

## COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN SUMMARY OF INFORMATION

*This document contains a discussion of information in the Executive Summary of the June 1995 Solid Waste Management Plan for the City of Atlanta. The Georgia Department of Community Affairs requires the City update this Plan by October 2005. The planning process will include opportunities for public input, and review by both the Georgia Department of Community Affairs and the Atlanta Regional Commission.*

*Text contained within this and similar boxes identify areas where the Solid Waste Management Plan (SWMP) will be updated as part of the City's planning process. The original Summary of Information is presented, followed by a text box with a discussion of the items in the Planning Element to be revised.*

*This Summary should be used in conjunction with the adopted June 1995 SWMP and is intended to encourage citizen comment and discussion by identifying those areas where the SWMP will be revised. It is the City's intent to have meaningful public involvement throughout the planning process. The City has prepared this document, as opposed to a draft SWMP, to facilitate the development of a SWMP that evolves through the planning and public involvement process. It is our belief that issuing a draft plan that was prepared without public involvement would not be consistent with the Department's vision of working collaboratively with the citizens, and the public and private entities of Atlanta.*

### **ELEMENT ONE - AMOUNT OF WASTE**

The goal of this planning element is:

*"To determine the amount and composition of the solid waste generated within each community or multi-jurisdictional area in order to have a sound information base upon which to base solid waste management decisions and to determine if statewide and local goals have been met."*

### **SOURCES OF WASTE**

#### **Residential and Commercial**

Residential discards are collected from two primary sources: single family and multi-family residences. Approximately 86,000 single family and 92,000 multi-family units are serviced by the City weekly.

Almost 23 percent of the residential waste stream is yard trimmings. Twenty-eight percent is composed of the different categories of paper. The plan recognizes the fact that yard trimmings comprise 23 percent of the residential waste stream and the City will pursue removal of this component as the primary method of reaching the 25 percent reduction goal, as required by state law.

There are approximately 20,000 commercial establishments within the City limits of Atlanta. The commercial, non-residential waste stream, which also includes construction/demolition waste, is collected and disposed of by private hauling companies. The quantity of waste generated by industrial processes in Atlanta is relatively small and is handled entirely by private haulers and disposal facilities.

### **QUANTITY OF WASTE**

The *residential* waste generation rate for Atlanta, using city landfill records and the 1990 population figure, was **4.48 PCD (Pounds per Capita per Day)** for 1990. In fiscal year 1992, the waste generation rate for

residential waste had dropped to **3.80** PCD, and by fiscal year 1994 the rate had dropped to **3.63** PCD. The table below provides a breakdown of the waste collected and the reduction over since the base year:

**Residential (RES) and Commercial (COM) Waste Tonnage**

YEAR	RES	% REDUCTION	SLUDGE	COM	COM &SLUDGE	% REDUCTION	TOTAL	% REDUCTION
FY '90	339,380	NA	34,661	NA	34,661	NA	374,041	
FY '91	293,463	NA	29,234	NA	29,234	NA	322,697	
FY '92	287,933	BASE YR	18,299	433,930	452,229	BASE YR	740,162	BASE YR
FY '93	282,673	<b>1.83%</b>	25,556	391,565	417,121	<b>7.76%</b>	699,794	<b>5.45%</b>
FY '94	274,946	<b>4.51%</b>	17,228	433,776	451,004	<b>0.27%</b>	725,950	<b>1.92%</b>
TOTAL	1,478,395		124,978	1,259,271	1,384,249		2,862,644	

Over the ten year planning period the city will require disposal assurance for approximately 5,841,212 tons of solid waste. This includes both residential and commercial.

