeasible or inappropriate, waiver revenues will provide critical funding support for public watershed projects that restore stream quality or protect flood plains, and provide an important offset for past uncontrolled development.

- Incorporate innovative stormwater management techniques into new development when possible.
- Explore opportunities to create linear stormwater ponds/wetlands within urban open space or along greenways.

Despite its namesake, Silver Spring does not currently possess any significant water features. Stormwater treatment for multiple small parcels can be consolidated in linear ponds or wetlands located in urban parks and public open space. A related option is to ‘daylight’ urban streams by converting a stream channel that had been enclosed in a storm drain to a more natural open channel. These water features can be attractively landscaped and can serve as a focal point that links the natural environment to the built environment in downtown Silver Spring.

- Continue the current program of vacuum street sweeping and expand to include parking lots and driveways.

The regular use of advanced vacuum sweepers on all paved surfaces, even if the sweepers are only 25 percent efficient, could achieve a 12 percent reduction in the total stormwater pollutant load generated by the CBD. The Urban District program regularly sweeps the curb areas of County roads, alleys, and sidewalks. Significant areas of pavement in public and private parking lots and private driveways could be added to the vacuum sweeping program to make water pollution and litter control more effective.

- Promote the use of areas designed to increase infiltration within required open or green space.

Pavement often makes up much of the ‘open space’ required in urban development. These areas should be designed to increase the infiltration of rainfall wherever possible. One incentive would be to count areas so designed toward compliance with stormwater quality requirements. Acceptable techniques might include alternative pavers, soil amendments and conditioning, small bioretention areas, rooftop gardens, disconnection of impervious cover, or other landscaping techniques that increase infiltration or enhance natural hydrology.

- Explore opportunities to improve the permeability of surface parking areas with green space, particularly at parking facilities owned or managed by the County.

Currently, about 25 percent of the total CBD area in Silver Spring is devoted to surface parking. Conversion of surface parking to parking garages would provide opportunities for creating true green space.

- Expand voluntary business pollution prevention programs within the CBD.

The County currently has two water pollution prevention programs. The Clean Water Partners Program is a cooperative venture between businesses and the County that encourages businesses to pledge to protect water quality through a variety of on-site procedures, including changes in the use of hazardous chemicals and pollution prevention preparedness. The County is also educating businesses and the public about the impacts of automobile leakage on water quality.

