



**MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION**  
8787 Georgia Avenue • Silver Spring, Maryland 20910-3760

**MCPB Item #5**  
**9/30/04**

**MEMORANDUM**

**TO:** Montgomery County Planning Board

**VIA:** Jorge A. Valladares, P.E., Chief, Environmental Planning *JAV*

**FROM:** Mark Pfefferle, Planning Coordinator, Environmental Planning *MP*

**DATE:** September 24, 2004

**SUBJECT:** Comprehensive Solid Waste Management Plan for the Years 2004 through 2013/Triennial Review

**INTRODUCED BY:** County Executive Duncan

**INTRODUCED DATE:** June 28, 2004

**PLANNING BOARD REVIEW:** September 30, 2004

**PUBLIC HEARING DATE:** October 5, 2004

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**STAFF RECOMMENDATION:** APPROVAL, with the proviso that the County meet the Annotated Code of Maryland requirement to update the Ten-Year Solid Waste Management Plan every three years.

**BACKGROUND**

State law requires the County to develop a Solid Waste Management Plan for the entire County including all towns, municipal districts, and sanitary districts. The Plan must cover a ten-year planning period and describe the solid waste disposal systems, solid waste acceptance facilities and systematic collection and disposal of solid waste by public or private entities. The plan establishes a framework on which current solid waste management activities are conducted and future programs are implemented. The Ten-Year Plan reflects the established integrated solid waste management system adopted by the County Council and implemented by the County Executive. The Plan defines the manner in which solid waste generated throughout the County will be managed for the next ten years.

Title 9, Subtitle of the Environmental Article, Annotated Code of Maryland requires all Counties to update their Ten-Year Solid Waste Plans every three years. The update reflects amendments

approved by the County Council and continuing changes in Montgomery County since adoption of the most recent Ten-Year Solid Waste Plan. Resolution 13-1418 adopted the last Ten-Year Solid Plan in 1998.

Section 9-515(e) of the Environment Article, Annotated Code of Maryland, requires the Montgomery County Council to submit the Comprehensive Solid Waste Management Plan, or amendments, to the Planning Board for recommendations at least 30 days before a public hearing on the plan, or amendments. The public hearing is scheduled for October 5, 2004.

## **ANALYSIS**

In fiscal year 2003 approximately 1.2 million tons of municipal solid waste (MSW) was generated in Montgomery County. The County utilizes a number of tools to address waste management including: waste reduction; recycling and composting; resource recovery; and land filling. All these components are integrated into the County's solid waste management system. The success of one element is often dependent on the successful implementation of others. The following discusses the major issues that influence the method in which MSW is either generated or handled in Montgomery County.

### Waste Generation Rates

The County has established a policy of projecting future waste generation based on a zero increase in the rates of per capita and per employee waste generation. The County projects future changes in overall waste generation exclusively as a function of projected population and employment growth. By assuming a zero increase in per capital and per employee waste generation, the County must aggressively implement waste reduction and recycling programs. If one element, such as source reduction and recycling, does not meet the projected goal, the actual waste generation and waste needing disposal would be higher than projected. This can underestimate the amount of waste needing disposal in the County.

Following national trends Montgomery County has become a community with declining persons per household. The average household size dropped from 3.3 to 2.64 persons per household in the past 20 years. Each household requires a defined level of service and generates fixed waste; therefore, more households in the County will generate more waste.

Recent statistics from the United States Environmental Protection Agency (USEPA) indicate a slight decline in the per capita generation rate of municipal solid waste. However, these statistics end in 2001. Prior to 2000, the per capita generation rate was steadily increasing. The per capita rate of MSW generation is correlated with the state of the economy. USEPA attributes the slight decline in the per capita generation rate from 2000 to 2001 to a declining economy. The national data indicated increasing per capita MSW generation through the mid to late 90s.

In order for the County to achieve a policy of no growth in the per capita rate of solid waste generation, the County must regularly monitor waste per capita and per employee generation trend. If rates exceed a zero growth rate, the County must evaluate the need for adjustments to the solid waste programs. Should multi-year trends indicate an overall increase in overall waste generation, the County adjusts its baseline per capita and per employee generation assumptions. Following adjustments of generation assumptions, the County projects future generation rates assuming zero annual increases.

## Transfer Station

Refuse collected by permitted solid waste haulers and others is processed at the solid waste transfer station in Shady Grove. The facility began operating in 1982 and has an operating permit of 821,500 tons of waste per year. Containers of compacted waste are loaded onto rail cars and transported to the Resource Recovery Facility in Dickerson. MSW that can be neither recycled nor burned is transported by tractor-trailers to a private landfill in Brunswick County, Virginia.

The transfer station processed an average of 2,200 tons of MSW per day in fiscal year 2003 and the current operating permit does not restrict the daily tonnage processed. Temporary increases in the daily tonnage occur following inclement weather. Based on the estimated increases in employment and population in the next ten years and assuming a zero percent increase in per capita and per employee generation rates, the transfer station will not exceed its permit capacity.