*It is anticipated that the Goal of this Element will not change. The SWMP will be updated to document the changes in the amount of waste that the City of Atlanta must safely and cost-effectively manage for its residents and business. Data will be revised to reflect actual source and quantity information from the City and similar municipalities, including:*

- *The number of single and multi-family units serviced by the City will be calculated.*
- *The City will determine what waste type(s) will be removed or reduced in order to achieve the 25% reduction goal.*
- *The number of commercial establishments with in the City limits of Atlanta will be calculated.*
- *2000 Census numbers will be used instead of 1990 numbers.*
- *Residential and commercial waste tonnage will be calculated for fiscal years 1995 through 2003.*
- *The total amount of waste to be disposed from Atlanta will be determined for the ten year planning period.*

## ELEMENT TWO - COLLECTION

The goal of this planning element is:

*"To ensure effective collection for the subsequent ten year plan period of solid waste, and recyclable and composting materials within each community of region."*

### SERVICE AREA

The City of Atlanta has an area of 131.6 square miles. The 1990 census population for the City was 415,200. The Bureau of Sanitary Services billings in 1993 indicated approximately 86,000 single family and 92,000 multi family units received collection services.

### PRIVATE AND PUBLIC COLLECTION SYSTEM

The City of Atlanta, through its Bureau of Sanitary Services, collects all of the single family residential waste generated in the City. The table below describes the residential programs planned for the City over the planning period.

**Table 2-1 Residential Collection Programs**

WASTE COLLECTION PROGRAM	ESTIMATED IMPLEMENTATION DATE	ANNUAL TOTAL COST
Residential waste collection	Operational	\$19,150,000
Residential Curb-side Recycling Program	Operational	\$2,500,000
Yard Trimmings collection and processing	Design and Implement System starting 1995	\$2,970,890*
Volume based collection system	1996	\$5,500,000*

\* FIRST YEAR OF IMPLEMENTATION, CAPITAL AND OPERATIONS COSTS

Haulers will be required to report annually, the amount of waste collected within the City limits.

### COLLECTION VEHICLES

The City operates 51 rear loading compactor trucks for single family waste collection. These vehicles are most convenient for servicing residential customers. Additionally, 21 front loaders are used to service containers for multi-family and institutional waste collection. The present fleet of solid waste collection equipment is sufficient to serve the present and future needs of the population.

*It is anticipated that the Goal of this Element will not change. The service area information of the SWMP will be updated to document the changes in the service area (the City collected solid waste from 178,000 residential units in 1993) as well as changes that the City has made in the collection program, including the implementation of a yard trimmings program. Additional waste collection programs planned for the City will be added to Table 2-1, and the annual total costs for each waste collection program will be determined. As part of the planning process, the Bureau of Sanitation Services has started an efficiency study and optimization evaluation for the City's collection practices. Updated information on collection vehicles will also be provided.*

## **ELEMENT THREE - WASTE REDUCTION**

The goal of this planning element is:

*“To ensure, at a minimum, a 25 percent per capita reduction by 1996 of the amount of solid waste being received at disposal facilities by promotion of source reduction, reuse, composting, recycling and other waste reduction programs today and in the future, thereby maintaining and enhancing the quality of life of the citizens of the area.”*

### **SOURCE REDUCTION**

The City of Atlanta, has established a Solid Waste Information Program. This program is operated as a continuation of the existing informational programs run by the Bureau of Sanitary Services in connection with the City's curbside recycling program. It is anticipated that the Waste Reduction Informational Program will continually evolve to provide information on the latest improvements and newest methods in solid waste management.

### **REUSE**

Reuse is a waste reduction method which utilizes items in the waste stream which normally would be discarded and disposed in the landfill. The City will make considerable progress toward the reduction in waste disposal by thermal treatment of the sludge generated by its sewage treatment plants, then putting the treated sludge to beneficial use as a component of masonry or other similar products. The City will also study alternative sludge reuse or disposal methods.

### **RECYCLING**

#### **Curbside Program (1 - 4 units)**

The City provides curbside recycling service to approximately 87,000 households zoned R-1. The City expects that the amount of waste removed due to better promotion, information distribution, effects of educational programs, and an expansion in the categories of recyclables collected (drop-off centers for magazines and corrugated), will result in a waste reduction of about 2.9 percent of base year disposal (7.61 percent of residential waste). The City's curbside program will initially serve only the single family residences that generate about 51.5 percent of the waste (and recyclables).

This plan does not presently include a program to provide recycling services to residents of multi-family housing units (greater than four units). The City will develop plans and strategies to provide recycling services to its citizens living in multi-family housing units. These programs are planned for implementation in 1987.

#### **Commercial Waste Reduction/Recycling Programs**

Extensive commercial recycling is already underway in Atlanta. Element Six provides information on efforts of the private sector in waste reduction and recycling. The City will establish procedures to measure quantities of commercial waste generated within its boundaries.

A series of programs may be implemented by the City depending upon the need for such programs and the result of a cost/benefit analysis of the programs. The value of any such program may only be evaluated after appropriate information is gathered about the source and characteristics of the commercial waste stream.

It is anticipated that any of these programs would be carefully considered and examined for their impact upon the cost to businesses and effectiveness of waste reduction. The City will seek the counsel of the Atlanta Chamber of Commerce and others in the business community to develop plans for information gathering about commercial waste collection.

The following is a list of city programs in order of increasing governmental involvement in the commercial waste reduction programs. Time of implementation of any of the programs is a decision reserved by the City.

1. Require reporting of waste collected by all private haulers doing business within the city. (Included as a part of this plan)
2. The City will develop strategies for multi-family recycling. One strategy to be considered will be to require commercial multi-family complexes to make on site recycling available to their tenants. This may be implemented with City Council approval in 1997 if the 1996 commercial reduction goals are not met. Multi-family complexes will also, as required by State regulation, be required to have separate collection of yard trimming's.
3. Require that commercial businesses, of a size to be determined, participate in a reduction program of their choice and show evidence of participation. This will be implemented with City Council approval in 1999 if previously set reduction goals are not met.
4. Institute additional mandatory programs to be developed in coordination with affected parties if those previously instituted voluntary measures do not achieve satisfactory reductions.

Only the first item on the list, the reporting of waste, is to be implemented as a part of this plan at this time. The value of the implementation of other programs can not be evaluated until the waste stream information is available. If voluntary waste reduction programs prove ineffective in making suitable progress toward waste reduction goals, then the more invasive programs may be further defined and considered for implementation.

*The goal for this Element will change to reflect the Georgia DCA's "Updated 2003 Minimum Planning Standards and Procedures for Solid Waste Management (Chapter 110-4-3-.01(3)(e)2)," which states: "Each solid waste management plan relying upon a landfill in Georgia for waste disposal, shall have a program in effect to reduce by 25 percent the per capita rate of municipal solid waste disposed statewide in solid waste facilities as compared with the per capita municipal solid waste disposal rate in FY 1992."*

*The SWMP will be updated to document the increase in the amount of material that the City of Atlanta must safely and cost-effectively manage for its residents and business. The SWMP will identify planned programs to reduce, recycle and reuse waste generated within the City, including the potential for an expanded curbside collection recycling program, additional Community recyclables drop-off centers and optimizing the market for recycled materials. The Curbside Recycling Program information will be updated, including the number of households being serviced, how multi-family units are being serviced, and the waste reduction results from curbside recycling. The progress of the City's Commercial Waste Reduction/Recycling Programs will be updated and any new programs will be listed.*

## ELEMENT FOUR - DISPOSAL

The goal of this planning element is:

*"To ensure that solid waste treatment and disposal facilities serving local governments and multi-jurisdictional areas meet regulatory requirements and are in place when needed to support and facilitate effective solid waste handling programs today and for the subsequent ten-year periods, thereby maintaining and enhancing the quality of life of the residents within the area."*

### THERMAL TREATMENT TECHNOLOGIES

A key element to an integrated waste management strategy is incorporating alternative disposal methods. One such alternative is waste-to-energy. The City has evaluated the alternatives of waste disposal using waste-to-energy and refuse derived fuel facilities. The City does not intend to pursue thermal treatment of solid waste as a part of this plan, but will continue to study the issue of waste-to-energy.

### LANDFILL UTILIZATION

The residential waste collected by the City is presently disposed of under contract at the Live Oak Landfill. The City plans to continue use of this facility and will seek additional private, verifiable disposal capacity to insure a minimum of 5 years' disposal assurance. During this five year period, the City will begin planning and developing alternative disposal facilities. We anticipate the alternative facilities will be available by the year 2000. These facilities should provide the City with the remaining capacity assurances as required by the minimum planning standards.