## Recycling

The Materials Recovery Facility (MRF), or Recycling Center, is located next to the Shady Grove transfer station and is accessed from Maryland Route 355. Recyclable materials collected at the curb, from single-family residences, are accepted at the MRF. The MRF also receives recyclables from multi-family residences and some commercial sources.

Residential mixed paper is transferred from the MRF to a mixed paper recycling facility for reprocessing. The MRF has a transfer capacity of 346 tons of mixed paper per 8-hour shift. Commingled containers (glass, plastic, aluminum, etc) are sorted and baled through a combination of mechanical and hand sorting. The sorted and baled recyclables are sold for remanufacturing. The MRF has a sorting capacity of 100 tons of mixed containers per 8-hour shift. The MRF facility is operated one shift per day.

In 2002 the County set a goal of achieving a 50 percent recycling rate by December 2004. The most recent data available from the Division of Solid Waste Services identifies the countywide recycling rate at 37.1 percent. The County will not meet the 50 percent goal by December. In fiscal year 2003, the single-family residential sector recycled 51.4 percent of the refuse generated, the multi-family residential sector recycled 11.6 percent of the waste generated, and commercial establishment recycled 30.1 percent of the waste regenerated.

The Ten-Year Plan assumes a modest increase in the recycling rate to 39.8 percent by 2013 but assumes a 50 percent recycling rate when estimating tons of MSW needing processing at the resource recovery facility.

## Resource Recovery Facility (RRF)

In 1995 the County began operation of a resource recovery facility in Dickerson, Maryland. All non-recyclable material, with the exception of by-pass, is transported from the Shady Grove transfer station via rail. The RRF consists of three 600 tons per day mass-burning, refuse-fired boiler units producing high pressure, high temperature steam for electrical power generation. The system is operated by Covanta Montgomery, Incorporated. Electricity generated from the

operation of the RRF is sold to nearby Mirant Dickerson. Waste generated from the combustion process is sent to Brunswick County landfill in Virginia.

The facility was designed without expansion capabilities and therefore must rely upon source reduction and recycling so the amount of MSW generated does not exceed the design capacity. The facility has a permit capacity of 657,000 tons per year (1,800 tons per day x 365 days per year). In fiscal year 2003, the Division of Solid Waste Services estimates the facility operated at 85 to 92 percent capacity. If 1,185,297 tons of MSW was generated in fiscal year 2003 and the recycling rate for fiscal year 2003 was 37.1 percent the actual amount of MSW needing to be disposed was 745,552 ton. This exceeds the capacity of the RRF anywhere from 59,000 to 112,000 tons in fiscal year 2003. MSW that is by-passed is sent by tractor-trailers to the Brunswick County landfill in Virginia.

The Ten-Year plan estimates 801,701 tons of MSW will need to be disposed in the RRF or disposed elsewhere. In order to manage the waste, the County is proposing a strategy to manipulate the market by altering tippage fees at the Transfer station. (Tippage fees are user fees assessed to permitted haulers to dispose municipal solid waste at the transfer stations). The County believes that manipulating the tippage fee will prevent out-of-county haulers from disposing of MSW in Montgomery County and force some in-county waste to be disposed at locations outside the County where the tippage fee is lower. The County is also proposing to expand existing new recycling programs to increase the recycling rate.

### Solid Waste Landfills

There are no active landfills in the County. The County does maintain a solid waste landfill permit, issued by the State, to operate a MSW landfill on approximately 820 acres of land along Wasche Road near Dickerson, Maryland. The property is also known as "Site 2". The property was acquired and is held in reserve for use if changes in laws or other circumstances render out-of-state waste disposal facilities infeasible. The County intends to maintain the current agricultural use of the farm with the exception of preserving the historic Chiswell farm.

By-pass MSW, non-processible waste, and RRF ash is transported to Brunswick County, Virginia for disposal in a private landfill. The County has a contract with the private landfill until 2012. If the facility in Brunswick County is not available for any reason during the life of the contract, the operator of the facility will provide space for Montgomery County waste in a landfill they operate in Georgia.

### Composting

At Dickerson, the County operates a leaf and grass composting facility on a 118-acre facility. The operation occurs on a 48-acre bituminous pavement pad. Compost that is dry is sorted and sold to commercial bulk and bagged markets.

Agreements between the County and the Sugarloaf Citizens Association requires that the facility not exceed more than 77,000 tons of yard trim per year and that the bagging operation not exceed 500,000 bags per year. In fiscal year 2003, the County received/collected 80,138 tons of yard waste. This exceeds the 77,000 tons allowed under the agreement. In the future, the County will implement a contingency plan if it receives more than 70,000 tons in a fiscal year. The contingency plan includes a solicitation to identify possible private in and out of County options.

## **M-NCPPC IMPACTS**

Adoption of this Ten-Year Solid Waste Management Plan will not impact M-NCPPC operations. However, implementation of the Ten-Year Plan, especially by increasing tipping fees will increase solid waste disposal costs for M-NCPPC operations. If the tippage fees rise too high, there will be a probable increase of illegal dumping in Parks requiring additional labor to collect the material and additional disposal costs.

## **RECOMMENDATION**

The staff recommends approval of the Ten-Year Solid Waste Management Plan with the proviso that the Solid Waste Management Plan be updated every three years, as required by state law.