### EXISTING FACILITIES -- PLANNED AND PROJECTED

No disposal facilities are operated by the City. The Gun Club Road Landfill has approximately 3-5 years capacity remaining but is not operational. There is one private MSW landfill operating within the City limits -- Chambers Bolton Road facility. The City will develop closure/post closure plans for Key Road, Cascade Road and Gun Club Road landfills. The City will seek a permit to construct a new disposal facility. The City will continue to use the Hartsfield Pathological Incinerator for incineration of animal carcasses.

The table below provides information on closure of City landfills:

**Landfill Closure 1995-1998/Post-Closure Cost Estimate**

LANDFILL	Acres	Closure Cost (design & const)	# Mon. Wells (est.)	Annual Monitoring Cost	Annual Maintenance Cost	30 Year Total Cost
Cascade Rd.	31	\$7,000,000	8	\$40,000	\$36,500	\$9,295,000
Key Rd.	100	\$8,500,000	20	\$100,000	\$105,500	\$14,665,000
Gun Club Rd.	110	\$9,000,000	25	\$125,000	\$115,500	\$16,215,000
E. Confed.	6	\$500,000	0	0	11,500	\$645,000
<b>TOTALS</b>	247	\$25,000,000	53	\$265,000	\$269,000	\$41,020,000

Notes:

1. These estimates reflect material and third party costs associated with closure of the landfills. Number of monitoring wells required may vary depending on preliminary design. Required city personnel costs not included.

2. E. Confederate closure cost is estimated separately from the other facilities and presumes that negligible monitoring and maintenance cost will be required.

3. Closure of all sites will begin in 1995. The five year plan for closure expenditures is shown in table 7-1.

*It is anticipated that the Goal of this Element will not change. The SWMP will be updated to reflect the significant changes that are occurring, including the closure of the City's four landfills (Cascade Road Landfill, Key Road Landfill, Gun Club Road Landfill and East Confederate Road Landfill), the planned closure of Live Oak Landfill, and the potential development of transfer stations to facilitate hauling of waste to commercial disposal facilities. The costs of landfill closure for the City of Atlanta will be updated.*

*As part of this planning process the City is evaluating short-term and long-term alternatives for the disposal of the City's waste, included the procurement that is currently underway for the short-term transport and disposal of solid waste. This section will list alternative disposal facilities and plans for disposal capacity.*

## ELEMENT FIVE - LAND LIMITATIONS

The goal of this planning element is:

*"To ensure that the proposed solid waste handling facilities are sited in areas suitable for such developments, are compatible with surrounding uses and are not considered for location in areas which have been identified by the local government or multi-jurisdictional area as having environmental or other land use limitations."*

### NATURAL ENVIRONMENTAL LIMITATIONS

When considering the location of all solid waste handling facilities including landfills, the following will be considered, according to state planning guidelines:

- Floodplains
- Wetlands
- Groundwater Recharge Areas
- Other Criteria Such as:
  - Water Supply Watersheds
  - Fault Zones
  - Seismic Impact Zones
  - Unstable Areas [Karst Areas]

### LAND USE PLAN / ZONING RESTRICTIONS

#### Land Use Plan/Zoning Restrictions

##### Current Land Use Plan/Zoning Restrictions (December 1994)

Zoning regulations that govern the City of Atlanta are found in the Atlanta Zoning Ordinance. This document is updated from time to time, with the most recent edition being available in the Municipal Clerk's office. The zoning classification of individual properties can be obtained from the Bureau of Buildings, Zoning Enforcement Division.

The following table indicates the zoning classifications in which certain solid waste facilities can be located.

<b>Zoning Restrictions for Private Solid Waste Management (as of December 1994)</b>		
<b>Facility</b>	<b>Districts Allowed</b>	<b>Districts Allowed by Special Use Permit</b>
Construction/Demolition Disposal		R-1,R-2,R-3,R-4,R-5
Inert Waste		R-1,R-2,R-3,R-4,R-5
Sanitary Non-Hazardous		I-1, I-2
Recycling Incidental to Other Activities	In District of Main Enterprise	
Stand Alone Operations Processing, Transfer, Storage		I-1, I-2
Biomedical Thermal Treatment Facilities	Ancillary Use with Medical Facilities	I-1, I-2
Thermal Treatment	Not Addressed	Not Addressed

As the above table illustrates, thermal treatment facilities are not specifically dealt with under present zoning regulations. Biomedical waste thermal treatment units are allowed in zones for the medical care facilities they serve, provided these facilities are located on the same lot that is zoned for a medical facility. Stand alone thermal treatment facilities and any commercial biomedical waste incinerators require a special use permit and must be located in I-1 or I-2 zoning districts.

The zoning ordinance identifies specific criteria used to determine whether a request for a special use permit complies with existing zoning standards. Noise, odor, proximity to neighborhoods, visual aesthetics to the surrounding community, egress and ingress and hours of operation are examples of criteria used to determine compliance.

As previously stated, the existing zoning ordinance does not adequately address certain solid waste facility issues. Therefore, the Bureau of Planning should actively pursue updating the zoning ordinance to establish more effective guidelines to regulate these uses. Any changes to the City's zoning ordinance that occur subsequent to City Council approval of this Solid Waste Management Plan will automatically become incorporated into this document.

*It is anticipated that the Goal of this Element will not change. The maps contained within the SWMP will be updated to reflect changes that have occurred to the Land Use Plan/Zoning Restrictions since 1995. In addition, the future land use of the City's four closed landfills will be documented.*

## SECTION SIX - EDUCATION AND PUBLIC INVOLVEMENT

The goal of this planning element is:

*" To identify the resources presently available to help the residents of the City of Atlanta grasp the social and environmental issues problems, concerns, and needs associated with solid waste management, particularly in terms of littering, source reduction, recycling, reuse, disposal of household hazardous waste, composting, energy recovery, and disposal, and to propose future programs as well."*

The City will implement the Education Programs as outlined in Element Six of its Solid Waste Management Plan. A waste reduction information program is a part of the education component of the plan.

*It is anticipated that the Goal of this Element will not change. As part of the planning process, the City is implementing a Public Involvement Plan to have meaningful public involvement throughout the development of the SWMP. The planning process will incorporate several opportunities for the residents and business to provide input to the SWMP. This includes opportunities for citizen input during development of the plan and during review of the Plan by the GDCA and ARC.*

*The revised SWMP will include a discussion of the long-term public education program to inform and educate the City's residents and businesses of the elements of solid waste management.*

## SECTION SEVEN - IMPLEMENTATION AND FINANCING

The goal of this planning element is:

*" To develop a balanced affordable solid waste management implementation strategy which supports the goals and meets the requirements of the Georgia Comprehensive Solid Waste Management Act."*

The plan will be adopted by the City Council, then forwarded to the Atlanta Regional Commission (ARC) and then the Department of Community Affairs (DCA) for approvals. The plan will be reviewed annually for reporting and measuring progress. The Bureau of Sanitary Services is under the General Fund for the City of Atlanta.

### Implementation

A schedule for implementing each element of the plan is developed and shown on the following table. The items in the table are activities the City is presently providing or will implement in cooperation with other government agencies.

IMPLEMENTATION SCHEDULE			
Element	Year	Cost	Funding Source
Curbside Recycling (up to four units)	ONGOING	\$2,500,000	General Fund
Multi-Family Recycling	1997	\$1,180,000	General Fund
Commercial Waste Reduction	1995 - 2002	NA	
Yard Trimming Collection and Processing	1995	\$2,970,890	General Fund
Residential/Commercial Waste Information Program	ONGOING	Included in Curbside Program	General Fund
Volume Based Collection Program	1996	\$5,500,000	General Fund
Landfill Closures	1995	\$25,000,000	General Obligation Bonds
New Disposal Facility	1996	\$3,000,000	General Fund
<b>TOTAL</b>		<b>\$33,500,000</b>	

Note: Costs are shown for year of implementation. See Table 7-1 and 7-2 for five and ten year costs estimates

*It is anticipated that the Goal of this Element will not change. The SWMP will be updated to reflect financial requirements of the updated Plan as well as a revised Implementation Schedule. The plan review process will include acceptance by the City Planning Commission, adoption by the City Council, and review by both the Georgia Department of Community Affairs and the Atlanta Regional Commission.*